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Rural Labour and the Organization of Agriculture
during the Principate

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A thesis submitted to the School of Graduate Studies
of the University of Ottawa in partial fulfillment of the
requirements of the degree of Master of Arts in Classical Studies

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My greatest thanks, however, are to my mother, for her constant support and encouragement over the many months during which I was labouring in the fields of Africa.

Kai phaiē tis an epi tōn agrōn estēkenai tas poleis
kakeinous einai krēpida tautais par' ōn puroi, krithai,
botruēs, oinos, elaion, trophē men anthrōpois, trophē de
tois allois zōois. Ei de mē boēs ēsan mēd' arotron mēde
spermata mēde phuta mēde agelai boskēmatōn, oud' an egenonto
tēn archēn poleis. Kai genomenai de tēs ekeinōn exērtēntai
tuchēs, kai to eu te kai cheiron autais prattein ekeithen
esti.

- Libanius De angariis 34

Nam is demum cultissimus rus habebit, ut ait Tremelius, qui
et colere sciet et poterit et volet. Neque enim scire aut
velle cuiquam satis fuerit sine sumptibus, quos exigunt
opera; nec rursus faciendi aut impendendi voluntas profuerit
sine arte quia caput est in omni negotio nosse quid agendum
sit, maximeque in agri cultura, in qua voluntas facultasque
citra scientiam saepe magnam dominis adferunt iacturam, cum
imprudenter facta opera frustratur impensas.

- Columella De re rustica 1.1.1-2

Nam paene, ut recordaris, cessante Africa fames in limine
erat...

- Symmachus Epistles 3.55

INTRODUCTION

The wealth of the Roman Empire came from agriculture. This is often obscured by the written records and "... those cities whose ruined buildings still survive as silent monuments of the immense majesty of the Roman peace", ensuring that knowledge of antiquity has urban orientation.¹ "The cities have told us their story, the country always remained silent and reserved."² The reality, however, was quite different. For every person who lived in the cities, there were probably ten in the countryside. The cities were "... atolls of civilization (etymologically 'citification') on an ocean of rural primitivism".³ In modern economic terms, the majority of the labour force was employed in subsistence agriculture. Furthermore, the lack of any challenge from industry, which remained almost entirely small-scale and non-capital intensive, or trade, which suffered from a lack of demand and an excess of risk and expense, meant that land remained by far the greatest avenue for investment. It provided a secure and steady income, and social prestige as well. Agriculture's primary importance in the ancient economy was never challenged.⁴

This truth was as applicable in the African provinces as anywhere. To early imperial writers Africa was a byword for a land of grain growing - to Pliny *cereri totum id natura concessit*.⁵ In later years, in the areas not suited to grain cultivation, there arose a great oleoculture, producing an east coast of *Africa proconsularis* that

was one huge olive grove, and able to claim that *paene ipsa omnibus gentibus usum olei praestat*.⁶ Pliny chose Africa as his example of a province whose large agricultural estates were the dominant feature of the social-economic fabric.⁷

Yet this agricultural system was of significance to more than just Roman Africa. In fact, by becoming the producer of a large exportable surplus of grain, which was sent to Italy to become the food supply of the million consumers of Rome, African farms gained an importance far beyond their own shores. As early as the days of the late Republic, Africa was one of *haec tria frumentaria subsidia rei publicae*, along with Sicily and Sardinia.⁸ To these there would later be added Egypt, but Africa was to continue its role as granary of Rome: *sed Africam potius et Aegyptum exercemus, navibusque et casibus vita populi Romani permissa est*.⁹ By the Late Empire, when Egyptian grain was diverted to the east to feed the new rival to Rome, Constantinople, Africa was supporting Rome by itself.¹⁰ At its height during the Principate Africa was supplying Rome with perhaps as much as three hundred thousand tonnes of grain annually.¹¹ At the same time, Africa came to export olive oil to such an extent that, as just noted, it could eventually claim to supply the whole world alone. But perhaps the most revealing proof of the international importance of African agriculture -and of the Romans' recognition of the fact- is the regularity with which rebellious generals bidding for the purple made certain to capture Africa, in order to use the threat of withholding its agricultural products as a political weapon.¹² As late as the end of the fourth century, rebellion in Africa meant potential starvation

in Italy.¹³ Africa was not the only land whose food exports were vital to the Empire's urban life (even if its role as the chief supplier of Rome meant that it received more notice from Roman writers), but it certainly was one of the most important.

The importance of agriculture is fundamental indeed to any study of Africa's economy, fundamental, in fact, to almost every aspect of its history in the Roman period. In the wider view, the significance of African farming to the Empire was substantial as well, particularly to the city of Rome. Imperial policy and actions could not help but be shaped by the vital role of this supply. At the same time there can perhaps be seen in the progress of African agriculture something of the nature of the attitude of the Romans in general, and the imperial government in particular, towards the development and exploitation of the provinces. And although there was much in African agriculture that was unique, it is possible that in its workings there may be elements that can lead to a better understanding of equivalent systems elsewhere.

The agricultural history of Roman Africa has long been understood to be of importance and has been much written about. The conventional picture of the course of that history has been drawn in some detail and it may be briefly sketched in outline here.¹⁴

It is acknowledged that Carthage had developed agriculture in the area around that city, using slaves to produce large quantities of olives, fruit, wine and livestock, while further out, beyond the immediate environs of Carthage, the free native population was left to

grow grain. The first Roman attempt to affect this pattern came with the destruction of Carthage in 146 B.C., when most of the developed lands near the city were laid waste. This probably destroyed most of the arboriculture and vineyards, but left the natives in place. In the 120's B.C., C. Gracchus planned to introduce Italian farmers, but the scheme was only partially carried out. Much of the province of Africa's land was eventually sold to rich absentee land speculators and farmed by slaves. Some Italians did move to Africa during the Republic, but mostly as *negotiatores*, not as farmers. Beginning with Marius, but mainly under Caesar and Augustus, large numbers of veterans were given land grants and settled as farmers. In the same period Italian civilian immigration was not insignificant. Investment in land by the rich continued and large estates became the dominant form of landholding, within which system slave labour continued to play a prominent rôle. The main crops during the Republic and early Principate were cereals, needed to supply the consuming population of Rome and Italy. Arboriculture and viticulture were not commonly practised, in order to avoid competition with Italian production.

To protect this expanding agriculture the nomadic tribesmen, who had been the only inhabitants of North Africa outside the area immediately around Carthage before the Romans took control, were forced to submit to Rome, though not without conflict. They were either settled-down to become farmers themselves, or pushed ever southwards by the advancing frontier of Roman suzerainty. With this new southern territory now safe for agriculture there came land unsuited to grain growing. At the same time some of the older fields of the north, long

farmed, began to give out. As well, the increasing population required higher production. The result, from around A.D. 200 onwards, was a shift from extensive cereoculture to intensive farming of mixed crops and fruits in the north, and the creation of a vast arboriculture across the entire south. Olives, vines, livestock and grain (less dominant, but still a significant crop) became the common exports. Official policy by the imperial government aided this transition. Eventually oil exports fueled a great economic expansion. The lands which produced all this now came to be organized on the basis of tenancy. Farmers, mostly poor peasants, rented their land, paid what they owed in kind and worked the land themselves. Slaves, less plentiful now that the wars of expansion were over, became rare as agricultural workers.

Parts of this history have attracted more attention from scholars than others. There is not much doubt about the crops grown, or where specific types of agriculture were centered. There has always, on the other hand, been a considerable interest in the systems of agricultural management and rural labour that were in use in Africa.

Largely this is to be explained by the not unnatural desire to discover how Rome first created, and then kept functioning for centuries, an apparent agricultural miracle out of a land previously home mainly to nomads. Partly responsible as well was the fact that there exists more information on the problems of how farms were actually run in Africa than in almost any other province. That this is so is due mainly to the discovery of a number of important inscriptions

relating to imperially owned estates in the area of the Medjerda river (the ancient *Bagradas*) in north-central Tunisia, but which potentially have a much wider applicability. These 'grandes inscriptions', as they are commonly called provide a depth of knowledge in matters of farm management, rural labour, landholding and other key subjects that is unparalleled in Africa, indeed anywhere in the Empire. Because of them, investigation of the problems of agricultural management and labour in Africa is not only desirable, but feasible as well.¹⁵

Ever since the discovery of the 'grandes inscriptions' at the turn of the century, the topics of agricultural management and rural labour have been the object of intensive scholarly attention.¹⁶ The result has been a very great number of studies. These works have, however, generally suffered from two main flaws.

Although it has long been realized that Africa under Rome retained to a very great degree an individual character, and was never thoroughly 'romanized', most analyses of agriculture in Africa fail to take this into account. The terms of reference under which farming in Africa are considered are more applicable to Italy than Numidia. Land is conceived of in the language of private ownership, leased under the rules of *locatio-conductio*; farmers are 'small owners', 'hired labourers', or 'tenants', who pay 'rent'.¹⁷ These are concepts which the Romans will, of course, have brought with them, but little serious account is taken of the implications of the survival under Roman rule of elements of the pre-Roman, even pre-Punic, socio-economic structures that will have been found in what was essentially a tribal society. An obligatory reference to the mass of the population being 'native'

obscures the fact that such natives will probably have kept in use a whole variety of features, such as communal landholding, inalienability of land and the assured rights to land of tribal members which, though not to be found in Latin legal terms, will have deeply affected how agriculture really worked. It is only relatively recently, with the seminal paper of C.R. Whittaker, "Land and Labour in North Africa" that this whole issue has come to be appreciated properly.¹⁸

Secondly, although a great many words have been written on the topics of how farms were operated in Africa, and on who made up their labour forces, no thorough economic analysis of the best evidence in existence -the 'grandes inscriptions'- has been undertaken, even though it forms the basis of much of those writings. Such an analysis was begun by J. Kolendo in his Le colonat en Afrique sous le Haut-Empire¹⁹, but has been most satisfactorily completed in D. Kehoe's The Economics of Food Production on Roman Imperial Estates in North Africa.²⁰

Important though these works are, they do not take into account each others' advances. Kehoe still writes in terms of African farms from the market-economy, landowning, perspective of the Italian writers on agronomy, Whittaker and Kolendo have not benefitted from the insights made by Kehoe into the economic status of farmers on the imperial estates.

The questions of agricultural management and the rural labour force are thus very much alive and remain central problems in the agricultural history of North Africa, which is to say, in all aspects of the history of North Africa. Given the obvious significance of the topic and the fact that important, but as yet separate advances have

been recently made, it would seem appropriate at this time to reconsider the management and labour force of agriculture in Roman Africa.

The aim of this study, then, is to examine how agricultural production was organized in *Africa proconsularis* during the Principate. The central themes will be the form which the organizational system, or systems, took and the forces which shaped them. The important questions will be: the degree of structural change under Rome, or, in other words, to what extent was agriculture in the period a 'Roman' (or, alternatively 'non-Roman') activity; the true nature of the system in place in the one area about which there is much information, namely the imperial estates of the Medjerda area; and what other systems, if any, can be uncovered elsewhere in Africa.

To fulfill this aim, the study will be divided into two main parts. The first will concern itself with the problem of agrarian change, focussing on how the agricultural situation in Africa developed under Roman rule. The first chapter will describe the agricultural state-of-affairs in North Africa as the Romans found it in 146 B.C. The second will then examine the means by which the arrival of Roman rule could have brought about changes in this pre-existing structure.

The second part will then reinterpret the evidence of the agricultural conditions prevailing in *Africa proconsularis* at the height of its development, in light of the facts revealed in Part One. Chapter Three will survey the state of knowledge of the systems of agricultural ownership, administration, management and rural labour in *Africa proconsularis*. Chapter Four will then focus on the system in

place in the one area that can be discussed in detail, the imperial estate district of the Medjerda river area, as revealed by the 'grandes inscriptions'.

It is a commonplace that historians of Antiquity have to contend with an intrinsic lack of sources. This lack is felt more acutely in the economic than in any other field of study.²¹

So wrote P.W. de Neeve in the introduction to his study of agricultural tenancy in Republican Italy. The historian of African agriculture might be tempted to add 'and most acutely of all in the economic history of the provinces'.

The standard limitations apply. There are no sources of trustworthy statistics and figures of any kind, with the result that all conclusions are broad and comparative, which severely limits any attempt at quantitative analysis. Economic references are in any case rare, and those which do exist constitute such an arbitrary selection from the whole of ancient economic life as to make almost any general statement very risky and leave any specific certainty without a wider context. The sources used are often widely separated in time and space, not only from each other, but from their subject, with resultant doubts as to their credibility. Nor can one go beyond written sources to more than a limited extent. Archaeology reveals much, but not labour organization, or 'modes of production'. Limited objectives are the most an economic historian can expect.²²

African economic history (or that of any province, one suspects) suffers an additional handicap. There were certainly ancient writers

on economic affairs, writers specifically enough interested in agriculture that their works have enabled K.D. White to insist that there is no part of Roman life on which we are better informed than the exploitation of the soil.²³ However true this may be for Italy, that truth is confined to Italy. The great writers on agriculture -Cato, Varro and Columella- wrote only of Italy. Even if they do present something of a problem when it comes to deciding the relationship of their ideas to the actual state of Italian farming, they nonetheless provide far more information than is available to anyone studying provincial agriculture. Most of the other writers who commonly present useful facts about agriculture suffer from the same flaw. There are, in fact, no comprehensive written sources on the agriculture of Roman Africa. Nor has rural archaeology, useful for at least giving the basic background on agriculture -areas farmed, types of farms, densities of populations, types of crops, and so on- if not on the less tangible aspects of economic relations, much to offer. M. Janon has said of the Aures region of southern Numidia that "Nous n'avons pas à notre disposition le moindre compte rendu de fouille, pour l'excellente raison qu'il n'y a jamais eu de fouilles", a remark that is almost as true for the rest of Africa, and which is only now being redressed.²⁴

The problems are particularly acute in examining the pre-Roman period. There is almost no rural archaeology. Economic history is forced to rely in its entirety on the essentially incidental references to pertinent matters in the writing of those ancient authors who had cause to discuss African affairs. The bulk of these were historians, often Greek, commenting on the various Roman military campaigns against

either the Carthaginians, the Libyans, or each other. Economics had little relevance here. Even assuming that an historian's facts were correct (which, since many had never seen Africa, is far from certain), one still possesses only a relatively few of them, and those usually unconnected. It is a particularly great loss that the work on agriculture by the Carthaginian Mago has survived only in fragments. Nonetheless, Polybius, Livy, Appian, Diodorus Siculus and Sallust, (to name only the most prominent), along with an assortment of other sources, such as the geographical writings of Herodotus and Strabo, have produced enough useful facts to allow one to reconstruct at least a broad outline of pre-Roman agriculture.

The emphasis is on written sources as well in the analysis of change wrought by Roman control to this system. Here, though, it must be Roman authors who play the most important role, as it is the Roman era that is being dealt with. Comparison can now be made to the agricultural writers, though with caution, to see how Italian practice may have been translated to Africa. Epigraphical evidence is also very useful here. The bulk of the information still comes from incidental references to agriculture in sources which are not concerned essentially with that subject.

All this changes in Part Two. Here one has a direct, explicit and even moderately comprehensive source on exactly the subject at hand. The 'grandes inscriptions' referred to above allow one to comment in detail on the legal organization of agriculture in at least one part, and possibly much, of *Africa proconsularis*. It is even possible to discern something of the difference between legal theory

and the 'on the ground' reality. Epigraphic evidence, therefore, forms the heart of these chapters. Other sources, some written, some epigraphic, allow views of other parts of the province, as well as permitting one to check and expand on the major inscriptions. These other sources are as diverse as the novelist Apuleius, the engineer Frontinus, Pliny's Natural History and the Digest.

The ancient sources have, of course, been primary in the study. Any attempt to review a subject which has been comprehensively commented upon must, however, take into account modern scholarship. Every attempt has been made to do this. Particular attention has been paid to recent writings. The key works in this regard are those of Kolendo, Whittaker and Kehoe. As well modern anthropological research has proved vital in understanding some key topics, such as tribal economic structures and pastoral nomadism.

Finally, the exact scope of the study. The limitations which have been placed on this discussion are several. In terms of subject matter, it will be clear at this point that the concentration will be entirely on the question of rural labour and agricultural management. There is neither any particular need, nor the space in this study, to widen the topic by describing in detail facts about the nature of the agricultural lands of Africa, the overall importance of various crops, or the physical details of African farming, as these facts are not in any dispute. More importantly, there will be no attempt here to consider the question of the 'colonate' of the Late Empire, the process by which the common farmer's status degenerated from free man to serf.

The topic is directly related to the subject under consideration and there are those who believe that the African inscriptions give important information on the creation of the colonate. That, however, is a problem far too large to be included here, and would require its own work.

Chronologically, the limits of the study are theoretically 146 B.C. to A.D. 235, with emphasis on what is normally referred to in English as the 'Principate' and in French as the 'Haut-Empire'. The earlier choice of date is obvious, as this is an examination of Roman agriculture, but is necessarily flexible: to understand how Roman agriculture developed it is important to know on what it was based. Chapter One, therefore, will concern the pre-Roman situation. The terminal date is somewhat more arbitrary. Inclusion of the reign of Severus was necessary, as one of the 'grandes inscriptions' dates to that period, but it was not desirable to go much beyond, as one then enters a period which produced very different social and economic formations from the Principate, and great changes in Africa. The convenient date of A.D. 235, corresponding to the nominal end of the Principate has therefore been chosen.

Geographically, the study is limited to *Africa proconsularis*. This includes modern Tunisia, eastern Algeria and the coastal strip of western Libya called Tripolitania.²⁰ Concentration within this province has been on the northern area, what is today essentially north and central Tunisia. This was the most important part of Roman Africa, containing the largest share of the population, most of the cities and, probably, the most important agricultural areas (in terms, at least, of

exports). It is also the only area on which there is much detailed evidence.

Notes - Introduction

1. K.D. White, Roman Farming (Ithaca, New York: Cornell University Press, 1970), p.11. An echo, of course, of Pliny N.H. 27.3.
2. Michael Rostovtzeff, The Social and Economic History of the Roman Empire, 2nd ed., edited by P.M. Fraser, 2 vols. (Oxford: Clarendon Press, 1957), pp.192-93.
3. Lynn White, "The Expansion of Technology 500-1500," in Economic History of Europe: the Middle Ages, ed. C.M. Cippola (London: Collins, 1972), 143-74, pp.144-5.
4. For a good summary of these new orthodoxies about the Roman economy, see Peter Garnsey and Richard Saller, The Roman Empire: Economy, Society and Culture (Berkeley and Los Angeles: University of California Press, 1987), pp.43-106, especially 43-63; M.I. Finley, The Ancient Economy, 2nd ed. (Berkeley and Los Angeles: University of California Press, 1985), p.56; Richard Duncan-Jones, The Economy of the Roman Empire: Quantitative Studies (Cambridge: University of Cambridge Press, 1974), Introduction and passim; A.H.M. Jones, The Later Roman Empire, 2 vols (Oxford: Basil Blackwell, 1964), 2:769.
5. Pliny N.H. 15.8; cf. Horace Odes 1.1.10; Juvenal Sat. 8.117-18.
6. R.M. Haywood, "Roman Africa," in An Economic Survey of Ancient Rome, ed., Tenney Frank, 6 vols. (Paterson, New Jersey: Pageant Books, 1959; orig. 1938), 4:3-119, p.46.; Expositio totius mundi 61.
7. Pliny N.H. 16.6.7.
8. Cicero De imperio Cn. Pompei 12.34; cf. Varro De re rustica 2.Praef. 3: *frumentum locamus qui nobis adhevat, qui saturi fiamus, ex Africa et Sardinia*. On the role of Sardinia later in the Empire see Robert J. Rowland, "The Case of the Missing Sardinian Grain," Ancient World 10 (1984): 45-8, who argues Sardinia remained a major supplier of Rome.
9. Tacitus Annals 12.43.
10. Claudian De bello Gildonico 1.58-62.

11. The argument for Africa as Rome's main grain source is based on Josephus Bellum Jud. 2.383 (Africa supplied Rome's food for eight months of the year and Egypt for only four). The amount derives from Aurelius Victor 1 (Egypt sent 20,000,000 *modii* to Rome a year - 1 *modius* equalling 6.5lq). Thus Africa sent twice 20,000,000 *modii*; cf. Gilbert Charles Picard, "Neron et le blé d'Afrique," CT 14 (1956): 163-77; Haywood, "Roman Africa," pp.43-5. The best discussion of African grain shipments to Rome is Geoffrey Rickman, The Corn Supply of Ancient Rome (Oxford: Oxford University Press, 1980), App. 3, pp.230-77; see also pp.108-12. R. convincingly questions the 40,000,000 *modii* figure. Cf. P.D.A. Garnsey, "Grain for Rome," in Trade in the Ancient Economy, ed. P.D.A. Garnsey, C. R. Whittaker and Keith Hopkins (Los Angeles and Berkeley: University of California Press, 1983), 118-30, who argues for an average export from Africa of 8,000,000 *modii* during the Republic and up to twice that during the Principate.

12. Appian B.C. 5.67; Tacitus Histories 1.73; 3.48; 4.38; Vita Severi 8.

13. Eusebius Hist. Ecc. 9.14; Claudian De bello Gildonico 1.62-9; Orosius 7.42.12; Symmachus Epist. 4.54, 74.

14. This very brief summary of the most accepted version of the course of development obviously omits detail. It has been compiled from a number of modern works, the general consensus of which it represents: T.R.S. Broughton, The Romanization of Africa Proconsularis (New York: Greenwood Press, Publishers, 1968; orig. 1929), passim; Haywood, "Roman Africa," Chaps. 1 and 2 passim; Rostovtzeff, Social and Economic History, pp.314-27; K.D. White, "Roman Agriculture in North Africa," Nigerian Geographic Journal 6 (1963): 39-43; Susan Raven, Roman Africa, 2nd ed. (London, Longmans, 1984), Chap. 6 passim; Gilbert Charles Picard, La civilisation de l'Afrique romaine (Paris: Librairie Plon, 1959), pp.59-76. In giving a general summary I have presented the most commonly stated course of events. I do not necessarily agree with all of them - there is, to choose a minor point, no real evidence that the soils of northern Africa became depleted, yet this is often stated as fact. Some of the more important elements of this summary with which I disagree will be discussed in detail in the course of this paper.

15. The inscriptions are to be found in CIL., VIII, 25,902; 25,943; 26,416; 10,570; 14,428; 14,451. I have generally preferred the untranslated phrase 'grandes inscriptions' found in French scholarship to the rather less euphonious 'big inscriptions' used in English. Texts are to be found in Dieter Flach, "Inscripfenuntersuchungen zum römischen Kolonat in Nordafrika," Chiron 8 (1978): 441-92; J.J. van Nostrand, "The Imperial Domains of Africa Proconsularis," University of California Publications

- in History 14 (1925): 1-88 (with English translation); Haywood, "Roman Africa," pp.89-102 (with English translation based on van Nostrand); F. Abbot and A. Johnson, Municipal Administration in the Roman Empire (New York: Russel and Russel, 1968; orig. 1926), no's. 74, 93, 111. See below, at Appendix for texts of the most important inscriptions.
16. References to early work will be found in Roth Clausen, The Roman Colonate: the Theories of its Origin (Rome: L'ERMA, 1965; orig. 1925), Chaps. 5 and 6, pp.138-201. A list of the more recent research on the subject would be prohibitively long. See Dennis P. Kehoe, "The Economics of Food Production on Roman Imperial Estates (see note 20, below), pp.7-12 and bibliography and the bibliographies of Jerzy Kolendo, Le colonat en Afrique sous le Haut-Empire (see note 19, below) and Dieter Flach, "Pachtbedingungen der Kolonen und die Verwaltung der kaiserlichen Guter in Nordafrika," ANRW 2.10.2, and Flach, "Inchriftenuntersuchungen," for such lists.
 17. These are not references to particular works, though such concepts can be found expressed in Rostovtzeff, Social and Economic History; Haywood, "Roman Africa,"; and most others.
 18. Charles R. Whittaker, "Land and Labour in North Africa," Klio 60 (1978): 331-62.
 19. Jerzy Kolendo, Le colonat en Afrique sous le Haut-Empire, Annales litteraires de Besançon 177 (Paris: Université de Besançon, 1976). The core of this work is summarized in "Le problème du développement du colonat en Afrique romaine sous le Haut-Empire," in Terre et paysans dépendants dans les sociétés antiques (Paris: Centre de recherches d'histoire ancienne de Besançon, 1979), 391-439.
 20. Dennis P. Kehoe, "The Economics of Food Production on Roman Imperial Estates in North Africa" (Ph.D. Dissertation, University of Michigan, 1982) - forthcoming in book form under the same title in the series Hypomnemata. Some of the important material from this research has been published in "Lease Regulations for Imperial Estates in North Africa," Zeitschrift für Papyrologie und Epigraphik 56 (1984): 193-219 and 59 (1985): 151-72.
 21. P.W. de Neeve, Colonus: Private Farm Tenancy in Roman Italy during the Republic and Early Principate (Amsterdam: J.C. Geiben, 1984), p.23.
 22. Finley, Ancient Economy, p.182; Garnsey and Saller, Roman Empire, p.43; de Neeve, Colonus, pp.23-4.
 23. White, Roman Farming, p.14.

24. Michel Janon, "Paysans et soldats," in L'Afrique romaine: les conférences Vanier 1980/ Roman Africa: the Vanier Lectures 1980, ed. C.M. Wells (Ottawa: University of Ottawa Press, 1982), 51-68, p.52.

25. This includes much of what is usually called Numidia. In fact Numidia was not created a separate province until the reign of Severus, despite what is to be found in most atlases of the Empire. Before this the province of *Africa proconsularis* was divided into a civilian zone, encompassing the eastern portion, and a military zone, in the west, under the *de facto* rule of the military legate. This will probably have had only a limited effect on agriculture, if any at all. Provincial boundaries were changed again during the Late Empire. See André Berthier, La Numidie: Rome et le Maghreb (Paris: Payot, 1981), pp.139-41; Brent D. Shaw, "Soldiers and Society: the Army in Numidia," Opus 2 (1983): 133-60, pp.142-43.

Although this study concentrates on *Africa proconsularis*, it has inevitably been necessary to make reference to areas beyond this one province. In this regard it should be noted that the word 'Africa' has been taken to mean North Africa, north of the Sahara and west of Cyrenaica - that is, modern Morocco, Algeria and Tunisia and part of Libya. The ancients did not normally consider Egypt as part of Africa, as is evidenced by the choice of names Rome made for her provinces on the African continent (ie., *Africa* and *Egypt*). Cyrenaica (modern East Libya) was part of Africa, but was always much more part of the Greek than Latin world, and I have not included it here. Tripolitania (modern West Libya) was Latin and is included. For the sake of vocabulary variety I have used 'Africa', 'North Africa' and 'northwest Africa' interchangeably when referring to the whole of North Africa generally; in the same sense I have anachronistically also used the modern term for Tunisia-Algeria-Morocco, that is 'the Maghreb', although properly speaking it does not include Tripolitania. This area was, however, legally, culturally and economically part of *Africa proconsularis* in antiquity. Any references relating specifically to the province of *Africa proconsularis* use that name, or equivalent phrases such as 'the proconsular province'.

CHAPTER ONE

Agriculture in Pre-Roman Africa

Not much information about the agricultural economy of the Maghreb in the pre-Roman period has survived. Carthage has left no written history; nor, of course, have the native kingdoms. Most of the earliest references in literature come from Greek historians, many of whom had never visited the region. Those who had first-hand knowledge tell little directly about agriculture in any of its forms. One must inevitably rely on the writers of the Roman period to provide much of the knowledge, but they not only suffer from the same essential lack of interest in the topic at hand, but are necessarily anachronistic as well. Archaeology is of limited use, as simple agricultural systems leave few recoverable traces. Excavation cannot reveal anything about social details and the organizational aspects of agriculture. Little rural archaeological prospection has been done in any case.

One is thus hard-pressed to gain much information on the extent and nature of agricultural activity in the pre-Roman era, and even less able to extract much on the social and organizational side of the question. Nonetheless, some attempt is necessary, if one is to understand the events and processes of the later, Roman times. The Roman systems which developed in Africa cannot help but have been influenced by the situation they inherited. Whatever conclusions can be arrived at will inevitably be tentative and fragmentary, but useful all the same.

In agricultural terms, the Maghreb at the time of the arrival of the Romans can be divided into three broad zones, based upon their state of development. The raising of crops was known throughout the region quite early in prehistory, but it was not practised equally everywhere. Carthage had appropriated, or gained political and military control over much of the most fertile land in the north-east 'corner' of what is today Tunisia. Agriculture reached its highest intensity of production here. Beyond Carthage's territory lay the kingdom of the *Massylii*. Here, under the influence of Carthage, the lands bordering Carthage's territory also advanced agriculturally, to reach a fairly advanced state. These two areas, forming as they do the part of Africa most heavily developed by Rome in later years, will be the main focus of attention here. In the rest of the Maghreb agriculture was much less developed and, though it was certainly carried on, pastoral herding formed the larger part of economic activity.

The exact limits of the territory which came under direct Carthaginian control are not yet entirely clear. It is generally accepted that, for much of her early history, Carthage possessed little territory in Africa. "Beyond her walls the country belonged to the natives."¹ After the stifling of her ambitions in Sicily with the defeat at Himera in 480 B.C., Carthage turned her attention towards her hitherto unexploited hinterland.² At the height of her power Carthage's territorial limit ran more or less along the line of the modern Tunisian-Algerian frontier, from ancient Thabraca on the north

coast southwards to Sicca Veneria; from there eastwards to near the east coast at Hadrumetum; and probably southwards towards Acholla to form a narrow coastal strip.³

Within this boundary the Carthaginians had, in K.D. White's words, "... laid the foundations of a first class system of intensive cultivation..."⁴ Particularly after the end of the Second Punic War agricultural production was stressed and expanded.⁵ It seems probable that by 146 B.C. most of the suitable land in the north-east of modern Tunisia -bounded roughly by Thabraca-Sicca-Hadrumetum- was in use.⁶ Strabo noted rather generally that the Phoenicians annexed all the African land which could support more than a nomadic way of life, which, though certainly not true of the Maghreb, or even of the area of the later Roman province of *Africa proconsularis*, is probably fair enough for this area.⁷

The area immediately adjacent to the city of Carthage itself, including the Cap Bon peninsula, the northern Sahel, the western Tell and the lower valley of the *Bagradas* river (the modern Medjerda) probably concentrated on arboriculture and viticulture.⁸ The army of the Greek invader Agathocles, in the late fourth century B.C., marched past vineyards and orchards on its campaign in this area, while no mention is made of wheat fields.⁹ The fragments of the famous agricultural treatise by the Carthaginian Mago contain many references to the production of trees.¹⁰

There is no doubt that the large-scale farming of vines and trees in the *chora*, as this zone was called, was an important part of agriculture there. To suggest that such commercial agriculture drove

all else out is perhaps an overstatement, however. Polybius does note that Carthage needed only the *chora* to survive, but the revenues from 'Libya' for war and amassing provisions.¹¹ This suggests at least some cereal growing in the *chora*. Whatever crops were grown, the cultivation was no doubt intensive.

Beyond the *chora*, but still within the area under direct Punic control, lay the area Polybius referred to as Libya: the middle and upper valley of the *Bagradas*, the upper *Miliana* valley and the valley of the *Siliana*, as well as the coastal plain of Byzacium. The accepted view is that here the land was left to the aboriginal Africans, who are believed to have grown mainly cereal crops; fruit trees and vines were rare.¹² Whether this choice of crops was a consequence of official Punic policy -as seems to have been the case in Sardinia, where the planting of olive trees is said to have been a capital offence- is unknown.¹³

Though Carthage was by far the most important of the Punic cities in Africa, there were others situated along the coast of the Mediterranean. Leptis Magna, Sabratha and Oea in Tripolitania, Hippo, Rusicade, Chullu, Rusgunia, Icosium and Iol on the Algerian coast and Hadrumetum and Utica on the east coast of Tunisia were all Phoenician settlements of at least some importance.¹⁴ It is probable that each more or less reduplicated the general division of intensively farmed land immediately around the town and extensively farmed cereal fields beyond, all on a very much reduced scale and with due regard for the local potential. Leptis Magna, for example, possessed huge olive groves by the days of Caesar, undoubtedly begun in the Punic era.¹⁵

They took advantage of a climate less suited to grain than that of Carthage's hinterland.

Within the territory 'owned' by Carthage a few writers give some clues to the organization of agriculture, though the picture is far from complete. It is known that the rich, presumably the Carthaginian nobility, owned successful, even magnificent estates near the city, particularly on the Cap Bon peninsula.¹⁶ They may have owned estates further afield as well: Hannibal owned land near Thapsus.¹⁷ The size of such estates cannot have been particularly great, since the amount of land in the *chora* was not large enough to permit vast *latifundia* to grow up.¹⁸ There is no really strong evidence that the estates were as uniformly small as is sometimes accepted, however.¹⁹ Certainly it is not a matter of holdings on the scale of later Roman operations, but some, especially those further out from Carthage (such as the possible Hannibalic farm at Thapsus) may have been larger.

Beyond this, little is known of the organization of Carthage's lands, in the *chora*, or beyond. There is no information on possible state ownership of land.²⁰ If the *chora* was owned mostly by Punic nobles, one cannot tell if the rest of Carthaginian 'Libya' was owned by the same persons, by the state, or by the natives.²¹ The territory was no doubt divided into administrative districts, of which it is now possible to define the broad outlines.²² But no details can be recovered of how this framework was used to organize agricultural production, if in fact it was, or extract taxes, as is known it was. Carthage certainly had extensive contacts with the Hellenistic East in her last centuries, as the recent excavations of the city have shown.

It is also commonly accepted that Carthaginian agriculturalists drew heavily on Greek sources.²³ Whether this means that some of the traits and practices of Hellenistic agriculture were adopted in Carthaginian farming is not known, though it remains a possibility.

One is only slightly better off in regards to details of the rural labour force. It is certain that the bulk of the rural population was native African - that is, of aboriginal, not Punic, stock. Phoenician immigration had no doubt been fairly heavy by ancient standards, but the population of Carthage and her *chora* together cannot much have exceeded four hundred thousand at her height, and intermarriage with the Libyans must have been common in the early period.²⁴ By 146 B.C. even the late influx of Phoenicians after the sack of Tyre by Alexander in 332 B.C. had probably been submerged in the local Libyan population after two hundred years.²⁵ No figures on the inland population are possible, but it is not unreasonable to assume that most of the Phoenician population outside the city would have been found in the *chora* and fewer beyond it; and that intermarriage with whatever Phoenicians settled here would have been even more frequent.²⁶ Thus, inland the population would have been little altered by immigration, while even in the *chora* archaeological prospection has shown a strong Libyan cultural tradition.²⁷ The effect of the Punic culture on the natives would have been undeniable, but it should not be overestimated. It is simply not known what influence it had on agricultural organization and production.

The size of this rural population is uncertain. It seems, at first sight, to have been quite large. There are several references to

the plentiful villages of Carthage's territory. Agathocles took over two hundred *poleis* during his invasion.²⁸ A similar number fell to Regulus.²⁹ Masinissa is claimed to have taken over seventy *oppida castellaque* from Carthage in two years in the 170's B.C.³⁰ By the middle of the second century B.C., the much reduced Carthaginian territory still had over three hundred 'cities' (*poleis*) in it.³¹ During the final Punic war Libyans took refuge in *purgous kai phrouria*, *a polla ēn eu tē chora*, usually taken as 'towers and castles'.³² It is true that these are conventional round numbers, but they clearly represent the reality of numerous inhabited places. What is equally true, however, is that they were not 'cities' in any usual sense, but villages and hamlets, some or all of them fortified. They are the 'petit bourgs' and 'hameaux' still to be found on the Roman *fundus Aufidianus* in the Late Empire, and elsewhere throughout northwest Africa later in antiquity.³³ Large numbers of them do not presuppose a particularly large rural population: pre-colonial Tunisia was dotted with villages, but was still under-populated.³⁴ The population was, however, clearly well sedentarized.

It is worth noting briefly here that a well sedentarized farming system need not rule out the continued presence of pastoral stock-raising and herding. In most parts of North Africa the two go very much hand in hand, or have in recent times.³⁵ Modern evidence shows that long distance transhumance from the south crosses what was the area owned by Carthage. It is true that it is not positive that this reflects ancient practice, but the constraints imposed by the existence of the same geographic and climatic conditions then as now

suggest that, in the absence of evidence to the contrary, migratory pastoralism should probably be accepted for antiquity. Certainly there is nothing amounting to proof that Carthage did not let pre-existing pastoralism continue.³⁶

It is known that Carthage imposed a not inconsiderable burden on its subjects in the form of taxes:

*kata gar ton progegonota polemon eulogous aphormas echein upolambanontes pikrōs epestatēsan tōn kata tēn libuēn anthrōpōn paraironkenoi men tōn allōn pantōn tōn karpōn tous ē miseis diplasious de tais pōlesi tous pharous ē prin epitatontes.*³⁷

This is thought to mean that, during the First Punic War, Carthage took one-half of the native population's harvest and, at the same time, doubled the tribute which the cities had to pay to her. The presumption is that the percentage of the harvest given over had been increased by the same factor. This suggests a normal, peacetime tax, or tribute of one-quarter of the harvest.³⁸ Whatever the exact amount of the tax burden taken from the natives of Carthaginian territory, there is no reason to doubt that (at least during wartime) "... il privait la population rurale d'une grande partie de ses récoltes".³⁹

It is in this light that one should view the exhortation by Hannibal to his troops before the battle of the Ticinus, when he promised to grant them 'free' land: *agrum sese daturum esse in Italia Africa Hispania ubi quisque velit, immunem ipsi qui accepisset liberisque*.⁴⁰ The implication is clear that there were significant burdens imposed by Carthage on its rural subjects, burdens the removal of which was worth the risk of death. It is not too much to assume that the taxes from which this land was to be immune were the one-half

grain tithes which Polybius mentions.

This tax would presumably be the source of the large quantities of grain which Carthage in her last years was able to furnish to Rome and the Roman army. Livy has a number of references to such donations: 500,000 *modii* of wheat and 300,000 of barley in 203 B.C.; a similar figure in 191 B.C.; a citation on 170 B.C. which specifically distinguishes between grain supplied by Carthage and that by neighbouring Masinissa's kingdom (which was another African source).⁴¹ Polybius mentions that Scipio's terms after Zama included Carthage providing grain for his army for three months.⁴² Tax-in-kind drawn from her subjects is clearly what is represented here; most of such a burden would have fallen on the natives if it is true that it was they who grew grain while the Carthaginians concentrated on arboriculture.⁴³

So far only the 'free' portion of the labour force in the Carthaginian territory has been discussed. The possibility exists of largely slave run estates. This is a system which has been thought to have been typically Carthaginian.⁴⁴ It is to be admitted that there is some justification for this. There are certainly references to the existence of slaves.⁴⁵ There are also reports of what were called slave revolts.⁴⁶ There is even specific mention of enslaved foreign prisoners-of-war forced into chain-gang field work.⁴⁷

The evidence is not overwhelming, however. First, the references that exist apply mainly to the *chora*.⁴⁸ Even within this area there is room for doubt. Many of the statements turn out to refer only to 'slaves' with no rural qualifier; some specifically deal with slaves in towns. That Carthaginians had some domestic chattel slaves does not

prove slave-run estates. Some of the slave revolts sound rather more like simple native uprisings. Thus the rebellion of 396 B.C. mentioned by Diodorus was prompted largely by the abandonment of an army in Sicily manned mainly by Libyans.⁴⁹ Imported foreign slaves are unlikely to have been upset over this. Note too that the revolt was by two hundred thousand freemen (*eleutherōn*), joined by slaves. At most one is dealing with Libyans pressed into some sort of submission by Carthage and connected (probably) by kinship to the lost soldiers, but even then not many need be slaves, even fewer rural ones. Given that the Libyans were being heavily taxed and conscripted to fight in foreign wars, one need not invoke a hated slavery to explain Libyan revolt.⁵⁰ Such arguments are never conclusive, and the aim is not to prove that there was no use of slaves in Carthage's agriculture. They do, however, suggest that it may not have been as exclusively servile as is often thought, even in the *chora*.

Beyond the borders of Carthage's official territory control passed out of the hands of the Carthaginians. By the later part of Carthage's history this outer area had been taken over by the Numidian kingdom of the *Massylii*, which reached its peak under Masinissa (c. 240-148 B.C.). However, though political control may have stopped, the influence of the Punic state was felt well beyond the actual frontier. It is not difficult to see the 'civilizing' influence of Carthage which provided the impetus for the development of the Massylian kingdom under Masinissa.⁵¹

The extent of the kingdom is still debated, but the areas

relevant to agriculture are not.⁵² For climatological and topographic reasons, the best lands for the growing of grain outside the Punic pale lie to the west and south-west; along the upper reaches of the *Bagradas*, around modern Souk Ahras (Thagaste), and west to Guelma (Calama) and on towards Constantine (Cirta) and Setif (Sitifis); and south-west to the Thala region.⁵³ It was in this region that the Punic influence would have produced the greatest result agriculturally. It has been noted that the recovery of inscriptions referring to the cult of the *Cereres*, non-Roman grain goddesses whose worship originated in Carthage, and continued well into the Roman era, has been concentrated in precisely these areas - the western Carthaginian lands and on to the west to Cirta and south-west to Thalla and Lambaesis.⁵⁴ The greatest number are in the eastern part of this zone, that is, nearest Carthaginian territory. This concentration, it if is truly indicative of those areas where grain was being grown in significant amounts by the second century B.C., is just what should be expected of agricultural development spurred by Carthage's influence.⁵⁵

It was common in antiquity to attribute to Masinissa the actual introduction of agriculture into Numidia. Polybius spoke of him in miraculous terms, claiming that Numidia was sterile before him and that he alone began the growing there of many kinds of crops.⁵⁶ Strabo repeats the tale, as does Appian.⁵⁷

Modern opinion rejects this. It does seem unlikely. Certainly it would seem odd that no agricultural practices had seeped out of Punic territories, peopled as they were by essentially the same folk as the rest of Numidia. Purely nomadic peoples are, in fact, exceedingly

rare, some agriculture almost always being present, as was mentioned above.³⁸ There is, in any case, archaeological evidence for very early agriculture in central and southern Numidia and it is difficult to accept that it existed there and not in the more attractive lands of the *Massylii* in northeastern Numidia.³⁹ It is altogether more likely that Masinissa was able to benefit from Carthage's downgraded power after the Second Punic War to impose his control to a greater degree than previously possible, and so help the expansion and increase of pre-existing agricultural production, bringing about additions to the area planted, and so larger production volumes, while possibly introducing such crops as the olive and vine.⁴⁰

What Masinissa's reign possibly did see was the beginning of truly large-scale production of wheat and barley, in the fertile part of his kingdom. There are numerous ancient references to the grain of Numidia. In 200 B.C. Masinissa was able to provide Rome with 200,000 *modii* of wheat and as much barley; two years later another 200,000 *modii* went to the Roman army in Macedonia.⁴¹ In 191 B.C. Masinissa's ambassadors more than matched Carthaginian offers to Rome, promising 500,000 *modii* of wheat and 300,000 of barley to the army in Greece, and another 300,000 and 250,000 *modii* respectively for Rome itself.⁴² These levels of contribution were kept up, and in 170 B.C. Numidia was again able to promise to donate a full million of wheat and a half-million of barley, again matching a Carthaginian gift.⁴³ It is known, in addition, that grain was sent to Delos in the 160's B.C.⁴⁴ And all these donations occurred before Masinissa annexed the *Magni Campi*, the fertile and productive grain lands of Carthage's *Bagradas*

valley after the 170's B.C., as part of his expansionist policy.⁶⁵ It is also worth noting that several of these gifts took place in successive or nearly successive years, eliminating the possibility of the use of stored grain.⁶⁶

Production clearly did not decline after the King's death. His son sent grain to the Roman army in Sardinia.⁶⁷ Caesar claimed after he annexed Numidia that the new province would provide 1,200,000 *modii* of grain in tribute annually.⁶⁸

It seems likely that grain was the chief crop of this heartland of the *Massili*. Polybius' reference mentioned above certainly suggests other crops were grown as well, but there is no mention of them in this area in the period before the Romans.⁶⁹ It is perhaps significant that Sallust, with the advantage of personal experience, was able to comment that Africa was not a good land for growing trees. Although it is impossible to know to what extent the lack of orchards which he depicts was due to the ravages of the last Punic war, it is notable that his accounts of the military operations in eastern Numidia during the war with Jugurtha stress the grain production of the region.⁷⁰ If the above mentioned Carthaginian reluctance to allow the spread of arboriculture and viticulture into the natives' lands is at all accurate, it is probable that such innovation was not encouraged by Carthage in independent Numidia either.

It probably should not be thought that settled agriculture completely eliminated semi-nomadic herding even in this region. There is no proof of this, and admittedly the relationship between the pastoralists who used the region before Masinissa's period and the

farmers who now farmed more land must have changed. The pastoralists' freedom of movement must have been restricted, for one thing. But there is mention of pastoral herders in the early days of Masinissa in eastern Numidia.⁷¹ Sallust mentions the Muthul river, in the same area, as being deserted and frequented only by cattle farmers in Jugurtha's day.⁷² Polybius, also a visitor to Africa, comments on the vast number of horses, oxen, sheep and goats, suggesting pastoral herding.⁷³ As noted above it is not known what routes the pastoralists frequented in antiquity, but it is certain that modern pastoralists use routes which find their way from the mountains of the Oued Nail, Nemenchas and Aures in the south into this very part of Numidia, between Souk Ahras in the east and Setif in the west.⁷⁴ Given the fact that the pastoralists were able to provide needed services for farmers -harvest labour, animal transport for grain- as they have done in recent history, there is no reason to believe that such movements were not standard in the period of Masinissa.⁷⁵

There is not much information on the organization of the agricultural lands of the developed part of Numidia, any more than there is on the Carthaginian territories. There is a distinct possibility that the Numidian kings continued to use the same Carthaginian administrative system as had existed before in those areas which were taken from Carthage.⁷⁶ There are no data on how the areas never under Carthaginian control were run. The only further information is limited entirely to the possessions of the Massylian kings and their family.⁷⁷ Both Polybius and Diodorus recount that Masinissa possessed enough land personally to set up estates of ten

thousand *plethera*, with Diodorus adding that one such estate was given to each of the king's sons as a bequest, along with all that was needed to run it.⁷⁸ As ten sons survived him, the assumption is that Masinissa controlled a fairly large group of royal estates.

It has been suggested that if a location for these properties is to be sought, the central *Bagradas* valley is the place to look.⁷⁹ The reasoning is that this was the most developed area agriculturally, and also that it is in this area that there are to be found a number of towns bearing the epithet *Regia* or *Regius* -Zama Regia, Bulla Regia, Hippo Regius, Aquae Regiae and (possibly) Thimida Regia- and so thought to have been royal residences, or to have other royal connections. This is plausible enough, though far from proven.⁸⁰ It is also known that the Massylian kings were given land inside the new province of Africa after the Third Punic War in reward for their aid.⁸¹ These lands found their way eventually into the hands of King Hiempsal II of Numidia, who Cicero mentions as possessing lands "*in ora maritima*".⁸² Given that such lands would have been entirely within a Roman province, they were probably considered the personal property of the kings, rather than as part of a foreign state.⁸³

It is not possible to make any reasonable statement of the size of the royal estates of the Massylian kings. The references by Polybius and Diodorus are by no means complete catalogues. The figures there are do not require the royal estates to have been very large. If, as is usual, one uses the figure of ten thousand *plethera* given to each of ten sons, and uses Varro's figure of one *plethron* as equal to ten thousand square Roman feet, the area bequeathed by Masinissa

amounts only to some eighty-nine square kilometers.⁸⁴ All ancient figures of this sort must be viewed with the gravest suspicion, of course; and it is true that the word *miriaplethros* used by the sources may well not have been intended to represent any specific area of land at all. However, other data do lead to the same general conclusion. The figures of 200,000, 300,000, 500,000 and even 1,000,000 *modii* of grain which are found in the sources sound impressive, but not that much land would be needed to produce such amounts: the accepted figures range from twenty to two hundred square miles for the 1,200,000 *modii* mentioned in Caesar's claim in Plutarch.⁸⁵ Thus, even if all the grain exported came from land controlled personally by the king, such estates are not proven to have been extensive. All one can be absolutely sure of is that grain was grown on a large scale in Numidia before the Roman annexation, and the kings of the *Massylii* controlled some sort of estates, though not necessarily large ones.

It is possible to make only the broadest comments on the status of rural agricultural populations in this part of Masinissa's kingdom. It is certainly clear that some sort of taxation was imposed upon the farmers: the quantities of wheat and barley donated by the rulers of Numidia can only have been obtained by some form of taxation-in-kind. It not possible to know if such taxes were imposed equally upon all settled agriculturalists, or only upon those working the royal estates. Though the latter seems unlikely, it is uncertain whether the same system was at work across the whole kingdom. Strabo mentions a census of foals ordered by the kings of Numidia, suggesting the possibility of some sort of proportional tax-in-kind on these animals, and possibly on

other pastoral products as well.⁸⁶ Thus pastoralists were probably at least partially under royal control as well.

There is a trio of references which bears upon the agricultural work force's position, but which are vague in the extreme and open to a number of interpretations. They do seem to suggest some sort of legal and social constraints upon the freedoms of the farmers of Numidia in the second century B.C. The first century A.D. writer Vitruvius records that near Zama there was an *oppidum* called Ismuc. This *oppidum* was entirely the property of one man, land and all: "*Gaius Iulius, Masinissae filius, cuius erant totius oppidi agrorum possessiones*".⁸⁷ Taken in this context *oppidum* must here mean an estate of some sort.⁸⁸ It was, moreover, a large holding: "...*oppidum Ismuc cuius agrorum regiones incredibili finitae sunt terminatione*".

The point is, of course, that if all the land was the property of one man, the local population was entirely dependant upon him economically. One would either be dealing with slaves or tenant farmers as the agricultural productive force.⁸⁹ Was this some early form of the colonate? The relevance to the pre-Roman situation comes from the fact that there is fair reason to believe that this estate was not founded after the Roman conquest, but had pre-Roman origins. The name *Masinissae filius* suggests this may be one of the royal estates; the location is certainly right, and opens the possibility (though no more than that) that Ismuc was not unique.⁹⁰ Presumably the land had been inherited directly, or confiscated by Caesar from Juba I (who backed Pompey in the Civil War) and given to Gaius Iulius for services rendered.

The problem with all this is that, while the estate may well have existed and its ownership may well have been handed down intact, this hardly requires that its organization had remained unchanged. What existed in the first century A.D. may, but need not have, existed into the first B.C.

Somewhat similar is a passage in Diodorus Siculus to which reference has already been made, concerning Masinissa's agricultural bequests. Diodorus includes the detail that Masinissa

*en de tais agron epimeleiais tosauton diēnegken ōs ekastō
tōn uiōn apolipein agron murioplethron kekasmēmenon pasais
tais kataskeiais.*⁷¹

A number of scholars have taken *kataskeiais* to mean rather more than simply 'well-equipped'. It is interpreted as 'with everything needed for cultivation', and includes the manpower necessary for farming.⁷² There would thus be evidence for not only an economically dependant labour force, but one over which political control could be transferred at will. In short, a tied, serf-like labour force in the fields of Numidia well before the arrival of Roman control, with either slaves or tenants transferable with the land they worked. In the same vein, during the Civil War, Caesar promised native African recruits that *kai autous eleutherous aphesein*, which only makes sense if in his eyes they were not free.⁷³

How much of this is to be accepted? It is not difficult to feel that too much is being read into evidence such as that just presented, though it admittedly is suggestive. The real problem lies in the interpretation. It is probable enough that the rural population of Carthage's territory and of the Numidian kingdom were 'peasantized' in

the broadest sense of that term (rural farmers who have to transfer their surplus to another, dominant group). It is entirely possible that Africa's farmers were to some extent not 'free' - it is arguable, indeed, that any investigation of ancient rural labourers should proceed from the assumption of a "basis of dependency not of liberty".⁹⁴ But is one to see in this a pre-Roman colonate, or something along the same lines? If not, what other model can be used to describe the organization of rural labour in the pre-Roman period?

There has been a tendency to look beyond Africa itself for an explanation. The influence of the Hellenistic world has been invoked and the fields of Africa seen to be a reflection of the highly developed system of economic organization present in the East. To Rostovtzeff, it seemed

...very likely... that the kings of Numidia -if not indeed the Carthaginians- had regulated relations between tenants and landlords in a Hellenistic sense, and treated the peasant almost in the way in which *basilikoi georgoi* were treated in Egypt.⁹⁵

Kolendo and, it seems, Kreissig appear to have accepted this explanation.⁹⁶

There is an initial plausibility to this. Carthage was certainly in contact with the East, and her agricultural practices could have been influenced by Greek ones, particularly in the *chora*. Masinissa was an admirer of Punic and Greek culture, and could have been influenced by them. But as has been seen, Carthage's empire was a late acquisition, with relatively few non-Libyan settlers and, in all probability, a fairly unaltered native culture.⁹⁷ The dramatic change necessary to turn semi-nomadic pastoral Libyans into *basilikoi georgoi*

is unlikely, though if it occurred anywhere the *chora* is the spot to expect. But what was just possible for Carthage seems unlikely in the extreme for the Numidian kingdom. It is generally agreed that the administrative apparatus of Masinissa's kingdom was, for all its Punic and Hellenistic airs, "unsophisticated" and "characterized by a lack of coherent administrative structures".⁹⁸ Masinissa began as essentially a tribal chieftain in a tribal society and whatever considerable abilities he may have possessed, it is hard to envisage that he, or his less capable successors, could have turned Massylian Numidia into anything like the "large scale experiment in bureaucratic centralism and in mercantilism" that was Ptolemaic Egypt.⁹⁹ The tribal organization of society, the size of his kingdom and the difficulty of controlling it, the probable continuation of the pastoral nomadic way of life even in the most settled parts - all these things make such a revolution unlikely. There was no doubt something of an administrative structure, and Masinissa may even have wished to emulate Greek practice, but it is not likely he changed things that much.

There may be an explanation for the hints of a tied and peasantized rural population closer at hand than the Hellenistic East. The background of Africa was tribal and it is to the socio-economic systems of tribal societies that one can look for a useful model of how agriculture was structured in pre-Roman Africa.¹⁰⁰

A theoretical description of the socio-economic concepts of societies which fall into the category of tribal produces an unfamiliar picture.¹⁰¹ One of the key points about them is that the land is conceived of as belonging to the group. This group may be any one of

the various levels of organization present in tribal society - the tribe itself, or more often the clan, lineage, or local community.¹⁰² The land may be explicitly thought of as communally owned, as is often the case in North Africa: among the Beni Mtir of the Central Atlas of Morocco, the land is considered the collective property of all the male members of the clan and is called *tamazrit n jmat* ('land of the group').¹⁰³ Alternatively, the land may be said to 'belong' to a king, or chief. The king may be said to 'own' the land, but it is not ownership in the European sense. His powers of control and disposal over the land are limited. He is better thought of as a trustee, or steward than an owner in the sense that that word is usually used, and the land as being in his custody rather than belonging to him. This system is today typical of sub-Saharan African societies.¹⁰⁴

Whichever approach is used, the central fact is that, since the land belongs to all, all have rights to it. No individual can really 'own' land, at most he can have use of it. This is the case with the just-mentioned Beni Mtir, for example. By the same token, however, each is guaranteed by his membership in the group that he will always have the use of some of the land.¹⁰⁵ In the Medjerda valley of Tunisia, in the nineteenth century, where society was still essentially tribal, the local peasant farmers possessed definite rights to the land and could not be evicted from it, even though the alien concept of private ownership had been imposed in theory, and the land was part of estates that, in the Beylical government's eyes, belonged to one large landowner.¹⁰⁶

The rights tribesmen have to the land are expressed in different

ways. In some cultures the land is redistributed annually to prevent individuals laying claim to specific plots. This was the rule in ancient Germany, according to Caesar, and has its North African counterparts.¹⁰⁷ More commonly, some of the land (usually pasture) is kept as communal land to be used by all members of whichever group it is that owns it, while some (usually arable) is divided up among families to farm. Families will often farm the same land for years and even generations, and indeed do come to have *de facto* rights of possession over it. They do not truly own it, however. These rights of possession may develop to the point where the land can even be sold, but there are still restrictions on it. Among the Iqari'yen of the Rif of Morocco all land has today come to be of this type (*melk*) and can be bought and sold. Such transfers can only take place within the membership of the local community, however, for it is here that the ultimate ownership of the land is thought to reside. The land has become individualized, but not individually owned. Among the Iqari'yen today all land is so individualized, but until recently across much of the Maghreb, and even today in many places, some of the land -often a large portion of it- was communally held.¹⁰⁸

The second important point about tribal economic systems centres on the classic anthropological phrase 'the economy is embedded in the society'.¹⁰⁹ Most of what one would consider economic acts do not take place as individual and specific actions with a chiefly economic purpose, but as a function of social relationships. Society is made up of a hierarchy of social, political and kinship groups and these determine what economic actions will occur. "People are linked in

transactions with one another because of pre-existing relationships of status between them."¹¹⁰ The result is the existence of obligations and rights based on one's position in society. One both owes obligations and has rights.

The points which must be drawn from this are several. Firstly, such obligations and rights work both upwards and downwards through society. They are effective at every societal level; that is, one man may owe obligations to a second and be owed them by a third.¹¹¹ Secondly, such obligations are owed to the position occupied in the society, not the person, and if one has a right it is because of one's role in society, not an individual right. The basic right, that of land, may be demanded by a farmer, but only because he is a member of the group. A leader may be able to demand tribute and service from that farmer, but only because of his role as leader, not out of any personal quality. The rights are invested in the title: "We must continually differentiate between a society as a structure of social positions (titles) and as a structure of relationships between the incumbents of those positions".¹¹²

It might be thought that in segmentary tribal societies (which are universal in North Africa), which minimize social status, these tendencies would be of limited importance.¹¹³ In fact, there are plenty of examples of obligations and rights at work in the Maghreb. Among the Beni Mtir the local leader is elected and carries out his duties. Then, the leader (*amghar*) is owed tribute:

L'*amghar* n'est pas rétribué. Pour le dédommager de ses peines, de sa responsabilité et des frais d'hospitalité qu'exigent ses fonctions, il jouit de certains avantages.

Les groupements désignent en effet des hommes qui exécutent ce qu'on appelle 'les corvées d'*amghar* on lui laboure ses champs, on moissonne et on dépique sa récolte.¹¹⁴

Similar examples are available from pre-colonial Algeria and Tunisia. In the Mitidja in Algeria during the 1830's, the important level of society was the local community (*hwash*). This was often effectively dominated by the head of the most important family within it, who had access to the income arising from the lesser families' labours. This instance was not unique, and tribute was often exacted, usually in kind or in labour.¹¹⁵ In Tunisia the same Medjerda area tribal farmers who had the right to land also had the obligation to provide their labour services to the man who leased the estate from the government appointed owner.¹¹⁶

In the terminology of a European system (including Rome's) labour services performed of necessity by one man for another imply vassalage, as indeed the evocative word 'corvée' immediately suggests its feudal origins. Payment by a farmer of part of his harvest to a superior would indicate tenancy. This is simply not the case in tribal societies. "The essence of such societies is, in fact, that payment of tribute implies a corresponding right to land rather than a contracted vassalage."¹¹⁷ It may be true, as a number of the Marxist historians of the recent Maghreb have insisted, that the ability to extract obligations was inversely proportional to the rights of those who had to fulfill those obligations - that is, that all the above examples of tribute and corvée labour imply a lessened strength in the less powerful tribesmen's rights, to the extent that one can speak of oppressing and oppressed classes.¹¹⁸ But to whatever extent that may

have progressed, the nineteenth century Maghreb was still an area where tribal rights to land could be successfully claimed, as the example of the farmers of the Medjerda valley indicate.¹¹⁹ Even today the Iqari'yen, at the other end of the Maghreb, are no oppressed peasantry:

...les sédentaires du Rif sont des guerriers et ne se conforment en aucun cas à cette image du paysan, européen ou autre, écrasé ou dominé par des féodaux....¹²⁰

Pre-Roman Africa was, of course, in many respects unlike the Maghreb of the modern pre-colonial era. The Arab invasions installed an entirely different culture in much of the region. It has often been suggested that the extreme cultural conservatism of the Berber peoples, the pre-Arab population, allows one to see in them the ancient society of the Maghreb. This may be true, but the events of the last millenium, and particularly the Arab invasions, have confined the Berbers to areas which are far from typical of the whole of the region.¹²¹ It is difficult to know how applicable Berber culture in the High Atlas mountains is to the Dorsale of Tunisia, or the Aures of Algeria, let alone the Steppe. Nonetheless, the modern North African examples chosen above are all concrete illustrations of larger principles which are operative in almost *all* tribal societies and, as such, were almost certainly present in tribal pre-Roman Africa.¹²² One cannot look for direct comparison between modern and ancient practice, at least not without very convincing evidence. But these larger, basic elements of tribal societies can provide parallels which can be most instructive in illuminating ancient Africa.

In summary then,

In those societies which can be described as

tribal... membership of the corporation almost always brings with it both claims to the land as well as obligations. It is the obligations which confuse... all have their own set of the rights to the land. Services therefore... do not in principle prove the existence of oppressive exploitation nor of landless labour. And certainly the ability to command corvee and metayage is not an index of "ownership" but of status in this type of society.... Both parties are equally tied by obligations which cannot be arbitrarily terminated without serious disruptive consequences and both are in some sense owners.¹²³

If these points have been made at some length it is because it is important to understand the background to the claim that one can use the assumption that little had been done to change the tribal nature of society in pre-Roman Africa to explain the evidence that exists on agrarian social structures of that era. With that background the claim can safely be made.

The paying of a tax in grain by Masinissa's tribal *Massylli* and by Carthage's tribal subjects is quite possible in a tribal economy. The grain will have been proffered by tribesmen as tribute to their king. The king, such as Masinissa, can comprehensibly bequeath to his sons land, the individualized and heritable lands found in most tribal societies (the equivalent of *melk*). What would have occurred had he tried to put the land into the hands of someone from outside the group in whose name it was owned is another question. Alternatively, one could look at the bequest as a king assigning Masyllian land to his sons as his role provided, for it is the chief role of a tribal king to assign land to tribal members, who have rights to it, and Masinissa's sons would have had the same claim as any Masyllian man. It is also easy to see how a local chief, like C. Iulius Masinissae, could be said



to 'own' all the land of 'his' estate, when the peasants who farmed it had claims to the land which did not get mentioned. And the transfer of farmers along with the land they farmed was only realistic. It was the essence of their society that they owed obligations to the man holding the position of 'chief', whoever he was, Masinissa, or his son. They also had rights to the land that they were unlikely to be willing to abdicate. It is easy too to see how Caesar might think such men were unfree, and to the extent that they owed tribute and labour to another he would be correct. What must be remembered is that the same system which made them 'unfree' also gave them rights which to an extent constrained the men who could demand their tribute. 'Free' and 'unfree', like land 'owning', are not really applicable concepts.¹²⁴ But Caesar would not have been alone in being confused by a tribal system - later European colonial administrators certainly did not understand the ones with which they were confronted.¹²⁵

It is thus much more satisfactory to invoke Ockham's razor here and choose an explanation for the evidence one possesses on how agriculture in pre-Roman Africa was organized that is native to Africa than to import a Hellenistic model. This is particularly true of Masinissa's kingdom and the outer parts of Carthage's territory, where little attempt to alter the native way of life seems to have been made. Within the *chora* it is possible that a rather more advanced conception of land ownership and economic relations developed. Certainly the Carthaginians themselves will have thought in non-tribal terms: Hannibal's offer of tax-free land only really makes sense in such a context. What one cannot know is if the offer was even understood by

his Libyan troops. To the Carthaginians the demand for 'tax' may have begun as something like what would today be meant by that word; to the natives who paid it it may well have been interpreted as simply the tribute they had always given to those whose position in society meant they could demand it. However it was understood, as long as the grain came in Carthage had no need to change the native system, even if she could have. If she had, it is questionable how long the changes would have survived her fall.

Possession of the basic principles common to tribal societies should enable one to make predictions on the way in which the economy of a tribal society such as that of pre-Roman Africa was organized, if only at the broadest level. Unfortunately this would involve an excursion into comparative anthropology that, though enlightening, would be beyond the scope of the present study. It will be sufficient here to comment briefly on one element that such an enquiry can illuminate, the nature of landholding. It is clearly of relevance to discover, if possible, how the lands on which agriculture was practised were held and organized.

As was stated earlier, the land in tribal societies is owned by the group. Various levels make up such a society, from tribe down to family, and each can be the group in which ownership is vested. What should be clarified here is that all groups can own land at the same time. For example, in the High Atlas of Morocco the Ait Mizane of Imilil make terraced and irrigated fields highly individualized property, in the exclusive possession of one man; unirrigated lands beyond these, used for dry farming and pasture, belong to the clan,

without fixed ownership by individuals, and are open to any member of the clan; and the distant upland pastures are owned by the tribe and can be used by all the clans which comprise that tribe.¹²⁶

As a corollary to this, it is generally true in North Africa that land is more apt to become individualized the greater intensity with which it is worked. Among predominantly pastoral people the great majority of the land is collectively owned, at the clan or tribal level. With intensive cultivation, especially on irrigated land and where arboriculture is common, most of the land becomes highly individualized, to the point of becoming *de facto* personal property. Cereal growing lands appear to fall somewhere in-between.¹²⁷

These facts obviously do not permit any specific applications, but they are useful when it comes to considering how to reconstruct landholding from ancient evidence. In areas of irrigated farming, or where tree crops were the chief crop, one might expect land to be highly personalized, at least on those parts of it where such crops were grown. Cereal growing areas, on the other hand, should perhaps be thought of as holding land rather more communally, at the family or local community level. Where herding was the chief occupation land is likely to have been mainly held at the clan level or higher. None of these categories will have been absolute: except in places where only irrigated land was farmed, it is probably not accurate to think of all land being individualized, and since there were very few places where only herding was practised there were probably not many where no land was individualized.¹²⁸ Most groups would have had some of each kind of land, the relative proportions being determined by the type of

agriculture which predominated. This may be a very rough set of distinctions, but with them in mind, analysis of landholding is somewhat more practical.

Notes - Chapter One

1. Stéphane Gsell, Histoire ancienne de l'Afrique du Nord, 4th ed., 8 vols. (Paris: Librairie Hachette, 1920-28), 1:462-63.
2. B.H. Warmington, Carthage, 2nd ed. (London: Robert Hale and Co., 1969), Chap. 3, pp.55-82. On Carthaginian motivations, see Gsell, Histoire ancienne, 1:464.
3. The veste was hers by 247 B.C. - Polybius 1.73; Diodorus Siculus 24.10. Madauros never was - Apuleius Apology 24. See also Gsell, Histoire ancienne, 2:93. For additional aid, see Dieter Füholler, Tunisien und Ostalgerien in der Römerzeit (Bonn: Rudolf Habelt, 1979), Map #1 and p.x1.
4. K.D. White, "Roman Agriculture in North Africa," Nigerian Geographical Journal 6 (1963): 39-49, p.40. Some ancient references to Carthage's agricultural prowess include Polybius 1.29.7; Diodorus Siculus 20.3.3; 20.8.3; Ennius Sat. 10; Appian Lib. 67.
5. The opinion of Michael Rostovtzeff, The Social and Economic History of the Roman Empire, 2nd ed., edited by P.M. Fraser, 2 vols. (Oxford: Clarendon Press, 1957), pp.314-15; K.D. White, Roman Farming (Ithaca, New York: Cornell University Press, 1970), p.17.
6. See Fusholler, Tunisien und Ostalgerien, Map #12, p.139. Note that his Zone 1 (*sesshaften Feldhaus*) corresponds essentially to the modern distribution of settled farmers in Northeast Tunisia, as bounded by the hills of the kroumerie and the Dorsale - see Jean Despois, L'Afrique du Nord, 2nd ed. (Paris: Presses universitaires de France, 1964), Carte C (at end of volume).
7. Strabo 17.3.15. In terms of the conceptions of the province of Africa in his day, it would seem even more so.
8. This is commonly accepted: Gilbert Charles Picard and Colette Picard, Daily Life in Carthage at the Time of Hannibal, trans. A.E. Foster (London: Allen and Unwin, 1961), pp.85-87; Warmington, Carthage, p.139; J. Ilevbarre, "Economic Evolution in North Africa in Carthaginian and Roman Times," Nigeria and the Classics 13 (1971): 65-82, pp.67-8; S. Moscati, The World of the Phoenicians, trans., A. Hamilton (London: Cardinal, 1973), p.220. The cultivated olive may have been a Phoenician introduction - Gsell, Histoire ancienne, 5:201. Also farmed were pomegranates.

(Columella De re rustica 12.46.5-6), almonds (Pliny N.H. 17.63.131) and Cato's famous figs (Pliny N.H. 15.74-75).

9. Diodorus Siculus 20.8.3-4.
10. Eleven of twenty-six, to be precise - White, Roman Farming, p.18. The emphasis in Roman writers in whose works Mago is preserved is on commercial agriculture, which may well have skewed the survival rate, of course. Nor can one be sure Mago's advice was widely followed, and represents reality on the ground.
11. Polybius 1.71.1. J. Debergh, "L'Occident phénicien et punique a-t-il connu une forme de communauté rurale?", in Les communautés rurales, Recueils de la Société Jean Bodin, 41 (Paris: Dessain et Tolra, 1983), 391-403, p.394 draws exactly the opposite conclusion from this passage, to my confusion.
12. Gsell, Histoire ancienne, 5:48; Picard and Picard, Daily Life pp.85-6; R.M. Haywood, "Roman Africa," in An Economic Survey of Ancient Rome, ed. Tenney Frank, 6 vols. (Paterson, New Jersey: Pageant Books, 1959; orig. 1938), 4:3-119, p.15; Warmington, Carthage, p.178; Rostovtzeff, Social and Economic History, p.10.
13. Pseudo-Aristotle De mirabilibus auscultationibus 100. It is accepted by some as Punic policy - i.e. Rostovtzeff, Social and Economic History, p.10; Ilievbarre, "Economic Evolution," pp.68-9 - without any more apparent proof than this rather dubious source. No account is taken of the fact that Carthage may have viewed Sardinia differently than her 'backyard', even if the source is correct.
14. Gsell, Histoire ancienne, 2:121-76 lists some 50 Phoenician settlements besides Carthage. Not all would have amounted to much, of course.
15. Bell. Afr. 2.38.1.
16. Diodorus Siculus 20.8.3-4.
17. Livy 33.48.1. Literally he possessed a *turris*, but presumably also an estate on which it was built.
18. Gsell, Histoire ancienne, 4:46; Warmington, Carthage, p.137.
19. The assumption rests on such observations as: Agathocles marched past many farms in his fairly short march (Gsell, Histoire ancienne, 4:46); that Mago recommended an estate owner should be solely a farmer (Picard and Picard, Daily Life, p.87, commenting on Columella De re rustica 1.1.18); on a Carthaginian saying that small farms are better than large (Columella De re rustica 1.39). Only the first is direct evidence, and only for one area.

- Columella also quotes an Italian saying about the superiority of small farms (1.3.8) that would hardly be used as proof for Italian agriculture in his day. To state that "it was a point of honour to cultivate one's own property personally" (Moscatti, The World of the Phoenicians, p.220) is totally unwarranted.
20. Gsell, Histoire ancienne, 4:48. Pietro Romanelli, "La condizione giuridiche del suolo in Africa," in In Africa e a Roma: scripta minora selecta (Rome: L'ERMA, 1979; orig. 1971), 319-64, p.321.
 21. That Hannibal owned an estate (if that is what it was) outside the *chora* may point at least partially to the first possibility.
 22. Gilbert Charles Picard, "L'Administration territoriale de Carthage," in Mélanges d'archéologie et d'histoire offerts à André Piganiol, ed. Raymond Chevallier (Paris: S.E.V.P.E.N., 1966), 1257-1265. A rather theoretical reconstruction. There are references to governors of Libya in Polybius 1.67.1; 1.72.3; Diodorus Siculus 25.8.10. Justin 21.6-7, however, refers to indirect rule.
 23. For a convenient summary of contacts, see Gilbert Charles Picard and Colette Picard, The Life and Death of Carthage, trans. Dominique Collon (London: Sidgwick and Jackson, 1968), pp.222-28; 267-70; Picard and Picard, Daily Life, pp.180-84. For some of the Hellenistic material found in the various UNESCO 'Save Carthage' campaign excavations of the last decade, see Serge Lancel *et al.*, Byrsa 1: Mission archéologique française à Carthage 1974-76 (Rome: Ecole française de Rome, 1979), pp.136-42. Serge Lancel, Gérard Robine and Jean-Paul Thuillier, "Town Planning and Domestic Architecture of the Early Second Century B.C. on the Byrsa, Carthage," in J.G. Pedley, ed., New Light on Ancient Carthage (Ann Arbor: University of Michigan Press, 1980), 17-28 discuss Greek influences on architecture. Samuel R. Wolff, "Carthage and the Mediterranean: Imported Amphoras from the Punic Commercial Harbour" Cahiers des Etudes Anciennes 19 (1986): 135-53 demonstrates the apparent predominance of Greece and Greek Italy on Carthage's overseas trade. For the theory that Mago's sources were mainly Greek, see Cedric Yeo, "The Development of the Roman Plantation and Marketing of Farm Products," Finanzarchiv series 2, 13 (1952): 321-42, p.329. White, Roman Farming, p.459, n. 7, for ancient references. The evidence for Carthaginian adherence to Greek methods seems less than conclusive.
 24. Strabo says that the population was 700,000 for the city alone, no doubt too high (Strabo 17.3.15); see also Warmington, Carthage, pp.133-34; François Decret and Mhammed Fantar, L'Afrique du Nord dans l'Antiquité: histoire et civilisation (des origines au V^e siècle) (Paris: Payot, 1981), p.60. On intermarriage, see C.R. Whittaker, "The Western Phoenicians: Colonisation and

Assimilation," PCPS 200 (1974): 58-79, pp.70-71.

25. Jean-Marie Lassère, Ubique Populus: peuplement et mouvements de population dans l'Afrique romaine de la chute de Carthage à la fin de la dynastie des Sévères (146 a.p. 235 p.p.), (Paris: Editions du CNRS, 1977), pp.39-40.
26. Warmington, Carthage, p.134 guesses 100,000 people of more or less pure Phoenician descent in all of Africa outside Carthage, but with no obvious basis.
27. See Picard and Picard, Daily Life, pp.87-88; G. Camps, "Aux origines de la Berbérie. Masinissa ou les débuts de l'histoire," Libyca 8 (1960), p.409. Certainly the large numbers of Libyans in the Carthaginian army suggests a small population that was recognizably Punic - see Gsell, Histoire ancienne, 2:331; Polybius 3.33.17-18; 3.56.1-4; Diodorus Siculus 19.106.2.
28. Diodorus Siculus 20.17.6.
29. Appian Lib. 3. Other sources refer to *oppida* (Orosius 4.8.16) and *civitates* (Florus 1.18.19).
30. Livy 42.23.
31. Strabo 17.3.15.
32. Appian Lib. 101.
33. Charles R. Whittaker, "Land and Labour in North Africa," Ellis 60 (1978): 331-62, p.339; Jean Peyras, "Le *Fundus Aufidianus*: étude d'un grand domaine de la région de Mateur (Tunisie du Nord)," AntAfr. 9 (1975): 181-222, pp. 196, 207; Richard Lawless, "L'évolution du peuplement, de l'habitat et des paysages agraires du Maghreb," Annales de Géographie 81 (1972):451-64, passim; settlements discussed in Elizabeth Fentress, Numidia and the Roman Army: Social, Military and Economic Aspects of the Frontier Zone, BAR International Series 53 (Oxford: BAR, 1979), pp.30-35 - the area in question is southern Numidia, but the comments are relevant.
34. See Lucette Valensi, Fellahs tunisiens: l'économie rurale et la vie des campagnes aux 18^e et 19^e siècles (Paris: Mouton, 1977), pp.1-24, on population and sedentarization in pre-colonial Tunisia.
35. See Despois, L'Afrique du Nord, pp.217-75; A.M. Hazanov, Nomads and the Outside World, trans., Julia Crookenden (Cambridge: Cambridge University Press, 1983), pp.19-25, for an introduction relevant to antiquity; Whittaker, "Land and Labour," pp.335-37.
36. Brent D. Shaw, "Fear and Loathing: the Nomad Menace and Roman

Africa,' in L'Afrique romaine: les conférences Vanier 1980/ Roman Africa: the Vanier Lectures 1980, ed. C.M. Wells (Ottawa: University of Ottawa Press, 1980), 29-51, pp. 78-9. Some of the ideas of Whittaker, "Land and Labour," p. 339 are interesting, particularly the Punic ditches, given the later probable use of similar structures called *clausurae* in Roman times, which were used to channel and control, not halt, transhumance. For a summary of ideas on *clausurae*, see David Mattingly and G.D.B. Jones, "A New Clausura in Western Tripolitania: Wadi Skiffa South," Libyan Studies 17 (1986): 87-96, with references to earlier literature. On modern pastoral migration in Tunisia, J. Clarke, "Studies in Semi-Nomadism in North Africa," Economic Geography 35 (1959): 95-108 and "Summer Nomadism in Tunisia," Journal of Economic Geography 31 (1955): 157-67. It is known for certain that pastoral transhumance was practised as early as the fifth millennium B.C. in the Aures mountains, in a form that shows close parallels between ancient and modern practice - see Colette Roubet and Patrick Carter, "Origine néolithique de la transhumance ovine dans le Maghreb oriental," in The Deyra Conference of Prehistory, ed. William Waldren *et al*, 4 vols. (Oxford: BAR, 1984), 1:239-50.

37. Polybius 1.72.
38. Jerzy Holendo, Le colonat en Afrique sous le Haut-Empire, Annales littéraires de Besançon, 177 (Paris: Université de Besançon, 1976), p.27.
39. Jerzy Holendo, "Sur le colonat en Afrique préromaine," in Neue Beiträge zur Geschichte der Alten Welt II: römisches Reich, ed. E.C. Weiskopf (Berlin: Akademie-Verlag, 1965), 45-56, pp.50-51. Some have seen this as too high, i.e. Whittaker, "Land and Labour," p.339, n. 41, who feels this does not correspond to the word *pixros* in the text. He does not, however, dispute the existence of a "vicious" tax system.
40. Livy 21.45.5. Whether or not Hannibal really said this, it is what Livy believed would have appealed to Libyan troops; nor was Livy extrapolating from similar Italian conditions - see Holendo, Colonat, p.28.
41. Livy 30.16.11; 36.4.5-6; 43.6.11; see also 31.4.6 and 31.50.1.
42. Polybius 15.18.6.
43. As shall be seen when discussing Masinissa's kingdom, however, these amounts of grain could be grown in a fairly small area, and so do not necessarily imply a very heavy tax rate.
44. Yeo, "Development of the Roman Plantation," p.329; Gsell, Histoire ancienne, 2:300; 4:47; Warmington, Carthage, p.137;

- Rostovtzeff, Social and Economic History, p.315.
45. Polybius 15.18.1; Appian Lib. 24. Varro De re rustica 1.17 contains a long quotation on slaves from Cassius Dionysius of Utica, who was the translator of Mago.
 46. Diodorus Siculus 14.77.3; Justin 21.4.6.
 47. Appian Lib. 15; Diodorus Siculus 20.69.2.
 48. Gsell, Histoire ancienne 4:46 confirms that he believed that, while slave were commonly used, most of the territory of Carthage was worked by Libyans. It was the view of Rostovtzeff, Social and Economic History, pp.314-15 as well.
Rostovtzeff, Social and Economic History, p.315.
 49. See above, at n. 45.
 50. See above, at n. 27.
 51. For example, Decret and Fantar, L'Afrique du Nord dans l'Antiquité, p.101; Ilevbarre, "Economic Evolution," p.68; P.G. Walsh, "Masinissa," JRS 55 (1965): 149-60, p.152. This is not to deny that agriculture was known and practised before Carthage's arrival on the scene (see Camps, "Masinissa," *passim*), only to explain its expansion and development under the influence of what was organizationally and commercially, if not technically, a more advanced society.
 52. See Decret and Fantar, L'Afrique du Nord dans l'Antiquité, pp.106-07; Walsh, "Masinissa," pp.151-52, on territory. The boundaries of such 'kingdoms' tended to be flexible, and Masinissa was an expansionist.
 53. Haywood, "Roman Africa," p.16; Despois, L'Afrique du Nord, pp.97-107.
 54. Walsh, "Masinissa," p.152.
 55. Ilevbarre, "Economic Evolution," p.71 feels the land brought into productivity included lands farther west.
 56. Polybius 37.3.
 57. Strabo 17.3.5; Appian Lib. 106; Diodorus Siculus 4.17.4 grants the honour rather more improbably to Hercules.
 58. See above, n. 35; Khazanov, Nomads, p.19.
 59. For a discussion of the origins of the tales about Masinissa, see Fentress, Numidia, p.20.

60. Walsh, "Masinissa," pp.152-54; Decret and Fantar, L'Afrique du Nord dans l'Antiquité, p.111.
61. Livy 31.19.4; 32.27.2.
62. *ibid.*, 36.4.8.
63. *ibid.*, 43.6.13; see also 42.29.8.
64. Inscriptions de Délos, 442A, 100-04; Inscriptiones Graecae XI.4,1115-16; Sylloge Inscriptionum Graecarum Vol. II, 452.
65. Livy 41.22; Appian Lib. 68; for a summary and discussion of this annexation, see Walsh, "Masinissa," pp.157-60.
66. Noted by Tolendo, Colonat, p.9.
67. Plutarch C. Gracchus 2.
68. Plutarch Caesar 55. Caesar may have been wrong, or just guessing about the actual figure, but high production was clearly common. The actual figure as given is 200,000 Attic *medimni*. Walsh, "Masinissa," p.154 notes that this would have been grown in even less area than Masinissa had had, since the productive Cirta region had been given to Sittius.
69. Haywood, "Roman Africa," p.23.
70. Sallust B.J. 17.5; 47.2, 46.5. Of course grain is more fundamental to an army than oil or wine.
71. Livy 29.31.7. The location is unknown, but close enough to Carthage's territories to permit raiding. On this, see André Berthier, La Numidie: Rome et le Maghreb (Paris: Focard, 1981), pp. 36-8.
72. Sallust B.J. 48.4.
73. Polybius 12.3.3.
74. Despois, L'Afrique du Nord, Partie 3, Chap. 1, pp.217-34, and Carte 25, p.222.
75. Shaw, "Fear and Loathing," pp.47-48.
76. This is how the inscription of a boundary stone of the reign of Micipsa, found 25 km north of Maktar, is usually interpreted - Picard, "L'Administration territoriale," p.1258, for text and translation.

77. Kolendo, "Le colonat en Afrique préromaine," pp.49-52.
78. Polybius 37.3; Diodorus Siculus 32.16.4.
79. Numerous scholars, including Gilbert Charles Picard, "Civitas Mahtaritana," Libyca 8 (1957), p.9; Gsell, Histoire ancienne, 5:209; Camps, "Masinissa," p.212. For others, see Kolendo, Colonat p.95, n. 25.
80. Fentress, Numidia, p.54 notes, for instance, that both Bulla and Hippo failed to put the king's image on the coins they issued. The inclusion of Hippo, or Zama in the 'middle' *Sagradas* is rather generous geographically, but they do all fall within the eastern part of Numidia which has been being discussed here, though this advances our knowledge of their precise location no further.
81. The Lex Agraria of 111 B.C. (CIL., I, 585, line 81) mentions this.
82. Cicero De lege agraria 2.22.58.
83. Kolendo, Colonat, p.9. Whether such a distinction would have meant much to the Numidians is another question.
84. Varro De re rustica 1.10; Fentress, Numidia, p.54.
85. Haywood, "Roman Africa," p.21 says 20 sq. miles (52 sq. km) with no sources; Walsh, "Masinissa," p.154 quotes Haywood, but uses the figure 200 sq. miles (520 sq. km). Walsh is apparently assuming that 1,200,000 *modii* represents a 10% tithe, and is giving the figure for the area needed for 100% of the crop. My own tentative calculations have suggested a maximum of some 65 sq. miles (169 sq. km) to grow 1,200,000 *modii* of wheat at the very low rates of return suggested as being typical by F.D. White in "Wheat Farming in Roman Times," Antiquity 37 (1963):207-12.
86. Strabo 17.3.19.
87. Vitruvius De architectura 8.3.24-5.
88. Kolendo, Colonat, p.26. The term *oppidum* could derive from the small villages of native farmers to be found on or near such a *fundus*. The meaning of a town is clearly inapplicable.
89. At 8.3.25 it is mentioned that C. Iulius is breeding slaves, but as he was selecting for beauty and sweetness of voice it may be doubted whether these were farm hands.
90. Kolendo, Colonat, p.25.
91. Diodorus Siculus 32.16.4.

92. Folendo, "Le colonat en Afrique préromaine," p.51; Colonat, p.27; apparently accepted by Whittaker, "Land and Labour," p.340: *kataskewrize* is, he says, "presumably thought to be the equivalent of Latin *instrumenta* and to include *instrumenta vocale* or slave labour".
93. Dio 43.5.2; cf. Whittaker, "Land and Labour," p.342.
94. Y. Garlan, "Le travail libre en Grèce ancienne," in Non-Slave Labour in the Greco-Roman World, ed. P. Garnsey, Cambridge Philological Society Supplementary Vol. 6 (Cambridge: Cambridge Philological Society, 1980), 6-23, p.11. For the definition of peasantry used here, see Eric Wolf, Peasants (Englewood Cliffs, New Jersey: Prentice-Hall, 1966), pp.3-4.
95. Rostovtzeff, Social and Economic History, p.584, n. 8.
96. Folendo, Colonat, p.27; Heinz Freisig, "Bemerkungen und Produktionsweise in Nordafrika (vorromische Zeit)," in Afrika und Rom in der Antike, ed. H.J. Deisner, H. Barth, and H.D. Zimmermann (Halle-Wittenberg: Martin Luther Universität, 1968), 135-42.
97. Whittaker, "Land and Labour," pp.338-40.
98. Walsh, "Masinissa," p.155; Fentress, Numidia, pp.50-57; cf. Gsell, Histoire ancienne, 5:140; Decret and Fantar, L'Afrique du Nord dans l'Antiquité, p.108.
99. F.W. Walbank, The Hellenistic World (Glasgow: Fontana, 1981), p.104.
100. The seminal work is Whittaker, "Land and Labour". This approach is also taken by Fentress, Numidia, Chap. 4, referring more specifically to southern Numidia.
101. For an introduction to tribal societies and economics, see Max Gluckman, Politics, Law and Ritual in Tribal Societies (New York: New American Library, 1968); Marshall Sahlins, Tribesmen (Englewood Cliffs, New Jersey: Prentice-Hall, 1968), especially Chap. 5; George Dalton, ed., Tribal and Peasant Economies: Readings in Economic Anthropology (New York: Natural History Press, 1967).
102. Thus, among the Beni Mzir of the Atlas (see next note) the chief landowning segment is the clan; among the Iqar 1, en of the Rif it is the local community. R. Jamous, Honneur et Baraka: les structures sociales traditionnelles dans le Rif (Paris: Editions de la Maison des sciences de l'homme, 1981), p.35.
103. A. Vinogradov, "The Socio-Political Organization of a Berber *Taraf* Tribe: pre-protectorate Morocco," in Arabs and Berbers: from

- Tribe to Nation in North Africa, ed. E. Gellner and C. Michaud (London: D.C. Heath and Co., 1972), 67-84, p.73; cf. David Seddon, Moroccan Peasants: a Century of Change in the Eastern Rif 1870-1970 (London: Dawson, 1981), p.63.
104. Gluckman, Politics, pp.66-72; David Grigg, The Harsh Lands: a Study in Agricultural Development (London: Macmillan, St. Martin's Press, 1970), p.119.
 105. Gluckman, Politics, pp.66-72; Sahlins, Tribesmen, p.76; Grigg, Harsh Lands, p.119. For the recent Maghreb, see Lucette Valensi, Le Maghreb: Avant la prise d'Alger (1790-1830) (Paris: Flammarion, 1969): "... l'appartenance à la tribu donne d'emblée un droit d'exploitation de ses terres...".
 106. Jean Poncet, "Statut foncier et rapports sociaux dans la Tunisie d'avant 1881," in Sur le féodalisme (Paris: Editions sociales, 1971), 119-210, pp.192, 202-07.
 107. Caesar B.G. 6.22.2-3; Poncet, "Statut foncier," p.205; Vinogradov, "Socio-Political Organization," p.75.
 108. Valensi, Maghreb, p.42; Vinogradov, "Socio-Political Organization," p.73; Seddon, Moroccan Peasants, pp.40-41, 55; René Gallissot, "Pre-Colonial Algeria," trans., David Seddon Economy and Society 4 (1975): 418-45, p.421; Jamous, Honneur et Saïdia, p.35; D.M. Hart, The Ait Waryaghar of the Moroccan Rif: an Ethnography and a History (Tucson: University of Arizona Press, 1976), pp.29-33, 53-59, 97-101.
 109. Sahlins, Tribesmen, p.74; see M. Nash, "The Organization of Economic Life," in Tribal and Peasant Economies: Readings in Economic Anthropology, ed. George Dalton (New York: Natural History Press, 1957), 3-12 ("economic action is only a part of the system of social action" -p.9); Daryll Forde and Mary Douglas, "Primitive Economies," also in Tribal and Peasant Economies, 17-28 ("in such a setting economic relations have not been separated from social relations" - p.17).
 110. Gluckman, Politics, p.78; cf. Forde and Douglas, "Primitive Economies," p.16.
 111. Gluckman, Politics, p.71; Sahlins, Tribesmen, p.87.
 112. Gluckman, Politics, p.69.
 113. For the concept of segmentary tribes, see D. Hart, "The Tribe in Modern Morocco: Two Case Studies," in Arabs and Berbers: from Tribe to Nation in North Africa, ed. E. Gellner and C. Michaud (London: D.C. Heath and Co., 1972), 25-58, pp.28-31, with basic references.

114. Vinogradov, "Socio-Political Organization," p.77.
115. Gallissot, "Pre-Colonial Algeria," pp.422-24, 426; Seddon, Moroccan Peasants, pp.41, 47.
116. Poncet, "Statut foncier," pp.203, 205.
117. Whittaker, "Land and Labour," p.341.
118. Gallissot, "Pre-Colonial Algeria," passim, and p.426; Seddon Moroccan Peasants, p.42.
119. Valensi, Maghreb, p.49.
120. Jamous, Honneur et Baraka, p.18.
121. As pointed out by Fentress, Numidia, pp.4-5.
122. Gluckman, Politics, p.71.
123. Whittaker, "Land and Labour," p.334.
124. *ibid.* passim, especially pp.332-34; C.R. Whittaker, "Rural Labour in Three Roman Provinces," in Non-Slave Labour in The Greco-Roman World, ed. F. Garnsey, Cambridge Philological Society Supplementary Vol. 6 (Cambridge: Cambridge Philological Society, 1980), 77-99, p.82.
125. Poncet, "Statut foncier," p.192; for an example from sub-Saharan Africa, see A.B. Mukwaya, "Land Tenure in Buganda," East African Studies 1 (Kampala, 1953), p.15, cited by Grigg, Harsh Lands, p.120.
126. J.D. Miller, Imlil: a Moroccan Mountain Community in Change (London: Westview Press, 1984), p.69. A nearly identical description, applying to the Selsawa of the same area, can be found in Jacques Berque, Structures sociales du Haut-Atlas, 2nd ed. (Paris: Presses universitaires de France, 1978), p.105.
127. See Gallissot, "Pre-Colonial Algeria," pp.420-21; Poncet, "Statut foncier," pp.189-95.
128. See Fentress, Numidia, p.48 on this; Gsell, Histoire ancienne 5:206.

CHAPTER TWO

Instrumentalities of Agrarian Change

In Carthage, Africa had a power whose culture, if not actually born of African soil, was at least resident there. After 146 B.C., however, the Maghreb entered a state which can fairly be described as colonial. With the destruction of Carthage, and later the annexation of Numidia, the eastern Maghreb became the overseas possession of a foreign nation.

The comparison with modern colonialism is tempting. Recent colonial imperialism has, without a doubt, often produced massive and far-reaching changes in the lands involved. Many of the effects have been negative, even catastrophic, and the system has been blamed for the creation of much continuing poverty in former colonial states.¹ The agricultural sphere has been particularly strongly affected. This is not surprising, considering the procedures adopted by some colonial powers with regards to the rural population and agriculture. The process in one part of Africa has been described as involving initially forcing the farmers to produce surpluses of food for the colonists, thus creating a peasantized rural population, and then breaking up this peasantry to provide cheap labour on the profit-oriented capitalist farms of the colonists.² The shock to the pre-existing rural lifestyle is obvious, and often effectively led to its disappearance.

Such a colonial process by the Romans would have no doubt brought about similarly sweeping changes in the agricultural life of ancient

North Africa. It is doubtful that this kind of colonialism was practised, however. A number of the key elements of the modern colonial system were absent in the ancient world. The overriding difference between the two periods was a lack of investible capital in search of profit in the provinces (or elsewhere, for that matter). There was no excess of such capital because investors had no particular urge to turn a profit from it; as Finley has put it, "... the strong drive to acquire wealth was not translated into a drive to create capital". Equally, modern imperialism was in large part driven by the presence of cheaper labour in the non-developed overseas lands. There might, of course, be other, adverse factors which could negate such advantages but overall this was still a significant attraction for the nineteenth century European capitalist. In the ancient world, however, there existed an in-built cheap labour force at home, in the form of slavery. As a result there was no need to go overseas to create profitable situations, even if they had been desired. Without these driving forces, the destructive effect of the modern colonial process could not be duplicated.³

This is certainly not to say, however, that the Roman conquest could not have produced changes in the agricultural system. A number of elements of the Roman arrival could have introduced disruptive forces to the established way of life. Some such factors were: a colonization of non-Africans on a large scale; the introduction of some technological advance in farming; new forms of labour organization unknown, or not common in the earlier period, notably slavery and wage labour; and other organizational changes, related to the ownership,

formation and management of the farm as a productive unit.⁴ Each of these potential instrumentalities of change will be examined in this chapter.

Perhaps the most obvious means by which the Roman state could have effected a major alteration in the existing agricultural state-of-affairs in the ancient Maghreb was the large-scale immigration of non-Africans into the African countryside. A large body of 'Roman' (including in this term anyone of Italian origin) farmers acquiring large quantities of land would have had inevitable effects. The existing population could have been driven off the land, displaced to become either migrants themselves, or a landless labour force. There would have been an automatic introduction of Italian social organization and those agricultural techniques and practices which could survive their transplantation to the African soil. The consequences of this demographic change could have been extremely widespread and deep. Indeed, exactly such a situation has been envisaged by some scholars, with bleak results:

Il en résulte, très certainement une plus grande prédisposition de l'Afrique au sous-développement: toute prospérité devra y être analysée soigneusement, n'étant peut-être qu'une enclave, qu'un corps étranger au sein de la misère.⁵

That there was a movement of Italians into the Maghreb, particularly during the civil wars and early Principate, is not in question. The debate centres on the significance of this immigration, both in scale and effect. The former has sometimes been held to have been quite large.⁶ But, beyond the size of the immigrant population,

the area in which they settled, their socio-economic status and the types of land grant given will all have significantly affected the overall impact which the new African population will have had on the way agriculture was organized and practised.

The first major movement of Italians into Africa of which there is evidence came only a quarter-century after the final fall of Carthage. The Gracchan colony of *Iunonia* was, as laid out, larger than the *Lex Rubria*, which authorized it, allowed, but it still only amounted to six thousand lots.⁷ Of these, it is not known how many colonists actually went out.⁸ Of those who did go, it is not known how many remained when the colonial charter was revoked.⁹ That some did is clear from the *Lex agraria* of 111 B.C., which confirmed their holdings, though in a non-colonial setting.¹⁰ The same law also makes it clear, though, that some of the land had already been sold.

After the Gracchan scheme, with its relatively restricted membership, there appears to have been no further settlement in Africa for some time. In 103 B.C. the tribune Saturninus passed a law permitting the assignment of land to the troops of Marius.¹¹ That this was carried out seems to be confirmed by a number of later inscriptions from towns in the middle *Bagradas* valley, which claimed Marian connections, including naming him as founder.¹² There have even been estimates that about two legions, or 10,000 to 12,000 men, were so settled.¹³ However, a strong case has been made for the argument that the men settled were not Italian immigrants, but native Gaetolian auxiliary cavalry.¹⁴ This is not certain, but the Marian veteran settlement must be in doubt.

Besides these two instances there is little evidence for large-scale movement to Africa until the end of the Republic. There is the possibility that a number of Etruscans, fleeing Sulla, followed Carbo to Africa in 82 B.C.¹⁵; epigraphic evidence supports a claim for their settlement south-west of Carthage.¹⁶ There is no hint as to the numbers involved, or the land taken up, but they probably remained in Africa.¹⁷ In the same period there must have been various other Italians who made their way to North Africa without doing so in groups large enough to warrant mention in the sources. The *Bellum Africae*, Plutarch and Appian all refer to the occurrence of *conventus C.R.*, the members of which must have come over during this time.¹⁸ In these, however, it seems likely that one is seeing the manifestation of the *negotiationes* who had stationed themselves in the province. These men may well have bought land, but they hardly farmed it themselves.¹⁹ Without some other source of manpower being introduced, the native African farmers must have remained on the land.

It is doubtful that many small farmers came on their own as settlers. There was probably a strong disinclination among Italian peasants to migrate overseas, for reasons which it is not hard to imagine.²⁰ The hazardous trip, the difficulty of acquiring land in another country, above all the lack of the capital necessary to 'make a new life' abroad, were all factors which would have produced a situation in which the peasant would have had neither the desire nor ability to emigrate unless aided by the state - which, with the exception of the instances already noted, did not occur before the civil wars.²¹

By the end of the Republic, then, Italians in Africa would have fallen into three main categories: businessmen in the (mainly coastal) towns, but perhaps owning estates inland; private citizens owning and running their own land; and the colonists.²² But the first had no practical effect on the working of the land (in the context being discussed here) and the second were probably very few in number. The third group was not large either, in all probability. If the various armies of the civil wars were able to raise large numbers of troops in Africa, it was not from Italians on the land: of those Italians who were taken, there would have been as many *negotiatores* from the towns as farmers, and most recruits would have been Africans.²³ One may speak of Republican Africa, even in the province of *Africa* itself, and certainly even more so further inland, as having a Roman presence in which "... il n'y a encore rien qui modifie vraiment la vie des indigènes...", of an Africa "à peine touchée par la présence des nouveaux arrivants".²⁴

This situation only began to change with Caesar's overseas settlements. He approved the private movement of at least some Italians -mainly Campanians, it seems- into the area of Cirta, Chullu, Milex and Rusicade, all under the mantle of Sittius, in recompense for his useful services.²⁵ In the province of *Africa* itself, Caesar definitely founded colonies at Clupea, Curubis and, of course, Carthage; Hippo Diarrhytus, Carpis and Neapolis are almost as certainly Caesarian.²⁶ There may have been a few others, plus, no doubt, viridiane installations at various places not actually honoured with colonial status.²⁷

Numbers are scarce and often disputed. There is Suetonius' statement that Caesar settled some 80,000 Romans overseas.²⁸ It seems unlikely that this plan had been fulfilled at his death: one figure which has been suggested would see a scheme for around 70,000 civilians from Rome and another 10,000 or so Caesarian veterans to go overseas, to which might be added another 10,000 ex-Pompeian soldiers.²⁹ Not all of these 90,000 would have ever made the trip, before 44 B.C. or after. Of course, their destinations included the whole colonizable area open to Caesar. How many went to Africa cannot be known. One estimate puts the figure at 5,000 veterans; how many civilians cannot even be estimated, but it probably was not very many.³⁰

The tempo of overseas settlement picked up even more under Augustus. By the end of his reign provincial Africa had received between nine and fourteen colonial foundations; in addition Mauretania had seen no less than thirteen colonies planted on her shores.³¹ Only by stretching the data can one begin to guess at the number of colonists, but it is commonly accepted that the size of colonies was not great. An average of 300 to 500 Italians veterans per foundation is a figure which has received some acceptance; it would give a total of some 15,000 Italian veterans settled in all of the Maghreb by Augustus.³² It is known, however, that veterans were also settled in non-colonial *pagi* by Augustus.³³ Therefore, Brunt's estimates, which allow 2-3,000 veterans per colony are preferable, as they have (by his own admission) the advantage of including some built-in overestimation and so allowing for the *pagi* that cannot be enumerated.³⁴ One may be dealing with something like 20,000 to 40,000 veterans at most in and

immediately around provincial Africa.

The movement of civilians out of Italy under Caesar (if it actually got under way) seems to have had no official counterpart under Augustus. There is no evidence for Augustus sponsoring any settlement of civilians in Africa. He may have been the cause of some movement, though less consciously than Caesar. It is known that Augustus set up some twenty-eight colonies in Italy for his veterans, probably uprooting a fair number of civilian locals in the process.³⁵ Not all the previous inhabitants need have been evicted for there to have been a secondary wave of farmers forced to seek their livelihood abroad, but there are no figures. Most, it is said, went to "Dyrachium, Philippi and elsewhere...", which might suggest either that Africa did not receive many (else it would have been mentioned) or that it did (under 'elsewhere'). Similarly frustrating is Virgil's line in the *Bucolics*: *at nos hinc alii sitientis ibimus Afros*.³⁶ It may indicate movement to Africa, or perhaps its negative tone should be read as proof of Italian reluctance to move overseas, and so as evidence against private settlement in Africa in numbers.³⁷ One simply does not know, nor, necessarily did Virgil. He surely did not know how many, nor can scholars today. The earlier restrictions on private migration still applied: probably it has, in Hopkins' words, been "thoughtlessly exaggerated".³⁸

There is no doubt that this period marked the high-water line of the Italian tide into Africa. With far fewer soldiers to demobilize, the Julio-Claudian and Flavian emperors did not have the pressures of veteran settlement to drive a colonial emigration policy.³⁹ Tiberius

and Gaius did nothing. Under Claudius and Nero a few colonies were founded: Oppidum Novum in Mauretania, and Ammaedara, Madauros and Icosium respectively.⁴⁰ There were three more under Nerva (Sitifis, Cuicul and Mopth...)⁴¹; and two by Trajan (Thamugaddi and, possibly, Theveste).⁴² This effectively marked the end of immigration on a large scale. By Trajan's reign colonies were already being 'founded' without any Italian content, and after him one may assume such foundations were the rule.⁴³ Indeed, as early as Claudius one meets non-Italians as veteran settlers in Africa.⁴⁴ Within a short time it was Africans who were in the majority as veterans, for the recruiting for the one legion stationed in Africa came to take place entirely within the Maghreb.⁴⁵ By the middle of the Julio-Claudian period, the bulk of the Italian and other non-African immigrants had been installed in Africa; by Trajan's time almost all.

After all this it should be clear that there is no way to put a definitive number to the Italian immigrants to Roman North Africa. At best one can get some idea of the order of magnitude with which one is dealing. Brunt has convincingly argued that, up to the civil wars, something like 150,000 Italian male adults went overseas; the various settlements of Caesar and Augustus added to this a net total of around 215,000.⁴⁶ Of these 365,000 (a number to be taken very loosely, needless to say), only a part was in North Africa; of those, not all, and possibly not even many, were willing, or able after a military career of many years to become actual farmers on the land.⁴⁷ Africa received something over one-quarter of all the colonies sent overseas up to Augustus (28 of 103), but of course this does not mean Africa got

that percentage of the total emigrants. Most veterans would not have had wives and dependants.⁴⁸ It is thus probable that there were between 50,000 and 100,000 Italian immigrants. The former figure is likely low, the latter high. The truth lies somewhere between.⁴⁹

To set this in perspective, it may be worthwhile to make a brief excursion into the question of the population of the Maghreb in antiquity. The whole subject is one fraught with great problems, and is almost entirely the province of modern speculation, with little evidence on which to base it. Certainly exact numbers are not possible. All that is required, however, is the broadest of estimates, for a comparison of scale.

The population estimates for the Maghreb vary widely, not surprisingly. The highest suggested figure, for Africa at its height, is about 8,000,000, the lowest about 4,000,000.⁵⁰ If one rather arbitrarily chooses a middle-range estimate, that of G.Ch. Picard, one gets 6,500,000 at Africa's peak in the late second century AD. and 3,500,000 in the late first AD.⁵¹ It appears that a population would, under the conditions prevailing in the ancient world, have achieved something like a 25% gain in population per century.⁵² In short, by working backwards, it seems that at the beginning of the first century AD. the Maghreb would have possessed at least 2,000,000 and probably 2,500,000 persons. With this in mind, it is clear that the Italian immigrant population probably never amounted to more than five percent of the total population, probably less.⁵³

Clearly, these ratios cannot justify thinking of an ethnically Roman Africa. The importance of the figures could, however, easily

have been changed by the location of the settlement of the immigrants. The dispersal of the Italians, leaving one area with few non-natives and another inundated with them would have greatly influenced the effect immigration had on the agriculture of any one region. Here again, one is speaking in relative terms. There is no way of identifying how many settlers were located in any one area, and there will have been Italians found in every part of the Maghreb, no doubt. But their relative frequency will have varied considerably.

Obviously the northern half of the province of *Africa* will have been settled first. The Gracchan colonists, at two hundred *iugera* each, must have effectively filled that part of provincial Africa suitable for farming, when the land guaranteed to the loyal cities and other natives is considered.⁵⁴ But only in legal terms: 6,000, 12,000, even 24,000 (assuming four persons per family sent out) would have produced a very feeble density of Italians over this area. The landownership might have been changed but not the actual producing population. As mentioned above, also, the land was being sold as early as 111 B.C., and since large estates did grow up in the area, it is entirely possible that some of the Gracchan owners sold their land and moved away.⁵⁵ There is just cause to think there were not six thousand Gracchan settled families on the land by, say, Caesar's day.

Perhaps the fact that legal title to all the good land had gone to the Gracchan settlers was why Marius set his ex-troops down in the middle *Bagradas* area, to the west; equally, it may have been a desire to attach these productive lands to Rome and protect the obvious route to Carthage.⁵⁶ Whatever the reasoning, if Marius' men were actually

Italians, they would have formed a Roman core on the *Bagradas*. Yet some of these too may have ended up selling their land and moving.⁵⁷

Caesar settled most of his people, as far as is known, in the province proper. Carthage, Clupea, Curubis, Carpis, Hippo and Neapolis are all coastal - put there, no doubt, for good strategic reasons.⁵⁸ (Caesar's ability to put numbers of new settlers into the very area supposedly all set out for the Gracchans, incidentally, suggests these cannot have been too thick on the ground.) Only in the Sittian settlement, far off to the west around Cirta was there a known Caesarian influx outside the old Punic *chora*.

Only under Augustus did Italian settlement move west in significant amounts. Still, Uthina and Thuburbo Minus, as well as the possible colony at Thuburbo Minus were all in the old *chora*.⁵⁹ The possibles at Hadrumetum, Maxula and Thysdrus were all along the east coast, also in Punic territory.⁶⁰ Only Thabraca, Simitthus, Thuburnica Assuras, and Sicca Veneria were to the west of the old Punic heartland, on a line across the middle *Bagradas*.⁶¹ The Cirta zone was now made a colony, perhaps reinforced.⁶² Besides these, all the other thirteen Augustan colonies, nearly half the total, were strung out along the coast of *Mauretania Caesarensis*, or even further west, in *Tingitana*.⁶³ It was only after Augustus that colonies were pushed south (i.e. Ammaedara, Thamugadi, Theveste). The rest of the post-Augustan colonies continued the 'filling-up' of Numidia: Mopth..., Cuicul and Sitifis west of Cirta, Madauros on the western *Bagradas*, Icosium on the coast of *Mauretania*.⁶⁴ It is clear that by far the greatest concentration of Italian immigrants was in the eastern part of *Africa*

proconsularis, especially in the coastal areas. The effect of immigration would have been much more limited in what is now western Tunisia or eastern Algeria.

What was the nature of the settlers' holdings? The earlier ones were probably well-off. The colonists of Gracchus' programme were *tous chariestatous ton politon*, so one must suspect they were fairly wealthy.⁶⁵ This is reflected in the very large land grants which each appears to have been given: from the *lex agraria* the amount seems to have been two hundred *iugera*.⁶⁶ The importance of this is that two hundred *iugera* is far more than one man, or even one family, could farm alone. Columella's calculations allow for about 10 man-days per *iugerum* of wheat cultivation, and he suggests between 6 and 9 labourers for a 200 *iugera* farm.⁶⁷ Cato advised using 14 workers on an olive farm of 240 *iugera*.⁶⁸ Exact numbers are not vital - clearly the Gracchan colonists were men running big farms, needing additional labour and not inconsiderable equipment. As Frayn has said, "Allocations of 200 *iugera* were clearly adequate for subsistence, but could not be required for this alone".⁶⁹ These were not peasants, but landowners of some importance. The same would apply, though to a lesser degree, to the putative Marian colonists, for Saturninus' law allowed for *centena agri iugera*.⁷⁰

Caesar's and Augustus' beneficiaries will not have done so well. There are no real data on the size of veteran land assignments. Republican veteran grants ranged from 100 *iugera* at Aquileia in 181 B.C. for centurions to only 3 for Latins in 173 B.C.⁷¹ Caesar gave grants of 10-12 *iugera* in Italy for families of 5 and 6.⁷² These are

not particularly helpful for provincial practices. Attempts at calculating farm sizes based on the known amount of money spent by Augustus on land (HS 860,000,000) and known land prices in Italy (HS 1,000 per *iugerum*), given an average grant of 10 *iugera*, are doubtful even for Italy, futile for Africa.⁷³ Comparisons with other provinces, such as Egypt, where soldiers in one Fayum community held 15 *iugera* farms on average, founder on one's inability to know how to equate Egyptian land to African and on the limited value of the use of averages.⁷⁴ References in Hyginus to the effect that centuries were sometimes distributed as 50 *iugera* lots, and in the *Liber Coloniarius*, which mentions 25, 35, 50 and 60 *iugera* lots, are not helpful either, being either unreliable and/or Italian.⁷⁵ Probably the amounts given by Caesar were higher than by Augustus; equally probable is that farms in Africa would have been larger than in Italy. Some have assumed that allotments were on the scale of 66 *iugera*, at least in the triumveral period, but this has been challenged.⁷⁶ Probably it was not so great, but, land prices being lower in Africa (possibly as low as HS 390 in some parts), the *praemium* paid by the later emperors on discharge would have bought more land.⁷⁷ Something around 20 *iugera* would seem minimum; more would not be unrealistic. A veteran with 20 *iugera* would probably have been no more than a working peasant farmer.

What influence, then, would the Italian immigration have had as an agent of change on agricultural organization and production? To work eastwards towards Carthage, it seems probable that in Mauretania, the small numbers of Italians, mostly coastal, separated by great distances and poor communications would have remained islands of Roman

influence in a sea of pre-Roman agricultural practices. Within the island agriculture would have been intensified perhaps, and Roman concepts of ownership and organization introduced, but most of the area of Africa remained unaffected.

In Numidia and provincial Africa, the effect would have been somewhat greater. It was here that the bulk of the immigrants came, though they would still have been greatly outnumbered, since this was where most of the natives were too. They were not evenly distributed, either: one sees masses of settlements on the north and east Tunisian and Algerian coasts, a band running north-south across the middle *Bagradas*, a clump around Cirta-Sitifis.⁷⁹ Between these the map is bare, and though one cannot claim anything like a complete picture, it must be wondered just how much of *Africa proconsularis* had significant numbers of Italians settled on the land.

Even so, an immigration in the area of six figures is not to be ignored.⁸⁰ There will have been an effect, though perhaps a patchy one. The earlier settlers may have been landlords, thanks to their allotments' large size, but Caesar's and Augustus' men, most of the immigrants, probably were not. Around the colonies, as well as in the *pagi* that are known, and the many that surely are not, immigrants will have introduced their way of life - to an extent. As has been noted, veterans mostly married in the province of their settlement, and cultural fusion will have begun at once.⁸¹ In the colony at Sitifis, for example, burials exhibit a surprisingly high degree of native Libyan cultural content.⁸² There is no hint of forced removal of natives from the land.⁸³ Immigration, in short, was a factor, but the

Italians never overwhelmed the natives, and one will have to look elsewhere for decisive change.

It might be thought that, whether there were foreigners present in large numbers or not, the superior agricultural technology of the Romans must have had a significant impact on agricultural production. This has certainly been the case in modern contacts between Europe and its colonies. In fact, however, the Romans possessed no particular advantage in technology. For all intents and purposes the farmer of Italy raised his crops using the same equipment as did his Libyan counterpart on the Great Plains of the *Bagradas* valley.

There was little technical innovation in the Roman period, or for that matter, the Greek period before. All the basic processes of agriculture were developed in the Neolithic period, to which Rome and Greece can claim to have added little.⁸³ There were certainly refinements in existing technology, but few practical innovations. Those important new developments which did occur, such as the famous 'Gallic Reaper', or the potentially revolutionary water-driven mill, were but little (or at least only locally) used.⁸⁴

The problem lay in the socio-economic ethos of the wealthy, landowning class. This was a basic fact of Roman society, and is beyond the scope of this study. Suffice it to note that technological progress aims essentially at the increase of productivity. There was no desire for any such increase in the Roman world.⁸⁵ The reason was simple. The value of land lay as much in the owning as in the yield.⁸⁶ As long as this was the case, the corollary was inevitable: "... where

ownership of land is matter of status and prestige, and agriculture is the sole occupation of the gentleman, the landowner is not motivated in the direction of increasing productivity".⁸⁷ As a result, the tendency was to expend one's resources on acquiring new land, rather than stepping up the yield of what one already possessed, and so no interest was shown in labour saving devices to increase output, or in new methods.⁸⁸ The patterns and methods of land use stagnated.⁸⁹ And the equipment available to a Roman farmer, no matter how wealthy he might be, was extremely simple, and completely comparable to those of his cousins elsewhere. One need only look at examples of Roman ploughs, along with those of underdeveloped modern nations to see that the ploughs of Rome held no superiority bestowed by advanced culture.⁹⁰ Comparisons with Libyan ploughs of antiquity are not possible, but Punic examples look equally sophisticated.⁹¹

Seen from the other side, the native African agriculture was very probably quite productive. The Carthaginians' agronomy, as has been noted, was advanced enough to be worth translating into Latin; Carthage's territory turned out considerable quantities of grain; the Numidian kingdom did likewise. Rome was not encountering a totally backward native body, but people who had long been exposed to the influences of the Mediterranean world. No doubt, in the remoter parts of the provinces of Africa the local peasant was less sophisticated than the Roman who possessed his copy of Cato, Columella or Mago. But they were not on different technological planes.

An example may be found in precisely that area where superior Roman technology might be expected to be unquestioned - water

transportation and management. The great aqueducts of Carthage and Caesarea were products of Roman technology, but they had no effect on farming. In terms of rural, agricultural water management, there is now some consensus that what was once unthinkingly accepted as 'Roman' may actually have originated in Africa itself, not Italy.⁹² In the words of the noted geographer of the Maghreb, Despois, "... il faut noter que... les Berbères n'avaient certainement pas attendus les Latins... pour s'ingénier à utiliser au mieux les eaux indispensables aux cultures".⁹³

There are examples of such systems in areas which were never under the sure control of Rome, and so unlikely to be Roman constructions; and in those areas that were firmly in hand, the archaeological evidence suggests that the water-control systems pre-date the Romans.⁹⁴ It is indeed notable that in the one area where a Roman technical contribution is certain - the building of dams, such as those of the Tripolitanian *wadi*'s- the 'improved' system proved catastrophically inferior to the 'primitive' local version.⁹⁵

It is perhaps also worth noting that the Romans may have had something to learn from Africa. Columella writes that Mago's recommendations did not always work in Italy, being designed for African soils.⁹⁶ No doubt he was closely studied by new immigrants. Similarly, the yields in certain conditions present in North Africa -mainly in irrigated, water-controlled fields- can be amazingly high, much beyond what was common in Italy, yet without any technological difference.⁹⁷ The Romans probably profited from that, as well.

The conclusion is straightforward. Pomponius Mela, for all his

historical faults, was not far wrong when he said of the Libyan farmers that *orae sic habitantur ad nostrum maxime ritum moratis cultoribus*.⁹⁸

The agricultural system of Carthage, as has been seen, utilized slavery on a significant scale. Slaves performing actual agricultural labour were probably only common, though, on the estates of the immediate *chora* of the Punic capital. Beyond this the frequency of slaves in the fields declined, being less frequent in the outer Carthaginian territories and quite rare, if to be found at all, in the Numidian kingdoms. And even the estate system of the *chora* must have been thoroughly disrupted during the Third Punic War. There was thus scope for considerable change if the advent of Roman rule brought with it the introduction of widespread agricultural slave labour. To find the extent and effect of such an introduction, if indeed one was even attempted, is therefore vital. It might be expected that such a development would occur, given the frequency of agricultural slavery in Italy.⁹⁹ The evidence, however, is far from clear cut.

It should be pointed out at the beginning that by the term 'slave' labour what is meant is actual legal slavery, what is often called 'chattel slavery'.¹⁰⁰ The so-called free natives of Libya may well have been in some sense unfree, if only through the constraints imposed by the existing structure of a tribal societal system. They were not, however, in any sense 'slaves', or, in all likelihood, even what could be called 'serfs'. What will be discussed here is not the continuation or changes in the status of such men, but the actual owned slave.

In addition, it should be noted that it is the actual physical work of farming that is in question here. It has been quite rightly asserted that slave managers (*villici*) and other administrative positions held by slaves contributed significantly to the production process.¹⁰¹ This avoids the point, however, since slave overseers could quite easily administer free tenant farmers, who would have done the physical work.¹⁰² In any case, servile administrative staff were a common phenomenon across the Empire and their examination in detail is beyond the scope of this study.¹⁰³ What one needs to know, in relation specifically to Africa, is the significance of servile labour in agriculture, how many "rustres aux mains calleuses", to use Gsell's phrase, there were in the fields.¹⁰⁴

Viewed in these terms, the evidence is at best equivocal. There are no real references for the Republican period in Africa that can be taken seriously as solid proof of servile agricultural labour. Sallust hints at it, when writing of the undisciplined actions of Albinus' soldiers, during the Jugurthine War: ... *villas expugnare, pecoris et mancipiorum praedas certantes agere eaque mutare cum mercatoribus vino...*.¹⁰⁵ The context is such that *mancipiorum* could well refer to field hands. Yet one might wonder, with only slight exaggeration, if any 'farmhouse' worth plundering would not have had a slave domestic or two worth something in trade. Sallust is here no clear proof for farm slavery. Neither are such references as that by Cicero, to Aelius Lamia's "*negotia, procuratores, libertos, familiam*" in Africa.¹⁰⁶ Lamia had estates in Africa, but no doubt town-houses too, where slaves would have been used in a variety of roles; there is no certainty his

slaves were even in the countryside.

To state, on the basis of such references as these, which are all there really are, that large slave-run estates emerged in Africa *proconsularis* during the Republican period is unjustifiable.¹⁰⁷ The assumption is being made, one suspects, that what held true for Italy in the same period must have held for Africa - a far from secure proposition, given that large slave-run estates were by no means universal throughout the Italian peninsula.¹⁰⁸

The state of the evidence for the Principate is not much better. Only in Tripolitania is there explicit, reliable mention of slave workers in the fields, and even here only from one source.

That source is the *Apologia* of Apuleius, written by that author to defend himself against a charge of sorcery in the city of Oea. Here, he says, he once persuaded his extremely rich wife, Pudentilla, to advance to her children a large portion of her wealth¹⁰⁹: "*redderet in praedis... magnamque vim tritici et ordei et vini et olivi ceterumque fructuum, servos quoque haud minus CCCC, pecora amplius...*" The agricultural setting of the passage makes it hard to believe that the author would be speaking of non-agricultural slaves, though the scepticism just applied to Sallust should be used here too. No doubt some domestics and administrative slaves would be found included, but the large number makes it rather implausible that one is here dealing entirely with non-labouring slaves.¹¹⁰

One must wonder, however, how typical a lady worth HS four million really was.¹¹¹ Fortunately, there are other places in Apuleius' narrative which seem to confirm that agricultural slave

labour was common. Earlier in the work, the author resorts to some personal invective to cast aspersion on an enemy. At one point he comments that "*Ego adeo servosne tu habere ad agrum colendum an ipse mutuarius operas cum vicinis tuis cambies, neque scio neque laboro*".¹¹² The implication must surely be that anyone of decent standing would possess slaves to work in the fields. The attack loses much of its power if the possibility of having field hands who were slaves was a fanciful one. The suggestion is the same when, a short while later, Apuleius continues, "... *qui nuper usque agellum Zarathensum, quem tibi unicum pater tuus reliquerat solus uno asello ad tempestivum imbrem triduo exarabus*".¹¹³ Though not stated, the suggestion, in light of the passages already quoted, is that he would have a slave to help in the field, if he were worth anything.

It is unfortunate that all the data on Tripolitania come from a single source, restricted to one area (Oea) and to one time (the date of Apuleius' writing was around 158). Nonetheless, the background situation which his words outline is strongly suggestive of one where agricultural slave labour was in use, certainly on estates owned by the rich, possibly on smaller farms as well. This is proof only for Tripolitania, however, and cannot be automatically assumed to hold for other parts of the province.¹¹⁴

If the information from Tripolitania is far from perfect, one might nonetheless wish for a statement as definite about the remaining portion of *Africa proconsularis*, or the rest of Africa, for that matter. It is particularly frustrating that the one explicit reference which exists to slave labour is in a work that is of very doubtful use

in an historical enquiry, namely the *Satiricon* of Petronius. He tells of a rich man who "*nam familiam quidem tam magnam per agros Numidiae esse sparsam, ut possit et Carthaginem capere*".¹¹⁵ Not only is the work a fiction, but the very character of the rich man is specifically referred to as an imaginary one. There is no question of this referring to an actual situation, but a case might be made for such a character being typical of large landowners. Or should one take this as humour, the point of which is the far-fetched nature of his holdings? It is very difficult to decide, and it best not to place much weight on the evidence of Petronius.¹¹⁶

After this, extraordinarily, there is no literary reference to rural slavery until after the period with which this paper deals. One, however, is only shortly thereafter, and on the assumption that whatever practices existed then had not suddenly sprung up without precedent, it can be included safely.

In 218 local troubles in Thyrsdrus (modern El Djem), in the eastern coastal area of *Africa praconsularis*, led to the rebellion which brought Gordian I to the throne for a short period. It began as a protest by landowners against a particularly rapacious *procurator*. Herodian relates that the owners "*kelousi nuktor katelthein tous ek ton agron neaniskous*", with the result that "*oi de peisthentes keleuousi tois despotaïs pro tes eo sunelthen es ten polin*".¹¹⁷ They killed the *procurator*, touching off the rebellion. Immediately below, the same rustic people are described as "*plethos ton oiketon*".

The problem lies in how one is to take *oiketon*. Some have believed that in using a word normally reserved for chattel slavery,

Herodian is specifically designating the mob as such.¹¹⁸ Others, more recently, have been willing to accept that these were perhaps people who were technically free, but bound by ties of client status to their large land owning patrons.¹¹⁹ *Colletai*, it is true, is normally taken as meaning a chattel slave.¹²⁰ It is again very hard to know whether one has here slaves or 'free' farmers, but if it were to be accepted at face value, there would be proof of the existence of just the kind of rural servile labour force under discussion here. It has to be seriously questioned, however, how likely slave owners would have been to arm their field hands and incite them to murder, even the murder of the opponents of the owners. It was not the sort of precedent they would have wanted to set for their slaves.

The legal compilations of the *Digest* and the *Code Theodosianus* date from after the Principate, and care must be taken with their evidence, even if they were based on much earlier legal work. They do make reference to rural slaves. There are opinions by Scaevola, among others, such as one on the estate of a Cornelia in Africa, which deals with *mancipia* and *rustica officia*.¹²¹ Probably this should be taken as confirming the presence of agricultural slave labourers.¹²² There are also other legal references to the existence in Africa of *mancipia*, *reliqua colonorum* and *mancipia rustica*.¹²³ Their appearance in the late legal codes presumably attests to their continuing applicability, though not necessarily in Africa. How representative such situations were is not known.

Also very late is the 'Life' of Ste. Melania, who, before she departed Africa in 417, possessed several thousand slaves. The sheer

numbers would again make one think it almost impossible that this was not, in part at least, an agricultural labour force, though mention is made of the *multos artifices, aurifiles argentarios, et aerariorum* owned by her, which has to throw into question the size of her slave field hand holdings.¹²⁴

Through all of this no mention has been made of epigraphical evidence. Work has, in fact, been done on the identification of slaves and ex-slaves in the inscriptional remains from Africa, and almost invariably they have indicated a very low occurrence of servile names. One such study has noted that the numbers for slaves in Africa are noticeably lower than those in Spain.¹²⁵ Another has found that the proportional difference between the number of slaves in Italy, Gaul and Spain on the one hand and Africa on the other is around ten to one.¹²⁶ The statistics clearly point to few slaves in Africa.

Unfortunately for this enquiry, such data are probably of limited usefulness. The reality is that very few simple agricultural workers will ever have been memorialized on stone. This applies to some extent to free farmers, but all the more so to servile ones.¹²⁷ The slave, or more commonly, ex-slave who did get mention was the one who was of more individual importance to his owner - the *vilicus, actor, tabularius, dispensator, or arcariorum*.¹²⁸ No wealth was wasted on a slave who died in the fields, perhaps "guère plus de frais pour un esclave rural mort que pour un âne crevé"¹²⁹ Such humble workers simply disappear from history without leaving the slightest epigraphic trace.

There are, to be sure, other references to slaves in the countryside of Africa, which can be construed as evidence of slave

labourers. St. Augustine speaks of troublesome slaves in the countryside during the troubles with the *circumcelliones*.¹³⁰ Similarly late mention comes from Optatus.¹³¹ But, as Gsell admits, these are not without their flaws as evidence, namely that most tell nothing precise about what these people actually did: Augustine, at least, seems to think of slaves mainly as domestics.¹³² One is also getting uncomfortably late and into the period of the colonate. The famous Zarai tariff of the early third century, recording duties on items brought into Roman territory, proclaims a charge for slaves.¹³³ All this proves is that the slave trade was alive at the time. It tells nothing of what the slaves so imported were used for, nor, in fact, if many slaves were imported at all. It would hardly be surprising that there was a market for slaves inside the Roman provinces in any case. More reliable is the Henchir Snobbeur inscription that specifically refers to slaves being used as shepherds; it dates from the late second century.¹³⁴ Nor do mosaics provide the kind of detail that would enable one to say if the rural workers they depict are free or servile.¹³⁵

What, then, is to be made of African agricultural slavery? As the evidence has shown, it was far from being a universally acknowledged phenomenon, as it was in Italy. This does not necessarily mean it was not present - there is a danger in expecting proof where it cannot reasonably be expected to have survived.¹³⁶ And there is some evidence for slaves in the fields, in early and late times, and in both Tripolitania and in *Africa vetus*. Nonetheless, it would be too much to argue from this that it was ever the dominant form of labour. There

are a great number of references to free *coloni*, tenant farmers in *Africa proconsularis*.¹³⁷ Free labour must have been most common.

In fact, besides asserting that slave labour existed and was used, but was never the most common type of labour, there is very little one can say with certainty. Tracing the chronological evolution is not feasible. It has been asserted that slavery was most common in the Republican and early Imperial periods, but soon died out due to an empire-wide decline in the availability of slaves and imperial policies aimed at expanding tenancy.¹³⁸ What evidence that exists just does not support that.

Various schemes explaining the spatial distribution of slaves fail for the same reason. Gsell believed that "Pour la culture, la main-d'oeuvre servile devait être employée, exclusivement ou presque, sur des propriétés moyennes, dirigées par le maître lui-même ou par son régisseur".¹³⁹ The references to Apuleius' insults to his accusers which Gsell adduces as proof are accurate in showing slaves were used on such estates, but only in Tripolitania, and even there they hardly prove exclusivity. The size of Pudentilla's and Melania's estates and slave populations seem to contradict this thesis.

Similar in nature, though originating from a Marxist analysis, is the assertion that rural slavery was confined essentially to the middle-sized estates of the territories of cities.¹⁴⁰ The events of Herodian, since they took place in Thysdrus, can be assumed to involve peri-urban slaves (if they were slaves at all), but none of the other sources can be placed specifically. In one city whose territory is fairly well-known -Caesarea- all evidence points to the continuance of

village based free labour.¹⁴¹ The fact that two of the rare references to slave labour relate to large estates (which were probably not immediately around cities) also works against this.

It is interesting that in the one area where one can speak with some certainty of slave labour, it is not even certain that it was a Roman introduction. Tripolitania was the one part of Punic Africa least upset by the wars with Rome, and Punic culture survived here into the Roman era. It is not at all unlikely that Pudentilla's slaves were part of an institution older than Roman rule.¹⁴²

One possible pattern of slave distribution which deserves some consideration was suggested by Gsell.¹⁴³ He reasoned that the southern parts of Tunisia, where the climate does not permit cereal cultivation, and where the olive was the chief crop, must have been largely farmed by slaves, on the grounds that olive trees take up to two decades to produce their first fruit, and no tenant or small owner could have survived the long maturation period. Only a large landowner, using slaves could have afforded to open up these areas. There is some logic in this, though it has not been widely accepted, or even discussed.¹⁴⁴ Unfortunately, given the lack of explicit sources and what has been said of the failings of epigraphic evidence, there seems to be no way of testing Gsell's thesis. However, it is a fact that the same areas which he mentions have been 'opened up' again in recent history for olive cultivation on a large scale without the use of slavery. The most common means was the *mgharasat* contract, whereby a large landowner lets an area to a tenant for a number of years, on the condition that the tenant plant olive trees on it. At the end of those years, the

previously landless tenant gets a part of the area as his own and the main owner gets the rest, with an established olive grove on it. In practice the tenant often became heavily indebted. Without advocating the *mgharasat* specifically as the solution in antiquity, it is clear there are ways other than slavery of establishing agriculture in these areas.¹⁴⁵

That one cannot say where the slaves were does not mean they were not anywhere. It is not necessarily the case that the widespread use of tenant farming precludes the presence of agricultural slave labour. Some owners will have kept some sort of 'home farm' for themselves, whether to be farmed under their own direction, if they lived on the land, or by an overseer they appointed. Such farms could easily be worked either by slaves or wage labourers. Thus there may have been slaves in some numbers working the land even on those estates which are known to have been mainly organized in the form of tenancies.¹⁴⁶ Along the same lines, some slaves may have been given their own land to farm, becoming what was called *servus quasi colonus*. There is evidence for these in Republican Italy, and some possible evidence for Africa as well.¹⁴⁷ If this aspect of slave labour is not here examined in detail, it is because it was effectively (though not legally) more like tenancy than slave labour in terms of agricultural organization. In addition, the whole concept is not universally accepted as representing a functional system, and even its proponents do not claim it to have been very widespread.¹⁴⁸

If slaves were never the main source of farm labour, perhaps never even very important outside Tripolitania, why is this the case?

The economic answer is obvious. If an alternative source of farmers is available, then the costs of purchasing slaves are avoided, as is the cost of equipment (assuming the tenant *coloni* supply their own), and the risk of farming is spread out.¹⁴⁹ As was shown in the last chapter, there was a body of native farmers, already peasantized to some extent, on the land, and, as will be argued below, the additional labour of pastoralists available when needed. "Why", to quote Whittaker, "should slaves have been introduced in large numbers into systems where there was an adequate supply of native labour already under the control of the rich?"¹⁵⁰

Slavery on the land was not the dominant form of labour, from any of the evidence that exists, and there is clear evidence that other forms *were* present. It may not even have been important to any degree. It would be disregarding what few facts there are to insist that the evidence "... can without violence be almost entirely reduced to supervisory and domestic staff".¹⁵¹ But, though there were rural slaves in the imperial period, in Tripolitania and possibly elsewhere, there is no reason to believe they ever formed a large portion of the agricultural work force.

There was a potential source for agricultural labour in Roman Africa which has not been properly taken into account in examinations of the development of its farming systems; a source which, on the contrary, has usually been seen as the very antithesis of everything connected with settled agriculture. The source is the pastoralist population of North Africa, more commonly referred to as 'nomads'.¹⁵²

Destruction of any pre-existing nomadic pastoral economic system has normally been taken as one of the cornerstones of the establishment of a successful agricultural economy. Conversely, a successful nomadic-pastoralist population has been seen as inevitably a grave threat to all sedentary farming.¹⁵³

Until comparatively recently it has been taken almost for granted that Rome's role in the Maghreb and the continuation of nomadic pastoralism were quite incompatible. One of the fundamental histories of Roman Africa put it in these terms:

Cette conquête du sol par l'agriculteur avait assurément pour contrepartie l'étouffement de nomades pasteurs... l'histoire de l'Afrique du Nord est dominée, plus encore que par la succession des dominations politiques, par l'opposition et l'alternance de deux modes de vie incompatibles. Le paysan ne peut vivre évidemment si le nomade vient razzier ses silos, fait pâturer ses bêtes dans les champs, détruit les maisons.¹⁵⁴

There is nothing unique in this analysis of agricultural-pastoral relations.¹⁵⁵ Nor has there been much doubt as to the outcome of the inevitable conflict between sedentary Roman and nomadic Libyan. The struggle was bound to favour Rome's organized military might, at least until the decay of the Empire allowed the conflict to be renewed on more equal terms. M. Janon has neatly summed-up this view of the course of events, which he justifiably feels is a caricature of reality:

Grâce à la puissance de l'armée romaine, et avec l'accord de la quasi totalité de la population sédentaire (ou sédentarisée par Rome), les nomades étaient refoulés au delà du *limes* méridional de l'Empire, dans les sables du Sahara; les montagnards étaient bloqués dans leurs montagnes. Les uns sur leurs pitons, les autres sur leurs chameaux attendaient, sans trop s'impatienter, que l'Empire donne des signes de faiblesse pour venir enfin, après quelques siècles, prendre leur revanche, piller les villes, brûler les récoltes, couper les arbres et faire retomber le

Maghreb dans l'anarchie et la stérilité d'où Rome avait su
le tirer.¹⁵⁶

In this scheme of things there is clearly no place for common or productive interactions between farmers and herders, and it might well be wondered what relevance the pastoralist has to a study of the agricultural aspect of Roman Africa. The answer that the pastoralist does in fact have a role derives from the fact that the caricature described by Janon is exactly that. The all-or-nothing, confrontational view of pastoral-agricultural relations has been thoroughly repudiated by research into modern pastoral societies. Anthropological field-work has demonstrated that there are few modern instances of pure pastoralism, and fewer still of pure nomadism.¹⁵⁷ Rather, most pastoralists both practice some farming themselves and are capable of peaceful interaction with those who are full-time sedentary farmers.¹⁵⁸

The reality of the matter is that pure pastoralism as an economic regime is inevitably non-autarchic.¹⁵⁹ The pastoralist may devote most of his activity to caring for his animals, and his herds or flocks can provide many necessary products, but animal products cannot of themselves ensure him an adequate diet or meet all his material needs.¹⁶⁰ As a result, contact with agriculture in some form is an absolute necessity. There is, in W. Swidler's words, "... a close interplay between stock and grain, between grazing and cultivation, between the desert and the sown".¹⁶¹ So important is this interplay that it is preferable not to think of separate pastoral and sedentary economies, but of pastoralist and farmer as "participants in a common

regional economy".¹⁴²

The contact with agriculture can take two basic forms. Most pastoralists do some farming themselves, in a number of variations, but which can generally be grouped under the heading of 'semi-nomadism'.¹⁴³ Often large tribal units contain within themselves some sections which are pastoral, some which are sedentary. Thus a 'tribe' may often be thought of as nomadic when it in fact is not such a simply unitary structure.¹⁴⁴ More specifically important to the present study, almost all semi-nomads, along with those pure nomads who do exist, also gain access to agriculture through contacts with completely settled farmers.¹⁴⁵ Sometimes the nomadic pastoralist will subjugate a group of farmers and compel them to contribute their harvest.¹⁴⁶ More often contact takes the form of trade, for the pastoralist has goods typical of his economic system (wool, leather, etc) which the farmer desires if not actually depends on. In addition the nomad can carry out mediatory trade, acting as a middleman transferring, for example, dates from oases to cereal farmers by means of the now-fabled caravan.¹⁴⁷ The site of this trading activity is usually large, periodic rural markets.¹⁴⁸ In return, the pastoralist gets the products, especially grain, on which he does depend.

Trade can involve less tangible goods. The nomad needs to pasture his flocks in late summer; the farmer needs the stubble of his harvested fields removed, a job which flocks do nicely, with automatic manuring added. Then there is the matter of getting such fields harvested in the first place. The farmer often experiences times when the normally available labour -for a peasant, essentially his family-

is insufficient for the tasks at hand. The problem is not constant, however; for many crops (cereals and olives included) harvest means a great need for many hands, but it would not be feasible to employ this number of workers for the rest of the year, when work levels are low. Much the same cycle controls the pastoralist's life, but in reverse, so that his time of least labour often coincides with the settled farmer's harvest. The potential combination is obvious and often brought into effect. The pastoralists sell their labour during the harvest, today mostly for cash, though even now payment often includes some grain, and for the right to pasture their animals on the stubble afterwards.¹⁶⁹

The stereotypical roving nomad is really almost a myth, and pastoralists are very much aware of and familiar with agriculture. That they should want to destroy agriculture is thus quite nonsensical; pastoralism is in the end absolutely dependant on farming. It is, in fact, now commonly accepted that pastoralism as an economic system is actually derived from settled farming, precisely because only farming of some sort can produce what the pastoralist needs.¹⁷⁰ Such is the source of a delightful saying about nomadic Turks and sedentary Tadzhiks: "There is no Turk without a Tadzhik, there is no hat without a head".¹⁷¹ This is not to say there is never farmer-nomad violence -there certainly can be- but that violence results from pastoralists' attempts at acquisition of control over, not destruction of, sedentary resources.

Generalized conclusions about pastoral-sedentary relations based on studies in various parts of the world, even the Middle East, are, it is true, far from proof of similar relations in ancient North Africa.

As correct as this caution is, one can at least see exactly the phenomena just discussed in ethnographic studies of modern Maghrebian groups.¹⁷² Semi-nomads who both farm and herd include the Bedouin of Cyrenaica¹⁷³, the Siian of Tripolitania¹⁷⁴, the Meraziques, Hamama and Frechich of Tunisia¹⁷⁵, and the Said Atba of Algeria¹⁷⁶, to name but a few. Trade contacts with purely settled farmers are also prominent in North-west Africa. In Algeria the above mentioned Said Atba are joined by the Arbaa in their summer movement north, where they are employed as harvesters in the area of the Sersou, near Tiaret.¹⁷⁷ Farther to the east, in Tunisia, the number of nomadic pastoralists who come north in the summer can be very large, occasionally up to 300,000 persons, though the actual number of harvesters is more normally in the range of 50,000 to 60,000, or one tenth of the pastoral population.¹⁷⁸ And this is despite the introduction of modern technology for harvesting. The route of these migrating pastoralists takes them right across the most fertile and farmed parts of northern Tunisia (and thus of Roman Africa).

If the changes wrought by the modern agriculture brought to North Africa by the French have not brought about the end of pastoralism and its interaction with settled farmers, it may be legitimate to doubt that Roman rule did either. And, in fact, there is not inconsiderable evidence that it did continue.

One may begin by noting that the pre-requisites were present. From the ancient sources there can be no doubt that pastoralism was practiced over much of North Africa in the pre-Roman period; and it is equally clear from physical remains that, in places, farming was

carried on as well.¹⁷⁹ And lest it be supposed that the two areas may not have coincided, note that it is in the area which at the height of the Principate belonged to the 'nomadic' *Musulami*, that is the *Muthul* River area, that the agricultural remains referred to above have been found. Given this, one should consider carefully what kind of a situation Sallust is describing when he writes that around the *Muthul* there were commonly many farmers and many cattle, or that the Romans invading eastern Numidia found the same thing.¹⁸⁰ Any farmer could have had cattle, but perhaps what one sees here is one element of a partially pastoral, partially sedentary *Musulami*. There is evidence that in other areas - the land of the *Garamantes* of southern Tripolitania and in the area of Oudja in eastern Morocco- agri-pastoral economies were practised.¹⁸¹

If the potential supply of nomadic labour was available, so too was a need for it. Roman agriculture, like most non-technologically advanced agriculture, was heavily dependant on additional labour at harvest time.¹⁸² This was true even throughout much of Europe until quite recently.¹⁸³ The famous career of the so-called 'Maktar Harvester', from central Tunisia, shows quite clearly that large gangs of hired labourers were needed at the harvest in Africa, as does a reference in St. Augustine.¹⁸⁴

What is lacking is any real evidence that nomads were ever either 'refoulé', or forcibly settled as farmers. The most obvious possible proof is the supposed 'cantonment' of the *Musulami*, just mentioned. That they and other pastoralists had their territory defined by Rome is not in doubt - there are at least ten boundary stones for the *Musulami*

alone.¹⁸⁵ However, it is hard to see in this the implementation of a particularly harsh 'reservation' policy such as the modern world has known. The area delimited by the boundary markers is actually quite large, including good land in the upper *Bagradas* and *Muthul* valleys, and encompassing Theveste. Since this is all that is known of the native area of these people, it cannot prove the *limitatio* involved any reduction in size or quality of land.¹⁸⁶ Nor is there any particular proof here of forced sedentarization. No doubt some farming was practised by the *Musulami*; but nomadic pastoralists have in recent times often proved quite willing to settle on their own initiative if economic stimuli are present, and the *Musulami* may well have already included some farmers in any case.¹⁸⁷ The very size of their *territorium*, and the inclusion of both mountain and plain in it, suggest transhumance went on. It has been noted, too, that the tribal territory lacks signs of centuriation, which opens the possibility of some special status for the tribe's land.¹⁸⁸ The argument for official Roman acceptance of continued pastoral movements has been made for the *Nicives* and the *Suburbes Regiani* around Cirta even more explicitly, since there is epigraphic evidence for these groups in widely separated places that has been interpreted as the stating out of winter and summer pastures.¹⁸⁹

Probably the most interesting positive evidence for continued pastoral movements in the Principate is the so-called Zarat Tarif, dating to 202, and found at Ain Zraia, some 60km north-west of Lambaesis.¹⁹⁰ It is, as the name implies, a customs duty list stating the amounts charged on various items brought across the frontier.

Whether the frontier in question here was one between Mauretania and Numidia, or between Numidia and lands to the south is unclear, but not particularly vital. What is significant is that many of the items listed are products of a pastoral economy (22 of 38, including horses, goats and sheep, as well as typical 'middleman' goods such as dates and figs), while those items coming from sedentary agriculture are not common.¹⁹¹ There is little doubt that one has here the movement of pastoralists into Roman territory. Note too that the area moved into is the Plain of Setif, a grain-growing area of importance. The point is made all the more persuasive when it is realized that Ain Zraia lies right on the line of modern pastoral movements north from the Sahara, via the Hodna Basin.¹⁹² A very similar inscription, more fragmentary, but also mentioning *bovem*, *asinu...*, and *porcum*, was found at Lambaesis itself, another point on modern pastoral migratory routes.¹⁹³

Also important is that the duty charged per head on the animals at Zarat is, relatively, very low - less than 0.2-0.3% of their value. The inanimate goods were taxed at a rate of 2-2.5% of value. In this one is presumably seeing a policy of making possible the regular transportation of large numbers of animals not for sale. Only such a nominal charge would be acceptable to a herder who could make no cash profit off the animals he was only taking north to pasture.¹⁹⁴

If one accepts that nomadic pastoral movement continued in the Roman period, there are a number of other pieces of evidence which, though not in themselves proof, do begin to make more sense than in a purely sedentary province. Inscriptional mention of a market - typical, as has been said, of points at which nomads and farmers trade-

in territorio Musulamiorum ad Casas can be seen as possible continuation of the old nomadic movements into the second century.¹⁹⁵ So too do references to *mappalia*, the transportable huts of the nomads, by Pliny and others.¹⁹⁶ Whittaker has drawn attention to the naming of two places in *Africa proconsularis* with the word *Mappalia* - one of them being one of the imperial estates right in the heart of grain country - which may signal continued penetration of nomads here in the Roman period, just as there was in the nineteenth century.¹⁹⁷ Perhaps the mosaic representation of what has been called a 'Bedouin tent' on one of the Qudna mosaics is reflective of the arrival of nomads to harvest, pasture and trade in this area.¹⁹⁸

There is another element which makes more sense if nomadic pastoralism continued into the Principate. The *Africana Limites* have been often and intensively studied, and there is obviously no space to discuss them here.¹⁹⁹ Suffice it to say that the remains of the *fossatum Africae* of southern Numidia do not provide any attempt at an effective system of border defence. There are four main sections, with gaps many tens of kilometers in length between; the siting of sections is inept in terms of mutual military support, and the physical location of some parts of the 'defences' is tactically indefensible.²⁰⁰ Exactly the same problems apply to the linear 'defences' found in Tripolitania and known as *clausurae*.²⁰¹ The obvious deficiencies of these works as classic border defences has convinced many scholars of the need for a different explanation. A good number have come to believe that the most reasonable role for the *fossatum* and *clausurae* was some sort of regulation of nomadic movement.²⁰² Certainly, there is

a concentration of such works in the area of the Lambaesis-Zarai 'gap', a geographically unavoidable passage, which in recent history has been a major route for pastoral movement; since geography is unchanging this area would almost certainly have played a similar role in antiquity, if any long range migrations from north to south did occur. The *clausurae* are almost universally placed across modern migration routes as well.²⁰³ Janon has argued that the whole role of the complex of settlements in the Zarai-Diana Veteranorum-Lambaesis area in Roman times was to allow control to be exercised over nomadic passage through this key area.²⁰⁴ It is notable too that the *limes* system as a whole is divisible into *limes interior* (northern) and *limes exterior* (southern), the area between which is essentially the same as that between desert and the land where cereals can grow without irrigation. This area has been used in modern times as a 'waiting area' by nomadic pastoralists, that is, as the area into which flocks can be driven in early summer to escape the drying up of the southern pastures and in which they can remain until the crops further north have been harvested (with the help of many of the herders), at which point the flocks can proceed north to pasture on the stubble.²⁰⁵ It is suggestive of a frontier system built around regulation, not removal, of pastoral migratory movement.

Two points should be made. First, there is no need to see in this continuation of pastoral nomadism a "compassionate Roman imperialism".²⁰⁶ A controlled pastoralism was advantageous. Rome could be adequately ruthless when necessary, as the history of the various revolts in Africa demonstrates. But the cause of these revolts

need not have been the destruction of the nomadic pastoral economy. Roman assumption of political primacy, the limitation of the political freedom of the pastoralist (including the right to subjugate sedentary farmers), the freezing of the nebulous and ever-changing balance of power typical of tribal societies - all these would have occurred, and all are adequate explanations of revolt without needing to invoke forced sedentarization.²⁰⁷ Which leads directly to the second point. There will have been changes in the social-economic make-up of Africa, of course. Probably some nomadic herders will have seen the advantages of farming and begun to concentrate on it. But since they were not, in the first place pure nomads the change was one of emphasis rather than of nature. The area of purely sedentary farmers expanded and within it the emphasis no doubt went from semi-nomadism in which only a little farming was done, to semi-sedentary pastoralism, in which nomadic movement was less important, and farming more so, and even in places to herdsman husbandry, in which most of the people farm and only some herd.²⁰⁸ But the evidence suggests that pastoral migration never ceased entirely. And this fact is what is important, for in it lies the explanation of why Africa, despite a population that in comparison with the modern Maghreb was small, was thought of in antiquity as *poluanthropos* - a plentiful seasonal labour force provided by nomadic herders.²⁰⁹

What all the above sections have indicated is that major changes in the social-economic structure of African life which could have significantly altered the organization of agricultural production did

not occur, at least to a very significant degree. There can be little doubt that over most of the Maghreb the land was worked by the same population as in pre-Roman times, with the same technology.

To this statement it might be objected that no account is being taken of the effect of romanisation on that population. In other words though the rural population may have been of aboriginal stock, the effects of its acquisition of Roman culture would have made this fact largely irrelevant.

The question of the romanisation of the Empire is a large topic and one that has been exhaustively studied. It is not within the scope of this discussion to investigate cultural change in detail, even in the rural parts of Africa alone. At most a statement of the general scholarly consensus on the subject can be attempted.

In general the trend of modern opinion has been to downplay the significance of the romanisation of the provinces. This is particularly true of the rural areas; the cities were far more 'Roman' than the countryside. Even in rural districts there was, of course, some cultural penetration. However, it appears that such penetration was not deep, and that most of the rural population was not heavily romanised. In the words of MacMullen, the "... tendency of non-Roman, that is non-Italian elements of Roman imperial civilization to assert themselves among the poor and rustic" produced the result that "there was plenty of movement and flowering in the upper branches of provincial society, but little detectable in the broad roots".²¹⁰

There is little doubt that this was the case in Roman Africa. Broughton long ago closed his work on the romanisation of provincial

Africa with the words "The Romans adapted themselves to Africa; they gave her peace, and made her prosperous, but they never made her Roman".²¹¹ Half a century of further research does not appear to have brought to light any significant causes for disagreement.²¹² The most important study of the 'resistance' of Africa to Roman rule has shown that (whether one accepts the concept of resistance or not) there was in the cultural sphere a very significant continuation of the non-Roman element. African religion not only survived in its own right, but 'corrupted' the Roman introductions; Punic and Libyan were spoken throughout the centuries of Roman rule; onomastics reveal many non-Roman naming patterns.²¹³ There is evidence of the continuation of the tribal organization of society, and some local political forms survived as well.²¹⁴ It may be safely said that Roman culture did not conquer Africa. At most there was created an unique Romano-African culture. Even this probably did not fully extend over the countryside, which probably remained culturally African for the whole of the Principate.

This does not mean, however, that no change occurred under Rome's rule. There were a number of factors created by the presence of Africa in the Empire which will have had their effect on agriculture. As a province Africa now had to produce not only for the subsistence of its population and for appropriation by its native upper class, but also to satisfy Rome. This meant the provincial land tax, support for the army stationed on African soil, the removal overseas of much of the production of extensive imperially-owned lands. Then too there was an increased urban population, effectively non-productive, which now had

to be fed. All this should have caused agricultural production to rise.²¹⁵

What is difficult to know is whether techniques of production, organizational methods or labour relations would have been changed. The extension of land area farmed may have been able to account for the presumed increase in output, even with farming going on in the same manner. Alternatively, it is entirely conceivable that the greater amount of agricultural goods being appropriated simply resulted in less for the peasant producers, without any increase in overall production at all.²¹⁶ But it is equally possible that there was an increase in production and that it was not made up entirely by increasing the area farmed. In this case the intensity of production will have had to increase, and that will possibly have had effects on how that production was carried out. These are points which must be borne in mind.

Even if no changes were brought about in this way, the colonial relationship will have had its effects. The presence of the army cannot but have been in some way destabilizing to the pre-Roman way of life. The monetarization of the economy comes to mind at once, a vital problem since modern colonial experience has shown that increased use of money in an agrarian society often brings about a major change from communal to private land tenure.²¹⁷ But the extent of monetarization may not have been great, beyond the immediate vicinity of the legionary camps: the evidence of the 'grandes inscriptions', at least, suggests that cash cropping, far from being the chief mode of farming, was subordinate to payment in kind.²¹⁸ The growth of cities, in number and

in size, no doubt did lead to an altering of socio-economic relationships in those areas which they controlled.²¹⁹ These things too must be considered.

The centuries of Roman rule, then, brought about perhaps fewer of the obvious changes to the rural part of Africa than might have been expected. It left the same people on the same land, with the same means of farming it. It did not radically alter their social structure, or socio-economic relationships. It is against this background -and, admittedly, with the changes it did cause in mind- that the evidence of agricultural organization in *Africa proconsularis* during the Principate must now be examined.

Notes - Chapter Two

1. D.K. Fieldhouse, Colonisation 1870-1945: an Introduction (New York: St. Martin's Press, 1981), Chap. II, pp.50-108, esp. 69-77. Not all colonialism followed this pattern.
2. On the effects on rural populations, see R. Palmer and N. Parsons, The Roots of Rural Poverty in Central and Southern Africa (London: Heinemann, 1977), Introduction, esp. p.2.
The role of the natives, as envisaged by some modern colonialists, has been most clearly put by a Belgian missionary in the Congo: "The Congo economy makes two essential requirements of the rural population: to provide labour, and to provide this labour with cheap food". J. van Wing, S.J., cited by B. Davidson, Africa in Modern History (London: Allen Lane, 1978), p.107; see also Chaps. 10 and 11.
3. The quote is from M.I. Finley, The Ancient Economy, 2nd ed. (Los Angeles and Berkeley: University of California Press, 1985), pp.144, 158. Cf. C.R. Whittaker, "Rural Labour in Three Roman Provinces," in Non-Slave Labour in the Greco-Roman World, ed. P.D. A. Garnsey, Cambridge Philological Society Supplement, vol. 6 (Cambridge: Cambridge Philological Society, 1980), 73-79, pp.73-74. On the economic factors in modern imperialism, see D.K. Fieldhouse, Economics and Empire 1870-1914 (London: Weidenfield and Nicolson, 1973), Part One, pp.1-87, especially Chap. 3, pp.38-62.
4. Essentially I here follow Whittaker, "Rural Labour," p.74.
5. Albert Deman, "Matériaux et réflexions pour servir à une étude du développement et du sous-développement dans les provinces de l'empire romain," ANRW II.3: 3-83, p.32.
6. Jean-Marie Lassere, Ubique Populus: peuplement et mouvements de populations dans l'Afrique romaine de la chute de Carthage à la fin de la dynastie des Sévères (146 a.C.-235 p.C.) (Paris: Editions du C.N.R.S., 1977), Partie I, pp.33-283; Marguerite Rachet, Rome et les Berberes. Un problème militaire d'Auguste à Diocletien, Collection Latomus, n. 110 (Bruxelles: Latomus, 1970), pp.57-8, 66.
7. Appian B.C. 1.24.
8. In Heitland's words, "Probably not all. Possibly not many. We have no detail whatever." "A Great Agricultural Emigration from

- Italy?," JRS 8 (1918): 34-52, p.35. We still do not. Stéphane Gsell, Histoire ancienne de l'Afrique du Nord, 4th ed., 8 vols. (Paris: Librairie Hachette, 1920-28), 8:61 thought that most went.
9. Plutarch C. Gracchus 13; Appian B.C. 1.24.
 10. CIL., I, 585. LX and LXI.
 11. Aurelius Victor Liber de viris illustribus 73.
 12. ILS., 1,374; 6,790; Année Epigraphique 1951, 81.
 13. Tenney Frank, "The Inscriptions of the Imperial Domains of Africa," AJPH 16 (1926): 855-77, p.64; accepted by R.M. Haywood, "Roman Africa," in An Economic Survey of Ancient Rome, ed. Tenney Frank, 6 vols. (New York: Pageant Books, 1959; orig. 1938), 4:14. No obvious bases for the figures are given. See also Lassere, Ubique Populus, pp.115-31; A.J.N. Wilson, Emigration from Italy during the Republican Age of Rome (Manchester: Manchester University Press, 1960), p.45; I. Carney, A Biography of C. Marius Proceedings of the African Classical Association, 1961, p.32, n. 163; L.A. Thompson, "Settler and Native in the Urban Centers," in Africa in Classical Antiquity: Nine Studies, ed. L.A. Thompson and J. Ferguson (Ibadan: Ibadan University Press, 1969), 74-52, pp.34-5.
 14. Gsell, Histoire ancienne, 8:10; more recently, argued convincingly by F.A. Brunt, Italian Manpower 225 B.C.-A.D.14 (Oxford: Clarendon Press, 1971), App. 12. pp.577-80.
 15. Appian B.C. 1.92.
 16. BCRH 1908 p.CCLII; 1915 p.CLXXI; J. Heurgon, "Inscriptions étrusques de Tunisie," CRAI 1969: 526-51.
 17. Jean-Marie Lassere, "L'organisation des contacts de population dans l'Afrique romaine sous la république et au Haut-Empire," ANRW II.2: 397-426, p.401.
 18. Bell. Afr. 68; 93; Plutarch Cato Minor 59; Appian B.C. 2.95.
 19. Sallust B.J. 21.3; 26.3; 47.1; 64.5; Cicero Verr. 2.1.70; Val. Max. 9.10.2; Caesar B.C. 2.36; see Thompson, "Settler," p.134.
 20. As noted by Marcel Benabou, La résistance africaine à la romanisation (Paris: Maspero, 1976), p.51.
 21. Brunt, Italian Manpower, pp.164-5.

23. To give but one such example, two legions raised by Varus - Caesar B.C. 1.31.2. On the question of legions raised in Africa, Brunt, Italian Manpower, pp.229-30; 473-4; 476; and App. 29, pp. 698-99.
24. Bénabou, Résistance, p.37.
25. Appian B.C. 4.54; Dio Cas. 43.3.1. On the make-up of the Italians in Sittius' settlers, see H.-G. Pflaum, "Remarques sur l'onomastique de Castellum celtianum," Carnantia 1956: 17-51; "Remarques sur l'onomastique de Ciria," Limes Studien 1958, 96-133. J. Heurgon, "Les origines campaniennes de la confédération cirtéenne," Libyca 5 (1957): 7-24; Lassère, Ubique Populus, 166-97.
26. Clupea - CIL., X, 6,104; Curubis - CIL., I, 780; 788; CIL., VIII, 21,400; Carthage - Pliny N.H. 5.24; Appian Lib. 136; Strabo 17.3.15; CIL., VIII, 25,417; Carpis - CIL., VIII, 25,417; 24,106; CIL., VIII, 968. See Brunt, Italian Manpower, App. 15, pp.588-601; H. G. Pflaum, "La romanisation de l'Afrique," Actes des VI Internationalen Kongresses für Griechische und Lateinische Epigraphik (München, 1977), 55-72.
27. Thompson, "Settler," p.138.
28. Suetonius Caes. 42.
29. Brunt, Italian Manpower, pp.255-59.
30. Lassère, Ubique Populus, pp.147-49.
31. See below, at nn. 59 to 61.
32. Pietro Romanelli, Storia delle Province Romane dell'Africa (Rome: L'ERMA, 1959), p.207. Accepted by P.D.A. Garnsey, "Rome's African Empire under the Principate," in Imperialism in the Ancient World, ed. P.D.A. Garnsey and C.R. Whittaker (Cambridge: Cambridge University Press, 1978), 223-54, p.231. Whittaker, "Rural Labour," p.74; Thompson, "Settler," p.144; given credence without open acceptance, by Brunt, Italian Manpower, p.261. Carthage, with 7,000 colonists, was the exception - Dio 52.47.1; Appian B.C. 2.136.
33. Such as the *pagus Fortunalis et Sutunurca* near Uthina - ILAf., 301 or the *pagus Mercurialis Medelitana* - CIL., VIII, 885 (=12,387). See T.R.S. Broughton, "Some Non-colonial *Coloniae* of Augustus," JAFNA 16 (1973), 13-24.
34. Brunt, Italian Manpower, p.261.
35. Dio 51.4.6; Broughton guesses 170,000 uprooted, with no

35. Dio 51.4.6; Broughton guesses 170,000 uprooted, with no obvious source - Romanization, p.78.
36. Virgil Buccolics 1.64.
37. Brunt, Italian Manpower, pp.163-64. As he points out, Virgil also mentions Scythia and Britain, neither of which could possibly have received immigrants. The Buccolics are poetry.
38. Keith Hopkins, Conquerors and Slaves: Sociological Studies in Roman History, Volume I (Cambridge: Cambridge University Press, 1978), p.67, n. 91. Broughton, Romanization, p.83 agreed; as did Heitland, "A Great Agricultural Emigration,"; and Rostovtzeff, Social and Economic History, p.683, n. 74.
39. Whittaker, "Rural Labour," p.75.
40. Oppidum Novum - Pliny N.H. 5.1.20; Ammaedara - CIL., VIII, 308; Madauros - ILAlg., I, 2,152; Apuleius Apol. 24; Icosium - Pliny N.H. 5.1.20; CIL., VIII, 20,853.
41. Sitifis - CIL., VIII, 8,441; 8,473; Cuicul - R. Cagnat, CRAI 1916, 597; Mopth... - Année Epigraphique 1959, 136.
42. Thamugaddi - CIL., VIII, 17,842; 17,843; Theveste - R. Syme, "Notes sur la Legion III Augusta," REA 38 (1936): 182-90, pp.182-4.
43. Broughton, Romanization, p.130.
44. Thus, one *Ti. Claudius Congonnetiacus, natione Bitry*, of the *Ala II Thracium*, from Caesarea - CIL., VIII, 21,204.
45. Whittaker, "Rural Labour," p.75; Thompson, "Settler," p.143; see Brent D. Shaw, "Soldiers and Society: the Army in Numidia," Opus 2 (1985): 133-60, pp.144-48.
46. Brunt, Italian Manpower, pp.262-64. Accepted by Whittaker, "Rural Labour," p.74; Hopkins, Conquerors, p.68.
47. Shaw, "Soldiers and Society," p.140.
48. Thompson, "Settler," p.143.
49. Two thousand colonists per colony (see above, at n. 34) and 28 colonies gives 50,000 colonists. Three thousand per colony gives 70,000. One quarter of the total 365,000 emigrant veterans comes to something over 90,000. These numbers are, it must again be stressed, intended only to convey some conception of the scale of the settlement.
50. The whole population question is a particularly vexed one.

The important works are: C. Courtois, Les Vandales et l'Afrique (Paris, 1955), p.196 - estimating 4,000,000 in the Severan era; J. Beloch, Die Bevoölkerung der griechisch-römischen Welt (Leipzig, 1884), p.527 - estimating 6,000,000; R. H. D. Thomas-Jones, "Wealth and Mortality in Roman Africa," FBSP 31, N.S. 18 (1967): 157-77, p.170 - estimating 2,000,000 between 90 and 144; J.C. Russell, "Late Ancient and Medieval Population," JAH 67/3 (1958), pp.75-77 - estimating 4,271,000 in 2nd century; P. Salmon, Population et dépopulation dans l'empire romain, Collections Latomus 137 (Bruxelles: Latomus, 1974), pp.36-9 discusses the above, but offers little insight; cf. M. Reinhard *et al.* Histoire générale de la population mondiale (Paris: Montchrestien, 1968), pp.36-7, who accept Picard (see next note).

51. Gilbert Charles Picard, La civilisation de l'Afrique romaine (Paris: Librairie Plon, 1959), pp.52-59
52. Lassere, Ubique Populus, pp.566-69; 596' claims to be able to determine the population growth rate of Roman Africa. His work is a modification of J. Durand, "Mortality Estimates from Roman Tombstones," American Journal of Sociology 45 (1959-60): 745-73. This apparently works from United Nations figures for underdeveloped countries found in United Nations, The Future Growth of the World Population, United Nations Population Study No. 28 (New York: United Nations, 1958), p.41. Lassere's rate would have produced between 22 and 27% population growth each century, depending on whether one allows 4 or 5 generations per century. I am not competent to judge the demography, but have no particular faith in our ability to confirm that growth in ancient populations matched modern circumstances. Certainly in Europe in the period 1000-1700 A.D., where conditions were admittedly different, but where the main factor in modern high population growth rates (reduced mortality through medical advances) was also absent, the population was capable of much higher growth rates than this; on the other hand, the overall growth rate per century in Europe does seem to have been about 25%. See David Grieg, Population Growth and Agrarian Change: an Historical Perspective (Cambridge: Cambridge University Press, 1980), Chap. 4, pp.51-63.
53. The percentage ranges from 2% (50,000 immigrants in a population of 2,500,000) through 2.5% (50,000 in 2,000,000) and 4% (100,000 in 2,500,000) to 5% (100,000 in 2,000,000). Again, these figures are but the roughest of approximations.
54. CIL., I, 585 - the *Lex agraria*, LXXV-LXXIX.
55. ibid., XLVI.
56. Fran', "Inscriptions," p.61; Lassere, "L'organisation," p.407. The land settled by the Marian troops was in the Numidian kingdom (one reason why it is hard to picture them as Italians, not

Gaetulians - see above, at n. 17), but they presumably would have remembered where their good fortune came from.

57. The soldiers were probably not the city proletarians that Frank envisaged ("Inscriptions," p.66) - see P. Brunt, "The Army and the Land in the Roman Revolution," JRS 52 (1962): 69-86, pp. 73-5. They could, however, easily fail at farming, as Brunt himself admits, if only through being given bad land.
58. As noted by Benabou, Resistance, p.41.
59. Uthina - Pliny N.H. 5.29; CIL., VI, 36,917; Thuburbo Minus - Pliny N.H. 5.29; ILAf., 414; Thuburbo Maius - see Brunt, Italian Manpower, p.595 for sources. Carthage was reinforced as well - Appian Lib. 136.
60. Hadrumetum to Thsydrus - see Brunt, Italian Manpower, p.595 for ancient sources.
61. Thabraca - ILAlg., I, 109; Année Epigraphique 1957, 77. Simithus to Sicca - see Brunt, Italian Manpower, pp.594-5; and Pflaum, "Romanisation," pp.55-72 for details
62. Pliny N.H. 5.22; Année Epigraphique 1955, 202.
63. Brunt, Italian Manpower, pp.595-97; and Pflaum, "Romanisation," pp.55-72.
64. For details on these, see above, at nn.40-42.
65. Plutarch C. Gracchus 9.
66. CIL., I, 585 - the Lex agraria, LX-LXI.
67. Columella De re rustica 2.12.7-9. See L.D. White, "Productivity of Labour in Roman Agriculture," Antiquity 39 (1965): 102-07, for comparison with modern data.
68. Cato De agri cultura 10. As Frayn notes, Cato was not an author to recommend extravagances - Joan Frayn, Subsistence Farming in Roman Italy (Fontwell and London: Centaur Press, 1979), p.93.
69. Frayn, Subsistence Farming, p.93. This, and n.68, above, of course refer to Italian conditions.
70. Liber de viri illustribus 73.
71. Livy 40.34; 42.4; cf. 35.9; 35.40; 37.57.
72. Cicero Ad. Att. 1.16.1; De leg. agr. 2.85.

73. Richard Duncan-Jones, "Some Configurations of Landholding in the Roman Empire," in Studies in Roman Property, ed. M.I. Finley (Cambridge: Cambridge University Press, 1971), 7-34, pp.10-11. Accepted by Garnsey, "Rome's African Empire," p.270.
74. Duncan-Jones, "Some Configurations," p.11. D.J. admits farm sizes vary widely. Similarly, his attempt to derive from the Lamassa water register an average holding for that part of Numidia falls into almost circular logic (p.18).
75. Liber Coloniarum, in F. Blume, F. Lachmann and A. Rudorff, edd., Gronetia Veteres, die Schriftw. der romischen Feldmesser, 2 vols. (Berlin: George Reimer, 1940-50), pp. 110-2, 214-10. See also Brunt, Italian Manpower, p.225-4; 337; 741-10.
76. L.C.C. Stevens and I. Richmond, "The Lead Register at Araucio," JRS 32 (1942): 65-77, pp.70-72; Brunt, Italian Manpower, p.227.
77. Based on the very speculative Appendix 9 of Richard Duncan-Jones, The Economy of the Roman Empire: Quantitative Studies (Cambridge: Cambridge University Press, 1974), pp.747-9. I include this only as an example of one opinion. The praetor was probably about HS 12,000 per legenary - Brunt, Italian Manpower, p.278.
78. The map on p.675 of Bénabou, Résistance gives a good, if somewhat incomplete, view of the situation at Augustus' death.
79. To a certain degree, thus, I feel that Whittaker, "Rural Labour," underestimates the effect, at least in *Africa praecensularis*.
80. See above, at n.48.
81. P.A. Février, cited by Whittaker, "Rural Labour," pp.75; 93, n.13.
82. Noted by Thompson, "Settler," pp.140-41. This did, of course, happen in Britain - Tacitus Annals 12.32.5 and 14.31.5.
83. M.I. Finley, "Technical Innovation and Economic Progress in the Ancient World," Economic History Review 17 (1965): 29-45, p.29.
84. Finley, "Technical Innovation," pp.35; 30. I.D.White, Roman Farming (Ithaca, New York: Cornell University Press, 1970), pp.446-48; 450-53.
85. Pliny N.H. 8.36.38, 43.

86. Finley, Ancient Economy, pp.121-22.
87. White, Roman Farming, pp.453-54.
88. H.W. Fleket, "Technology and Society in the Graeco-Roman World," Acta Historiae Neerlandica 2 (1967): 1-25, pp.19-20.
89. White, Roman Farming, p.452.
90. See illustrations in F.D. White, Agricultural Implements of the Roman World (Cambridge: Cambridge University Press, 1967), pp. 126-9. Nor for that matter was there any superiority over other provinces' native agricultures, e.g. Britain - see A.L.F. Rivet, Town and Country in Roman Britain (London: Hutchinson, 1964), p. 100. On modern North African ploughs, see David Grigg, The Harsh Land: A Study in Agricultural Development (London: Macmillan, St. Martins' Press, 1971), pp.170, 172.
91. A Punic plough drawn on a Carthaginian *zippus* is illustrated in S.-E. Tietli, La Carthage punique (Paris: Librairie d'Amérique et d'Orient, 1978), p.122.
92. The best recent work is Brent D. Shaw, "Water and Society in the Ancient Maghrib," AntAfr. 20 (1984): 121-73.
93. Jean Despois, "La culture en terrasses dans l'Afrique du nord," Annales ESC. 11 (1956): 42-50, p.49.
94. For areas outside Roman control - Richard Lawless, "L'évolution du peuplement, de l'habitat et des paysages agraires du Maghreb," Annales de Géographie 81 (1972): 451-64. For Roman areas - Raymond Chevallier, "La centuriation romaine et la mise en valeur des sols dans la province d'Afrique," Information Géographique 20 (1958): 119-54, p.152; cf. Shaw, "Water and Society," p.157, nn. 147-45.
95. Shaw, "Water and Society," pp.151-55. Proof that the fact that Romans were not necessarily superior did not stop them from believing they were - a trap into which, it may be noted, the colonial French engineers also fell.
96. Columella De re rustica 1.1.16.
97. Shaw, "Water and Society," pp.160-62.
98. Pomponius Mela 1.41.
99. I do not think there is any need to attempt to prove that agricultural slavery was common in Italy (which is not to say universal - see below, at n. 108). A few references include: Columella De re rustica 1.3.12; Plutarch C. Gracchus 8.9; Martial

9.22.4. References to *ergastula* include Suetonius Augustus 32; Suetonius Tiberius 8; Seneca Exc. Controv. 5.5; Pliny N.H. 18.21, 36; Juvenal Sat. 8.180.

100. We may accept here a modern legal definition - that of the League of Nations' Slavery Convention: "the status or condition of a person over whom any or all of the powers attaching to the right ownership are exercised" (Article 1(1)).
101. G.E.M. de Ste. Croix, The Class Struggle in the Ancient Greek World (Ithaca, New York: Cornell University Press, 1981), pp.563-64, n. 13a - disagreeing with the usage of Whittaker, "Rural Labour," p.77.
102. See, for example, CIL., VIII, 25,902 (the 'Henchir Mettich' inscription) which speaks of *vilici* (ie. slaves) running estates manned by free *coloni*.
103. Stéphane Gsell, "Esclaves ruraux dans l'Afrique romaine," in Mélanges Gustave Glotz 2 vols. (Paris: Presses universitaires de France, 1932), 1:397-415, pp.407-11 discusses these in Africa.
104. *ibid.*, p.403. The problems of defining what we mean by agricultural slavery has recently been confronted by E.M. Wood in the introduction to her "Agricultural Slavery in Classical Athens," AJAH 8 (1983): 1-47.
105. Sallust B.J. 44.5.
106. Cicero Ad Fam. 12.29.
107. Broughton, Romanization, p.29; Picard, Civilisation, pp.48-9. It is, of course, equally unprovable that events took the other course and that immigrants brought only a few slaves (Gsell, Histoire ancienne, 7:96).
108. On this, see P. Garnsey "Non-Slave Labour in the Roman World" in Non-Slave Labour in the Greco-Roman World, ed. P. Garnsey, Cambridge Philological Society Supplementary Vol. 6 (Cambridge: Cambridge Philological Society, 1982), 34-47, pp.35-6. For a detailed discussion, see F.W. de Neeve, Colonus: Private Farm Tenancy in Roman Italy during the Republic and Early Principate (Amsterdam: Gleiben, 1984), Chaps. 3 and 4, pp.63-174.
109. Apuleius Apology 93.
110. Duncan-Jones, Economy of the Roman Empire, App. 9, p.348 has estimated that two-thirds of her slaves would have been adult male farm hands and also notes that we would undoubtedly have been told, given the nature of the *Apologia*, if P. had impoverished herself by her donation: thus she must have had a good deal more than 400

slaves - D.-J. says 600. I can find no obvious basis for his exact figures, but his logic seems cogent. Ramsay MacMullen, "Late Roman Slavery," *Historia* 36 (1987): 359-82, p.366 agrees. On P.'s wealth cf. *Apology* 71: 77

111. Ramsay MacMullen, "Peasants, During the Principate," *ANRW* II.1: 253-61, p.256.
112. Apuleius *Apology* 17.
113. *ibid.*, 23. Chained slaves are mentioned at *Apology* 47.
114. For the date of the *Apologia* see R. Syme, "Proconsuls d'Afrique sous Antonin le Pieux," *REA* 61 (1959): 310-19. *ILS.*, 2,927 does refer to a large number of slaves owned by one owner. Henriette Pavis d'Escurac, "Pour une étude sociale de l'Apologie d'Apulée," *AntAfr.* 8 (1974), p.92 comments on this: she believes Tripolitania was quite different from the rest of Africa in this regard; cf. MacMullen, "Late Roman Slavery," p.366, n. 42.
115. Petronius *Satyricon* 117.
116. Gsell, "Esclaves," pp.398-99 declined to place any weight on this reference. Dennis P. Kehoe, "The Economics of Food Production on Roman Imperial Estates in North Africa" (Ph.D. Dissertation, University of Michigan, 1982), pp.13-14 accepts that there must have been some basis for P.'s ruse.
117. Herodian 7.43-45.
118. W.E. Heitland, *Agricola: a Study of Agriculture and Rustic Life in the Greco-Roman World from the Point of View of Labour* Westport, Conn.: Greenwood Press, Publishers, 1970; orig. 1921), pp.341-42: "... are we to suppose that by 'slaves' Herodian loosely means *coloni*? Surely not."
119. The Loeb translation -Herodian, trans. C.R. Whittaker, 2 vols. (Cambridge: Harvard University Press, 1969)- refers to the mob as 'country folk' and a 'mass of retainers'. G.E.M. de Ste. Croix has indicated (though not in relation specifically to this incident that he believes *οἰκεταί* can refer to non-slaves of the group he calls serfs - *Class Struggle*, p.153.
120. *Oxford Latin Dictionary*, s.v.
121. *Digest* XXXIII.7.27.1.
122. Garnsey, "Rome's African Empire," p.237.
123. *Codex Theo.* X.1.2; X.8.4;VIII.19.1.3; IX.42.7; XI.27.2.

124. Historia Augusta 61.5, cited by Jean-Marie Lassère, "Rome et le sous-développement de l'Afrique," REA 81 (1979): 48-104, p. 82, n. 81-82. The text does not all seem to be from Africa, as MacMullen finds evidence holding elsewhere. See also, MacMullen, "Late Roman Slavery," pp. 766, 774, who agrees that some of her slaves were from Africa.
125. J. André-Louis Martin et al., "Détermination de la représentativité des inscriptions latines grâce à la statistique inférentielle," Antiquité 9 (1975): 115-21. Of course if rural slaves were not present in the concept of a then a "this tells us is that there were no domestic and urban slaves in Spain" the "this tells us" part of the concept of a slave could have been quite different.
126. G. Ferreira Menault, "El numero de esclavo en las provincias romanas del Mediterráneo occidental en el Imperio," Flavio 67 (1981): 777-89, p. 790.
127. Gsell, "Esclaves," p.402.
128. *ibid.*, pp.403-04.
129. This cheerfully macabre phrase is Lassère's - "Rome et le sous-développement," p.82.
130. St. Augustine, Epist. 108.6.18; 195.4.15.
131. Optatus 3.4.
132. Gsell, "Esclaves," p.401.
133. CIL., VIII, 4,508.
134. As noted by de Ste. Croix, Class Struggle, p.171. We should not go to the other extreme, however, of assuming silence means slaves were not otherwise - Whittaker, "Fiscal Liberty," p.77.
135. Carriey, Rome's African Empire, p.276, n.61, see Thérèse Frechet Carriey, La vie rurale en Afrique romaine d'après les mosaïques (Paris: Faculté Universitaires de France).
136. CIL., VIII, 27,256.
137. There are many references. The most important of the grandes inscriptions are CIL., VIII, 25,902; 25,943; 26,416; 10,570; 14,426; 14,451. These will be cited in detail below. Also, Agrippinus Urbicus (probably quoted in Frontinus De agris et agrorum in Plinius, scholia and Rudolf, Geographica vetere, p.84.
138. By Flavius, Civilization, pp. 48-49; accepted by Lassère,

- Ubique Populus, p.427; Jerzy Kolendo, Le Colonat en Afrique sous le Haut-Empire, Annales littéraires de Besançon 177 (Paris: Université de Besançon, 1976), pp.41-2; For the argument against a significant decline in slave numbers throughout the Empire, see Garnsey, "Non-Slave Labour," pp.35, 40. MacMullen, "Late Roman Slavery" pp.366-7 realizes the unsubstantiated nature of the usual view.
139. Gsell, "Esclaves," p.405.
 140. E.M. Schtjerman, Die Krise der Sklavenhalterordnung im westen des römischen Reiches, trans. W. Sevfarth (Berlin: Akademie-Verlag, 1964). Accepted by Kolendo, Colonat, p.43. Rejected by Whittaker, "Land and Labour," p.341, n. 58; Garnsey, "Rome's African Empire," p.348, n. 62.
 141. On Caesarea, see below, Chapter Three, at n. 91. The epigraphic evidence for Hippo Regius, to take another example, also contains no provable slave labourers and several who are obviously not - noted by Whittaker, "Rural Labour," p.78. One suspects that Marxist and non-Marxist notions of 'production' are again clashing here - see above, n. 101. Also, see below, Chapter Three, at n. 102.
 142. Garnsey, "Rome's African Empire," p.237.
 143. Gsell, "Esclaves," p.405.
 144. Kolendo, Colonat, p.29 dismisses Gsell out of hand, though not explaining just how he would have the *coloni* he proposes for these areas fed. K. obviously has not noticed that G. has specified areas where cereals cannot be grown, as he provides the *Bagradas* estates as proof that *coloni* could be used to grow olives.
 145. Discussed by Whittaker, "Rural Labour," pp.88-89; Elizabeth Fentress, "Forever Barber?", Opus 2 (1983): 161-76, p.166.
 146. Gsell, 'Esclaves,' pp.405-06; Garnsey, "Rome's African Empire," p.237; c.f. Digest. XX.1.32. The references in the Henchir Mettich inscription mentioning *servus dominus* could refer to such slaves as well as to administrators - CIL., VIII, 25,902 IV.6.
 147. On Italy, see de Neeve, Colonus, p.143; for Africa, the inscription evidence is collected in Gsell, "Esclaves," pp.407-11; accepted and expanded by Kolendo, Colonat, pp.42-43.
 148. Garnsey, "Non-Slave Labour," p.40 is dubious. Kolendo, Colonat, p.43 admits its limited extent.
 149. See Kolendo, Colonat, p.41.

150. Whittaker, "Rural Labour," p.79.
151. ibid., p.78.
152. There is no universally accepted definition of 'nomad' or 'pastoralist'. The basic concept of a people who rely on the raising and herding of animals, and who undertake periodic movements to allow the pasturing of these animals is sufficient for our purposes. See A.M. Khazanov, Nomads and the Outside World (Cambridge: Cambridge University Press, 1983), pp.15-17; D.L. Johnson, The Nature of Nomadism: a Comparative Study of Pastoral Migrations in Southwestern Asia and Northern Africa (Chicago: University of Chicago, Department of Geography, 1969), Chap. 1.
153. For an excellent introduction to ancient and modern attitudes towards nomads, beginning with the Mesopotamian cultures, see Brent D. Shaw, "Fear and Loathing: the Nomad Menace and Roman North Africa," in L'Afrique romaine: les conférences Vanier 1980/ Roman Africa: the Vanier Lectures 1980, ed. C.M. Wells (Ottawa: University of Ottawa Press, 1982), 22-50, pp.32-3; and Brent D. Shaw, "Eaters of Flesh, Drinkers of Milk: the Ancient Mediterranean Ideology of the Pastoral Nomad," Ancient Society 13/14 (1982-83): 5-31.
154. Picard, Civilisation, pp.65-6.
155. See, for example, W. Frend, "North Africa and Europe in the Early Middle Ages," Trans. Royal Hist. Soc. (ser. 5) 5 (1955): 61-80, pp.67-4; W. Frend, "Nomads and Christianity in the Middle Ages" JEH 26 (1975): 209-21, pp.211-12; Broughton, Romanization, pp.11-12 (more implicitly); Rachet, Rome et les Berbères, passim; Deman, "Développement et sous-développement," pp.32-36.
156. Michel Janon, "Paysans et soldats," in L'Afrique romaine: les conférences Vanier 1980/ Roman Africa: the Vanier Lectures 1980 ed. C.M. Wells (Ottawa: Ottawa University Press, 1982), 51-68, pp.52-53. Pol Trousset expresses the same dissatisfaction with the stereotype in "Signification d'une frontière: nomades et sédentaires dans la zone du Limes d'Afrique," in Roman Frontier Studies 12, ed. W.L. Hanson and L.J.F. Peppie (Oxford: BAR, 1979), 931-44, p.933.
157. Khazanov, Nomads, p.19. The economic reality is not always mirrored in nomads' perceptions of themselves, as they often prefer to see themselves as 'pure' nomads, i.e. superior to sedentarists - see Shaw, "Fear and Loathing," p.37, n. 22.
158. Johnson, The Nature of Nomadism, p.11. A good example of pastoralists practicing "multi-resource economies" is provided by Nina Swidler, "Sedentarization and Modes of Economic Integration in

the Middle East," in When Nomads Settle, ed. Phillip C. Salzman (New York: Praeger, 1980), 21-34. Note that the pastoralists who do *not* farm in the area she studies *do* rely heavily on trade with farmer-sedentarists.

159. Khazanov, Nomads, pp.69-82.
160. Johnson, The Nature of Nomadism, p.11.
161. W.W. Swidler, "Adaptive Processes Regulating Nomad-Sedentary Interaction in the Middle East," in The Desert and the Sown: the Nomad in the Wider Society, ed. Cynthia Nelson (Berkeley: University of California Press, 1973), 22-42, p.23.
162. F. Barth, 'A General Perspective on Nomad-Sedentary Relations in the Middle East,' in The Desert and the Sown: the Nomad in the Wider Society, ed. Cynthia Nelson (Berkeley: University of California Press, 1973): 11-22, p.17.
163. Khazanov, Nomads, pp.17-25 for a discussion of the various categories within this specialization, with references to modern research.
164. For an example, Johnson, The Nature of Nomadism, p.105.
165. Khazanov, Nomads, Chap. 4, pp.198-227; N. Swidler, "Sedentarization," pp.23-24.
166. Johnson, The Nature of Nomadism, p.11; Khazanov, Nomads, pp.222-72.
167. Khazanov, Nomads, pp.202-12.
168. Whitaker, 'Land and Labour,' p.336, with references to work on such markets; and in more detail - Brent D. Shaw, "Rural Markets in North Africa and the Political Economy of the Roman Empire," AntAfr. 17 (1981): pp.37-83.
169. N. Swidler, "Sedentarization," passim; A. Mohammed, "The Nomadic and the Sedentary: Polar Complementaries - Not Polar Opposites," in The Desert and the Sown: the Nomad in the Wider Society, ed. Cynthia Nelson, ed. (Berkeley: University of California Press, 1973), 97-112; R. Dumont, Types of Rural Economies (London: Methuen and Co., 1957), pp.170-73.
170. Johnson, The Nature of Nomadism, pp.2-3, n.3.
171. Quoted in Khazanov, Nomads, p.82.
172. On modern nomadism in North Africa generally, see Jean

- Despois, L'Afrique du Nord, 3rd ed. (Paris: Presses universitaires de France, 1964), pp.217-79.
173. Roy H. Behnke, Jr., The Herders of Cyrenaica: Ecology, Economy and Kinship among the Bedouin of Eastern Libya (Urbana: University of Illinois Press, 1980), Chap. 3, pp.40-48; Johnson, The Nature of Nomadism, p.91.
 174. J. Clarke, "Studies of Semi-Nomadism in North Africa," Economic Geography 35 (1959): 95-108, p.107.
 175. ibid., pp.99-102; Despois, L'Afrique du Nord, pp.241-45.
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 177. ibid., p.105.
 178. J. Clarke, "Summer Nomadism in Tunisia," Journal of Economic Geography 31 (1955): 157-67, p.164; see also Fig. 6.
 179. See above, at n.91. See also Colette Roubet and Patrick Carter, "Origine néolithique de la transhumance ovine dans le Maghreb oriental," in The Deyra Conference in Prehistory, ed. William H. Waldren, et al., 4 vols. (Oxford: BAR, 1984), 1:239-50, which links the origin of pastoralism to at least the fifth millennium B.C. in the Aures Mts.
 180. Sallust B.J. 48.4; 46.5.
 181. Charles Daniels, The Garamantes of Southern Libya (North Hallow: Oleander Press, 1970), pp.36-44; J. Marion, "Les ruines antiques de la région d'Udja," BAM 2 (1957): 117-73; Marion discussed in Elizabeth Fentress, Numidia and the Roman Army: Social, Military and Economic Aspects of the Frontier Zone (Oxford: BAR, 1979), pp.33-6.
 182. Accepted by White, Roman Farming, p.367.
 183. A comparison made by MacMullen, "Peasants, during the Principate," p.257.
 184. CIL., VIII, 11,824; St. Augustine Epist. 46. One might also mention the Late Empire circumcelliones, but since the social and religious factors which went into making these rustic mobs seem to still be disputed, it is best not to use them in our argument.
 185. CIL., VIII, 10,667; ib. 16,692; 28,073a; 28,077b; 27,246; IAIq. 2,978; 2,980; 2,989; 2,979 b.1; 2,929; ILT. 1,657.
 186. As noted by Vénabou, Résistance, p.437; Shaw, 'Fear and Loathing,' p.42. Possibly, as Fentress suggests, it may even have

- been an attempt to *stop* expropriation of land already under way - Fentress, Numidia p.76.
187. Philip C. Salzman, "Introduction: Processes of Sedentarization as Adaption and Response," in When Nomads Settle, ed. Phillip C. Salzman (New York: Praeger, 1980), 1-20, pp.11-18.
 188. Shaw, "Fear and Loathing," p.43.
 189. André Berthier, "Nidives et Suburbures," BAA 3 (1968): 293-300. There certainly have been other interpretations of the evidence - Serge Lancel, "Suburbures et Nidives: une inscription de Tigiis," Libyca 3 (1955): 297-99; Bénabou, Résistance, pp.475-76 and n. 31. I have not seen the first two articles cited here, and so can only note that the argument has been made.
 190. CIL., VIII, 4,508; cf. 18,647.
 191. J.P. Darmon, "Notes sur le tarif de Zarat," CT 47-48 (1964): 7-23, p.17; Shaw, "Fear and Loathing," p.46; Haywood, "Roman Africa," pp.81-2 provides a translation and list of estimated prices.
 192. Despois, L'Afrique du Nord, p.226.
 193. R. Cagnat, "A New Roman Customs List," JRS 4 (1914): 143-47; Despois, L'Afrique du Nord, p.226.
 194. Shaw, "Fear and Loathing," p.47.
 195. CIL., VIII, 270.
 196. Pliny N.H. 5.22; Tacitus Annals 3.74; cf. Livy. 29.31.8; Sallust B.J. 46.5; Gilius Italicus 3.287; Geell, Histoire ancienne 4:218-20.
 197. Whittaker, "Land and Labour," p.347.
 198. Prêtreur Canonge, La vie rurale, Planche 1, Photo 1; cf. Garnsey, "Rome's African Empire," p.233.
 199. The basic work is J. Baradez, Vue aérienne de l'organisation romaine de la Sud-Algérie, Fossatum Africae (Paris, 1949). On the eastern part of the desert - El Tadjel, Recherches sur le Limes Tripolitane du Chott Djerid à la frontière Tunisie-Libye (Paris: Editions du C.N.R.S., 1974).
 200. Fentress, Numidia, p.112.
 201. Troussset, Recherches, p.141; David Mattingly and G.D.B. Jones, "A New Clausura in Western Tripolitania: Waddi Sliffa

- South," Libyan Studies 17 (1986): 87-96, p.94.
202. Troussset, Recherches, pp.141-42; Fol Troussset, "Note sur un type d'ouvrage linéaire du limes d'Afrique," BCH n.s. 17(B) (1981): 787-791, pp.787-791; Whittaker, "Land and Labour," p.350; Ferris, Nomads, pp.112-7; Mattingly and Jones, "A New Clausura," p.94. Shaw, "Fear and Loathing," p.41-44, proposes a different view, but one which still assumes a persistence of pastoralism; cf. Shaw, "Soldiers and Society," pp.177-38.
203. See Ferris, Numidia, Map 6, p.82; Mattingly and Jones, "A New Clausura," Figure 1, p.88.
204. Michel Janon, "Recherches à Lambèse I et II," AntAfr. 7 (1977): 197-257, pp.198-99; Janon, "Paysans et soldats," pp.56,58.
205. Whittaker, "Land and Labour," pp.348-50 and Map following p.346.
206. The phrase is Shaw's - "Fear and Loathing," p.43.
207. Whittaker, "Land and Labour," p.348.
208. Khazanov, Nomads, pp.19-27.
209. Whittaker, "Land and Labour," p.350; the reference is to Herodian 7.4.4.
210. Ramsay MacMullen, "Notes on Romanization," Bulletin of the American Society of Papyrologists 21 (1984): 161-77, pp.171,173.
211. Bright, Romanization, p. 220.
212. One must of the important scholars seem to feel: Rostovtzeff, Social and Economic History, p. 374; P. Brunt, "The Romanization of Local Ruling Classes in the Roman Empire," in Assimilation et intégration de l'étranger économique dans le monde antique, Annales du VI^e congrès international d'études classiques (Bucharest, Editions Armand, 1975), 161-74, pp.167-72; B.H. Warmington, The Frontiers of the Roman Empire from Diocletian to the Vandal Conquest (Westport, Conn.: Greenwood Press Publishers, 1971; orig. 1956), 12-70; Frontiers, Civilization, pp.154-55; Fergus Millar, "Local Culture in the Roman Empire: Libyan, Punic, and Latin in Roman Africa," JPS 58 (1968): 126-51; A.H.M. Jones, The Later Roman Empire, 2 vols. (Oxford: Basil Blackwell, 1964), p.996; Peter Brown and Elizabeth Cullen, The Roman Empire Since 180, Culture and Society (Los Angeles and Berkeley: University of California Press, 1987), pp.192-5; Whittaker, "Land and Labour," passim; Wood, "Roman Africa," pp.114-13; David Mattingly, "Libyans and the Limes," AntAfr. 27 (1987): 71-95 (on Tripolitania); H.-C. Pflaum, "Romanisation," pp.64-72.

213. Bénabou, Résistance: religion - pp.259-380; language - 471-91; onomastics - 491-578; tribal structure continuity - 427-69.
214. Whittaker, "Land and Labour," p.343, esp. at nn. 70-72; Garnsey, "Rome's African Empire," p.252 and n. 120; p.353 for references to government forms; cf. Marcel Bénabou, "Les survivances pré-romaines," in L'Afrique romaine: les conférences Vanier 1990 / Roman Africa: the Vanier Lectures 1990, ed. C.M. Wells (Ottawa: University of Ottawa Press, 1987), 13-27.
215. Garnsey and Saller, The Roman Empire, p.56; Kehoe, "Economics," pp.75-76 for a specific area of Africa.
216. Pointed out by Shaw, "Soldiers and Society," pp.149-50.
217. Grigg, Harsh Lands, p.120; Whittaker, "Land and Labour," p.359.
218. Noted by Whittaker, "Land and Labour," p.359. It will be seen in Chapter Four, below, that there is some evidence in the 'grandes inscriptions' of a trend in the mid-second century to cash crops among the wealthier peasants. The whole question of the extent of monetarization in rural Roman Africa is very much an open one. It is interesting to note, however, that the peasant's world in Europe up to the nineteenth century was still largely a non-monetarized one, though it was the richer peasant who was most affected by the process of monetarization - as Fernand Braudel, Civilization and Capitalism 15th-18th Century, vol. II: The Wheels of Commerce, trans. Sian Reynolds (London: Fontana, 1985), pp.55-8 points out.
219. Philippe Leveau, "La ville antique et l'organisation de l'espace rural: villa, ville, village," Annales ESC 38 (1983): 920-42; see also, Keith Hopkins, "Economic Growth and Towns in Classical Antiquity," in Towns in Societies: Essays in Economic History and Historical Sociology, ed. F. Adams and E.A. Wrigley (Cambridge: Cambridge University Press, 1970), 75-77.

CHAPTER THREE

Continuity and Change in the Organization of Agriculture

The first part of this study has demonstrated that the organisation of agriculture in pre-Roman Africa was, outside of a restricted area immediately around Carthage, largely determined by the tribal nature of society, and that even near Carthage nothing like a complete disruption of this occurred. It has also been shown that the changes caused by the advent of Roman rule were limited. The evidence from the Roman period on agricultural management and labour will now be reconsidered in the light of these facts.

To do this it will be necessary to examine all the various levels of management at which agriculture was organized, from province-wide administration down to the basic regulations governing how particular estates were farmed. The main areas of interest are three: the government's involvement in the administration of agriculture; the ownership of agricultural lands; and how estates were actually manned and directed, including the existence of common systems of farm management. A detailed discussion of the management of the best known group of estates, the imperial *saltus* of the *Bagradas*, will be reserved for Chapter Four.

There was, it appears, no government body charged with overseeing agriculture across the whole of North Africa, or even just across

Africa proconsularis. The imperial government was not generally interested in interfering in the operation of the properties of private citizens, so the absence of that sort of government control is not surprising.¹ What is unexpected is the limited establishment set up even for the collection from such private estates of the government's share of Africa's bounty, the taxes-in-kind that made up the provincial tithe (*stipendium*) and provided Africa's contribution to the *annona*. Important as Africa was in supplying Rome with grain, the government's portion of agricultural exports was managed entirely by the administrative system already in place for governing the province. It had to make do with the usual, small number of officials available - governor, financial procurator, and so on. There is no evidence for any permanent official in charge of the grain exports for the *annona* until the very late second century.² The single possible exception is the appointment of one T. Flavius Macer as *curator frumenti comparandi in annonam Urbis*. Yet even this is now thought to have been an extraordinary and temporary position, possibly in response to a shortfall in grain exports from Egypt due to rebellion, or drought.³

It is not until the reign of Septimius Severus that one finds solid evidence of permanent administrative posts specifically charged with the agricultural production of Africa, and then still only with the vital *annona* grain. One Herennius Victor was *proc. Augg. nn. ad fusa frumenti et res populi tractum utriusque Numidia*.⁴ A few years later L. Iulius Victor Modianus was *proc. Auggg. nnn. tractuus Numidia, a frumentis*.⁵ Probably, though not certainly, these men were in charge of obtaining the grain from both imperial and private

estates. Both, as well as Macer in the previous century, were Africans.⁶

It was only later still that the whole process of grain collection in Africa and its shipment to Rome was finally organized comprehensively, with the creation of the *praefectus annonae Africae*. This post is first attested only in 314 and may have been part of Diocletian's reforms; in any case the only other three known occupants date to the later fourth century.⁷ The only other governmental interference in the agricultural production of Africa as a whole was the creation, or more probably reorganization, by Commodus, of the fleet of merchant vessels that carried African grain to Rome (*classis Africanae*). Even these probably remained privately owned vessels.⁸ There thus exists no evidence for governmental control over, or interference in, private agriculture in Africa during the Principate.⁹

What did exist was an administrative organisation to control the imperially owned estates of Africa, the land belonging to the emperor personally. This was an important structure, because the emperor was proprietor of a great deal of land in Africa; he was almost certainly the single largest landowner. This is why it was necessary to create what came to be a complex and extensive system devoted to managing his estates.

In theory, the countryside seems to have been divided into large administrative areas called *tractus*. Each *tractus* was itself divided into *regiones* made up of all the estates belonging to the emperor within a given area. There were procurators in charge of each *regio* and *tractus*; at the top of the system was the procurator for Africa.¹⁰

There is a significant amount of evidence available for only one *tractus*, albeit the most important one. The *tractus Carthaginiensis* was made up of at least six *regiones*: Vaga, Thisiduo, Thugga, Assura, Thuburbo Maius and one the name of which is lost but for the letters ...tana.¹¹ From the locations of its *regiones*, it appears this *tractus* contained much of the best land of *Africa proconsularis*, but it is not possible to delineate its boundaries.

Elsewhere the system seems not to have been so neat. In some areas there may have been *regiones* that did not belong to any *tractus*, for there are references to *regiones* where no *tractus* is known. One such was the *regio* whose headquarters was at Thamugaddi.¹² Similarly, there was an apparently independent *regio* for the district of Hadrumetum, a *regio Leptiminensis* and a *regio* for all of Tripolitania.¹³ Numidia, on the other hand, was all one *tractus*, possibly with a different internal structure than that of Carthage. The impression given by inscriptions which speak of a *tractus utriusque Numidiae* and a *fiscus advocati ad fusa per Numidiam* is that Numidia's *tractus* may have been one large, undivided unit.¹⁴ Unfortunately it is not possible to know whether all this represents a real difference between the manner in which the area around Carthage was administered and the way other areas were handled, or if it is simply the product of gaps in evidence that is, after all, hopelessly incomplete and haphazard. There may well have been *tractus* and *regiones* all record of which have been lost.

The administration of the imperial estates appears to have lacked standardization in another way as well. From the evidence as it now

stands, it seems there was a great deal of flexibility in the use of titles for administrative districts. Thus the *regio* of Hadrumetum was also known as a *diocesis* and a *provincia*.¹³ The emperor's holdings about Theveste were at one point managed as part of a *regio* that contained Hadrumetum, at another as part of a unit with the odd title of *saltus* and were finally designated the *tractus Thevestini*.¹⁴ This inconsistency is again no doubt partially due to the lack of complete evidence: it is not known what all the titles were, or even if there were some that, if preserved, would make the whole system seem more rational. Even more important, the confusion represents changes over time. The inscriptional record is simply too fragmentary to allow the course of these inevitable developments to be traced.

Nonetheless, the possibility remains that the apparent incoherence of these arrangements is the reflection of a reality of different methods of organization existing concurrently. It has been suggested that this state-of-affairs would have come about because of differences in rates of growth between areas. The *tractus* of Carthage was established first, and the lands which made it up were already nearly fully developed. In the south and west, on the other hand, great expansion in both land cultivated and estates owned by the emperor occurred. Because the imperial holdings in these latter areas were not originally important enough to justify setting up the complete administrative apparatus, the government created independant *regiones* here. As the emperor's estates grew and multiplied, some of these *regiones* may have expanded until they were effectively on the same scale as the whole *tractus* of Carthage, without necessarily assuming

the title of *tractus*. *Regio* may, in short, have meant different things in different places.¹⁷ This explanation is plausible, but the very incomplete evidence makes it no more than a tentative hypothesis.

The organization of this bureaucracy must have been fairly complex. From the cemetery of officials at Carthage there is proof of a substantial number of different posts connected with the administrative system, including *tabularius*, *custos tabulari*, *adiutor tabulari*, *adiutor a commentariis*, *adiutor ad instrumenta commentarium*, *pedisequus*, *librarius*, *dispensator*, *notarius*, *cursor* and *agrimensor*.¹⁸ All these (and possibly many whose titles have not survived) would have worked for the procurator of the *tractus Carthaginensis*, who, in turn, would have reported to the provincial procurator of the imperial estates. Some of the inner workings of the system are revealed by the Ain-el-Djemala inscription, one of the 'grandes inscriptions' from the *Bagradas* valley.¹⁹ The relationships of the various *procuratores* mentioned in this inscription are not clear, but it appears there was a definite chain-of-command. The responsibilities of the procurator at each level are not clarified either, but as a group they dealt with complaints and disputes, enacted imperial decisions concerning the emperor's land and, it seems, dispensed justice on the estates.²⁰

The next important factor in the organization of agriculture was that of the ownership of agricultural land.²¹ The ownership of land will have had a great significance in terms of the management of farming, since it decided how the land was held, who determined what the aims of production would be and, in turn, how these aims were to be

achieved. In Africa, as anywhere, there are two important elements to the question of ownership. The first is, who owned the land - that is, were the farm lands of *Africa proconsularis* owned by a small, rich proportion of the population, or was ownership distributed equally? Were the land owners native Africans, or absentee Italian landlords? The second problem is how ownership affected the way in which land was held. Were most of the lands held as parts of large estates, or were small freeholds common? Did the men who owned large amounts of land hold it in small plots scattered over a wide area, as was often the case in Italy, or were large estates covering great areas common?²²

Part of the question, at least, is easily answered. It is clear from a variety of Roman authors that it was large-scale landowning which was particularly characteristic here. Landownership and the structure of agrarian life were dominated by the large agricultural estate.²³ According to the now famous phrase of Pliny, at the time of Nero, 'half' of Africa was owned by six men, whom that emperor had killed so that he could confiscate their land for himself.²⁴ The exact proportion quoted by Pliny does not have to be accepted for his point to be. Similarly, the fact that the *Satyricon* of Petronius is a fantasy does not necessarily negate the equation of rich African and large-scale landowner made when one of the characters pretends to have three hundred million sesterces of land in Africa. Indeed, the deception involved hinges on the tale's plausibility.²⁵ If a more sober source is desired, one need only look as far as Seneca, who mentions Africa as one of the lands where thousands of farmers regularly laboured for the benefit of a single landowner.²⁶ Perhaps

the most striking confirmation of the type of estate commonly found in Africa are the lines of the *agrimensor* Agennius Urbicus:

*...Africa, ubi saltus non minores habent privati quam res p. territoria: quin inno multis saltus longe maiores sunt territoriis: habent autem in saltibus privati non exiguum populum plebeium et vicos circa villam in modum munitionum.*²⁷

Against this body of opinion there is no countervailing commentary on the existence of small, privately owned farms, though logic tells one that they must have existed. Only chance mention in the literature and inscriptions reveals the small-owner.

Who were the great landowners of Africa? Some of the land was no doubt in the hands of absentee Italian landlords, particularly in the early period. For example, during the Republic there were Italians such as L. Iulius Calidus, and M. Caelius Rufus, who had family holdings, possibly at Horrea Caelia. After the start of the first century A.D. this probably began to change, with the rise of the first African born, but Italian descended wealthy families. There is no need to doubt that the first African senators, from Cirta, based their wealth thoroughly on rural property. The numbers of Africans obtaining senatorial status increased through the Principate and though the emperors tried to force such men to invest up to one-third of their wealth in Italian land the repetition of these orders hints at their lack of success. Those Africans lower down the scale, but still possessing considerable wealth -equestrians and local aristocrats- also built up large estates. Apuleius' wife Aemilia Pudentilla, worth several million sesterces, owned a good deal of land at Oea. The best analysis is that, though some land, perhaps including the larger

estates, was held by men not resident in Africa, much too was in the hands of Africans, increasingly so as time went on.²⁸

The emperor was certainly one of the greatest of the absentee landowners.²⁹ Admittedly, his African holdings in the early years of the Principate may not have been that great. There are only a few, scattered references from this period. Pliny wrote of procurators sending remarkable examples of agricultural produce to Augustus from Byzacena, presumably from his estates there.³⁰ There is mention of one Delius, the *vicarius* of a *vilicus* of Augustus, who built a *teloneum* on an estate near Bisica; the presence of a *vilicus* suggests an agricultural setting.³¹ Both Tiberius' and Claudius' reigns provide evidence of imperial land at Calama.³² It would be too much to argue from the meagre state of the evidence alone that the emperor's land in Africa were few at this time - the Julio-Claudian era was not particularly productive epigraphically, and there is no way of knowing how many estates were not preserved on stone.³³ But it is a logical inference that by this early date not much land had been accumulated into the emperor's hands, and the lack of reference to such lands may be evidence of this fact.

There is no doubt, however, that the number of imperial estates later grew considerably. This probably began with Nero's confiscation of the lands of Pliny's *sex domini* who owned half of Africa.³⁴ Confiscation was now added to inheritance and gifts as the ways by which the emperors could enlarge their holdings.³⁵ From this point the imperial lands must have grown fairly rapidly, for by the height of the Principate there were a good number. From the 'grandes inscriptions'

there come the *Villa Magna Variana*, of Trajan's day, the *saltus Neronianus*, *saltus Blandianus et Udensis*, *saltus Lamianus et Domitianus*, *saltus Tuzritanus* (all by Hadrian's reign), the *saltus Burunitanus* (of the 180's), and others unnamed.³⁶ This area clearly formed an important complex of imperial lands. Farther south there was the *saltus Massipianus*, near Ammaedara (reign of Marcus Aurelius).³⁷ The *saltus Philomusianus* lay near Simitthus.³⁸ Some scholars have argued for a significant imperial presence in the area just north of the Aures Mts.³⁹ To these directly owned imperial properties (a list that includes, of course, only those estates whose names have chanced to be preserved, and not an exhaustive list of those), must be added the properties belonging to the family of the emperor, which, though administered separately, must commonly have fallen into imperial hands upon the owner's death.⁴⁰

The evidence is not sufficient to permit drawing any map of the imperial holdings. It may be that it is only chance preservation that locates such a large proportion of the known imperial land in the middle reaches of the *Bagradas* river. On the other hand, it was this region which was probably the best developed in the pre-Roman period, and it is among the best grain land in Africa. It is only natural that many estates should be found here and that the emperor should have his share of these.⁴¹ That this was so would seem to be confirmed to some extent by the relative completeness and order of the imperial administrative organization in this area (discussed above), as compared with the rather patchy network that appears elsewhere. This is not enough, however, to allow the claim that *most* imperial property was in

this area. All that can be said is that the emperor owned land in most parts of the province, including a large amount in the *Bagradas* area.

By the end of the Principate the emperor was very probably the single largest landowner in the province. This can be stated with some certainty because there are, as it happens, some precise numbers on the amount of land owned by the emperor in *Africa proconsularis*. The usefulness of this windfall, most rare in ancient sources, is, however, tempered by its late date. It comes in the form of an imperial constitution of A.D. 411, in the *Codex Theodosianus*, stating the areas of imperial land, cultivated and uncultivated, in the two smaller provinces which by this date had been created out of the *Africa proconsularis* of the Principate. In the northern province (still called *Proconsularis*) there were 14,702 *centuriae*, 285.5 *iugera* of imperial land (about 7,432 sq. km); in the southern province, *Byzacena*, there were 15,075 *centuriae*, 183.5 *iugera* (7,620 sq. km). Since the total area of the two provinces together was about 91,000 sq. km, the emperor owned one-sixth of their land surface.⁴²

It has been argued that the amount of imperial land would have remained at about the same level from the second century to the date of this law, the forces of acquisition and alienation balancing out.⁴³ It is true that the emperors probably gave up some of their lands over this period. But some of them also engaged in large confiscations, particularly Septimius Severus. It is therefore unwise to assume that the imperial holdings had reached this level during the second century. Still, it is hard to believe that there was any other, single individual who owned more land in the province than the emperor.⁴⁴ As

Aggenius Urbicus understatedly put it, "...*Caesare, qui in provincia non exiguum possidet*."⁴⁵

One can be no more specific about the amount of land in the hands of the great private landowners. The references to thousands of tenants working for one man, the half-province owned by six men, the private estates larger than city territories - these establish securely enough that the province was the site of a good deal of investment in land by the rich. Beyond that unremarkable generality they do not reveal much.

The names of several specific private estates survive. Vitruvius spent time at the estate of his friend C. Iulius Masinissae *filius* called Ismuc, which he described as follows: *cuius agrorum regiones incredibili finitae sunt terminatione*.⁴⁶ This was near Zama. It is notable too that most of the imperial estates whose names have survived, and which have just been mentioned, can be reliably attributed to specific private citizens, who presumably owned them before their acquisition by the imperial house. Thus the *Villa Magna Variana* is accepted as deriving its name from P. Quinctilius Varus, proconsul of Africa c.7-4 B.C. The *saltus Blandianus* can be connected with C. Rubellius Blandus, proconsul A.D. 35-36. The *saltus Lamianus et Domitianus* may once have been owned (or formed out of two earlier estates owned) by L. Aelius Lamia and either L. Domitius Ahenobarbus, or, as has recently been suggested convincingly, Cn. Domitius Lucanus.⁴⁷ There is information on estates in the south of the province as well. There was a *saltus Reguensis*, for example, belonging to one Lucius Africanus.⁴⁸ Valeria Atticilla owned property in the

same region.⁴⁹ The inscriptions confirming these facts date to before 138 and to 105 respectively, but it is probable the estates in this region were on the whole created later than those in the *Bagradas* region and close to Carthage.

As the transition from private to imperial status of the *Bagradas* estates indicates, the imperial holdings in Africa grew at least partially at the expense of private holdings. Nonetheless, there is sufficient evidence from later periods to indicate that large private estates remained common throughout the period. Augustine speaks of wealthy landlords, both resident and absent.⁵⁰ When the crown confiscated the lands of the rebellious Gildo (admittedly in *Mauretania Sitifensis*), a special officer, the *comes Gildoniaci patrimonii*, had to be appointed to take care of them, so large were his estates.⁵¹ Perhaps the largest single owner of any period (besides the emperor) was Melania, who owned estates in all the African provinces, one of which, near Thagaste, was larger than that city's territory.⁵² There is no reason to think that large-scale private landholding was ever uncommon in Roman Africa.

Despite this it is quite impossible to estimate the area in the hands of great landowners at any time, or to locate any one area where their estates were most common. No area can be ruled out; the *Bagradas* area may have held many imperial estates, for example, but since there is no clue as to their size, there is no way of knowing if all the land was the emperor's. There may have been private *saltus* here, as anywhere.⁵³

There is one point which can be made about large-scale ownership

of land in *Africa proconsularis*, private and imperial alike: the actual estates seem to have been very large. In Italy a man might own a great amount of land, but as often as not it was scattered into small pieces over a large area, or at least divided into two or three smaller estates. The evidence from Africa suggests a different rule there. Estates seems to have consisted of large, unitary blocks of land. The statement of Aggenius Urbicus about estates larger than city territories is definitely presented as a common situation. This would tend to be supported by other references already quoted, such as the claim that Melania had an estate larger than Thagaste's territory, and Vitruvius' description of Ismuc: *cuius agrorum regiones incredibili finitae sunt terminatione*.⁹⁴ The explanation for this difference in landholding patterns may simply be that there were more opportunities in Africa for rich men to buy up all the land in one area than in Italy, since much of the province's land will have originally been held by the state as *ager publicus* (as all provincial land theoretically was) and sold off in vast amounts.

Most of the really large estates were probably to be found in the south and west of the province, because it is likely that dense urbanization and large estates would have tended to be mutually exclusive. A town with its own *territorium* would automatically subtract from the area of a private large estate.

This theory can to some extent be tested. The survey done by P. Leveau around the city of Caesarea is almost the only source of evidence for the effect of urbanization on landholding, but it is an excellent work. Naturally its limitations must be borne in mind - as a

surface survey Leveau's project was able to provide only the barest outline of land use around Caesarea, which itself is in a different cultural and geographic setting than that of *Africa proconsularis*. Nonetheless, it does provide an opportunity to see at least how the presence of a city affected landholding in one area.⁵⁵

In terms of landowning most of Leveau's findings bear out what might be expected. In the area immediately around the city the villas seem to have controlled fairly small areas - 100 to 200 ha of plain, plus some land in the hills. The area increased with distance from the town, so that in the inland mountain zone estates were considerably bigger - from 500 to 700 ha.⁵⁶

What is perhaps most interesting, though again not unexpected, given the limitations of ancient communications, is the relatively small area in which landowning patterns were affected by the presence of a city. Of the sixty to seventy villas located, almost all are to be found within fifteen km of the city. It may not be true that villa distribution is absolutely equivalent to landownership by city residents, but it is a fairly good indicator, and the indication is that Caesareans, at least, did not own land very far from their city.⁵⁷ This is all the more striking when it is remembered that Caesarea, one of Africa's larger cities, being a coastal town, was forced to concentrate all its control over a hinterland in one direction only; an inland town of the same size would have presumably affected an even smaller radius. Note too that as a capital Caesarea would probably have attracted more citizens likely to build villas than a simple town of equivalent size (or so evidence in other provinces has indicated).⁵⁸

All in all, the effect of urbanization on landowning can be described as fairly intensive, but over a quite restricted area.

On the whole, then, one would expect that the most urbanized part of the province -the northeast 'corner' of Tunisia, on either side of and between the lower *Bagradas* and *Miliana* valleys- would have had fewer large estates. It should be remembered, though, that much of the municipalization in this region was fairly late; Septimius Severus was responsible for much of it. Before this time there would have been fewer *territoria* and less city-estate conflict. Indeed, it is possible that it was the reluctance of large landowners, among whom the emperors were most prominent, along with the cities which already had large *territoria* (especially Carthage), to part with the advantage of having significant amounts of territory under control that kept the municipalization so late. In summary, there probably were always some large estates in all parts of the province, but the areas they dominated no doubt shifted towards the south and the west with time, as municipalization progressed in the northeast.⁵⁹

Large-scale landowning and the great estates receive attention in the literature of antiquity. Far less interest was shown by writers in the small owner and as a consequence very little is known of the African peasants who owned and farmed their own land - such men do not leave many monuments, and archaeology can reveal that small-scale farming was carried on, but cannot tell if the farmers were tenants or owners. It is more than a little ironic that one of the few references to the small independant farmer in Africa exists precisely because the urban elite had such a dismissive attitude to such men. It occurs when

Apuleius seeks to discredit an accuser by pointing out that the man owns only a tiny farm at Zarat, and a single ass to work it.⁴⁰

Does this lack of evidence reflect a lack of small owners? Certainly the conditions of the Roman state were inimical to the existence of a free peasantry - the state and its leaders hastened rather than arrested the decline of the Italian peasantry. But they also acted to create new peasants through the settlement as peasants of veterans. It is difficult to know how significant the effect of this was in Africa. As was argued in Chapter Two, the immigrant Italian veterans were not as numerous as has often been thought; something on the order of seventy-five thousand is a realistic figure. However, the process of granting retiring veterans land continued throughout the Principate, so some new independant farmers were assured.⁴¹ Estimates of the numbers of such men vary, but there was only one legion in Africa and, given the low life expectancy of antiquity, one hundred retirees per year from the legion itself is not unreasonable. This would give about ten thousand new farmers per century, not all of whom would have chosen to become farmers. Still, two thousand or so new peasant holdings could have been created each generation. These would presumably have been concentrated in the areas around the legionary camps, especially Lambaesis. Not only was this where the veterans/settlers were, but it was the one area which might have had adequate quantities of land available for them, since it was in the south, at the limits of pre-Roman cultivation. The land had previously probably either been used only for pastoralism, or at most for low intensity cultivation.⁴²

It has been suggested by Fentress that many of these veteran farmers were given land on imperially-owned estates, at least from the early to mid-second century, and so became tenants rather than small owners.⁴³ This proposal has not been particularly well received, and the evidence is certainly not as convincing as Fentress claims. It does support the presence of some imperial holdings in the south Numidian region; what it fails to do is establish any large scale coincidence of imperial property and veteran settlement. Of the twenty-one imperial sites recorded by Fentress which can be safely accepted as imperial on the evidence she presents, only two have veterans recorded nearby. The creation of imperial veteran tenants in southern Numidia does not seem to have been a general policy.⁴⁴

As it happens there does exist some evidence for peasant farming in this region. It comes from the famous Lamasba inscription. This is a register showing the amounts of water to which a number of properties were entitled as part of a local irrigation scheme near the town of Lamasba, some forty km north-west of Lambaesis; it is dated c. 218-222. The inscription itself is rather problematic, since it lists the areas to be irrigated only in terms of a land unit called 'K' and not defined, but in analysing it much can be learned.⁴⁵

The inscription was set up by local farmers who called themselves *coloni*. Whether this means they were 'tenants' or just 'farmers' is uncertain, but most scholars take them as peasants owning their own land.⁴⁶ Four of the seventy-eight landholders are specifically listed as veterans - for example, Flavius Fortis *veteranus*. Two more names reveal possible military connections - Steminia *Aemerita* and Sextilius

Aemeritus- possibly meaning their fathers had received honourable (*emeritus*) discharge. This hardly suggests that the bulk of local holdings were veteran related.⁶⁷

Three of these veterans are listed as holding almost exactly the same land area in their possession. Flavius Fortis and one Iulius Felix each had 600 K and one Iunius Saturninus had 650. It seems reasonable to assume that one is seeing here a standard legionary discharge grant (either in land, or in an amount of cash which would buy about 600 K of land). The problem is to decide what 600 K represents. It has been suggested that a 'K' was a direct unit of land measurement, equal to 0.025 *iugera*. This, however, is based on a comparison with known veterans' farms in Egypt, which were about 15 *iugera*.⁶⁸ This is suspect, because Nile Valley land values will hardly have been equivalent to those in southern Numidia. Much more plausible is the suggestion that, since the Lamasba area was undoubtedly planted with olives, the unit 'K' represents one tree, or more accurately, a measurement of land area based on the area needed by one tree to grow. In southern Tunisia, under similar conditions, this is today about 25 sq. metres. One 'K' would thus be equal to something like 0.01 *iugera*.⁶⁹

This gives a veteran's holding of 600 K an area of about 6 to 9 *iugera*. Whether planted with trees or cereals (in which case the use of the 'K' would be an indirect measurement), or both, these areas would seem at first sight too small to plausibly support a family in this region.⁷⁰ There are a number of solutions to this problem. The inscription is not complete, so given the ancient tradition of holding

land in separated parcels (seen even in the surviving portions of the inscription) each veteran may have held land that was not recorded on the portion of the stone that survived. Further, not all the land owned by one man need have been irrigated, and so would not have been recorded. As well, if the tribal landholding practices described in Chapter One persisted (as will be argued below) each man may have had use of unirrigated land belonging to his clan or village. These ideas may be supported by the fact that the fourth known veteran is recorded on the surviving stone as holding only 350 K.

A good deal more can be discerned about farming at Lamasba. Owners did hold separate parcels of land, for example. One Germanius Valentinus appears as the thirty-ninth entry, holding 430 K there, and as the sixty-second entry, holding another 664 K. Because this was a linear irrigation scheme, this represents an actual separation on the ground. Aemilius Secundus likewise appears forty-first (450 K) and eighty-fourth (2300 K).⁷¹

Even more striking is the close tie between kinship and land holding. Members of the same family tend to hold land -or at least irrigated plots- in contiguous units. Thus, along one branch of the system, Marius Saturninus held 200 K next to Maria Satura (150 K), whose property lay next to Maria Donatula's (100 K), who in turn owned land next to Marius Felix (200 K). In the same way, among the largest family in terms of land held, the Germanii, Germanius Petronianus (620 K) had land beside Germanius Valens (600 K), who had land beside Germanius Valentinus (664 K), all on one canal, while on another there was a block of land made up of properties owned by the son of Germanius

Petronianus (440 K), Germanius Castula (803 K) and, after an intervening three properties, the same Germanius Valentinus met just above (430 K). The same sort of groupings can be established for the Apulei (5 members), Dentillii (2 members), Caecilii (2 members) and up to five other families. Linked to this, there is an apparent tendency for neighbouring families to intermarry, probably to consolidate land holdings.⁷²

Perhaps the most important feature is the extreme unevenness of property distribution. The smallest plot is 70 K, the largest 4000. The last two owners on the list as it now stands, Aemilius Secundus and a man whose name is lost, owned 2300 K and 4000 K respectively - together 12.7% of the total known; Secundus alone owned 7.5% of the total. The ten largest owners held more than the first fifty together; twenty owners, over one quarter of the known total, owned less than 5% of the land. Fully 66 owners fall into the category of owning 1000 K (that is, 10 *iugera*) or less. In short, there were a large number of small owners and a very few large ones.⁷³

Lamasba was definitely a community of peasant farmers. Even the largest holding, 4000 K, only amounts to some 40-50 *iugera*, and a typical large family holding would only be about 1500 K (15 *iugera*). It should be remembered that in Italy, by means of comparison, anything under 80 *iugera* may, it has been argued, be legitimately thought of as a small-holding.⁷⁴ Of course, there was probably more land, the record of which is lost, for many of the names that survive, and perhaps non-irrigated land as well. But it still seems unlikely that the farmers of Lamasba were ever more than small holders.

Yet it was clearly not a purely veteran community, made up of lands doled out in equal portions. There are few named veterans, and besides that, the distribution of land is so uneven that it is difficult to envisage any way that the regular land grants of a legionary settlement could have been so totally altered.

What probably should be seen here are aspects of the pre-Roman social and economic system which was discussed in Chapter One. A brief glance at the names engraved on the register is enough to convince that the population was ethnically African - there are five variations on Saturninus, four on Rogatus, four on Felix, and two each on Fortunatus and Donatus, plus others such as Africanus, Expectatus, Castula, Honoratus, Quadratus and so on.⁷⁵ It should be recalled that even the veterans had by this period been Africans for some time, albeit many of them from the other end of the province.⁷⁶

An interesting hint of non-Roman landholding practices relates to possible inheritance patterns. Iulius Fortunatus held a plot of 530 K, while beside this was another plot of exactly the same size held in common by the heirs of Iulius Petronianus. Shaw has suggested that this reveals an inheritance system related to Semitic practice, whereby the eldest son received the same inheritance share as the rest of the heirs together. Fortunatus would by this theory be the eldest heir of Petronianus. Among the Apuleii a similar situation can be seen: Apuleius Rogatinus and Apuleius Africanus each held 110 K, Apuleius Processus 220, all three forming one block. Probably Processus was the eldest son, getting exactly what the other two heirs together got (and which they, unlike the heirs of Iulius Petronianus, split up).⁷⁷

On the other hand, it cannot be claimed that this was a purely non-Romanized community. The same names that probably reveal African blood are, after all, Latinized forms. There are other Roman features as well. Women could own land -for example, Lolliia Mustia (150 K), Maria Satura (150 K) and Iulia Victoria (245 K)- and, in fact, owned 8.5% of the land. This would probably have been a Roman influence at work. But what has to be kept in mind is that the fact that land was apparently owned and inherited (14% was specifically stated to be held by joint heirs) does not mean there was a truly European sense of landholding present. As was pointed out in Chapter One, tribal systems can often allow for *de facto* personal possession of land without removal of the many restriction on the powers of disposal which the possessor has over the land. This has, in North Africa, at least, often been particularly common where high intensity crops, especially irrigated or arboreal crops, have been grown, as was the case here. That the land could be inherited, therefore, does not prove that a Roman landowning system was present.

Lamasba was relatively near the main legionary base and in fairly accessible country. It was open to romanizing influences through settlement of romanized veterans, or simply by example of the romanized Africans still in uniform. A landholding system in this area should reasonably be expected to exhibit some traces of such influence, and Lamasba has no reason to be different. It was probably a transitory system, between the older, pre-Roman forms and more romanized types. But the evidence as it stands does not require that the change have been great. The distribution pattern of landholding (few large - many

small), the influence of kinship on where land was owned and the probable inheritance patterns all point to native agrarian practices more or less intact; and none of the evidence compels the conclusion that non-tribal landholding concepts had been introduced.

There is no equivalent to the Lamasba table for other parts of *Africa proconsularis*. As a result it is not possible to say how small landowning worked in any particular part of the province. Indeed, the single Lamasba inscription does not really justify claiming that it was common even there, or that the system revealed in it was typical of the region. If there were many other small, independantly owned farms it might be expected that they would be most common in the hills and mountain areas, and in the remoter parts of the province - in the places, that is, where large landowners would have had little opportunity or incentive to buy up land. But this is purely hypothesis, however logical.

To return to the question asked earlier in this section, how common were small peasant-owned farms like those of Lamasba? The answer, quite simply, is that it is impossible to know. It is difficult to believe that they were extemely rare, but this is unprovable. Nor is there much chance of ever being able to shed any light on this aspect of landownership.

Finally, a comment must be made on one last aspect of landowning, namely how land was owned in the territories given to the native tribes. There is, unfortunately, little evidence on landholding in these areas. The native African *gentes* who were assigned land

certainly practised farming, even before the Roman *adsignatio* took place, but knowledge of these tribal homelands comes essentially from boundary stones, not particularly informative on agricultural practice. Based on the wording of a single inscription, from a group called the Zimizes, which reads *ut sciant Zimizes non plus in usum se habere quam...*, it has been argued that tribal land was held in a communal form called *usus*.⁷⁸ This was "... an umbrella term covering *usus fructus* and or *habitatio*, though somewhat less than each...", which meant that land could not be considered as private, but only held as a "... 'habitation' or a bundle of access rights".⁷⁹ This certainly sounds plausible, given that predominantly pastoral tribal peoples often hold land, particularly pasture, communally, as was seen in Chapter One. Unfortunately there simply are not enough data to confirm, and for all practical purposes landownership in tribal areas remains a blank.

Because the evidence from Roman Africa stresses the importance of the large estate, it is vital to attempt to gain some understanding of how such estates were run, how they were managed and how they were manned. Once again, the evidence is slight.

Before proceeding to examine the management of large estates, the small-scale farm may be dealt with briefly. For farmers of this sort, men such as the veteran with his twenty or so *iugera*, the members of the irrigation system of Lamasba, or the man with the one ass and tiny farm at Zarat whom Apuleius deprecated, there were probably few management or labour choices to be made. There was no alternative but

to work the fields himself, with the labour of his sons and perhaps a slave or two to help handle the work-load. Such men do not think in terms of 'management systems'. What could not be done 'in-house' was taken care of by cooperation with neighbours. An instance of this is alluded to by Apuleius in his attack on his accuser: he says of how the man was forced to run his farm that "... *ego adeo servosne tu habeas ad agrum colendum an ipse mutuaris operas cum vicinis tuis cambies...*".²⁰ Clearly some sort of mutual labour exchange between neighbours was in use by those who could not work their farms alone. This is not, however, particularly exceptional for farmers in this sort of position - indeed, it is a typical part of defensive strategies formulated by peasantries to cope with demands on them.²¹ Examples are to be found in native North African contexts, as in Morocco, where donation of labour at harvest time in return for reciprocal labour when needed is called in Berber *twiza*.²² Without more evidence than this there is little to be drawn from Apuleius' reference.

Peasant proprietors undertaking communal action on a slightly more organized level can be seen in the *Aqua Claudiana* irrigation system of Lamasba. Such schemes were by their very nature joint ventures. Furthermore, they must have been exceedingly common in North Africa, where much of the land was only really productive when water management was carried out. As the Lamasba inscription makes clear, the irrigation system was entirely a locally-run affair: only when the previous, consensual routine of water distribution broke down was an arbitration commission set up, the decision of which makes up the Lamasba inscription. And, as Shaw points out, the rarity of such

inscriptions when there were so many irrigation systems suggests they were mostly managed by customary, unwritten practice rather than elaborate formulae.³³ Probably these were the sort of functions that the many *vici* and *pagi* associations which are recorded in rural Africa carried out. By such means small farmer-owners were able to counteract the power of large estate owners and maintain their independence.³⁴

For the larger owner in Africa farming will have been rather less straightforward than for the peasant. He will have had to make a number of basic management decisions, of the same sort as are known from Italy. Among these were: whether to supervise his estates directly, either by himself or through a *villicus*, or to rent out the estate to tenant who would do the managing; if he chose to rent, whether to rent out his estate as a whole, or to break it up into several leaseholds; whether to rent the entire estate, or to keep part as a 'home farm' for himself; whether to collect his rents in cash, or in kind; whether to set a fixed rent amount, or to adopt sharecropping; and, finally, how to man his estate - by slaves, or with free labourers.³⁵

In one respect his decision-making will have been simplified - as was seen in Chapter Two, rural slave labour was probably never adopted on a large scale. But the very native labourers whose existence in a dependant status made slaves unnecessary would have in themselves presented a problem. Where the concept of private property is not well established, the notion of tenancy must likewise be unsure. The 'free' men who could be called on to farm the fields of Africa may not have

been totally free, but they would have considered those fields in some way their own, or at least not entirely the estate owner's. To create a true tenancy system such as existed in Italy these rights to land would have had to be legally and effectively denied. The alternative would have been to accept a system which was in nature different from that in Italy. Much of the evidence about farm management suggests that such a complete change did not take place.

The regions in which the greatest such change might be expected to have occurred, and the most 'Italian' systems of management put into place, are those near the cities, the most romanized parts of Africa. And indeed this can be seen to have occurred to an extent. As was mentioned above, evidence is scarce, but Leveau's Caesarea survey is revealing. The first and second centuries saw the installation of a 'villa economy' in the area around the city, where none had existed before. Aside from the immediate surroundings of the city (one or two km from the walls), which are relatively empty of villas and were probably given over to market-garden agriculture run from the city, the whole remainder of the hinterland of Caesarea came to be covered with some five to six dozen villas, some of them quite large (there are eight of 2,000 sq. m). Numerous large olive press installations attest to an olive oil industry on a fairly grand scale, aiming at least to meet city demands, possibly export ones as well.²⁴ Equally unsurprising, few of the villas had residential quarters; most were obviously centres of farm estates whose owners lived in the city. There is enough evidence from other parts of North Africa of city residents owning farms nearby to make it clear that this was fairly

common. Some examples are the farm of one L. Saedius Octavius Felix, *duumvir* of Tipasa, three km east of that town, or the *agricola bonus* Q. Vetidius Juvenalis, who lived in, and obtained municipal honours from, Thubursicu Numidarum.⁹⁷ All of this was a great change.

It is clear that one of the city's roles was to act as an organizer of space. By becoming the spot where essential services were offered from, it created a countryside that was quite new. The ring of villas around Caesarea illustrates this clearly. It conforms to the geographical concept of 'Central Place Theory', according to which important centres (in this case towns) providing services group around themselves smaller centres using those services, the area in which the secondary units are found being equal to the area of control of the centre place.⁹⁸ The villas of Caesarea, all within fifteen km of the city, define its area of economic influence. It is thus clear that the presence of the city affected how agriculture was run. Instead of the village oriented agriculture that had existed before, there was created a new countryside - one, near the city, which had estates centered on villas, "à la romaine". Farther out, beyond the city's influence, agriculture remained "fidèle à la tradition indigène de l'organisation villageoise".⁹⁹ In Leveau's words:

A un espace agricole dont la mise en valeur était réalisée par un réseau de *villae* succédait un autre espace où les *villae* étaient absentes et où l'élément déterminant du paysage agraire était constitué par les ruines de petites et de moyennes agglomérations paysannes.¹⁰⁰

The rise of the city had created a romanized, 'citified' (ie., with villas) agrarian system.

This said, the limitations of the effect of the cities as

organisers of space must be recognized. There is the point made earlier in connection with landowning - that this countryside "à la romaine" was not large, only fifteen km across, and this for a large city of high status. This area of economic influence was much smaller than the legal territory of Caesarea. Even more important than this, there are signs that within the area economically influenced by the city not everything changed. As was just noted, there was an area of villas near the city and an unaffected area of villages beyond. But even within the area dominated by villas there were still numerous villages and hamlets, of the effectively timeless type native to North Africa (and apparently identical to those of the village zone beyond). Many of these agglomerations were found in close proximity to villas, and there can be little doubt that they were the homes of the farmers who worked the land of those villas. However, some villages in the villa zone were isolated from any villa.⁷¹ Thus, though the romanization of the countryside appears to have moved the centres of management into the villas, the presence of 'bourgs ruraux' within that romanized area strongly suggests continuity at the level of the labour supply, at least. If the isolated villages were anything more than manpower reserves for the villa economy, then there is the possibility that some land continued at every level -ownership, management, labour- as it had been before the city arose. And this within ten km of its walls.

Caesarea is a useful test case for the effects of urbanization on the organization of rural life precisely because it is relatively isolated from other urban centres. This was not the case in the east,

in the main agricultural zone of Africa, where towns were common. Yet the same pattern of agrarian habitation appears in the few surveys which have been done in these areas. In the very heart of *Africa proconsularis*, the valley of the Oued et-Tine, only sixty km west of Carthage, was quite heavily urbanized, and there appeared here numerous farms that can probably safely be thought of as *villae*. Yet the native village persisted as well. In one area of little more than 300 sq. km, there were 12 towns or small cities and at least 75 farms, but there were also at least 10 of what the surveyor has called "hameaux" and "bourgades".⁷² Similarly, in the area immediately east of the important centre of Thysdrus in the central east coast region of the province, examination of the landscape has revealed not only that the Roman centuriation of the land brought about the installation of *villae*, but also that there continued to exist similar non-Roman villages, from pre-Roman times until the Late Empire.⁷³ The overall impact of these archaeological findings must be to confirm that urbanization did not necessarily change all aspects of rural life in the areas around towns. Villas sprang up, certainly altering agriculture considerably, at the level of the 'estate of administration', but around them persisted the many native villages, suggesting that for the actual labourers, at the level of the 'estate of production', much remained the same.⁷⁴

To this general conclusion that the change caused by urbanization was not total and was limited in scope one caution must be appended. Not all areas will have been affected in the same way. A recent survey of the southern portions of proconsular Africa, in the area

Sufetula-Cillium-Thelepte, has uncovered large and small farm sites, but only two agricultural villages, and these in hill country ten kilometers east of the nearest town, Cillium.⁷⁵ Presumably in these southern reaches there was less settled agriculture than nomadic pastoralism in pre-Roman times, and so fewer settlements of the village type. The expansion of agriculture, being a Roman innovation, seems to have taken the Roman form of individual farms. It is a reminder that local and regional variation must always be kept in mind.

Interesting though these facts may be, they do not provide any real detail about how farms were manned, about what the men who lived in the villages and villas revealed by the various surveys actually *did*. Archaeology tells nothing of how estates were managed. Only written records can do that. Fortunately, such records do exist, in the form of a series of inscriptions from the area of the middle course of the *Bagradas* river, some one hundred kilometers west of Carthage. The system of agricultural management described in these 'grandes inscriptions' is important enough to warrant a detailed discussion, and it will be considered in depth in Chapter Four. However, as the *Bagradas* system had implications for farming elsewhere and over a great period of time, its chief features will be summarized here.

The earliest and most important of the *Bagradas* inscriptions is that found at Henchir Mettich (hereafter, the HM inscription), which dates to 116-117.⁷⁶ It contains the text of an order written by two imperial procurators giving permission to *coloni* on an estate called *Villa Magna Variana* to bring under cultivation unused lands on the

estate called *subseciva*, on the terms of a 'law of Mancian', "*ad exemplum legis Mancianae*". When they have brought these lands into use, the *lex Manciana* required that a certain portion of the crops be paid to "*dominis aut conductoribus vilicisve*", to the 'owners, lessors or stewards' of the estate. In return, the law guarantees the *coloni* will have the right of *usus proprius* over the land they bring under the plow.⁹⁷ The bulk of the inscription is devoted to clarifying how the crop shares were to be determined for specific crops, who was in charge of land left fallow, payment for pasturage rights for the animals of the *coloni*, restitution for crops destroyed by *coloni*, and the confirmation that *coloni* cultivating the new land had the right to bequeath it and use it as security for loans.⁹⁸ The only restriction on this right was that if a *colonus* let land he had brought under cultivation lapse into idleness again, he lost his right to it.⁹⁹ The inscription ends with a statement that the *coloni qui intra fundum... habitabunt* must contribute to the owner, lessor or steward a total of six days labour a year, while men called *coloni inquilini* have to perform guard duty.¹⁰⁰

The inscription, in short, defines a system by which an imperial estate (for the order was given by imperial *procuratores*) was managed in a form of sharecropping tenancy. The estate was probably leased as a whole to a chief tenant, or lessor (*conductor*) who sub-let to lesser tenants who each held but a part of the estate. The sub-tenants (*coloni*) had specific labour duties in addition to their share requirements, but also had perpetual hold on at least some of the land they farmed.

The next most important of the inscriptions is that from Ain el-Djemala (the AD inscription), dating to Hadrian's reign.¹⁰¹ It begins with a petition by a group of farmers to some group of procurators, that the farmers be given the wooded and swampy parts of their unnamed estate, in order to plant olives and vines on them. It is specifically stated that they wish to do this "*lege Manciana, condicione saltus Neronianus vicini nobis*", 'in accordance with the law of Manciana, on the terms applying to the neighbouring estate called Neronianus'.¹⁰² The inscription also contains the government's reply, stating that permission is given to everyone who wishes to take under cultivation any part of two specific estates not then being farmed by the *conductores*, and that those doing so would have the rights of possession and use of the products of the land, and rights of bequeathal. These rights are said to be based, not as might be expected on the *lex Manciana*, but on a "*lege Hadriana comprehensum de rudibus agris et iis qui per X annos continuos inculti sunt*".¹⁰³ A third inscription, from Ain Wassel (AW inscription) consists of a copy of the AD inscription's reply to the petition, and is useful mainly for restoring the complete AD text. The AW inscription dates to the reign of Septimius Severus.¹⁰⁴

The inscription found at Souk-el-Khmis (SK) is of interest not for what it reveals of the regulations of imperial estate management, but of its realities.¹⁰⁵ The *coloni* of a *saltus Burunitanus* complain to the emperor Commodus (thus dating the inscription to 181) that an imperial procurator had been conspiring with several *conductores* to raise the share of harvest they owed and their labour dues, and that

when they had complained before, he had used troops to force them into line, to the extent of torturing some of them. All the *coloni* (who call themselves inhabitants of *saluum tuorum* when addressing the emperor, thereby showing theirs to be an imperial estate) want is that the levels of crop shares and labour dues be kept at those fixed by the *Iex Hadriana*. The inscription concludes with Commodus' reply, ordering that the law be obeyed, and shares and labour dues be left as they are. A copy of the imperial command was found engraved on another stone at Ain Zaga, some thirty kilometers from Souk-el-Khmis. It is of contemporary date, but the distance between the two find spots suggests that it probably came from a different estate.¹⁰⁶

Finally, there is the Gasr Mezuar inscription (GM).¹⁰⁷ It is poorly preserved, but also appears to date to Commodus' reign. It is another appeal by *coloni* against overly great exactions. Its two points of interest are that the labour dues set by law here were twice that elsewhere, twelve days instead of six; and that the *coloni* threaten to move away if their demands are not met.

It certainly seems that all six inscriptions refer to the same basic system of agricultural organization, what is normally called the Mancian system, after the *Iex* mentioned in the HM and AD inscriptions. This Mancian system would be important enough if it only pertained to the area of the six inscriptions, since this was an important agricultural zone. Its significance, however, extended far beyond just this.

An inscription from Djenan-ez-Zaytouna (which lies to the west of the region of the *Bagradas* estates), dating to the period of Septimius

Severus, refers to its dedicator as a *Mancianae cultor*. Since there is another inscription from the same place mentioning *possessores fundi Tapp...*, it is probable that this is a reference to a farmer with a lease based on the *Iex Manciana* type, on a large estate.¹⁰⁶

Rather more remarkable than this, both in place and time, is the second piece of associated evidence. The previous information presented a system of relatively restricted area, known to be in use from the early second century to its later parts. The so-called Albertini Tablets, from an area about one hundred kilometers south of Theveste, on the present Tunisian-Algerian frontier, change all that. Not only are they far from the other known Mancian sites, but they date to the 490's, during the Vandal period. They are deeds of sale of plots of land in a larger *fundus*, the plots being sold under the condition that they be farmed by the rules of *culturae Mancianae*. Despite the great separation in time, features of the system described above are still visible. A private individual, one Fl. Geminus Catullinus, is the *dominus* of the *fundus*, but takes no part in the sales. Instead, the purchaser of each plot acquires it "*ut h(a)b(eat) p(ossideat) utatur fruaturque ipse heredesque eius in perpetuo*", despite Catullinus' *dominium*.¹⁰⁷ Although no *conductor* is mentioned, the rights of the purchasers in these tablets are clearly like those of the *coloni* of the *Bagradas*.

In some form, then, the Mancian system was in use throughout most of the course of the Principate and beyond, outlasting even Roman rule in Africa. Further, it is attested in widely enough separated places to make it possible that it was in use over the whole of *Africa*

proconsularis. The system was clearly of the greatest significance.

Unfortunately, its parameters cannot be determined much more precisely than this. Its origin can at best be sketched in. The name of the *lex* on which the system was based presumably derives from one T. Curtilius Mancianus. His exact role in its creation is uncertain.¹¹⁰ Some scholars believed that Mancianus was sent as an official legate by Vespasian to Africa, to organize agricultural production there.¹¹¹ Others argued that the *lex Manciana* really originated in a private lease arrangement created by Mancianus for an estate which he owned in Africa, and which was later retained by the government when it acquired the estate; later yet, the arrangement proved successful enough that it was implemented on other imperial estates.¹¹² Although there is evidence that a reorganization of African landholding by the government may have taken place in the 60's and 70's, it is probable that Mancianus's role was as private landowner rather than imperial agent.¹¹³ There is no attestation for an African position for Mancianus and the date of his role there would be an unusually long time after his consulship in c. 70-72. Further, it would be odd for a senator to be in charge of reordering the affairs of lands owned by the emperor: all other actions concerning these estates were handled by imperial procurators. Probably, therefore, the *lex Manciana* began as a management system on private estates (a *lex locationis*) and only later was taken over by the government for the imperial estates recorded on the 'grandes inscriptions'.¹¹⁴

Whether Mancianus created the system himself or adopted it from some earlier prototype is unknown. However, it is certainly possible

that the latter was the case. The Mancian system does appear to be peculiar to Africa, and as will be seen in Chapter Four certain aspects of it suggest a native African source. It is the opinion of some of the scholars who have studied the question that Mancian drew on and adopted existing native tenure arrangements.¹¹³

If it is true that the Mancian system originated in a private rather than a public manner, it is reasonable to ask whether the system was regularly used on private estates as well as the imperial ones which the 'grandes inscriptions' record. This is a tempting idea, for it allows the possibility of explaining in one bound how the whole of African agriculture was regulated.¹¹⁴

It does not seem likely that the *Lex Manciana*, in its role as a government policy, applied to private estates. The argument for its doing so rests on the repeated use of the phrase *domini aut conductoribus vilicisve* in the HM inscription. Since owners (*domini*) in the plural can hardly refer to the emperor, private owners, and thus private estates, must have been involved as well as emperor and his estates. This intrusion of the government into private estate managing would be unparalleled in the Principate, however. Furthermore, since the HM inscription appears to be the application of the *Lex Manciana* to the situation of a specific estate, rather than a complete publication of its articles, it seems unlikely that the *procuratores* writing it would have unthinkingly used words that did not apply to the case at hand simply because they were in the original private regulation. The best explanation is probably that the plural *domini* were included in case the estates were ever passed back into private hands; the

procurators had to cover this possibility because the Mancian system provided permanent rights for *coloni* and the future private owners had to know to what rules they were bound. This is presumably what eventually happened to the estate to which the Albertini Tablets pertain, since it was in the 490's owned by Fl. Geminius Catullinus.¹¹⁷

The *Lex Manciana* was thus by the second century an imperial law regulating only imperial estates, deriving from a private estate management system that itself probably originated in local tenure arrangements. The fact that the *Lex Manciana* itself was a purely imperial regulation does not, however, mean that its basic elements could not have been copied by private landowners for their estates, if they saw that (as its wide extent in time and space suggest) it was a successful system. If it worked well enough that the imperial government adopted it, it seems likely that many private owners would have followed suit.

This may well have been the case. The Albertini Tablets would tentatively suggest this. Similarly the evidence of an estate in the heart of *Africa proconsularis*, the *fundus Aufidianus*, near Matera (modern Mateur) is perhaps most easily understood as the result of a system not unlike that of the *Lex Manciana*. The archaeological remains of the 6,400 *iugera* (1,600 ha) estate reveal a large, central farm, at least 12 smaller, but still sizable, farms scattered across the estate and two large villages at its edges. An inscription found at the central farm speaks of a farmer of the nearby town of Biha Bilita who, as *conductor*, restored the *fundus Aufidianus*, planting a new olive grove, an orchard and vines, as well as digging wells. The inscription

was erected as his funeral monument by his widow.¹¹⁸

Certain aspects recall the Mancian system. As on the imperial *fundi* there was a *conductor*, acting for the estate's owner - here a private individual apparently, though he is unnamed.¹¹⁹ There are a dozen or so farms that it would seem reasonable to connect with the 'grandes inscriptions' *coloni qui in fundo... villas habent habebunt....*¹²⁰ The villages around the estate edge may have been inhabited by farmers of the same status as the *coloni inquilini* of the 'grandes inscriptions', a mysterious group, apparently distinct from the men just called *coloni* and usually accepted as being of lower status.¹²¹

There were divergences from the Mancian system as well, though. Unlike the *conductores* of the imperial estates, who appear to have been mainly middlemen, ensuring collection of the crop shares owed by the *coloni* to the government, the *conductor* on this farm was obviously a farmer - he planted numerous new crops and improved the condition of the *fundus*.¹²² This was probably only possible if he had a long-term contract to manage the estate (since crops like olives take years to mature). In fact, the evidence that he was buried there and a monument raised by his widow, implying that she may have continued in his place, suggests that he had a permanent, or emphyteutic lease.¹²³ From all indications, the *conductores* on imperial estates appear to have held short-term leases.¹²⁴

Whether an imitation of the system used on imperial estates or not, the *fundus Aufidianus* tells a good deal. Clearly this large estate was run by indirect management, and a particularly decentralized

form at that. Not only were there *coloni* (this seems the only reasonable explanation of the twelve or more farms), but a farm manager who himself was a tenant, albeit probably a permanent one. What one would of course like to know is whether the *coloni* of the farms on this estate had the same sort of permanent tenure as those of the imperial estates, but this remains unknown. The *conductor* was probably a moderately wealthy man and a landowner himself, for he is stated to be a citizen of the town of Biha Bilita.¹²⁵ The *coloni* of the various farms were, it seems, not particularly poor men either. Even if, as appears probable, only about half the estate's farms have been found, there would still have been only one farm per century of land.¹²⁶ A farm of one hundred or more *iugera* would be considerably more than could be called a peasant holding.¹²⁷ The labour force, it appears, was to be found in the villages at the edge of the *fundus*, as vital here as in the many other areas in which they have been noted.

The Mancian system was very probably the most common single system of agricultural management in use in *Africa proconsularis*. It could conceivably even have been used on the majority of large estates, private as well as imperial, though there is no proof of this. It should not be imagined, however, that the Mancian system and its variations were the only way estates were run in Africa. There is evidence that other schemes of organization were to be found. From the area of Sitifis, in *Mauretania Sitifensis*, (to give an example that is admittedly from the very boundaries of the territory and time with which this discussion is concerned) there comes a series of inscriptions in which are mentioned imperial *procuratores* in charge of

communities called *castella*, in which live *coloni*.¹²⁸ The inscriptions do not reveal much about agriculture, since their subject is mainly construction in the estate's *castella*, but they do show a different organizational structure from that to be found in the Mancian system. The *coloni* are apparently residents of an imperial estate, but they are not referred to as being the *coloni* of any one *fundus* or *saltus*, as those in the inscriptions from the Bagradas area were. Rather, the *coloni* are specifically stated to belong to various *castella*.¹²⁹ Further, instead of a hierarchy of *procurator-conductor-colonus* as found in the Mancian regulations, here there appears to have been direct control of the *coloni* by the *procuratores*. Thus it looks as though imperial estates in this area were managed on an entirely different basis from those farther east, the key element of which was the native agricultural village, the *castellum*. It has been proposed that the greater reliance on the village as part of the management system of estates was due to the less romanized nature of the area, but as Chapter Four will show, the Mancian system was not a particularly 'Roman' one.¹³⁰ Unfortunately no alternative reason for the different system is apparent.

An equally interesting situation existed at the other end of the province, in the inland parts of Tripolitania. Here all settled farming was centered on the numerous seasonal river valleys (*wadi*), the lack of precipitation precluding any other arrangement. Widespread settled agriculture appears to have begun here in the mid-to-late first century based on large undefended courtyard farms, often built in *opus africanum*, that would not have been out of place in Italy, and which it

seems reasonable to consider as *villae*.¹³¹ Thus far a fairly romanized countryside seems to have been developing, with each villa likely controlling a specific stretch of *wadi* as its estate. So, for example, along one four kilometer stretch of the Wadi Mansur, about one hundred kilometers south of Lepcis Magna, there were three such courtyard farms, each the centre of an estate of about 33-50 ha (counting only the *wadi* floor; each estate could have held land on the plateau behind the *wadi*, probably mainly for pastoral activity).¹³²

What is fascinating about this area is that the apparently romanized villa did not last. Most such farms declined in the third century. They were replaced by large, fortified structures known as *gsur*, which date to the late second century and beyond.¹³³ Thus, on the above mentioned Wadi Mansur, the three courtyard villas were replaced as important centres in the second and third centuries by an equal number of *gsur*, which presumably controlled similarly sized estates.¹³⁴ This sequence is paralleled elsewhere: in one case a courtyard farm actually developed into a *gasr*.¹³⁵

The *gsur*'s role in their estates is unclear, but it seems likely they acted as storehouses for crops, were distribution points for foodstuffs and coordinated activities, each one serving as a "focal point for water supply and manpower".¹³⁶ Certainly there was a hierarchy of farmsteads of various sizes apparently dependant on them.¹³⁷ This in itself is unexceptional - the courtyard farms probably fulfilled a similar function. But it is difficult not to believe that some organizational change is reflected in the shift from *villa* to *gasr*. Parts of the *wadi* agricultural system look to be very

native and local - the population of the *gsur* were definitely Libyan in culture, and the hill-top villages which formed the pre-Roman population centres are still to be found inhabited in most of the Romano-Libyan period *wadi* valleys.¹³⁸ Yet at the same time the *gsur* must have been part of a wider, 'Roman' economy, serving as a "... link in a market chain dispatching grain, olive oil and perhaps wine to the coast as well as probably along the trade routes to the south". From these markets they "... received in return above all money and supplies of non-local materials such as better classes of pottery."¹³⁹ The blend is typical of African agriculture, though the details are quite specific to Tripolitania. The course of development has been explained as follows: "... a more intensive agricultural system capable of a modest surplus was developed by local chieftains in response to the economic pressure of the Roman coastal market".¹⁴⁰ This suggests that in Tripolitania the effect of Roman rule on how farming was run was considerable, but that it did not remove it totally from the pre-Roman methods. It is a conclusion that, as much as of the evidence has shown, applies to most of *Africa proconsularis*.

Variations though there may have been in the ways agricultural estates were organized in various parts of Africa, there were no doubt many elements common to most regions. There has already been occasion to mention the native village, and it seems likely that this was one part of rural life that was to be found in most areas. Two other particularly important aspects will be mentioned here.

Another typically North African institution which would have

entered into any estate manager's calculations was the rural market. The rural market -the temporary assembly of peasants for the purpose of trading- is a common feature of many agrarian societies. Rural markets are usually periodic (ie. once a week, month, etc.) gatherings of short duration (typically part of one day) at a customary place that offers both accessibility and placement between two areas of complementary production (often mountain-plain), as well as a neutral location between the various social groups which attend, since they are not necessarily friendly. Their two key facets are that they are defined by their periodicity, rather than location -hence the Latin name for them, *nundinae*- and that they are a specifically rural, not urban, phenomenon.¹⁴¹

The rural market has been particularly important in the life of the Maghreb for all its recorded history. This seems to have been just as true during the Roman era; the evidence for *nundinae* in Africa, though limited, is greater than for any other part of the Empire.¹⁴² Though this might suggest agricultural continuity, there was in fact considerable change imposed on the market institution by the Romans. For example, in most places the creation and location of markets are determined solely by the factors mentioned above. Yet in the surviving inscriptions of Roman Africa, the vast majority of the known establishments of markets were by large estate owners on their properties. This is quite atypical of normal distributions. The sample is not large and this might be dismissed as coincidence, but there is other evidence of interference in traditional market systems. All known African markets display a basic fifteen-day cycle that is

African in origin, not Italian. But within this basic periodicity they are highly erratic, more so than any other known market system. The cause was the shift to calculating time by Roman methods.¹⁴³

Most interesting of all is the known interaction of markets. In traditional systems, the days of various markets in one area tend to be ordered to produce a mutually interconnected cycle of non-competitive markets. Near Cirta in the mid-second century one Antonia Saturnina founded a market on her estate, at Ain Meshira. Only ten kilometers away, one Phosphorus did likewise on his estate at Ain Melôk. Normally such close markets could be expected to form part of a non-competitive cycle. In fact, however, the markets were set to occur on exactly the same days for the whole year. Since the procedure of creating a market involved considerable effort by the establisher, it is unlikely that this was a coincidence.¹⁴⁴

There was more intervention here, it seems, than a simple unconscious effect such as might explain the change wrought by a new mode of time reckoning. The estate owners were actively interfering in the rural market systems of Africa. There could be a number of reasons for this. An owner might be worried about one of the most common traits of rural markets - their great propensity for violent conflict as differing, potentially hostile groups come together - and wish to control this by moving a market to where he could keep an eye on it. Markets are also often the chief arena for local political activity in their area, the place where alliances are made and prominent leaders get their start. For this reason too an estate owner would want the market to be where he could control it.

There could be reasons other than security, as well. An owner might found a new rural market because it helped make his estate self-sufficient, which as Cato demonstrates, was important to a Roman farmer. As the one main point of trading activity for his *coloni*, it meant that

"... all the trading and marketing done by the *coloni* on his lands took place within the socio-economic frame of the domain itself. At one stroke the landlord increased the isolation and dependance of his workforce, and also enhanced the *autarkeia* or economic selfsufficiency of his domain."¹⁴⁵

There are references as well to the effect that African *nundinae* were connected with tax collecting, which has certainly been the case with markets in the more recent Maghreb, since they are some of the few spots where all locals must at some time or another congregate.¹⁴⁶ Finally, if the modern *sūq* of the Maghreb is any indication, the rural market probably also served as a point of congregation for labourers who wished to work for hire. The market thus became a labour exchange in which the owner could get the vital extra labour he would need at harvest time (and also where he could ensure that no *colonus* was spending his time selling labour which he owed to the owner for free).¹⁴⁷

These were all benefits which accrued to an owner who set up a market where he could control it. Why, however, did such owners go to the trouble of destroying the complementary cycles of markets, as Antonia Saturnina and Phosphorus appear to have done? The answer is probably similar to the logic offered above for increasing estate self-sufficiency. Owners wanted their *coloni* to trade within the

estate, but not *between* estates. "Thus *nundinae* were tied to the internal economy of the domain, but *not* to the external sphere of large scale trade and exchange between domains, and between agricultural estates and the central State."¹⁴⁸ Such trade was the prerogative of the owner. The owner was aiming at ensuring a dependant population: this appears to have been another of the eternal of African agrarian management.

Finally, the references to markets as labour exchanges brings up one last element which was probably present in most parts of Africa, and a factor in any estate owner's running of his farm - migrant seasonal labourers. Most non-technologically advanced agriculture, and this includes that of Roman Italy, relies on such additional labour at harvest time, and the typical crops of Africa, especially the olive, make it imperative, because they require so little labour at other times of the year.¹⁴⁹ The question is thus not whether hired seasonal labourers were important in African agriculture -it is inherently likely that they were- but *who* such workers were.

The one piece of evidence which permits a glimpse of this phenomenon during the Principate is the celebrated 'Maktar Harvester' inscription.¹⁵⁰ This monument tells the story of a poor peasant with only a little land who each harvest season joined the gangs of hired harvesters who travelled the plains around Cirta, and through this work gained enough money to rise to a respectable station in society. His success was probably far from common, but clearly the existence of such men was not.¹⁵¹ Indeed, his statement that he commanded a troop of harvesters for eleven years might suggest a regulated and orderly

system of employing them.

Unfortunately, the Maktar Harvester does not reveal much about his origins. That he was not a landless labourer is clear - he inherited land from his father, though only a little. But whether this means he was simply a sedentary peasant whose land was insufficient to feed his family (or at least to meet his desires), as was probably the case with most Italian seasonal labourers, is not so certain.¹⁵² There is the distinct possibility that in the Maktar Harvester one is seeing the manifestation of those yearly movements by pastoral herders which, as was pointed out in Chapter Two, are so typical of North Africa.¹⁵³ Such pastoralists were not usually purely nomadic, and many will have possessed some farmed land. An increased demand for workers probably occurred, because of the extension of settled agriculture that Roman cities demanded and Roman peace made possible; but the demand was met, at least partially, by one of the region's native elements, the pastoral nomad. This explanation is, admittedly, unproven, but it is perfectly consistent with the Roman Africa that this discussion has attempted to argue existed. Like the persistence of the rural market, and much else that has been examined here, it typifies the blend of change and continuity that seems to have made up African agriculture.

Notes - Chapter Three

1. Peter D. Garnsey and Richard P. Saller, The Roman Empire: Economy, Society, Culture (Los Angeles and Berkeley: University of California Press, 1987), pp.20-21; cf. Dennis P. Kehoe, "The Economics of Food Production on Roman Imperial Estates in North Africa" (Ph.D. Dissertation, University of Michigan, 1982), p.44.
2. Henriette Pavis d'Escurac, La préfecture de l'annone: service administratif impérial d'Auguste à Constantin (Rome: Ecole française de Rome, 1976), p.140.
3. CIL., VIII, 5351 (=ILS., 1435); Pavis d'Escurac, Préfecture, pp.125-26, 140; Lionel Casson, "The Role of the State in Rome's Grain Trade," in The Seaborne Commerce of Ancient Rome, ed. John H. d'Arms and E.C. Bopff (Rome: American Academy at Rome, 1980), 21-34, pp.26, 32, n.27; contra, H.-G. Pflaum, Les carrières procuratoriennes équestres sous le haut-empire romain, 4 vols. (Paris: Librairie orientaliste Paul Gauthier, 1960), p.229, no. 98. The date is Trajanic.
4. CIL., VIII, 18,909; Pflaum, Carrières, p.727, no. 274. It dates to 198-209.
5. AE., 1942-43, 105; Pflaum, Carrières, p.732, no. 275. The date is 209-11.
6. Pavis d'Escurac, Préfecture, p.141. On Africans serving the imperial administration generally, see M.G. Jarret, "An Album of the Equestrians from N. Africa in the Emperor's Service," Epigraphische Studien 9 (1970): 146-232.
7. Code: Theo., XI. 30. 4; XIII. 5. 3; CIL., VIII, 323; Charles Saumagne, "Un tarif fiscal au 4^e siècle de notre ère," Karthago 1 (1950): pp.120, 128, 146; Code: Theo., XIII. 5.12; Pavis d'Escurac, Préfecture, pp.142-44.
8. SHA Commodus 17. 7; Pavis d'Escurac, Préfecture, pp.206-07.
9. Pavis d'Escurac, Préfecture, discusses what government intervention there was, mainly in the areas of agricultural commerce (pp.257-64) and, more relevantly, in the requisitioning of produce (pp.185-86).
10. Dorothy Crawford, "Imperial Estates," in Studies in Roman

- Property, ed. M.I. Finley (Cambridge: Cambridge University Press, 1976), 35-70, p.52; R.M. Haywood, "Roman Africa," in An Economic Survey of Ancient Rome, ed. Tenney Frank (New York: Pageant Books, 1959), 3-119, pp.86-87; T.R.S. Broughton, The Romanization of Africa Proconsularis (New York: Greenwood Press, Publ. 1968, 1968; orig. 1929), pp.163-65; Jerzy Kolendo, Le colonat en Afrique sous le haut-empire, Annales littéraires de l'Université de Besançon no. 177 (Paris: L'Université de Besançon, 1976), p.17.
11. CIL., VIII, 10,570; 12,883; 13,188; 12,892; 12,879; ILA., 246; CIL., VIII, 12,880.
 12. CIL., VIII, 2,757.
 13. For the first two - ILAlg., 3062; for Hadrumetum - CIL., VIII, 11,174; 7,039; 23,068.
 14. CIL., VIII, 18,909; 25,582.
 15. CIL., VIII, 11,341 (= 23,219); ILS., 1,441.
 16. CIL., VIII, 7,039; ILAlg., 285; 3,992; CIL., VIII, 7,053.
 17. This explanation has been suggested by Kolendo, Colonat, p.17; Broughton, Romanization, p.166 felt the system had been created in the area of Carthage and expanded in "an unsteady and gradual way".
 18. CIL., VIII, 12,590-13,214. The dates are all up to Marcus Aurelius.
 19. CIL., VIII, 26,416.
 20. Jerzy Kolendo, "La hiérarchie des procurateurs dans l'inscription d'Ain-el-Djemala (CIL VIII, 25943)," REL 46 (1968): 319-29 contains references to the important work on the procuratorial management of the imperial estates. More will be said on this in Chapter Four.
 21. On the various types of land in Africa, see M. Rostovtzeff, A Social and Economic History of the Roman Empire, ed. P.M. Fraser, 2nd ed., 2 vols. (Oxford: Clarendon Press, 1957), pp.326-7; Richard Duncan-Jones, "Some Configurations of Landholding in the Roman Empire," in Studies in Roman Property, ed. M.I. Finley (Cambridge: Cambridge University Press, 1976), 7-34.
 22. On landowning patterns in Italy, see Richard Duncan-Jones, The Economy of the Roman Empire (Cambridge: Cambridge University Press, 1974), Appendix One.
 23. Peter D. Garnsey, "Rome's African Empire Under the

- Principate," in Imperialism in the Ancient World, ed. Peter D. Garnsey and C.R. Whittaker (Cambridge: Cambridge University Press, 1978), 223-54 and 343-54, p.224.
24. Pliny N.H. 18.6.7.
 25. Petronius Satyricon 117. Nonetheless, I would not place much weight on this reference alone.
 26. Seneca Epist. ad Lucilium 19.5 (114).
 27. Agennius Urbicus De controversiis agrorum, in F. Blume, I. Lachmann and A. Rudorff, edd., Gromatici Veteres: die Schriften der römischen Feldmesser, 2 vols. (Berlin: Georg Reimer, 1848), pp.84-85. The source for Agennius Urbicus was probably Frontinus, on which see Garnsey, "Rome's African Empire", p.344, n.7.
 28. On Republican times - Cicero Pro Caelio 30; Nepos Atticus 12.4; see Kolendo, Colonat, pp.7-9. On imperial orders to hold land in Italy - Pliny Epist. 6.19.4; SHA Marcus 11.8. On Apuleius' wife - Apuleius Apology passim, esp. 77, 88, 92. On African senators holding land at home, see Garnsey, "Rome's African Empire," pp.226-28; A.H.M. Jones, The Roman Economy, ed. P.A. Brunt (Oxford: Basil Blackwell, 1974), p.126.
 29. Crawford, "Imperial Estates," summarizes the evidence.
 30. Pliny N.H. 18.94-95; see Kolendo, Colonat, pp.12-13.
 31. CIL., VIII, 12,314.
 32. ILAlg., I, 323 (= CIL., VIII, 5,384); CIL., VIII, 17,500; see Crawford, "Imperial Estates," pp.50-51.
 33. On the generally low level of inscriptional evidence from the early Empire, see Ramsay MacMullen, "The Epigraphic Habit in the Roman Empire," AJPh. 103 (1982): 233-46.
 34. Garnsey, "Rome's African Empire," p.225; Crawford, "Imperial Estates," pp.50-51; Broughton, Romanization, p.158.
 35. On how emperors got, and got rid of, land, see Crawford, "Imperial Estates," pp.40-41.
 36. Villa Magna Variana - CIL., VIII, 25,902; saltus Neronianus saltus Blandianus et Udensis, saltus Tuzitanus, and saltus Lamianus et Domitianus - CIL., VIII, 25,943; 26,416; saltus Burunitanus - CIL., VIII, 10,570; others - see Kolendo, Colonat, Annexe, p.77.
 37. CIL., VIII, 587.

38. CIL., VIII, 14,603.
39. Elizabeth Fentress, Numidia and the Roman Army, British Archaeological Reports International Series, no. 53 (Oxford: BAR, 1979), pp.134-44. This has been challenged, however - see below, n. 58.
40. Crawford, "Imperial Estates," pp.39-40.
41. This is the opinion of Kolendo, Colonat, p.10.
42. Codex Theo., II.28.13.422. It is not explicit that this refers only to imperial land, but this is invariably accepted. For the area of the provinces, see Claude Lepelley, "Déclin ou stabilité de l'agriculture africaine au Bas-Empire?", AntAfr. 1 (1967): 135-44, pp.138-39.
43. Gilbert Ch. Picard, "Néron et le blé d'Afrique," CI 4 (1956): 163-73, p.169.
44. On alienation, see Crawford, "Imperial Estates," pp.40-41. It has been reasonably argued that the potential alienation of an imperial estate is allowed for in the very wording of one of the 'grandes inscriptions': for this, see Dennis P. Kehoe, "Lease Regulations for Imperial Estates in North Africa," Zeitschrift für Papyrologie und Epigraphik 56 (1984): 193-219 and 59 (1985): 151-72, pp.155-59. See also Garnsey, "Rome's African Empire," p.225; Crawford, "Imperial Estates," pp.39, 42.
45. Agennius Urbicus De controversiis agrorum, in Gromatici Veteres, pp.84-85.
46. Vitruvius De architectura 7.3.24ff.
47. Jerome Carcopino, "L'inscription d'Ain-el-Djemala," MEFR 26 (1906): 365-481, p.433; see Kolendo, Colonat, p.11. On the new suggestion of Cn. Domitius Lucanus, see Dennis P. Kehoe, "Private and Imperial Management of Roman Estates in North Africa," Law and History Review 2 (1984): 241-63, p.258.
48. CIL., VIII, 11,451; 23,246.
49. CRAI 1923, p.71.
50. St. Augustine Epist. 56, 58, 89.
51. Notit. Occ. 12.
52. Vita St. Melania 10,21 in Analect. Boll. (1889), p.16ff.

53. Garnsey, "Rome's African Empire," pp.225-26; Haywood, "Roman Africa," p.85.
54. See above, at nn. 27, 52, 46.
55. Phillipe Leveau, Caesarea de Mauretanie: une ville romaine et ses campagnes, Collection de l'Ecole française de Rome, no. 70 (Rome: Ecole française de Rome, 1984). This volume summarizes and largely supercedes the many papers which L. has written on this subject.
56. Leveau, Caesarea, pp.476-80.
57. *ibid.*, p.483; Phillipe Leveau, "La ville antique et l'organisation de l'espace rural: *villa*, ville, village," Annales ESC 38 (1983): 920-42, p.924.
58. I. Hodder and M. Millet, "Romano-British villas and towns: a systematic analysis," World Archaeology 12 (1981): 69-76, pp.74-5: "These factors suggest that the status of towns, rather than simply their marketing pull or degree of Romanization, affected villa distribution."
59. On the area of greatest municipalization, see Claude Lepelley, Les cités de L'Afrique romaine au Bas-Empire, 2 vols., (Paris: Etudes augustiniennes, 1979), 1:46-49. On the dates of municipalization, see Jacques Gascoü, La politique municipale de l'empire romain en Afrique proconsulaire de Trajan à Septime Sévère (Rome: Ecole française de Rome, 1972), pp.207-230 for a summary, pp.226-30 on Severus; cf. Garnsey, "Rome's African Empire," p.246 on this and also on the power of landlords in retarding municipalization.
60. Garnsey and Saller, Roman Empire, pp.75-76; Apuleius Apology 23; see W. Heitland, Agricola (Cambridge: Cambridge University Press, 1921), p.334.
61. On the peasant during the Empire, see Peter D. Garnsey, "Peasants in Ancient Roman Society," Journal of Peasant Studies 3 (1976): 221-35. On immigrant veterans, see above, Chapter Two at nn. 5-80.
62. Fentress, Numidia, p.124 estimates 400 per annum; Garnsey, "Rome's African Empire," p.346, n.31, 200-300 per annum; B.D. Shaw, "Soldiers and Society: the Army in Numidia," Opus 2 (1983): 133-160, pp.138-40 takes the figure of 100 retirees per year suggested by J. Mann, "The Settlement of Veterans in the Roman Empire" (Ph.D. Dissertation, University of London, 1956) as the best estimate, but believes even this may be too high; C.R. Whittaker, "Rural Labour in Three Roman Provinces," in Non-Slave Labour in the Greco-Roman World, ed. Peter D. Garnsey, Cambridge

Philological Society Supplement, vol. 6 (Cambridge: Cambridge Philological Society, 1980), 73-99, p.75 suggests the 2,000 farms per generation.

63. Fentress, Numidia, pp.134-44.
64. Shaw, "Soldiers and Society," pp.140-41 rejects F.'s views firmly, perhaps too much so. He accepts only one of her proposed 21 imperial sites (the recording of a *Vicus Augustorum*) and this only tentatively. This does ignore the presence of a *tractus*, boundary stones between Augustus and other parties, and *procuratores* of Augustus, as well as other *procuratores*, one of them a *procurator saltus*. But only one of the *proc. Aug.* and the one *proc. saltus* actually have veterans recorded in the immediate vicinity, hardly overwhelming evidence of veteran settlement on imperial estates. Most of the rest of F.'s proofs of imperial land are questionable, including references on stone to *possessores*, *conductores* and *coloni*, which she insists in Africa refer only to tenants, but which was being used by Apuleius as late as the mid-second century to mean simply 'farmer' - see P.W. De Neeve, Colonus: Private Farm Tenancy in Roman Italy during the Republic and Early Principate (Amsterdam: J.C. Gieben, 1984), p.59, n.128. On this, see Henriette d'Escurac Doisy, "Notes sur le phénomène associatif dans le monde paysan à l'époque du haut-empire," AntAfr. 1 (1967): 59-71. See also, Roth Clausen, The Roman Colonus: the Theories of its Origins (New York: Ams Press, 1925), Chaps. 5 and 6, pp.178-201.
65. CIL., VIII, 18,587. The best examination is Brent D. Shaw, "Lamasba: an Ancient Irrigation Community," AntAfr. 18 (1982): 61-103.
66. Shaw, "Lamasba," does not discuss the problem, but seems to assume freeholding; Heitland, Agricola, p.293 thought there was "Nothing to suggest that the holders of these plots were tenants..."; d'Escurac-Doisy, "Phénomène," pp.60-1 agrees.
67. Shaw, "Lamasba," p.88. It has been suggested that small-scale landowning in Africa was mainly produced by the settlement of veterans - d'Escurac-Doisy, "Phénomène," pp.60-7; P. Romanelli, "Brevi note sulla distribuzione della piccola e grande proprietà agricola nell'Africa romana," in Atti del Primo Congresso nazionale di Studi romani (Rome, 1928) - I have not seen this last article. The Lamasba inscription would seem to contradict this, but one inscription cannot be used to make any widespread claims.
68. Duncan-Jones, "Some Configurations," calculates 0.025 *iugera* per *K*, on the basis 15 *iugera*/600 *K* = 0.025.
69. Shaw, "Lamasba," pp.82-7.

70. Of course, this was irrigated land and so of high productivity. The question of yields and of what a family could live on are still debated. See K.D. White, "Wheat Farming in Roman Times," Antiquity 37 (1963): 207-12 in general; and more specifically on this point J. Evans, "Wheat Production and its Social Consequences in the Roman World," CQ 31 (1981): 428-42; W. Mayerson, "Wheat in the Roman World: an Addendum," CQ 34 (1984): 243-45 illustrates how high productivity could be on precisely this type of farm, albeit in the Negev.
71. Shaw, "Lamasba," pp.98-100 reproduces the contents of the inscription in chart form.
72. *ibid.*, pp.88-89.
73. *ibid.*, pp.90-91; Duncan-Jones, "Some Configurations," p.23; Whittaker, "Rural Labour," p.76.
74. H. Dohr, "Die italischen Gutshofe nach den Schriften Catos und Varros" (Dissertation, University of Koln, 1965), p.29, cited by K.D. White, Roman Farming (Ithaca, New York: Cornell University Press, 1970), pp.385-87, establishes categories of large, medium and small holdings which seem reasonable.
75. For these names as ethnic Libyan names see Marcel Benabou, "Les survivances préromaines en Afrique romaine," in L'Afrique romaine: les conférences Vanier 1980/Roman Africa: the Vanier Lectures 1980, ed. C.M. Wells (Ottawa: University of Ottawa Press, 1982), 13-27, p.23. The names on the inscription are listed by Shaw, "Lamasba," Chart II, pp.100-101.
76. Shaw, "Soldiers and Society," Table I, pp.145-46 and Table II, p.147 conveniently reproduces interesting data on the origins of the recruits for the *Legio III Augusta*.
77. Shaw, "Lamasba," pp.88-90.
78. CIL., VIII, 8,369. The boundary stones are conveniently listed in Fentress, Numidia, pp.74-75; and Marcel Benabou, La résistance africaine à la romanisation, (Paris: Maspero, 1976), pp.433, 438.
79. B.D. Shaw, "Fear and Loathing: the Nomad Menace and North Africa," in L'Afrique romaine: les conférences Vanier 1980/ Roman Africa: the Vanier Lectures 1980, ed. C.M. Wells (Ottawa: University of Ottawa Press, 1982), 29-50, p.43. *Usus* is accepted by Benabou, Résistance, pp.441-42. The quote is from B.D. Shaw, "Pastoralists, Peasants and Politics in Roman North Africa" (Ph.D. Dissertation, University of Cambridge, 1978), pp.217-19, cited by Shaw, "Fear and Loathing," p.43. This dissertation appears to be

the only detailed discussion of the topic, but I have not seen it and cannot comment.

80. Apuleius Apology 17.
81. Eric R. Wolf, Peasants (Englewood Cliffs, New Jersey: Prentice-Hall, 1966), p.78.
82. Jacques Berque, Structures sociales du Haut-Atlas, 2nd ed. (Paris: Presses universitaires de France, 1978), p.139.
83. Shaw, "Lamasba," p.68.
84. D'Escurac-Doisy, "Phénomène," p.60.
85. On direct supervision vs renting - de Neeve, Colonus, pp.82-88; cf. Cicero 2Verr. 3.53,35 for large estates rented as wholes. On estates rented in parcels, see Cicero Ad Att. 13.9.2; Pliny Epist. 5.14.8; see M.I. Finley, "Private Farm Tenancy in Italy Before Diocletian," in Studies in Roman Property, ed. M.I. Finley (Cambridge: Cambridge University Press, 1976), 103-21. On home farms', see Horace Sat. 2.7.118; Epist. 1.14.1-3 (the famous Sabine farm). On fixed vs share rents, see White, Roman Farming, pp.388-89.
86. Leveau, Caesarea, pp.465-66 for the area near the city; pp. 478-80 for the number of villas; p.402 for villa sizes; pp.473-74 for olive presses.
87. ibid., pp.476-80 on lack of villa residences. On other examples of city dwelling farmers, see CIL., VIII, 20,872, with Stéphane Gsell, Atlas archéologique de l'Algérie (Osnabruck: Otto Zeller Verlag, 1973; orig. 1910), Feuille 4, no. 44; ILAlg., I, 1,362. Noted by d'Escurac-Doisy, "Phénomène," p.63.
88. B.D. Shaw, "Rural Markets in North Africa and the Political Economy of the Roman Empire," AntAfr. 17 (1981): 37-83, p.39, n. 1 gives references to work on Central Place Theory; see also Leveau, "La ville antique," passim on the role of the city in organizing space, and p.924 on Central Place Theory specifically.
89. Leveau, Caesarea, p.483; "La ville antique," p.936.
90. Leveau, "La ville antique," p.932.
91. Leveau, Caesarea, pp.412, 481. Villages attached to villas include L.'s numbers 151, 152 and 174. Isolated villages include numbers 59, 165, 180 and 201.
92. J. Peyras, "Paysages agraires et centuriations dans le bassin de l'Oued et-Tine (Tunisie du Nord)," AntAfr. 19 (1983): 209-53;

- J. Peyras and L. Maurin, "Uzalitana: la région de l'Ansarine dans l'Antiquité," CT 19 (1971): 11-103.
93. Pol Troussel, "Nouvelles observations sur la centuriation romaine à l'est d'El Jem," AntAfr. 11 (1977): 175-207, p.203.
 94. For the concepts of 'estate of administration' and 'estate of production', see Max Gluckman, Politics, Law and Ritual in Tribal Society (New York: New American Library, 1965), p.71.
 95. R. B. Hitchner, "The University of Virginia (U.S.A.)-Institut Nationale d'Archéologie et d'Art de Tunisie Kasserine Archaeological Survey, 1982-1986," forthcoming in AntAfr. 24 (1988).
 96. CIL., VIII, 25,902. On the date, see the summary of opinions in Kehoe, "Lease Regulations," p.194. For the inscriptions I have adopted the system of abbreviations (ie. Henchir Mettich = HM) used by Kehoe, "Economics" and "Lease Regulations"; and by Kolendo, Colonat.
 97. HM I.5-10. The translation is from Haywood, "Roman Africa," p.92.
 98. HM I.10-20; I.20-II.13; II.13-III.12; III.12-16; III.16-20; III.20-IV.2; IV.2-9.
 99. HM IV.9-22.
 100. HM IV.22-35.
 101. CIL., VIII, 25,943. The date comes from the phrase *Imp. Caes. Hadriani. Aug.* at II.2.
 102. AD I.5-8.
 103. AD II.1-15.
 104. CIL., VIII, 26,416. It is dated by the reference *pro salute Imp. Caes. L. Septimi Severi* at its head.
 105. CIL., VIII, 10,570.
 106. CIL., VIII, 14,451; see Kehoe, "Economics," pp.196-97.
 107. CIL., VIII, 14,428.
 108. ILTun. 629. The second inscription referred to is ILTun., 628.
 109. C. Courtois et al., edd., Tablettes Albertini (Paris: A.M.G.,

- 1952). The contribution of Charles Saumagne (pp.8-187) has been republished as Charles Saumagne, "Essai sur la législation agraire: la *lex manciiana* et le *jus manciianum*," CI 10 (1962): 11-114. The specific wording is from Tablet III, but it is typical.
110. Kehoe, "Private and Imperial Management," pp.244-49.
111. Notably M. Rostowzew (Rostovtzeff), Studien zur Geschichte des römischen Kolonates (Stuttgart: Teubner, 1970; orig. 1910), pp.324-30. See Dieter Flach, "Inschriftenuntersuchungen zum römischen Kolonat in Nordafrika," Chiron 8 (1978): 441-92, p.444; and Kehoe, "Private and Imperial Management," p.244 for discussion.
112. Tenney Frank, "A Commentary on the Inscription from Henchir Mettich in Africa," AJPh 47 (1926): 157-70, p.157; Broughton, Romanization, pp.161-62; Tolendo, Kolonat, p.48; Dieter Flach, "Die Pachtbedingungen der Kolonen und die Verwaltung der kaiserlichen Güter in Nordafrika," ANRW 2.10.2: 427-73, pp.444-46.
113. On the government's actions in this field in Africa, see Kehoe, "Private and Imperial Management," pp.246-47.
114. *ibid.*, p.247-49.
115. C.R. Whittaker, "Land and Labour in North Africa," Flio 60 (1978): 331-62, pp.357-8; accepted by Kehoe, "Private and Imperial Management," p.262.
116. Kehoe, "Lease Regulations," pp.203-04 for what follows.
117. As noted by J. Percival, "*Culturae Manciana*: Field Patterns in the Albertini Tablets," in The Ancient Historian and his Materials, ed. Barbara Levick (Farnborough: Gregg International, 1975), 213-29, p.214. On alienation of imperial land, see above, at n.35.
118. J. Peyras, "Le *Fundus Aufidianus*: étude d'un grand domaine romain de la région de Mateur (Tunisie du Nord)," AntAfr. 9 (1975): 181-222, p.196. The inscription is AE., 1975, 883.
119. On *conductores*, see below, Chapter Four, at nn. 84-127.
120. HM I.20. See below, Chapter Four, at n. 193.
121. HM IV.27-31. See below, Chapter Four, at n. 221.
122. See below, Chapter Four, at nn. 96-103.
123. Peyras, "Fundus Aufidianus," pp.28-09.
124. See below, Chapter Four, at nn. 85-6.

125. Peyras, "Paysages agraires," pp.234-35.
126. Peyras, "Fundus Aufidianus," pp.197, 207.
127. Kehoe, "Economics," pp.109-10.
128. P.-A. Février, "Inscriptions inédites relatives aux domaines de la région de Sétif," Mélanges d'archéologie et d'histoire offerts à André Piganiol, ed. R. Chevallier (Paris, 1966), 217-28, pp.120-23, for a list.
129. 1e, CIL., VIII, 8,701.
130. Fentress, Numidia, p.136.
131. G.W.W. Barker and G.D.B. Jones, "The UNESCO Libyan Valley Surveys 1979-81: Paleoeconomy and Environmental Archaeology in the Pre-Desert," Libyan Studies 13 (1982): 1-34, p.4 for description of farms; G.W.W. Barker and G.D.B. Jones, "The UNESCO Libyan Valley Survey 1980," Libyan Studies 12 (1981): 9-48, p.38 for dates. One farm (at Fareheit el Habs on the Wadi Merdum, Md 11) dates as early as A.D. 50.
132. C.O. Hunt, et al., "ULVS XIII: Interdisciplinary Approaches to Ancient Farming in the Wadi Mansur, Tripolitania," Libyan Studies 17 (1986): 7-47, pp.16, 45, and Fig. 2 (farms are Mn 6, 80, 82).
133. Barker and Jones, "Libyan Valley Surveys 1979-81," p.4 for definition of *gsur*; pp.20 and Barker and Jones, "Libyan Valley Survey 1980," p.38 for dates.
134. Hunt et al., "ULVS XIII," pp.16, 45, and Fig. 2 (*gsur* are Mn 23, 25, 26).
135. Barker and Jones, "Libyan Valley Survey 1980," p.38.
136. *ibid.*, pp.35-38.
137. Barker and Jones, "Libyan Valley Surveys 1979-81," p.3.
138. *ibid.*, pp.21, 31; Barker and Jones, "Libyan Valley Survey 1980," p.22 on culture; Hunt et al., "ULVS XIII," p.38, and Fig. 2 (villages are Mn 85, 88); also Barker and Jones, "Libyan Valley Survey 1980," p.28, Fig.8 (near Banat); and Barker and Jones, "Libyan Valley Surveys 1979-81," p.15 on the Wadi Mimoun (village is Mn 234).
139. Barker and Jones, "Libyan Valley Survey 1980," pp.35-38. See p.36, Fig. 11 and p.41, Fig. 13 for schematic presentations of the role of the *gsur*.

140. *ibid.*, p.22.
141. Shaw, "Rural Markets," pp.37-44, with references to modern research on rural markets. See also, Henriette Pavis d'Escurac, "*Nundinae* et vie rurale dans l'Afrique du Nord romaine," *BCH NS.* 17B (1984): 251-59. More generally, Ramsay MacMullen, "Market Days in the Roman Empire," *Phoenix* 24 (1970): 333-41.
142. Pavis d'Escurac, "*Nundinae*," p.252; Shaw, "Rural Markets," pp.53-54, 65. The most important pieces of (mainly inscriptional) evidence are *CIL.*, VIII, 2,701 (=11,451) at Casae; 8,280 (=ILS 6,689) near Cirta; *AE.*, 1913, no. 226, also near Cirta; *BCH* 1903 ccx1, again near Cirta; *AE.*, 1942-43, no. 7 (=ILAlg. II. 3,604), Castellum Tidditanorum; *CIL.*, VIII, 6,357 (=ILS 6,868), Castellum Mastarense; *CIL.*, VIII, 4,508 (the Ain Zarai tariff) mentions herds being taken to *nundinae*. The common African name 'Nundarius', very rare in Italy, also suggests that rural markets were an important part of African life - see Shaw, "Rural Markets," pp.80-83, Chart 5.
143. Shaw, "Rural Markets," pp.53-54, 65 (locations), 44-46 (time reckoning). Italian rural markets were, as the name *nundinae* might suggest, based on a nine day cycle - p.44.
144. *CIL.*, VIII, 8,280; *AE.*, 1913, no. 226. See Shaw, "Rural Markets," pp.38, 64-65. The complete marketing dates known from Castellum Mastarense and Castellum Tidditanorum (about 15 km apart) show a one day difference in market days (eg. Castellum T., Jan. 13 and 30, Castellum M., Jan. 14 and 31). Pavis d'Escurac, "*Nundinae*," p.256 believes this reveals exactly the cycle expected from an uninterfered-with market system, as does Shaw, "Rural Markets," pp.66-67. The reason for the difference in attitudes towards interlocking markets between the establishers of these markets and those elsewhere is probably the fact that these markets were not on large estates. The large domain was probably a less important factor here than the urbanization which had occurred. Since the large estate was not directly involved, the advantages to an owner of breaking up the 'natural' cycle were not relevant; while the advantages to the town dwellers of having an interlocking cycle were.
145. Shaw, "Rural Markets," p.57; on politics, pp.55-57; on violence, p.53. Cato on self-sufficiency, *De agri cultura* 2.7.
146. *Codex Theod.* VII.20.2.4; *CIL.*, VIII, 24,609. See Shaw, "Rural Markets," p.58.
147. Pavis d'Escurac, "*Nundinae*," p.254; Shaw, "Rural Markets," p.57. See Optatus *De schism. Donatist.* 3.4 for a Late Empire example of labourers at such a market.

148. Shaw, "Rural Markets," p.65.
149. See above, Chapter Two, at nn.179-81. For example, in the relatively unmechanized Spain of the 1960's, seasonal changes in labour requirements in olive growing regions were great. In Jaen province in one year, the numbers of unemployed agricultural workers were: January - 3,000; April - 17,000; July - 6,000; October - 16,000. Over a significant part of southern Spain, more than 50% of the agricultural workforce was made up of casual labourers in 1961. See Burkhard Hofmeister, "The Impact of State Regulation on Spain's Major Olive Growing Regions," in Agricultural Geography I.G.U. Symposium, ed. E.S. Simpson (Liverpool: Department of Geography, University of Liverpool, 1965), pp.16-19.
150. CIL., VIII, 11,824.
151. Albert Deman, "Matériaux et réflexions pour servir à une étude du développement et sous-développement dans les provinces de l'empire romain," ANRW II,3: 3-97, pp.76-81 has calculations of the typical wages of such a labourer. D. also discusses the dating of the Harvester inscription, which varies from Antonine to third century.
152. J. Evans, "*Plebs Rustica*: the Peasantry of Classical Italy," AJAH 5 (1980): 19-47 and 134-73, pp.136-37 on underemployed Italian peasants.
153. See above, Chapter Two, at nn. 149-205.

**ORIGINAL
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**FOLLOWING
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CHAPTER FOUR

The Management of Imperial Estates

In all of Roman Africa, there is only one area about which enough information exists to make a detailed description of the system of agricultural management feasible. This is the region of the imperial estates of the *Bagradas* valley. This chapter will investigate in some depth the workings of these estates, as revealed mainly by 'les grandes inscriptions'. It will look in turn at the laws and regulations that governed how the estates were run, at the component members of the estates (managers, tenants, etc.), and at the economic and social dynamics of the system.

It should be stated at the outset that no attempt will be made here to investigate all the points of the interest raised by the 'grandes inscriptions'. They, and particularly the Henchir Mettich inscription which forms the core of the group, are long and difficult texts. They present many possible points of contention concerning their interpretation, even without the difficulties created by many, often serious, lacunae. The problems of the texts have been the centre of considerable debate since the first was published in the late nineteenth century, and there are still many questions for which there are no clear and adequate solutions. Indeed, much space could quite easily be devoted to textual criticism of the Henchir Mettich and Ain-el-Djemala inscriptions.¹ There is, however, obviously no space for that in this discussion. Instead, the focus will be on uncovering

the workings of the system of agricultural management defined by the *Lex Manciana*. Wherever possible the common consensus on textual problems (usually as embodied in the text of D. Flach²) will be accepted, though there are points -such as the questions of how many types of *coloni* there were and whether they lived on or off the estate- where some discussion of the text is inevitable.

It is best to begin by setting the 'grandes inscriptions' and the system they describe in their historical perspective. The 'grandes inscriptions' are a series of Latin inscriptions found around the turn of the century in northern Tunisia. The inscriptions deal with details of the management of agricultural estates owned by the Emperor.

The area where the inscriptions were found lay on either side of the middle course of the river *Bagradas* (modern Oued Medjerda), the principal river of *Africa proconsularis*. It may be conveniently defined as the area between the point at which the *Bagradas* was joined by the tributary today known as the Oued Siliana and that at which its other important tributary, the *Muthul* (modern Oued Mellegue) flowed into it. The area was bounded, roughly, by the towns of Vaga (modern Beja) on the north, Thugga (modern Dougga) on the south, Bulla Regia (near modern Souk-el- Arba) on the west, and Tichilla (modern Testour) on the east. It is thus not a particularly large region, measuring some seventy kilometers East-West and forty kilometers North-South. It lies from one hundred to one hundred and seventy kilometers west of Carthage.³

The *Bagradas* possesses only a narrow valley through much of this

region; only in the western part does the valley widen appreciably. For most of the region the land is quite hilly.⁴ Five of the six 'grandes inscriptions' were found in the hill country beyond the valley.⁵ It is thus not truly accurate to speak, as most authors do, of the 'estates of the *Bagradas* valley'.⁶ The area usually receives over four hundred millimeters of rain annually, allowing safe cultivation of cereals and other crops without irrigation.⁷ The rough nature of much of the land, however, means that even today a fairly significant portion of it is still used mainly for pasture.⁸

The area was, as was seen in Chapter One, in the hinterland of Punic Carthage, with a native population of settled farmers who were left in place to cultivate mostly grain. The area may well have been very productive in Punic times. By the period of Masinissa it was probably one of the most important parts of the Massylian kingdom. By Jugurtha's day it was growing much grain and attracting large numbers of Italian traders.⁹ The only major Roman settlement plan in the area of which anything is known was that of Marius, but it is not certain that his veterans were even Italians. From the names of later imperial estates it appears the land fell into the hands of rich senators such as P. Quinctilius Varus, L. Aelius Lamia and C. Rubellius Blandus, all *proconsuls* at one point or another in the first half century of the Principate.¹⁰ Under these men the land was presumably formed into large estates, which were later taken over by the emperor, probably sometime during or shortly after Nero's reign.¹¹

The estates of the middle *Bagradas* had thus been in existence for at least a half-century when the earliest of the 'grandes

inscriptions', that of Henchir Mettich (HM), was erected in 116-117. There is no direct evidence on how the estates were run before that date. The HM and other inscriptions, however, make repeated reference to the *Lex Manciana*, which regulated at least part of the agricultural life of several of the estates.¹² Since there is general agreement among scholars that the *Lex* took its name from T. Curtilius Mancina, it is possible to date it. Mancina was suffect consul in 55 and legate of Upper Germany in 56-58, which gives at least a general period.¹³ Further, the *Lex Manciana* is referred to in the HM inscription as a *consuetudo* (HM I.23-24; cf. HM II.18-19), which suggests that it had been in effect for some time by 116-117. The Mancian system had, it seems, probably come into effect quite early on in the period of imperial ownership.

From that time the Mancian system had a long history. The series of inscriptions which is the subject of this chapter illustrates that the system was in continual use for some eighty to ninety years, at least. The first, the HM inscription, dates to 116-17; the last, the AW inscription, dates to some part of the reign of Septimius Severus, probably about 198-211. Continuity between the two is confirmed by the AD inscription, which comes from Hadrianic times (117-38) and the three inscriptions which were set up during Commodus' reign (180-92) - the SK, GM, and AZ inscriptions.

This uninterrupted century is only the minimum, though. The Albertini Tablets, found south of Tebessa, contain references to *culturæ mancianæ*. Since these date to the 490's there is evidence that the Mancian system survived beyond the end of Roman rule in

Africa, in some form.

The tablets also confirm that it was used over an extensive area. Had only the 'grandes inscriptions' of the *Bagradas* valley survived, it would be impossible to say that the Mancian system was used outside the restricted area described above. But there is a reference to a *Manciane cultor* from Djenan-ez-Zaytouna, west of the *Bagradas* valley (Severan in date) and there are the Albertini Tablets, from far to the south. These suggest that the Mancian system, or some part or form of it, came to be widely used, perhaps throughout *Africa proconsularis*.

The 'grandes inscriptions' deal specifically with imperially owned estates. Similarly, the inscription from Djenan-ez-Zaytouna probably comes from an imperial estate. All the evidence from the Principate thus points to the Mancian system being restricted to imperial land. The Albertini Tablets, it is true seem to come from a private estate, but the change in political dominance in Africa caused by the Vandal conquest makes it impossible to know if there were private Mancian-system estates during the Principate. It seems unlikely.

What, finally, was this system? In brief, it was a system by which imperially owned agricultural estates were administered by imperial agents (*procuratores*), and leased by wealthy lessees (*conductores*), who leased whole estates or large parts of them. The *conductores* then sub-let the estate in smaller parts to tenants (*coloni*). The *coloni* paid their rents to the *conductores*; it was a share rent, the amount of which was fixed by law, usually at one third of the crop. The *coloni* had the right to hold their land as long as

they kept it cultivated, and could even bequeath it. The *coloni* had to provide several days of labour and the use of draught animals to the *conductores*. The *conductores* used this labour to help farm the land on the estate which was not being used by the *coloni*. The *conductores* made their profit from the crops grown on this land, plus by keeping some portion of the crops handed over by the *coloni*. The rest of the *coloni*'s harvest was passed on, naturally, to the imperial government that owned the estate.

Both the *coloni* and the imperial government showed an interest in perfecting and improving this system. The *coloni* petitioned the government to have this system extended to cover new lands. The government agreed, and beginning at least under Trajan and continuing to at least Severus' reign, it maintained the policy of broadening the area farmed under the Mancian system. The government also granted special tax-exempt status to several crops at various times, in order to increase production. The *coloni* also petitioned the emperor about mistreatment by the *conductores* and *procuratores* and, in all surviving cases, their plea was favourably received.

This is what is known of the Mancian system. It would be well to point out that there is no doubt much that is not known about it. The surviving inscriptions are remarkably informative, it is true, but there is no reason to think that they represent the totality of the government's rulings on the way estates were to be run, or even a large part of it. There were no doubt many other estates, many other petitions and many other imperial replies than the six that survive. It is dangerous to assume that what happened on these estates happened

in exactly the same way on all other estates. Though it seems likely that the imperial government will have tried to be as consistent as possible, it must be remembered that it is not known how consistent that was.

Another problem is that of change over time. Even in the inscriptions which survive there is visible a process of interpretation of the rules. Tenants petition, the government interprets and issues a decree. The decrees that survive are admittedly conservative, in the sense that they support the previous interpretation of the rules, but in at least one case a new law (the *Lex Hadriana de rudibus agris*) extended the area over which the system applied. In the other direction, it is clear that the lessees tried, and to some extent succeeded, in changing the realities of how the system worked (if not its legal basis) when they raised rents; and it is clear that such violations did occur over a period of time, not just once. Change was, thus, possible. There is no certainty that the Mancian system remained substantially the same beyond the period which is preserved in detail. There is, after all, the problem of the slave-like serf-*colonus* of the Late Empire to be explained.

What follows, then, is a description in detail of the system of management used on imperial estates in the second century. It was used elsewhere and later - but possibly with charges that cannot now be ascertained. These limitations must be borne in mind.

Given the central position of the *Lex Manciana* in the whole problem of how imperial estates were managed, it is logical to begin an examination of the agriculture of the imperial estates by determining

the nature of the *lex Manciana*. Many of the earlier commentators on the *lex Manciana* have believed that the law concerned only the bringing under cultivation of *subseciva*. *Subseciva* was unused land, either the land that lay between the regular borders of a centuriation pattern and the (irregular) outer limits of the area being surveyed, or the land that was within a century, but was unsuitable for farming because of its nature, or land that was of good quality, but simply had not yet been assigned because of a lack of landholders.¹⁴ *Subseciva* by definition did not belong to an estate, even if lying within it.

This view of the *lex Manciana* is based essentially on the opening lines of the HM inscription, where it is stated

qui eorum intra fundum Villae Magnae Varianae id est Mappalia Siga villas habitabunt, eis eos agros qui subseciva sunt, excolere permittitur lege Manciana vvv ita, ut eos qui excoluerit usum proprium habeat (HM I.6-10).¹⁵

Thus the *lex Manciana*'s purpose was to permit the cultivation of *subseciva*, and the HM inscription's purpose was to apply the permission to a particular estate.¹⁶

The most extreme version of this thesis was propounded by Ch. Saumagne. He not only believed that the *lex Manciana* authorized just cultivation of *subseciva*, but also that it limited that cultivation to vines and olives.¹⁷ The purpose of the *lex* was for Saumagne summed up in the petition of the *coloni* of the Ain-el-Djemala (AD) estate, when they asked of the emperor *dare nobis eos agros, qui sunt in paludibus et in silvestribus, instituendos olivetis et vineis lege Manciana...* (AD I.4-6). 'Land that is marshy or forested' is a perfect definition of *subseciva* and the reason the *coloni* were asking for it for olives and

vines "according to the law of Manciana" was because that was all the law concerned.

However, the HM inscription does not connect the *lex Manciana* with any particular crops. In the section that deals with the cultivation of *subseciva* (*lex fructibus qui eo loco nati erunt...*, where *eo loco* refers to the *agros qui subseciva sunt* one line above), it declares that rents are to be paid on *fructus cuiusque culturae* (HM I.10-13).¹⁸ Furthermore, the verb used for 'cultivation' of *subseciva* is *excolere*, a very general word.¹⁹ Saumagne thought that this simply allowed for intercultivation of other crops among the mandated vines and olive trees, but Kolendo reasonably protests that it is rather odd that the inscription should pay more attention to subsidiary crops than the main ones, which is what it does.²⁰ And it later specifically refers to rents paid *ex consuetudine Manciana* on crops *cuiusque generis* (HM I.23-25).

If it is accepted that there is no real support for the *lex Manciana* concerning only olives and vines, is there any for it even concerning only *subseciva*? This was the view of most other scholars, beginning with M. Rostovtzeff and concluding most recently with D. Flach. There are problems with this proposal as well, however.

For instance, the HM inscription devotes much of its length to describing how the rents of potentially confusing crops were to be handled. Among these were vines. It was permissible, it is declared, to grow new vineyards on the sites of old ones - *vineas serere colere loco veterum permittitur...* (HM II.24-25). Now it is clear that the *loco veterum* has to refer to vineyards that were once cultivated on the

estate and for some reason *abandoned*. The key point is that they were on the estate, not on *subseciva*, permission for the cultivation of which is only now being given. Equally important, these vineyards are explicitly connected with the *Iex Manciana* (HM II.29).

Likewise, the inscription mentions old fig and olive groves - *ficeta vetera et oliveta, quae ante hanc legem sata sunt...* (HM II.17-18).²¹ These too would have been in the estate, not on the *subseciva* land around it. These were to pay their rent *e consuetudine* (II.18-19). The only *consuetudo* actually named in the inscription is the *consuetudo Manciana* of twenty-four lines previously (I.24), obviously a synonym for the *Iex Manciana*.

It is clear that there are two direct connections between the *Iex Manciana* and cultivation of land that was inside the estate. The passages just quoted concerning the use of the phrase *consuetudo Manciana* also offer similar evidence. A phrase such as 'shall pay rent according to custom' only makes sense if the rent has been being paid that way for a considerable time. The farmers of this estate had clearly been working under the rules of the *Iex Manciana* before the HM inscription was set up. But it was only by that HM inscription, and from the moment when its rulings were prescribed, that *subseciva* cultivation could legally commence. The *Iex* was in use long before *subseciva* cultivation was authorized and certainly did not exist just to provide that authorization.²²

Even if it was not clear that the *Iex Manciana* did not just regulate *subseciva*, it would still be necessary to rethink the concept that the HM inscription simply applied a law concerning *subseciva*

cultivation to the *Villa Magna* estate. Some clauses of the inscription certainly do concern *subseciva*, but others seem to deal with land inside the estate without actually mentioning the *Iex*. The discussion of pasturage rights and of liability of *coloni* for crop damages, for example, never mention *subseciva* (HM III.16-IV.2). Passages about rights of bequest and new olive groves, on the other hand, specifically state *subseciva* or *superficiem ex inculto*, which would seem superfluous if the whole inscription concerned those lands (HM IV.2-10; III.2-10). Most conclusively of all, the section dealing with labour duties mentions three kinds of farmer - *coloni qui intra fundum... habitabunt*, *coloni inquilini*, and *stipendiarii* (HM IV.22-35). Yet at the inscription's beginning it was ordered that only those who lived on the estate had the right to cultivate *subseciva* (HM I.6-7). The other two sorts of farmer - *coloni inquilini* and *stipendiarii* - are irrelevant and would not be mentioned unless some land other than *subseciva* was being dealt with by the inscription.

It is apparent, thus, that the *Iex Manciana* did not concern solely *subseciva*, and that the HM inscription did not have as its purpose the application of a law on *subseciva* cultivation to one estate. If this is so, however, it is necessary to discover what both the *Iex Manciana* and the HM inscription did do.

Since the *Iex Manciana* clearly had been in use for a considerable time, since it concerned both *subseciva* and land inside the estate, and since the farmers of the estate who read the HM inscription were clearly expected to be familiar enough with it to understand a reference to it as simply *consuetudine*, it seems that the best

suggestion for its function is that put forward by Kolendo.²³ He argues that the *Iex Manciana* was the basic lease regulation for the whole estate, defining the legal status of all its lands and the tenure arrangements of all its farmers. When *subseciva* cultivation was granted, that land, formerly outside the estate, became part of it, and therefore fell under the rules of the *Iex Manciana*. Thus, when the HM inscription states of *subseciva* that *excolere permittitur lege Manciana...*, the term *lege Manciana* is not an instrumental ablative ('by order of...'), but a circumstantial ablative ('conforming to the terms of...').²⁴ The *Iex Manciana* provided an overall set of rules for cultivation, originally adopted for the whole estate, and the *procuratores* who were allowing *subseciva* to be legally cultivated from this point on were doing so on the condition that these same rules applied to the new cultivations.

If this is what the *Iex Manciana* was, the HM inscription still needs to be explained. Part of its role was clearly to announce that *subseciva* cultivation was now permitted (ie. I.6-10). But its second and longer part deals with crops on what might be called the 'old estate', that part of it which comprised the estate before the *subseciva* was added.²⁵ Why should such a disjointed document be published, lacking a unifying purpose?²⁶ Kolendo fails to explain this, as do earlier theories which take the *Iex Manciana* as regulating only *subseciva*.

D. Kehoe suggests a possible solution.²⁷ He has proposed that the HM inscription is the document in which the imperial *procuratores* announced a set of policies aimed at increasing production on one

specific estate, *Villa Magna Variana*. One of the policies was to encourage the bringing under cultivation of unused land, the *subseciva*. To bring about *subseciva* cultivation the *procuratores* offered the incentive of full Mancian rights for this land, such as the land on the 'old estate' already possessed (HM I.6-10). This was an incentive, because Mancian terms were, as will be seen shortly, quite favourable. Another policy to raise production was to encourage the cultivation of high value crops, such as honey, fruit trees, fig trees, vines and olive trees. These could be grown on newly cultivated *subseciva*, or on the 'old estate'. In either case, the incentive was some sort of reduced rent for large-scale producers of fruit and honey (II.13-17; I.29-II.6)²⁸; and a rent-free period for the trees and vines (five years for figs and vines, ten for olive trees) (II.21; III.6-7; but see III.11; II.26). Naturally, once the rent-free period, which more or less corresponded to the initial fruitless period of a newly planted tree or vine, was over, the regular Mancian rent of one-third had to be paid (II.23; III.9; III.11-12; II.29).²⁹

The important point here is that the HM inscription is not a statement of what the *Lex Manciana* was, nor an application of that law to one estate. It is a unified document aimed at increasing production on one estate by applying a variety of incentives, one of which was granting Mancian status to *subseciva*, another of which was reduced rents for honey producers and a third of which was rent-free periods for certain crops.³⁰ Its second purpose was to state a variety of rules designed to clarify potentially dispute-causing problems relating to the incentives (III.12-20 on rights to pasture; III.20-IV.2 on crop

damage; II.6-13 on honey fraud).

The farmers of the *saltus Villa Magna Variana*, both on *ex-subseciva* and older estate land, worked under the rules of the *Iex Manciana*. As will be recalled from Chapter Three, the terms of the *Iex* were several.³¹ Mancian *coloni* were sharecroppers, paying one-third of their crop to the *conductores* (HM I.24-27). They also had to perform *corvée* labour duties for the *conductores*, in the amount of six days per year (IV.22-27, though the *Iex Manciana* is not specifically cited in this regard). In return, they had certain rights to their land, called *usus proprius* (I.9), which apparently meant permanent possession as long as the land was cultivated (IV.9-12), the right to bequeath the land they farmed (IV.2-6), and the right to use it as security for loans (IV.6-9).³² These things are what defined a *cultor Mancianae*. When it is recalled that this form of tenure persisted for over four centuries across a wide area of *Africa proconsularis*, it would seem to confirm that the *Iex Manciana* and Mancian tenure were this kind of general arrangement, broad and easily applicable, rather than some relatively insignificant ruling on marginal land, the importance of which would have been forgotten soon after its institution, let alone by 490, when *culturae Mancianae* were mentioned in the Albertini Tablets.³³

There was a second regulation governing the imperial estates of the *Bagradas* area, at least after some point in Hadrian's reign. This one was a true *Iex*, issued by the emperor. Its announcement is found in the Ain-el-Djemala (AD) inscription.³⁴

In the AD inscription, the *coloni* of an unnamed estate request

permission to cultivate marsh and forest land on the terms of the *Lex Manciana*. When the imperial *procuratores* replied, they granted the request, but went further. Rather than referring to the *Lex Manciana*, the procuratorial answer cited a *Lex Hadriana de rudibus agris et iis qui per X annos continuos inculti sunt*, which granted the right to cultivate not only *subseciva*, but also any land within the estate which was lying unused. All of such land was to be given to the men who brought it under cultivation. They were to have the right that *iisque qui occupaverint possidendi ac fruendi eredique suo reliquendi id ius datur* (II.4-21 = AW II.1-13). This is essentially the *usus proprius* of the HM inscription.

It is fairly clear that the *Lex Hadriana de rudibus agris* had as its purpose the authorization of cultivation of unused lands. (It is worth noting that as such it would have effectively replaced the *Lex Manciana* if, as most scholars believe, the *Lex Manciana* regulated the use of *subseciva* only. The continued references to the *Lex Manciana* in later inscriptions is thus another indication that the usual view of that regulation is incorrect, and that the interpretation of it described above is probably accurate.³⁵) The *Lex Hadriana de rudibus agris* may have applied to both private and imperial lands, but more probably only to the latter; it is unknown whether it applied only in Africa, or throughout the Empire.³⁶

The *Lex Hadriana de rudibus agris* thus gave permission to farm all kinds of unused land. From a reference to a *Lex Hadriana* in the Souk-el-Khemis (SK) inscription, it seems this law may also have forbidden the changing of crop share rents or labour duties on such

lands as were already being farmed when the law was issued (SK III.4-5). This is a difficult point, however, and it has been argued that the *lex Hadriana* of the SK inscription is not the *lex Hadriana de rudibus agris* at all.³⁷

Finally, just as the *lex Manciana* and the HM inscription are not the same thing, so the *lex Hadriana de rudibus agris* and the AD inscription are different. The law authorized farming of unused land. The inscription applied the law, gave some incentives to ensure it would be taken-advantage of -- again, rent-free periods (AD III.9-15 = AW III.8-14), and set out some rules on preventing conflicts (AW IV.14-18).

The *Bagradas* imperial estates were thus run under the terms of a basic tenure agreement called the *lex Manciana*. From the time of Trajan at least one estate was extending those rules to its surrounding and internal unused land; from Hadrian's reign there was a general legal regulation to the same end. The rules set up estates farmed by permanent sharecroppers who had considerable rights to their lands.

Understanding the legal structure that formed the framework of agricultural life on the imperial estates; at least in the *Bagradas* area and probably across a much wider area, it is possible to look at the various categories of farmers who made up an estate.

At the top of the hierarchy were the imperial *procuratores*. These were the agents of the emperor appointed to oversee his possessions. The *procurator* is a familiar figure in the 'grandes inscriptions'. The opening lines of the HM inscription introduce two

procuratores: data a Licinio Maximo et Felicio Augusti liberto procuratores (HM I.4-5). The farmers of the AD inscription addressed their request for land to their *procurator* (AD II.1), and received replies from a variety of different men with this title (AD II.1; IV.1, 3, 5-6).³⁸ The SK *coloni* first appealed to their estate's *procurator* about unfair treatment, then complained directly to the emperor about his reaction (SK II.1-23). *Patroclus Auggg. libertus* republished the AD inscription's ruling in Severus' day in his capacity as *procurator* of another estate (AW I.4-5).

As the multiple replies by *procuratores* to the AD inscription's farmers indicate, there was more than one kind of *procurator*. As was described in Chapter Three, there was an extensive and complex network of administrative districts for the imperial holdings in Africa.³⁹ The *Bagradas* estates fell into the most important of these districts, the *tractus Karthaginensis*, which in turn was made up of several *regiones*.⁴⁰ The *tractus*, and each *regio*, would certainly have been run by a *procurator* of suitable rank. It has also been suggested that there existed a *procurator* for each estate. This is based on the evidence of several inscriptions from elsewhere in Africa referring to *procuratores* of *fundi* and *saltus*.⁴¹

In fact, however, the *Bagradas* farms probably did not have estate *procuratores*. Despite the detailed nature of the rules set out in the inscriptions, there is nowhere any hint of a *procurator* being involved in any part of the actual running of the estates. For example, the key operation on the estate from the government's point of view was the determination of what amount of crop the *colonus* would

hand over at harvest. Yet the rule here was that the *colonus* would make his own estimate of his crop yield, and hence his share amount, and turn it over, not to the *procurator*, but to the *conductor* (HM I.11-19). Similarly, as far as one can tell, when the *coloni* came to do their required *corvée* labour, it was to the *conductor*, not to the *procurator*, that they went (IV.28-31). If he did not even inspect the harvest the *procurator* probably did not involve himself deeply in any part of the estate's operations.⁴² There is then little point in having one for each estate.⁴³ This is not surprising, though. With a *conductor* leasing the estate, there really was no place for a *procurator saltus* in the system. He would have added an unnecessary level of bureaucracy.⁴⁴ The references to *procuratores* of *fundi* from elsewhere in Africa come from private estates. These would not have been part of an intricate administrative structure, such as the imperial government used to manage its estates. The private estates, without regional *procuratores* (and possibly even without *conductores*) would have need *procuratores* on each estate.

Rather than *procuratores* of each *saltus*, then, the officials named in the inscriptions were probably at the regional and/or *tractus* level. The *regiones* were small enough in this part of the province to provide adequate surveillance. It is perhaps possible to determine the status of the various named *procuratores*, but for the present it suffices to know that each estate probably did not have its own.⁴⁵

What, then, did the *procurator* do, if not the day-to-day running of an individual estate? The fact that it was they who published documents that were legally binding on the *coloni* and *conductores* shows

that they were superior in rank to, and in charge of, both.⁴⁶ From the nature of the orders they did issue it would appear their role was mainly supervisory - ensuring the general profitability and harmonious existence of the emperor's estates in their area. One specific function, perhaps the major one, appears to have been to act as a higher authority in arbitrating disputes between *conductor* and *colonus*.⁴⁷ This is revealed in the SK inscription, where the *procurator* took sides with the *conductores*, an act stated to be *contra fas* (SK I.1-3).

This SK *procurator* was also accused of 'sending in the troops' to put the *coloni* who had complained in their place (I.11-13). This suggests that another of the *procuratores*' functions was keeping the peace, and possibly dispensing justice. The extent of this power is uncertain; the complaint that *cives etiam Romanos* were beaten could be construed as implying that non-citizens could be treated thus legally by procuratorial order, or alternatively that any such action was wrong, but that inflicting it on a citizen was worse yet. The theoretical legal powers of the *procurator* remain unknown, but it seems clear that he had some practical criminal jurisdiction over the estate's inhabitants.⁴⁸

The next rung on the *saltus* ladder was the *conductor*. This was the man who leased an entire estate from the emperor and was in charge of it. He then sub-let parts of it out to sub-tenants, who did most of the actual farming. The *conductor* was thus a head, or chief tenant.

The *conductor* presumably obtained the lease for a particular

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estate by bidding on it competitively.⁴⁹ The inscriptions do not say how long the lease was, but the AD inscription makes reference to a rule by which certain crops *eas proximo quinquennio ei dabit in cuius conductione agrum occupaverit...* (AD III.15-17). This suggests that a conductional lease was five years. The evidence is slight, but this standard figure was the norm in Italy.⁵⁰ The *conductor* no doubt based his bid for the estate on his estimate of the amount of produce he could extract from it in those five years.⁵¹

The inscriptions mention two ways in which the *conductor* could go about extracting that produce. First, his tenancy gave him the right and duty of collecting the shares handed over by the actual farmers, the *coloni*. The rules of the HM inscription make this clear: *ex fructibus qui eo loco nati erunt dominis aut conductoribus vilicisve eius fundi partes e lege Manciana praestare debebunt* (HM I.10-12). At the same time the *conductor* could farm some part of the estate he leased. The HM inscription states the *conductor* could seize and cultivate any land on his estate that the *coloni* had left idle (HM IV.16). The AD inscription makes reference to land on the estate not being used by the *conductor* -*ea loca neglecta a conductoribus*- with the obvious corollary that there were fields not so neglected (AD III.3; cf. III.10-12). Furthermore, the labour which the *coloni* had to perform for the *conductores* was in the form of ploughing, weeding and harvesting, which only makes sense if the latter was producing crops (HM IV.23-8; SK III.11-13; GM A 12). A rule in the HM inscription gave the *conductor* rights to the *agri herbosi*, that is pasture lands (HM III.12-16). This indicates that the *conductores* did carry out some

ranching, but the labour dues owed them show that this was not all they did, as some have believed.⁵² The *conductor* also received a small fee for sheep which the *coloni* pastured on the estate, but at four asses per head, the amount would have been too small to make this a very significant source of income (HM III.18-21).

Once he had collected his crops from the *coloni*'s shares and his own production, the *conductor* would submit to the *procuratores* the amount he had bid as his rent. What surplus remained, minus whatever the *conductor* needed for his own subsistence, formed his profits, to be sold, presumably.

Of the two main sources of conductorial income, the farming which he himself did, or rather which was done on the land he retained for himself, has commonly been assumed to have been the more lucrative. As Kolendo argues, the free labour given by the *coloni* made this land more profitable than the *coloni*'s share totals, since the *conductor* was getting all of its crops, as opposed to just one-third of the *coloni*'s.⁵³

While there is some truth in this argument on a theoretical level, it must be noted that the amount of labour extracted from the *coloni* was really quite small - a total of six days per year on the estates of the HM and SK inscriptions, twelve per year on that of the Gazr Mezuar (GM) inscription.⁵⁴ Even if there were a great many *coloni* farming small and unproductive plots (which is not at all certain, as will be seen), it is questionable if two days each of ploughing, weeding and harvesting by each *colonus* could have produced a crop worth more than that produced by their other hundred or so days of labour in

their own fields. If the *coloni* were running large, productive farms it would be all the more unlikely. Unless the sum the *conductores* bid covered only the land they themselves worked, and not that worked by the *coloni* -and it is unlikely that the government would have let a sizeable chunk of produce slip through its fingers by granting such an exemption- it is hard to envisage how the *conductores* could have made the bulk of their profit through farming.⁵⁵

There is another reason why this should be so. The *conductor* leased for five years. Since high-value crops such as olives and vines take more than this length of time to start bearing fruit, the *conductor* would be unlikely to plant such crops on the land he kept for himself - he would be putting capital into an investment that would not bring returns until after he had (or could have) left.⁵⁶ So he would plant mainly grain, which yields a crop in its first year.⁵⁷ But cereals are a low value crop, exactly the wrong thing for a farmer seeking (presumably) more to sell his crop for profit than to subsist on it.⁵⁸ The *coloni*, who had permanent hold on their land, would have no such hesitation over planting valuable crops like trees and vines, and their shares would bring in significant amounts of these salable products. The *conductor's* position, thus, automatically oriented him more to 'farming rents' than to farming the land.

These arguments suggest that, theoretically, the *conductores* should have drawn most of their profit from the *coloni's* rents rather than from farming and there is evidence that this was in fact the way things really worked. The HM inscription tells that the *coloni* were authorized to replant vines on old vineyard sites (HM II.24-25). As

was seen earlier, these abandoned vineyards were actually on the estate, not on *subseciva*. If the *conductor* was drawing his profit from farming estate lands not used by *coloni* he would be unlikely to let these lands sit idle; yet this is exactly what happened. Nor was this situation confined to the *saltus Villa Magna Variana*, for in the AD inscription's *sermo procuratorem* permission was given to farm "*eas partes... quae in centuriis elocatis... nec a conductoribus exercentur*" (AD II.9-15 = AW II.1-7).⁵⁹ The wording of the law on which the permission was based strongly suggests that land could typically sit for long periods unused - lands which "*per X annos continuos inculti sunt*" (AW II.10-13).⁶⁰ The republication of the AD *sermo* in Severus' reign on the Ain Wassel (AW) inscription shows the situation had persisted to the end of the second century. It is hard to see how the *conductores* could be drawing the bulk of their profits from farming when they regularly left significant portions of the land that was available to them uncultivated. Of course, if they were farming rents, not crops, the *conductores* should still have preferred to have the unused lands producing rents, and should have tried to install tenants on them. The reasons for the land remaining unused will be discussed below, but it can be noted here that it was mainly due to a lack of potential tenants.

This is not to say that the *conductores* did no farming at all - the labour dues of which they made use show they did. But the relative importance of the profit produced by this farming was probably low when compared to that drawn from collecting shares. Given this, it might be wondered just how much farming the *conductores* really did. It is

usually accepted that the *conductor* routinely maintained a 'home farm' of his own on the estate, permanently keeping some area of land near it for his own use, in addition to the land he farmed after confiscating it from *coloni* who let it lie idle.⁶¹ But there is, in fact, no evidence for a 'home farm' in the inscriptions; the only farms referred to are the *villae* of the *coloni*.⁶² It is impossible to speak with any certainty on this point, but it is entirely possible that the *conductor* did not maintain any permanent establishment of his own on the estate, but rather concentrated whatever farming he did on the abandoned land he had taken over from *coloni*. And even this clearly was not all that much, as land sat unused.

If farming was not the *conductor*'s principal occupation, or the main source of his profit, and if he may not even have lived on the estate, it is doubtful whether he concentrated much of his attention on the day-to-day running of it. Presumably a wealthy man to be able to lease a whole estate, he probably had interests elsewhere as well.⁶³ It is probable, then, that the *conductor* employed a steward (*vilicus*) to look after what crops he had planted and to see to the *coloni*. This is supported by the inscriptions. The HM document refers to "*dominis aut conductoribus vilicisve eius fundi*", though ownership of the *vilicus* is not clarified.⁶⁴ On the other hand, there are a number of references just to "*conductoribus vilicisve*".⁶⁵ This certainly suggests that the *conductores* were thought likely to employ slave, or freedman *vilici*. This makes sense, since sharecropping-type operations usually involve a fairly close supervision of the sharecropper by the owner (or in this case his agent), to ensure high crop yields.⁶⁶

It is less clear whether the *conductores* would have used any labour beyond that provided by the *coloni*'s six (or twelve) days a year. Since they had only a five year lease, the *conductores* would be unlikely to buy slaves to work their part of the estate under any circumstances, but they could, of course, have owned slaves elsewhere (on land the *conductor* may have owned) and used them on the leased estates. There is no evidence the emperor provided the estates' *instrumentum*.⁶⁷ As slaves were fairly uncommon in Africa, this was probably not too important in overall labour terms.⁶⁸ The land the *conductor* farmed could be handled by the *coloni*, with the extra harvest labour needs being filled, probably, by pastoralists come north for just this purpose.⁶⁹

The image is emerging of the *conductor* as something more than a simple farmer. Rather than being confined to one estate, he may well have had many interests, and was probably quite wealthy, a "rather grand gentleman", in de Neeve's words.⁷⁰ It is Garnsey's opinion that "The *conductores* of the imperial *saltus*... are probably to be found in the top stratum of the sub-curial class, if they did not actually penetrate into the local aristocracy".⁷¹ An example of this sort of man would be A. Gabinus Datus, member of the *conductores praediorum Thuggensis*, that is in one of the *regiones* of the *Bagradas* area, to whom his fellows erected a monument.⁷² The Gabinii were notable local aristocrats.

The dedication to Gabinus is interesting for another reason. The inscription reads *conductoris praediorum regionis Thuggensis*. It used to be thought that this should be emended to read *conductoris*, thus

producing a single large-scale lessee of all the imperial estates in the *regio*.⁷³ This would fit well enough with the wealthy *conductor* outlined above, but most scholars now accept Carcopino's argument that *conductoris* is simply an archaic plural form.⁷⁴ This produces a group of *conductores* in the *regio*, from which Carcopino argued that it should be inferred that they formed "sociétés publicaines", that is took the leases for all the imperial estates of a *regio* as a corporate body. It is possible that this happened, for there are similar inscriptions from elsewhere.⁷⁵ The evidence of the 'grandes inscriptions' on this point is somewhat equivocal. The SK inscription clearly refers to the crimes of one *conductor*, but it admittedly does say there was collusion between all the *conductores* (SK III.a-5). These could well be the lessors of all the estates in the area, or, conceivably, all the *conductores* of one estate. The AD inscription orders that crops of new plots are to be automatically given to the *conductor* during whose lease the plot was brought under cultivation (AD III.13-15). The implication is that there was one *conductor* for them to be given to. On the balance of the evidence it would seem the *Bagradas* estates were leased by individual *conductores*, not corporations of them, but this is not certain.⁷⁶ Whether the collusion of *procurator* and all the *conductores* just remarked on means that each had several *conductores* (which could support the corporation theory, or even the view that estates were not in fact leased as wholes, but in parts to several *conductores*), or simply refers to a larger area than one estate is not clear.⁷⁷

The *conductor* was thus a wealthy large-scale lessee of land more

interested in collecting farmers' shares for his profit than farming for himself. This is a straightforward enough picture of the *conductor*, but might perhaps be considered somewhat theoretical. That such a creature could exist, however, is not in doubt. For proof of this it is necessary only to turn to Roman Sicily. Here the grain tithe (*decuma*) was farmed out to contractors (*decumani*) who bid on the right to collect the tithe from city territories. The *decumani* based their bids on a detailed list of farms, farmers, and crops to be planted, drawn up by the city officials, as well as on a knowledge of local conditions. They then collected the tithe directly from the farmers.⁷⁸ The parallel is not absolute, since the *conductor* worked by estate, not city, and also did some farming, but it does show the reality of the *conductor* type pictured above.

In Sicily the *decumani* appear to have remained essentially Sicilians, rather than outsiders; it is notable perhaps in this regard that A. Gabinius Datus reveals by his name his African ancestry. This raises the question of the place of the conductorial system within the rest of the sort of economy which has been postulated in the previous chapters. The imperial *procurator* was obviously an intrusion, one of the changes brought about by Rome. So too was the role of the *conductor* as conduit through which local surpluses could be channeled to an overseas consuming population. This does not mean that the conductorial system was incompatible with the sort of pre-Roman, tribal economic system of which substantial elements seem to have survived throughout the Principate. On the contrary, a local man of high status, to whom tributes of labour and harvest shares were due would

fit perfectly into a tribal socio-economic milieu. Parts of the *conductor's* role were new, such as the temporary nature of his term, but this presented no real obstacle to the system's comprehension by the locals.⁷⁹ In such societies, after all, it is the title, or position to which the tribute is owed, not the individual.⁸⁰ As long as the position is filled, the system will work.

The conductional system was feasible in an essentially tribal economy. That this is so may be illustrated by a parallel with the tribal economies of the pré-colonial Maghreb. It was common in that period for a ruler to extract taxes from a tribe or town by appointing a proxy who would do the collecting. The beneficiary of this fiscal concession (which was called *iqta*) obtained only a temporary right to extract taxes from a specific group; he gained no rights over the land. This continued to belong to the tribe which had usufruct of it. Nor did the delegate acquire governmental, administrative, or judicial rights over his area.⁸¹ His sole benefit was from the amount he could collect beyond the fixed amount he had paid the ruler. The *iqta* delegate was not at all unlike the *conductor*.

Even more to the point, in nineteenth century Tunisia it is recorded that the estates of the statesman and reformer Kherredine, in the area of Souk-el-Arba (only slightly west of the region of the imperial estates of the *Bagradas*) were leased to a 'patron', or head-tenant, who lived not on the land, but in Beja. The 'patron' then sub-let the whole estate to farmers who were sharecroppers. The land was valuable to the 'patron' not for the potential farming profit it could bring him directly -often he did not farm it at all- but rather

because of the tribute owed him by the farmers.⁸² The parallel is quite striking, and illustrates neatly how a condoctorial system could coexist with the tribal economy that probably existed to a large degree in rural Roman Africa.

With the imperial *procuratores* looking after the general well-being of agriculture in whole regions and the *conductores* concerning themselves with the profitability of whole estates, it is clear that it is necessary to look further for the men in charge of the actual operation of farming the land. One thus comes to the people the 'grandes inscriptions' refer to as the *coloni*.

Just who the *coloni* were is not clearly defined in the inscriptions. The opening lines of the HM inscription grant the right to bring unused lands under cultivation to those *qui... intra fundum habitabunt*. It then goes on immediately to set out the procedure by which people called *coloni* will go about paying rents on the crops *qui eo loco nati erunt*. *Eo loco* most probably refers to the unused lands mentioned just above⁸³, so it seems that the men who were bringing the unused lands under cultivation were *coloni*.⁸⁴ *Coloni*, therefore, were men who lived within the estate.⁸⁵ Since the word *colonus* has the two meanings of 'farmer' and 'tenant'⁸⁶, it seems a reasonable starting point to take the *coloni* of the HM inscription as tenant farmers, renting land on the Villa Magna Variana estate.

Such a straightforward picture of the *coloni* could possibly be too simplistic, however. For, after outlining the procedure for paying rents, the HM inscription lists what the amounts of those rents are to

be. Rather than saying that the *coloni* will be obliged to pay... or something similar, it says that *qui in fundo Villa Magna... villas habent habebunt, dominicas dominis eius fundi aut conductoribus vilicisve eorum in assem partes fructuum et vinearum... praestare debebunt*".

The problem at once arises of who these people who 'have or will have *villas dominicas*' are. Indeed, it is far from clear just what '*villas dominicas*' are, though it seems most likely that the words mean 'farmsteads owned by the landlord', which in this case means the emperor.⁸⁷ Were there thus two kinds of tenants - tenants who used farmsteads belonging to the estate's owner and tenants who had their own farms? Or was the phrase *qui... villas dominicas... habebunt* simply another way of designating the *coloni* mentioned in Line 10? After all, on an imperially owned estate, all *villae* could plausibly belong to the emperor. But, if so, it is not at all clear why this passage is worded so differently from the ones above.⁸⁸

There thus exists the possibility of two kinds of *coloni*. This is not certain, however. There is only one list of rent amounts - the one for the group with *villas... dominicas*. If this phrase was included to distinguish this group from the men simply called *coloni* in Line 10, one would expect a rent list for the latter as well.

All in all, the problem as it stands is insoluble. The general view is that there was only one group of tenants, despite the confusing wording, and it seems best to accept that judgement.⁸⁹ The very problematic nature of the evidence must not be forgotten, however.

The *coloni* were sharecroppers, that is farmers who paid a

percentage of their harvest to the landowner. These shares were called variously *partes*, *partes agrariae*, and *partes colonicae* (HM I.11, 16, 22; III.15; IV.15). The *Lex Manciana*, the basic lease regulation, set the proportion of the harvest to be turned over at one-third for most crops, including wheat, barley, figs, wine and oil (HM I.25-29; III.9-10; AD III.4-5). The exceptions included beans, of which only one-fifth, or one-fourth was to be given; this presumably was an incentive to grow beans, which are good for the soil (HM I.27).⁹⁰ The other exception to the one-third rule was honey. For the *colonus* who raised honey bees, one *sextarius* (one-half a litre) of honey was the amount required to be handed over, but the text is not clear on whether this amount applied to those with five hives or less, or only to those with more than five.⁹¹

The *coloni* determined their own share amounts, since they were allowed to simply state what their harvest total had been (HM I.10). They may even have been responsible for their own threshing and pressing, for their shares were to be handed over in the processed form (I.25-28). In the case of fruit, only that part of the harvest which the *colonus* did not keep for himself as subsistence was liable to division, at least from the time of the AD inscription: *nec alia poma in divisionem unquam cadent quam quae veniunt a possessoribus* (AD III.12-13).⁹²

As has already been mentioned, the *coloni* were also required to perform *operae*, labour, for the *conductores*. On the *saltus Villa Magna Variana* and the *saltus Burunitanus* this amounted to two days of ploughing per year, two of weeding and two of harvesting (HM IV.23-28;

SK III.8, 13; IV.6). On the unnamed estate of the GM inscription, the amount was twelve days in total (GM A 12). This suggests local variation was permitted.⁹³ Any *colonus* who owned draught animals was required to make them available for his *corvée* labour (SK III.9).

Coloni who owned sheep had to pay a small fee to the *conductor* for the right of pasture on estate land (HM III.18-21). This is the only money rent, if it may be so considered, mentioned in the inscriptions. There were other, secondary payments-in-kind which *coloni* on some estates (local variation again) were required to profer.⁹⁴

To balance these dues the *coloni* were permitted by the *Lex Manciana* and the *Lex Hadriana* to keep their land as long as they continued to cultivate it, to bequeath it and to use it as security for loans.⁹⁵ This right was referred to as *usus proprius* in the HM inscription, and by the words *iisque qui occupaverint possidendi ac fruendi ereditque suo relinquendi id ius datur* in the AD inscription (HM I.6-9; IV.1-22; AW II.7-11). The result was a population who were born and raised on the imperial estates - men who could call themselves *alumni saluum tuorum* when addressing the emperor (SK III.29). They were, however, legally free men who could openly threaten to leave their estate when oppressed, as the *coloni* of the GM estate did.⁹⁶

With this combination of rights the imperial *coloni* of the *Bagradas* were certainly not a class of tenant farmers in the sense which that term is used for Italy. They are something of a puzzle.

As Kehoe has seen, the key question about the *coloni* is that of their economic status.⁹⁷ From the beginning of research on the

'grandes inscriptions' opinion has been almost universally agreed that the *coloni* were peasants, poor men farming small plots of land with the labour of their families. Rostoytzeff called them "*meistens armen Kolonen*".⁹⁸ Heitland assured his readers, "That the *coloni* on this estate were themselves hand-workers can hardly be doubted".⁹⁹ To these comments few objections were raised.

The only real difference of opinion which was raised in this regard was a debate over a relatively minor differentiation in these *coloni*'s economic status. Some scholars saw the *coloni* as a poor and downtrodden peasantry, some as a relatively prosperous one. The early commentators on the inscriptions seemed generally to take the former view, often linking the *coloni* to the serf colonate of the Late Empire. R. Clausen, in his chapters reviewing these works, disagreed on the connection with the colonate, but still felt they were "poor and humble". T.R.S. Broughton thought in terms of forcibly settled ex-nomads, obviously poor. This view has been kept alive by more recent writers, such as W. Held, who accepts both the poor *colonus* and his eventual development into the serf-*colonus* of the Late Empire, and A. Deman, who analyses the Africans as the victims of a Roman imperialism similar to that of modern empires, stressing the exploitation of the poor peasant. Even M.I. Finley, who has little else in common with the Marxist viewpoint of Deman and Held, seems to adopt the concept of the poor, oppressed peasant.¹⁰⁰

In opposition to this was the school of thought which saw the *colonus* as a well-to-do peasant. The thesis in this case was that the imperial legislation, the evidence of which is to be found in the texts

of the inscriptions produced a new agricultural system throughout Africa. G.Ch. Picard sees Africa as experiencing a period of great prosperity in the second and third centuries because of this, and the *coloni*, while still peasants, profiting from it. Ch. Saumagne could envisage *coloni* who were well-enough off to be able to take advantage of the imperial legislation to expand their farms. P. Romanelli essentially concurred, as did A. Piganiol, J. Carcopino, and J.M. Lassere.¹⁰¹

It is only fairly recently that the concept of the *colonus* as peasant has been questioned. P.D.A. Garnsey has suggested that the rules of the inscriptions would have concerned not peasants, but "... small and medium landowners" with a "... gap separating them from the mass of the rural population".¹⁰² C.R. Whittaker has noted that the *coloni* appear to possess land other than on the estates (as will be seen), and questioned whether they were really typical small tenants.¹⁰³ By far the most important analysis, however, is that of D. Kehoe, who has challenged in detail the conception that the *coloni* were peasants at all.¹⁰⁴

There are a number of avenues for the exploration of this question. One way to begin is with a rather theoretical approach, based on rural population. It is a fact that in areas where there is a high rural population density, the economic status of the farmer tends to be low. Although a rise in the population of a modestly populated area will provide an initial increase in the work-force, and thus greater production, there is an optimal population level. Once this is surpassed overpopulation appears to have a number of effects. There

develops a shortage of land. This tends to cause farm sizes to shrink, as partible inheritance splits-up holdings. Fragmentation of holdings into dispersed plots also occurs, for a variety of reasons. The value of land increases, taking with it rents. The amount of investible capital available to the farmer declines, as he is usually supporting a larger number of dependants.¹⁰⁵

The result of this is that large landowners prosper, since they control the commodity whose value is increasing -the land- and can either charge high rents for it, or work it with labour which, because of its availability, is cheap. The small owner, who has land enough only for his subsistence, and the tenant suffer, because their factor of production -labour- is less valuable. The main benefit of this situation for farmers is higher prices for produce, but the small farmer gets little from this, producing as he does mainly for subsistence. It is true that a system based on tenancy means there is no obligation for owners to divide up the land to provide some for each man, but though farm sizes in ownership terms may not shrink, in operational terms they may still do so, since there are many tenants, and rents for them rise too. Alternatively, a landless population can be formed.¹⁰⁶

If the rural population is low, on the other hand, labour is scarce and land readily available. The farmer's position is advantageous. He is able to pay low rents and farm larger amounts of land, even to expand his holding.

High rural populations thus make an impoverished peasantry more likely, low populations make it less so. In North African terms, a

high rural population density would suggest that the *coloni* really were poor peasants, suffering from the problems just outlined. The government could have used them as a form of cheap labour, charging high rents for small farms. If the population were small, the situation would have been reversed. The government would not have been able to charge the high rents, and might actually not have been able to get all its land farmed if it insisted on each *colonus* possessing only a small holding. Rather more likely, the *coloni* would have tended to rent larger amounts of land.¹⁰⁷

There is no real chance of determining the rural population of *Africa proconsularis* in absolute terms. But if it can be discovered what the state of some of the key elements of the equation were --such as availability of land and the pressure the *coloni* could exert on the government as a group-- it may be possible to determine the general level of rural population, and so how the *coloni*'s probable status stood.

It is unlikely that *Africa proconsularis* was overpopulated. Even if one of the large population estimates is accepted --Picard's figure of 6,500,000 for all of Roman Africa at its height and 2,500,000 for the area corresponding to modern Tunisia-- it is hard to see how one could think of *Africa proconsularis* as severely overpopulated when a pre-colonial population of the same order could lead one historian to refer to the region as "une terre sans hommes", and when a modern Tunisian population of 5,600,000 puts it in the second lowest category on a map of world population densities.¹⁰⁸ Further, it must be recalled that the presence of a frontier area in the south and west of

the province, being opened up for settlement, will have made available an outlet for any excess population.

Despite this, it must be admitted that at first sight the inscriptions suggest exactly the high rural population that most scholars have accepted. The HM inscription begins with a decree permitting the *coloni* to cultivate *subseciva*, often land initially passed over for reason of its unsuitability for farming; the AD *coloni* actually specifically asked to be allowed to farm *agros qui sunt in paludibus et in silvestribus* (HM I.6-10; AD I.4-8). This appears to be exactly the "... clearing of woodland and waste for extra arable land..." which characterizes overpopulated land.¹⁰⁹

There is, however, other evidence which contradicts this interpretation.¹¹⁰ As has been seen above, there appears to have in fact been unused arable land on the estates. The HM inscription permits the cultivation of vines on old, abandoned vineyard sites within the estate; the AD inscription ordered that the *coloni* not only be allowed to have the *subseciva* they had asked for, but also "*omnes partes agrorum... etiam eas partes occupandi, quae in centuriis elocatis... nec a conductoribus exercentur...*" (HM II.24-25; AD II.4-14; AW I.12-II.7). The *centuria elocata* refers to land that had been included in the estate by the original survey. There is thus a clear reference to the existence within the estate of unused lands. Some of it, since the HM inscription calls it *loca vetera*, was probably once farmed by *coloni* and then abandoned. The amount of this land was significant enough that the imperial government would issue an edict to encourage its cultivation, and the problem was persistent enough that

the government's first order had to be repeated years later on the AW inscription.

Why then were the *coloni* asking for marginal land? One possible answer is that they may not have been. As was noted earlier in this chapter, *subseciva* could mean any land on an estate that had not already been allocated, regardless of its value, and the HM inscription may have been referring to that sort of *subseciva*.¹¹¹ This will not do as an explanation for the woods and marshes of the AD inscription, however, and perhaps should be avoided altogether. Kehoe suggests another possible solution: that the estate land was not open to them.¹¹² The *coloni* had permanent rights to the land they farmed, but once they stopped farming it, the land reverted to the *conductor*. He had the right to farm it, but not the right to give it to some other *colonus* to farm, at least not with the right of *usus proprius* that the *colonus* would have on any land he already farmed. Only the emperor, as owner, could do that. So land, once farmed and now abandoned, sat unused. What the *coloni* were asking for was the land they could have *usus proprius* on. What they received when the government saw the amount of land going to waste was the *Lex Hadriana de rudibus agris*, which removed the whole problem by giving them what amounted to *usus proprius* over any land they took up.

There is another reason why *coloni* asked for *subseciva*.¹¹³ The AD *coloni* were asking for land in order to plant olives and vines. It is known from Columella that when planting such crops the Roman experts felt that soil which had already been farmed, either for cereals or for olives and vines, should be avoided, as it would be worked out. Newly

cleared wooded land was the best possible choice in Columella's view for new vineyards.¹¹⁴ Thus the *coloni*, in asking for wooded and marshy *subseciva*, were not just seeking the only land available to them on 'good terms' (ie. where they could get *usus proprius*), but also the land best suited for the crops they wished to grow.

There are, as well, indications that when it came to the other key indicator -the question of whether the *coloni* were scarce enough to be able to put leverage on the government- conditions for the *coloni* were not so bad. The very petition of the AD *coloni* asks for Mancian status for the lands requested, as had been granted on the neighbouring *saltus Neronianus*, where (if the incomplete text has been correctly restored) the result had been an *incrementum habitatorum* (AD I.8-11). Putting such a statement in an appeal for land only makes sense if an increase in *coloni* was desirable; which in turn implies a relatively low population.

There are other indicators. In an overcrowded land a poor peasant will probably have to make do with a small piece of land, perhaps not even large enough to feed his family.¹¹⁵ But in the HM inscription one sees a different story. The inscription, while discussing the rules on honey production, imposes the penalty of confiscation of hives on any *colonus* who "*ex fundo Villae Magnae sive Mappaliae Sigae in octonarium transtulerit*" those hives to avoid paying his share on them (HM II.6-13). The *octonarium* is probably provincial land on which the *stipendium* (land tax) was payable.¹¹⁶ It is necessary to accept that, as Whittaker has said, the inscriptions "... suppose that some of the resident labour force of *coloni* on the *fundus*

will have had other land apart from that under discussion on the estate".¹¹⁷ There is also reference to another group of farmers, *stipendiarii*, who are in some way attached to the estate, since they are included in its rules, but who seem to get their title from cultivating the extra-domainial land subject to the *stipendium*. They were probably not, however, the same as the *coloni* under discussion here, and will be treated separately (HM IV.33).¹¹⁸

This view of the *coloni* as holding a sizable amount of land is supported by the GM inscription, where *coloni* complain of harsh treatment by their *conductor* and threaten to "*domum revertamur, ubi libere morari possimus...*" (GM A 6).¹¹⁹ The point is that the *coloni* clearly had someplace else to go to, and whether it was land they already held, or simply unused land they knew to be available, either case suggests a relative abundance of land, and opens up the possibility of well-off *coloni*. Similarly, if one takes the statement at face value, there must have been a shortage of *coloni* to make such a threat anything more than laughable: it could only work if the emperor would have had a difficult time finding other farmers to take their place. And it did work, for the emperor and his agents replied favourably to the GM *coloni*, and to all the other appeals which are preserved as well. It is true that the examples of these appeals are not many, and unfavourable replies, which will not have been preserved in inscriptions, may well have occurred.¹²⁰ It still seems from the imperial decisions which do exist that the *coloni* were in such a position that the government had to take into account their desires.¹²¹

Thus there are indications that the situation on these estates

was one of a relatively low population density. This makes intrinsically unlikely a mass of poor and oppressed *coloni* acting as serf-like labour. Besides this, however, there are pieces of direct evidence on the well-to-do status of the *coloni*.

The most obvious evidence is tied to their petitions to grow vines and olives on the *subseciva* they wanted.¹²² These are essentially cash crops, not subsistence ones. If the *coloni* were switching over entirely to the latter from the former, one should expect them to be poor peasants, since this is a typical reaction of poor farmers, who can buy more food with the cash they get from selling a high-value crop like wine or oil than they can grow themselves.¹²³ But this is not what the *coloni* appear to have been doing. The HM inscription clearly shows that all sorts of crops, from cereals to vines, were expected to be produced; the AD inscription likewise speaks of cereal crops (*partes arides*) as well as arbori- and viticulture (HM I.24-III.12; AW III.14).¹²⁴ So the *coloni* were not replacing subsistence crops, but adding to them with cash crops. This suggests they were in a good position in terms of subsistence and were bent on improving it.

To do so would have been a fairly expensive proposition.¹²⁵ Columella made an estimate of the costs of setting up one *iugerum* as a vineyard.¹²⁶ Many of his costs do not apply to an imperial estate (eg. land did not need to be purchased) and have been questioned in any case. But of those that are accepted and did apply, at least HS 2,000 were needed per *iugerum*, as well as considerable labour.¹²⁷ Neither of these could be afforded by a poor peasant, who could not have that kind

of money and could not afford to take the requisite time from his subsistence farming to work on the vineyard. Poor peasants, as was noted, have little free capital.

There are other clues. The HM inscription states that if a *colonus* were to have his land confiscated for failure to cultivate it, any buildings (*aedificia*) he had built on it would be lost with it (HM IV.9-12). *Aedificium* is not specific, but erecting anything but the most modest of shacks would require labour and capital. Likewise, the *coloni* are characterized as living in *villae* (HM I.20-21). This, again, is not specific, but it does not sound like *mappalia*, which is the African word for the kind of hut a poor peasant lived in.

The *coloni* of the *saltus Burunitanus* complained that they were being forced to give up too much of their draught animals' time for the *operae* owed to the *conductores* (SK III.6-9; cf. HM III.17-18). This implies they owned the animals. They probably also owned their own honey making equipment, since the government gave them incentives to own more than five hives, which would be pointless if it had supplied them in the first place (HM I.29-II.6).¹²⁰ This and all the other factors just outlined suggest *coloni* who were not particularly poor.

In other words, the *coloni* appear to have been wealthy enough to afford, in all probability, the costs of expanding their holdings by setting up new vineyards and olive groves. In this context the rent-free periods make sense as an inducement to the *coloni* to put out the capital necessary for such expansions. Now they could plant, knowing not only that they had permanent lease on the land on which the trees and vines were located, by virtue of the rights granted by the

Ilex Manciana and *Ilex Hadriana*, but as well that during the long initial period when such crops bear no fruit, they did not have to worry about acquiring a debt load to pay rent on them.¹²⁹

It is also worth noting that there were *coloni* in other parts of the province who were apparently inhabitants of imperial estates and who bore similarities to the *coloni* here.¹³⁰ What is most noteworthy about these men is that some of the dedications by which they are known were clearly paid for at their expense. To give only one example, the "*coloni fundi Turrio Rutundus Domini nostri Augusti Templum deapsum denuo sua pecunia fecerunt / cum columnis ornatis....*"¹³¹ One should not stress the similarities between different areas too much, but here the imperial *coloni* appear not as impoverished, but wealthy men who were the "backbone of their community", and who paid the costs involved in maintaining its physical appearance and cultural life.¹³²

Finally, one may note that there is evidence from outside Africa which can be interpreted as supporting this view of the *coloni*. Firstly, it is clear that *coloni* who could afford to rent farms in several places at once and work them with slave or hired labour existed in Italy and Sicily. Cicero makes reference in his *Verrines* to tenants who leased whole farms in Sicily and in several different parts of it.¹³³ There are no such references for Africa, but there is an interesting bit of archaeological evidence. The *fundus Aufidianus* mentioned in Chapter Three shows signs of a dozen or so large farms as well as two outlying villages. Previously the villages had been thought of as the homes of *coloni* on such estates. Perhaps it is more

likely that the large farms were the *villae* of the *coloni qui in fundo... villas habent...*¹³⁴

It is reassuring to know that there is proof that there did exist in the Roman world wealthy agricultural tenants who were in a position at least somewhat comparable to that of the *Bagradas coloni*. The problem is to determine just how appropriate that comparison is. Kehoe, who is largely responsible for demonstrating that the *coloni* were relatively wealthy, extrapolates from this that they were capitalist farmers whose aim was solely monetary profit and who would abandon farming if that profit were not forthcoming.¹³⁵ In other words, he sees them as essentially the same sort of large-scale farmer as was to be found in Italy. It has been argued above that considerable elements of African social and economic structures persisted during Roman rule, and that native practices of landholding and labour are discernable in places. And the system of estate management found in the 'grandes inscriptions' does appear to be unique to Africa. It is thus perhaps more likely that the real nature of the imperial *colonus*—some of whom, after all, were farming an estate still known by a very unRoman second name, *Mappalia Siga*—is to be found among the types of members of tribal societies than in Sicily or Italy.

An examination of the *coloni*'s salient characteristics supports this. The *coloni* had the right to keep their land as long as they cultivated it. This is usually referred to as a 'permanent lease', but this terminology may be more confusing than revealing.¹³⁶ In a tribal environment it would make more sense as an expression of the right to tribal land that every tribal member has. Rather than seeing a

situation in which the 'owner' grants use of land which belongs to him to another, one should be considered in which the *coloni* had, and always had had, rights to that land which could not (in their eyes, at least) be cancelled by anyone, since it did not belong to any one man.

The related clauses of the Mancian system could easily be of native African origin as well. The *coloni* acquired permanent hold on any new land they brought under cultivation. In the standard model this was a grant of privilege by the land's owner, due to the "untiring zeal with which Caesar constantly guards human needs", but it is not inapposite to point out that the tradition by which a man who opened up a plot of land gained thereby the rights to that land was one to be found in pre-colonial, tribal North Africa.¹³⁷ The clause that cost a *colonus* his land for letting it lie unused longer than mere fallowing required also has its parallel; Poncet refers to an identical tradition that saw land left fallow for three years return to common land.¹³⁸

The *coloni* gave one-third of their harvest to the *conductor*. This is invariably referred to as 'rent', with the corollary that the *coloni* were tenants.¹³⁹ Appropriation of harvest shares, however, is entirely compatible with the tribal concept of obligation owed to one superior in status. The same argument applies with equal force to the *operae* required of the *coloni*. They need be nothing more than the labour dues found in tribal societies. Such tribute of goods or labour in no way makes the giver a 'tenant' nor the receiver a 'landlord'; on the contrary, "... the payment of tribute implies a corresponding right to land rather than a contracted vassalage".¹⁴⁰ There is no evidence that the *coloni* thought of themselves as 'tenants' at all, and from the

government's acknowledgement of their rights to land in the *Lex Manciana* and *Lex Hadriana*, it seems the administration may have understood the difference too. It never referred to the *coloni* by the term that legally meant tenant *-conductor-* reserving that for another level of management.¹⁴¹

There is an exact parallel for this sort of situation in the Tunisian estates of Khereddine in the Medjerda valley during the nineteenth century, which were referred to while discussing the role of the *conductor*. Though the estates were, in the eyes of the Beylical government, the property of Khereddine, and though the farmers on the land gave labour and harvest tribute, they were *djedari* ('ancestral occupants') and had rights to the land. Khereddine appears to have recognized this fact when he wrote "Les lacunes de mes titres sont certaines...". As Poncet has said, "Ces 'occupants' ne sont pas des serfs, puisqu'ils ne sont pas liés à la terre mais ils ne sont pas plus des locataires, puisque nul ne peut les chasser du sol où ils sont installés 'de pere en fils'".¹⁴²

If a tribal social-economic system can explain the details of the *coloni*'s tenure arrangements, can it also accommodate the well-to-do farmers the *coloni* appear to have been? In fact, it can. Historical accounts of the Maghreb demonstrate the existence of a rich peasant stratum. R. Montagne in his classic work on the Berbers of Morocco described what are commonly called 'notables', or 'big men' ('grands' in French).¹⁴³ These were the rich locals who held sway in Berber councils, three or four per village. In Algeria, R. Gallissot has depicted the rise of such men through 'taxation' and 'forced labour',

with the result that "... at the lowest level there emerges from the peasant mass a large number of family heads who already possess political weight by virtue of their economic standing...."¹⁴⁴ It is possible to obtain some precision on men of this sort of standing in pre-Protectorate Tunisia, among the Fouâd, a fraction of the Madja tribe.¹⁴⁵ With 476 landholders, this group in 1861 farmed 412.5 *mâchia* (one *mâchia* equals approximately ten ha). Generally the land was held relatively equally --the average amount was .85 *mâchia*-- but some men held more. The *caïd* held 11 *mâchia*, his brother 6, another man 5, two others 3 each. What is interesting is that these are sizable chunks of land: 3 *mâchia* is equivalent to some 30 ha, or over 100 *iugera* in Roman times, more than enough to qualify as a medium sized estate in ancient Italy.¹⁴⁶ Khereddine's *djedari* seem to have worked more than a small piece of land as well.¹⁴⁷ Both examples would appear to be fairly well-to-do men of the type envisaged by Kehoe for the *coloni*.

This view of *coloni* fits with other points as well. The 'grand' of tribal society maintains his position by conspicuous expenditure of his wealth. This is exactly the sort of thing that one sees the wealthy *coloni* doing, such as the men who refurbished the decrepit temple mentioned above.¹⁴⁸ Similarly, the *coloni* of one of the *Bagradas* estates refer to themselves deprecatingly as *rustici tenues* and *tui vernulae*, terms that sound odd coming from men who were probably wealthy and (some of them) certainly Roman citizens. In Italy such an appellation would be strange; in a tribally oriented society it is perfectly understandable since its purpose is to clarify status relationships. The Africans were acknowledging superior status, an

action which, to them, probably implied to them that they were at the same time stating their rights to land, its use, and, in this case, protection.¹⁴⁹

There is no way of knowing, of course, how much land an ancient 'big man' might have controlled, nor even if the comparison is particularly apt. The sort of data presented here are parallels that allow interpretation of the ancient evidence, not evidence themselves. There have been too many changes in the Maghreb since the Roman period to make it possible to directly equate the *colonus* with a Berber 'grande', or any other specific position in any modern society. What has been shown here is that such roles do exist in most of the tribal societies which have been studied. Given that this is the sort of society, in the broadest terms, which Roman Africa seems likely to have been, it is reasonable for the *coloni* to have filled a similar role.¹⁵⁰

About the last two groups mentioned in the 'grandes inscriptions' little can be said. The HM inscription mentions, while discussing labour dues, that "*coloni inquilini eius fundi... nomina sua conductoribus vilicisve in custodias singulas, quas in agris praestare debent nominent...*". It also says "*stipendiariorum qui intra fundum habitabunt, nomina sua nominent in custodias, quas conductoribus vilicisve eius fundi praestare debent*" (HM IV.27-34). Nothing else is said in the inscriptions about these *coloni inquilini* and *stipendiarii*.

It is one common, and sensible, interpretation of *stipendiarius* to assume a connection between the name and the *ager stipendiarius*, the land on which the provincial land tax was paid.¹⁵¹ This land would not

include imperial estates. The *stipendarii* would thus be farmers who in some way held land outside the estates, but who, from their inclusion in the inscription, clearly either worked or lived on the estate. This view may be supported by the reference to *octonarius ager*, land held off the estate to which farmers might remove hives to avoid paying their share of honey. This *octonarius ager* would be nothing other than *ager stipendiarius* on which the amount of *stipendium* was one-eighth of the crop, or perhaps eight *denarii* per *iugerum*.¹⁵² Its existence would be proof of the presence near the estate of the kind of land the *stipendarii* are believed to have held. An alternative explanation for the name *stipendarii* is that they held land which had been liable to the *stipendium* when the province of *Africa* was created.¹⁵³ The land had since become imperially owned, and the tax was no longer applicable, but the name had stuck. In this view *stipendarii* could be both living on and working imperial estate land. The evidence is not strong enough to permit firm conclusions, but it is hard to see why the *stipendarii* were singled out as a special class, with lesser labour duties, if the second explanation is correct. Therefore, it seems that of the two possibilities, it is more likely that the *stipendarii* lived on the imperial estate and worked land off it.

Another, tempting possible answer is that in the *stipendarii*, one sees the migrant pastoralists who, as hired seasonal labour, were so vital to African agriculture. The word *stipendiarius* could be being used in the sense of hired worker, and the one group of hired workers who would be consistently enough employed on these estates to warrant

mention in their basic rules were the seasonal harvesters. The *stipendiarii*'s required *opera* was *custodia*, probably watching herds, which would be a suitable role for pastoralists. Unfortunately, there is no proof for this. Perhaps the words *qui intra fundum... habitabunt* in the inscription make it unlikely one is dealing here with nomads, who probably could not be said to have lived 'on' an estate, but since this passage is reconstruction, there is no real compulsion to accept that they did live 'on' the estate. The whole question of the *stipendiarii* is unsolved.¹⁵⁴

The *coloni inquilini* are even more mysterious. It has been the usual opinion that they were a separate group from the men simply called *coloni* and that they were of fairly poor status.¹⁵⁵ They may have been poorer natives from the region who lived on and worked the estates' lands. Certainly the later use of the word *inquilinus* suggests a poor farmer, attached to the land he works. It is difficult to translate this into African terms with any confidence. The most recent scholarly opinion has suggested that the *coloni inquilini* were the same people as the *coloni* and that the labour, that is listed under the former term is simply additional to the labour listed under the latter.¹⁵⁶ Why the term *inquilini* should be added to *coloni* here and only here is unclear, however, though it admittedly would remove the anomaly of the relatively high status *coloni* having to do more labour than the lower status *coloni inquilini*.

Beyond stating the facts it is difficult to comment. Is it logical to accept the *stipendiarii* as poor men, when they appear to have 'their own land off the estate to farm'? Yet if they were not, and

if the *inquilini* were not a separate group, one is then left without any reference in the inscriptions to the main body of the peasantry (presuming the *coloni* proper were well-off as has been suggested here). It is probably best to take separate groups of *inquilini* and *stipendiarii* as making up the bulk of the poorer, native population. The *inquilini* would have been those peasants who both lived on and worked on the estates, while the *stipendiarii* would have been those living on the estates, but farming nearby, non-imperial land. The two groups would then be the inhabitants of the villages that have been found on the edges of estates like the *fundus Aufidianus*, and which were said to have ringed African large estates like walls.¹⁵⁷ This typical position around the edge of estates would of course have suited *stipendiarii* farming land outside an estate.

Besides the roles and interests of the various parties making up the imperial estates of the *Bagradas*, it is possible to know something of the social and economic dynamics of the estates as well. There appears to have been a significant state of tension between the *coloni* and the *conductores*.

This, at least, is the impression given by the SK, GM, and AZ inscriptions. These speak of petitions by *coloni* to the government against oppression and over-taxation, and include the government's favourable replies. They are thus valuable evidence of the conflicts to be found in the imperial estate system. It is not easy to say how typical the problems cited were. There are only two actual instances of petitions (the AZ document merely repeats the official reply to the

SK petition) and it is unwise to generalize too widely. Nonetheless, the GM inscription makes reference to government orders of many years before on the same subject as was being disputed in 181. The AZ inscription copies the SK's decree, suggesting the problem was common to both. The SK inscription refers to a conspiracy of a *procurator* with all the *conductores* of (probably) an area, again hinting at a fairly common problem. Likewise the citing of previous rulings on the subject of the dispute -a *lex Hadriana*, a *sermo procuratorem* and a *perpetua forma* inscribed in bronze- indicates the problems involved were not new.¹⁵⁸

The subjects of conflict as recorded by the inscriptions were three: increases by the *conductores* of share amounts; *opera* dues; and the use of draught animals. The AD inscription's petition to the government for rights to use *subseciva* may reflect as well an earlier conflict between *coloni* and *conductores* over rights to land and how it was to be used. And there would, of course, have been conflicts over individual problems, such as the *colonus* who avoided payment on his honey production, or the *colonus* who suffered the loss of part of his crop at the hands of another and demanded restitution.¹⁵⁹

The rising labour dues appear to have been the chief problem on both the *saltus Burunitanus* (SK) and the GM estates; though it must be noted that the *coloni* protested not against the fact of *opera* but its unilateral increase by the *conductor*. The *coloni* also protested the increased share levels, and the overuse of their animals, but received no specific reply to these (SK III.7-9; GM A 12-13). Possibly the reason lay in the fact (to be explained more fully below) that the

shares constituted the only source of profit of the government, while the labour went entirely towards ensuring the *conductor's* profit: the government was willing to sacrifice the latter, but not its own.

The source of these conflicts lay in the basic nature of the estate system. The *conductor* leased the estate for only five years and naturally wanted to extract as much profit from it as possible in that time. Since his profits came mainly from shares, there could easily be a tendency for him to try to force the *coloni* to overfarm, what Kolendo has called "une économie du rapine".¹⁴⁰ It is not surprising to find the *conductor* trying to raise shares either, no matter how profitable they were in the first place. Why he should want more labour from the *coloni* is at first sight puzzling, since more work for the *conductor* meant less on the *coloni's* own farms, and so less profit for the *conductor* in the end. If, however, the *coloni* were fairly few, as has been suggested, there may not have been enough land being farmed by them to allow the *conductor* to extract a large enough rent to meet and surpass the sum he had bid to get the estate, forcing him to farm some land in order to make a profit. For this he needed the *coloni's* labour.¹⁴¹ Lastly, being in charge for only five years, the *conductor* would want the *coloni* to farm 'quick yield' crops such as cereals; he would not want them to plant such crops as clives or vines, which would not yield any return until after he had gone.

The *coloni*, on the other hand, would want to balance subsistence with profit. As long-term inhabitants, they would strenuously avoid any overfarming that might harm the land's fertility. If they were relatively well-off, they would be at the point where they would want

to move beyond subsistence and plant profitable olives and vines. And no matter what status they had, the *coloni* would want to keep down share rents and labour dues, just as automatically as the *conductores* would want to raise them.

The *conductores* and the *coloni* were thus in conflict on several issues. The government, the third party involved, wanted above all to keep the estates producing a steady flow of crops, as high as possible, of course, but not so high as to impoverish the *coloni* in the long-term for short-term gain.

There would thus be inevitable tensions. The course of the conflict they engendered can be followed in some detail, at least on the *saltus Burunitanus*. The *coloni* appealed the *conductores*' increases to the *procurator*. He, however, was in alliance with the *conductor*, and they responded by using troops to enforce the increase and punish the *coloni*. The *coloni* remained undaunted and through their spokesman appealed directly to the emperor, who issued a favourable reply (SK II.5, 1-4; III.1; IV.1-8). How much real effect this had is unknown: against the fact that the *coloni* were totally in the power of the *procuratores* must be set the fact that the *procurator* would now be watched by an emperor whose one interest was to keep the farmers who produced Rome's grain happy.¹⁶²

The *coloni* seem to have relied mainly on such petitions to press their case, though their ultimate weapon, as revealed in the GM inscription, was to threaten to leave the estate (GM A 1-6). Possibly, too, they refused to perform their *operae*, or to hand over their shares. The government clearly took their threats seriously, for it

must be remembered that the interests of the *coloni* and the government more or less coincided - a prosperous estate planned for the long term was what Rome wanted. The *conductores* had opposing interests, and used their power as rich men to influence the *procuratores* away from their duty to the emperor and towards the *conductores*, to the government's disadvantage (a point the *coloni* were not slow to point out).¹⁶³ Possibly, as well, the relatively low number of *coloni* meant that the estates were not producing quite up to what Rome desired and the *procuratores*, under pressure to meet 'quotas', decided to let shares and *operae* be raised somewhat.¹⁶⁴ Whatever the reason, the *procuratores* did not always fulfill their assigned role as arbitrators of disputes: the system for mediating precisely such conflicts as these failed and direct imperial intervention was necessary.

If there were such inbuilt tensions, it may be asked why the government used such a management system in the first place.

Imperial estates may have been kept, as opposed to sales to private owners, for a number of reasons. The most important was probably that it allowed direct imperial control over the source of much of Rome's food supply, and prevented possible use of its control as a political weapon. Once the decision to keep the estates in the emperor's hands was made, the next decision was on the form of labour. Faced with the pre-existing structure of native society, there probably was not much of a decision to be made. Slave manned estates would have brought about too much social disruption and been impractical to create. Better, rather, to leave the natives on the land much as they were before, and appropriate as much of their surplus as possible.

This situation was thought of, naturally, by the Romans as some form of tenancy, with concessions to the tribal nature of African society; the fact that the locals probably would not have understood the concept of tenancy was no obstacle, as long as they produced. The permanent 'leases' even had some beneficial effects, as in creating farmers interested in improving their holdings.

The form of surplus appropriation was the next problem. A straight cash rent was conceivable, but what Rome needed was food, not money. A fixed rent in kind would have met this requirement, as would a share rent. Share rent tenancies have a number of disadvantages, the chief of which is that sharecroppers do not naturally farm intensively, because the more they produce, the more crop they have to hand over. This tendency to low intensity cultivation can be overcome in a number of ways - raising the shares, forcing the sharecropper to farm so small a plot that he has to farm intensively, allowing only short leases so that sharecroppers who do not farm intensively can be replaced, and so on. But on the *Bagradas* estates none of these could be used, since shares were fixed, *coloni* could expand at will into *subseciva*, and leases were permanent. The result was good for the *colonus*, but bad for the government, since the sharecroppers could not be forced to farm intensively.¹⁶⁵

Why then did the government choose sharecropping? Partly the answer lay in risk dispersion. The *coloni* were protected from the risk of bad years by having only to pay a share of what they actually harvested, not some fixed amount that might be more than they brought in. This was absolutely essential in North Africa, where the risk of

drought was constant.¹⁴⁶ The *coloni* were thus unlikely to fall into debt, which was a serious problem in Italy, where indebted tenants sold off their belongings to pay off their debts, but thereby impoverished themselves.¹⁴⁷ The government was assuming some of the risk, but the tradeoff of risk for a debt-free and successful body of *coloni* was worthwhile (and besides which, much of the government's risk was passed on to the *conductores*, who had to pay the set amount they bid).

In addition, if the government could not force the *coloni* to farm more intensively, it might persuade them to do so. The permanent nature of the *coloni*'s holdings made them likely to improve them, since they knew they would always have them: long-term leases are a principal way of ensuring improvements by tenants.¹⁴⁸ By giving rent-free periods on olives and vines, the government could overcome somewhat the farmers' limited ambitions. The best persuader of all, though, was the *conductor* himself, who could, and would, apply pressure on the *colonus*, since his profit depended on high crop surpluses.

The government was thus not unreasonable in choosing sharecropping. Against the possibility of a production level that was less than the maximum conceivable, it got a system of debt-free farmers producing a steady level of produce, and improving their farms as well. And all this without forcing the introduction of any new concepts of tenure that might well have proven shattering to the agrarian social fabric.

As for the conductorial system, one very major reason for using it has just been seen - the quick-profit oriented *conductor* would ensure an acceptable level of farming intensity. There were other

reasons, as well.

One of them may be found in the Romans' views on land management. It was an almost universal opinion among Roman agricultural writers that an estate could only be run efficiently as long as the owner could take some part in its management, if only at the level of regular visits and inspections.¹⁶⁹ When the size or location of the estate made this impossible, difficulties were to be expected. Slave managers had no direct interest in keeping an estate as efficient as possible. Therefore, letting to a tenant, who did have an interest in efficiency, was the preferable option.¹⁷⁰

The emperor faced this problem in Africa. Not only were his holdings great, but he was the ultimate absentee landlord. By letting the estates out to tenants --the *conductores*-- he ensured that each was in the hands of a man who had a clear financial interest in keeping it functioning at its peak. For the emperor this would ideally have meant the *conductor* running his estate day-to-day and not using a *villicus*. As has been seen, the *conductores* probably did employ *villici*. But the *conductor* was still probably a local man, able to visit his leased estate (or estates) regularly and keep his *villici* in line. It might be argued that *procuratores* for each *regio* or *saltus* could have done the same thing. The *conductor*, however, had a financial incentive the *procurator* would lack.

Yet another reason for using the *conductores* can be drawn from analogy with the tax-farmers of antiquity. As A.H.M. Jones argued, the prevalence of tax-farming in the ancient world probably rested on the fact that the system (whereby a certain amount was paid up-front for

the right to collect an area's taxes, the tax total collected above the amount bid constituting the tax-farmer's profit) gave to the government not the highest possible tax return, but a fixed and (above all) predictable one.¹⁷¹ The role of the *conductor*, who could justifiably be called a 'rent-farmer', was very similar. The imperial government obtained its rent from its imperial estates in Africa in agricultural products, since the farmers were sharecroppers. The importance of these crops, especially grain, to the *annona* for Rome can hardly be overestimated, and must have occupied the attention of the government. By leasing out the estates to the *conductores*, the government assured itself a steady and certain income on which it could plan.¹⁷²

This, then, was the system by which the imperial estates of the *Bagradas* region, and possibly of much of the province, were managed. It was an intricate combination of: imperial agents charged with making sure the government's interests were looked after; head tenants who ensured profitable estates and a steady income; wealthy peasants who kept the balance between short-term and long-term planning; and labourers who did the actual work. It was carefully designed to balance checks and incentives, in order to ensure what the government wanted - steady production. It was perhaps overly complicated, since its structure created inevitable internal tensions, but it appears to have been successful enough to last several centuries and help bring Africa the agricultural success for which it became famous.

Notes - Chapter Four

1. Thus, for example, Dennis Kehoe, "Lease Regulations for Imperial Estates in North Africa," Zeitschrift fur Papyrologie und Epigraphik 56 (1984): 193-219 and 59 (1985): 151-72 spends five pages arguing for a rearrangement of the AD inscription's columns, to better explain the various procuratorial commentaries, in one of the better preserved inscriptions.
2. Dieter Flach, "Inschriftenuntersuchungen um romischen Kolonat in Nordafrika," Chiron 8 (1978): 441-92, pp.477-91.
3. Maps of the imperial estates of the *Bagradas* region are to be found in J.A. Talbert, ed., Atlas of Classical History (London: Croom Helm, 1985), p.151; Jean-Marie Lassere, Ubique Populus: peuplement et mouvements de population dans l'Afrique de la chute de Carthage à la fin de la dynastie des Sévères (Paris: Editions du CNRS, 1977), Carte III, facing p.334.
4. The French 1:200,000 series maps of Tunisia (Paris: Ministère des Travaux Publics et des Transports, 1923) reveal the nature of the landforms in detail. The relevant sheets are Flles. V (Tunis) and VI (Souk el Arba). For a more general view, the Afrika-Kartenwerk series maps, produced by the German Research Society at 1:1,000,000 are useful. G. Stuckmann, ed. Afrika Kartenwerk N1 (Berlin: German Research Society, 1977) covers topography.
5. For the findspots of the inscriptions, see Jérôme Carcopino, "L'inscription d'Ain-el-Djemala," MEFR 26 (1906): 365-481, pp.423-440. The Souk-el-Khmis inscription is the one found in the valley.
6. Gilbert Charles Picard, La civilisation de l'Afrique romaine (Paris: Librairie Plon, 1959), p.61; T.R.S. Broughton, The Romanization of Africa Proconsularis (New York: Greenwood Press Publishers, 1968; orig. 1929), p.158; Elizabeth Fentress, Numidia and the Roman Army, British Archaeological Reports International Series 53 (Oxford: BAR, 1979), p.135; Dennis Kehoe, "The Economics of Food Production on Roman Imperial Estates in North Africa" (Ph.D. Dissertation, University of Michigan, 1982), Introduction passim; C.R. Whittaker, "Land and Labour in North Africa," Klio 60 (1978): 331-62, p.355. Tenney Frank, "The Inscriptions of the Imperial Domains of Africa," AJPh 16 (1926): 55-73 points out the inaccuracy of the term.
7. Jean Despois, L'Afrique du Nord, 3rd ed. (Paris: Presses

universitaires de France, 1964), Carte C; J.M. Houston, The Western Mediterranean World: An Introduction to its Regional Landscapes (London: Longmans, 1964), pp.660-63.

8. H. Achenbach, ed. Afrika-Kartenwerk N11 (Bedenutzung) (Berlin: African Research Society, 1976).
9. On Carthage's control and the crops grown, see above, Chapter One, at n.n. 12-13. On the region in Masinissa's kingdom, see above, Chapter One, at nn. 79-83. On traders in Jugurtha's day, see Sallust B.J. 47.1.
10. On settlement, see above, Chapter Two, at nn. 11-14. On senatorial holdings, see above, Chapter Three, at n. 44.
11. Based on Pliny's famous six landowners killed by Nero for the 'half of Africa' they owned - Pliny N.H. 18.35. This is commonly taken as part of a concerted plan of confiscation by the emperor, rather than a caprice - see Broughton, Romanization, p.158; R.M. Haywood, "Roman Africa," in An Economic Survey of Ancient Rome, ed. Tenney Frank, 6 vols. (New York: Pageant Books, 1959; orig. 1938), 4: 84-5; Picard, Civilisation, p.62; Dennis P. Kehoe, "Private and Imperial Management of Roman Estates in North Africa," Law and History Review 2 (1984): 241-63, p.246.
12. See above, Chapter Three, at nn. 107-115.
13. Tacitus Annals 13.56.2. The fact that the *Ilex Manciana* was named after a private individual suggests that it was not technically a *Ilex*, but some private regulation.
14. F. Blume, K. Lachmann and A. Rudorff, edd. Gromatici Veteres: die Schriften der romischen Feldmesser, 2 vols. (Berlin: G. Reimer, 1848-52), 2:390-94; O.A.W. Dilke, The Roman Land Surveyors (Newton Abbot: David and Charles, 1971), p.94.
15. The text of the 'grandes inscriptions' printed here is that of Flach, "Inscripfenuntersuchungen," pp.477-91. This is the most complete modern edition of these documents. The most important of them are reproduced below in the Appendices. It should be noted here that I do not accept all of F.'s interpretations of the inscriptions.
16. For a discussion of this view of the *Ilex Manciana*, listing the opinions of the various scholars concerned, see Dieter Flach, "Die Pachtbedingungen der Kolonen und die Verwaltung der Kaiserlichen Guter in Nordafrika," ANRW 2.10.2: 427-73, pp.443-56.
17. C. Courtois, L. Leschi, C. Perrat and Ch. Saumagne, edd., Les Tablettes Albertini (Paris: A.M.G., 1952), pp.108, 110-13. The chapter by Saumagne concerned here has been reprinted as Ch.

Saumagne, "Essai sur la législation agraire: la *lex manciiana* et le *jus manciianum*," CT 10 (1962): 11-114 - this view of the *lex* is stated on p.104.

18. See Kehoe, "Lease Regulations," pp.205-06 on why *eo... loco* must refer to the *subseciva* mentioned in lines 7-8.
19. Kehoe, "Lease Regulations," p.208.
20. Saumagne, Tablettes Albertini, pp.125-26; Jerzy Kolendo, Le colonat en Afrique sous le Haut-Empire, Annales littéraires de l'Université de Besançon 177 (Paris: Université de Besançon, 1976), p.49.
21. Not III.17, as Kolendo, Colonat, p.50 prints.
22. Kehoe, "Lease Regulations," p.213.
23. Kolendo, Colonat, pp.50-51; Kehoe, "Lease Regulations," pp. 209, 213 accepts this argument.
24. Kolendo, Colonat, p.51; Kehoe, "Lease Regulations," p.205; and particularly, Kehoe, "Economics," pp.45-46. Kehoe points out other places in the inscriptions where there are parallels to this circumstantial ablative, ie. HM I.11-12 and II.24-25.
25. See above, at n. 19.
26. Kehoe, "Lease Regulations," pp.209, 214.
27. *ibid.*, pp.214-19; Kehoe, "Economics," pp.45-52.
28. On honey, see Kolendo, Colonat, p.56, nn. 35-37; Kehoe, "Economics," p.145, n. 86; Kehoe, "Lease Regulations," p.27, n. 48; Flach, "Inscripfenuntersuchungen," pp.448-50. On fruit, Kehoe, "Economics," p.68, n.48; Kolendo, Colonat, pp.57-8; Kehoe, "Lease Regulations," p.217, n. 49.
29. Kolendo, Colonat, p.104, n. 18; Kehoe, "Economics," p.146, n. 87. The rent-free periods may be somewhat longer than the fruitless period, but this is in itself an incentive for the farmer who gets a year or two of rent-free crops. The government loses in the short-run, but gains in the long-term. II.23 and II.29 refer specifically to the *lex Manciana*, while the others say *partem tertiam*.
30. The HM inscription applies to one estate; that does not mean, of course, that it could not be part of a wider policy. But the *lex Manciana* was not that scheme, ie. M. Rostovtzeff, Social and Economic History of the Roman Empire, ed. P.M. Fraser, 2nd ed., (Oxford: Clarendon Press, 1953), p.368.

31. Kehoe, "Lease Regulations," pp.156-58; see above, Chapter Three, at nn. 108-12.
32. See Kehoe, "Lease Regulations," p.156, n. 60 for references to various theories on *usus proprius*; p.157, n. 62 on permanent possession; p.156, n. 62 on bequests.
33. See above, Chapter Three, at nn. 119-20.
34. The AD inscription poses many problems and has provoked much discussion, into which it is not possible to venture here. Kehoe, "Lease Regulations," pp.160-70; Flach, "Inschriftenuntersuchungen," pp.461-70; Flach, "Pachtbedingungen," pp.456-68 all cover the issue and refer to the relevant preceding work.
NB. The AD inscription is badly damaged; fortunately a copy of much of it survives on the inscription from Ain-Wassel (AW). Some references to the AD inscription in the text include lines reconstructed from the AW inscription. At these points the appropriate AW line numbers have been included.
35. Pointed out by Kolendo, Colonat, pp.51-52.
36. See Flach, "Pachtbedingungen," pp.455-56; Kehoe, "Lease Regulations," p.167, n. 79.
37. *ibid.*, p.52; *contra*, Flach, "Inschriftenuntersuchungen," pp. 473-74; Flach, "Pachtbedingungen," p.450. Kehoe, "Lease Regulations," p.211 accepts Flach's arguments.
38. Some of these could possibly have been other than procurators - see Flach, "Pachtbedingungen," p.459.
39. See above, Chapter Three, at nn. 10-20.
40. The two *regiones* into which most of the *Bagradas* estates would have fallen were Vaga -CIL., VIII, 12,883- and Thugga -CIL., VIII, 12,892.
41. Kolendo, Colonat, p.63, n. 76 provides sources of such estate procurators, but does not believe the imperial estates had them.
42. Kehoe, "Economics," p.166.
43. Despite acknowledging that the procurator did not do much on the estate level, Kehoe does not appear to make this connection, and believes there were (presumably severely underemployed) *saltus procuratores*. Kolendo's view (next note) is more satisfactory.

44. Kolendo, Colonat, pp.64-65.
45. Jerzy Kolendo, "La hiérarchie des procureurs dans l'inscription d'Ain-el-Djemala (C.I.L. VIII, 25943)," REL 46 (1968): 319-29.
46. This is the opinion of Fergus Millar, "Some Evidence of the Meaning of Tacitus Annals XII.60," Historia 13 (1964): 180-87, pp. 185-87; and of Peter Brunt, "Procuratorial Jurisdiction," Latomus 25 (1966): 461-89, p.485.
47. Kehoe, "Economics," p.165.
48. Kolendo, Colonat, p.66. Whether they had technical jurisdiction is debatable. See Fergus Millar, "The Development of Jurisdiction by Imperial Procurators," Historia 14 (1965): 362-67. Brunt, "Procuratorial Jurisdiction," disagrees on their criminal powers.
49. Kehoe, "Economics," p.166; M. Rostovtzeff [Rostowzew], Studien zur Geschichte des römischen Kolonats (Leipzig-Berlin, 1910) pp.317-18. Admittedly, there is no proof of this, but see below, at n. 76.
50. P.W. de Neeve, Colonus: Private Farm Tenancy In Roman Italy during the Republic and Early Principate (Amsterdam: J.B. Gieben, 1984), p.10, n. 39 lists the relevant ancient sources. M.I. Finley "Private Farm Tenancy in Italy Before Diocletian," in Studies in Roman Property, ed. M.I. Finley (Cambridge: Cambridge University Press, 1976), 103-21, p.106 accepts them, as do Haywood, "Roman Africa," p.101; Dorothy Crawford, "Imperial Estates," in Studies in Roman Property, ed. M.I. Finley (Cambridge: Cambridge University Press, 1976), 35-70, p.48.
51. Kehoe, "Economics," p.167.
52. Rostovtzeff, Studien, pp.348-49, n.1; cf. Kehoe, "Economics," p.167.
53. Kolendo, Colonat, pp.59-60.
54. See above, at n. 50.
55. Kehoe, "Economics," p.168.
56. Kehoe, "Lease Regulations," p.216, n. 47 for sources.
57. Kolendo, Colonat, pp.35-36.
58. Richard Duncan-Jones has dealt with this question in his Economy of the Roman Empire (Cambridge: Cambridge University Press,

1974), pp.45-51 and Table, p.58. Some very basic calculations are possible; they are based on Italian data, but the relations of wheat and wine should probably have been roughly the same elsewhere. Duncan-Jones lists the relevant sources; in addition to which, see K.D. White, "Wheat Farming in Roman Times," Antiquity 37 (1963): 207-12.

Most sources agree on a sowing rate for wheat of 5 *modii* per *iugerum*. The evidence for crop returns varies from fourfold to fifteenfold. The highest grain prices for Italy are about HS 4 per *modius*. Thus the gross profit on a *iugerum* of wheat would vary from HS 80 to HS 300 per *iugerum*.

The average yield of wine, in contrast to this, was probably about 1.17 *cullei* per *iugerum* (1 *culleus* = 20 amphorae). The average price for wine in Italy appears to have been about HS 27 per amphora. Thus the gross profit on a *iugerum* of vines was HS 631.8 per *iugerum*.

Obviously these figures are intended only to give a general illustration of the fact that even the most productive wheat farm could not hope to match a vineyard in profitability.

59. Kehoe, "Economics," pp.170-71.
60. This probably amounted to exactly two conductorial leases.
61. W.E. Heitland, Agricola (Westport, Conn.: Greenwood Press, Publishers, 1970; orig. 1921), p.353.
62. Pointed out by Whittaker, "Land and Labour," p.357, n.13.
63. Rostovtzeff, Social and Economic History, p.327.
64. The *domini* here is potentially puzzling - why should owners in the plural be mentioned when the only owner was the emperor? See above, Chapter Three, at n. 127 for the most likely answer.
65. Gsell thought that at these points the *domini* had been accidentally omitted, but offered no support for this view - Stéphane Gsell, "Esclaves ruraux dans l'Afrique romaine," in Mélanges Gustave Glotz, 2 vols. (Paris: Presses universitaires de France, 1932), 1:397-415, p.407, n. 5.
66. Kolendo, Colonat, p.63. That close supervision is typical of sharecropping is only natural - the lessor's profit depends entirely on how productive the leasehold is, so he inevitably keeps close watch on how well the lessee is managing it. See de Neeve, Colonus, p.17; Kehoe, "Economics," p.202.
67. As Heitland, Agricola, p.345 points out.
68. See above, Chapter Two, at nn. 98-148.

69. See above, Chapter Two, at nn. 149-205.
70. De Neeve, Colonus, p.20.
71. Peter D. Garnsey, "Rome's African Empire under the Principate," in Imperialism in the Ancient World, ed. Peter D. Garnsey and C.R. Whittaker (Cambridge: Cambridge University Press, 1978), 223-54, p.234; Broughton, Romanisation, pp.173-4; Jerome Carcopino, "Fermier général ou sociétés publicaines?," REA 24 (1920): 13-36 all agree.
72. Carcopino, "Fermier général," passim; Garnsey, "Rome's African Empire," pp.234, 348, n.55; Kehoe, "Economics," pp.182-83, n. 13.
73. L. Poinssot, "Gabinus Datus, *conductor regionis Thuggensis*," CRAI 1920, pp.357-59.
74. Kehoe, "Economics," p.182, n. 13; Garnsey, "Rome's African Empire," pp.234, 348, n.55; Kolendo, Colonat, pp.62-63. It could, alternatively, have been a stonecutter's error.
75. For example, ILAlg., I, 3,992 - *conductores qui in regione Hipponi(ens) consistent*.
76. Kolendo, Colonat, p.63.
77. Heitland, Agricola, p.350, who bases his view on the AD/AW inscription, which could support the view of several *conductores* per estate.
78. For a discussion of the *decuma*, with ancient sources cited, see V.M. Scramuzza, "Roman Sicily," in An Economic Survey of Ancient Rome, ed. Tenney Frank, 6 vols. (New York: Pageant Books, 1959), 3:225-378, pp.237-40.
79. Kehoe, "Economics," p.187, n. 32 points out that such a time limitation would have been new.
80. Cf. Max Gluckman, Politics, Law and Ritual in Tribal Society (New York: New American Library, 1965), p.40. See also above, Chapter One, at n. 112.
81. Yves Lacoste, "General Characteristics and Fundamental Structures of Mediaeval North African Society," trans., David Seddon Economy and Society 3 (1974): pp.5-6.
82. Jean Poncet, "Statut foncier et rapports sociaux dans la Tunisie d'avant 1881," in Sur le féodalisme (Paris: Editions sociales, 1971), 188-210, p.203. This article is an extract from

Poncet's La colonisation européenne en Tunisie (Paris: Mouton, 1962), cited by Whittaker, "Land and Labour," pp.357-58; and in C.R. Whittaker, "Rural Labour in Three Roman Provinces," in Non-Slave Labour in the Greco-Roman World, ed. Peter D. Garnsey, Cambridge Philological Society Supp. Vol. 6 (Cambridge: Cambridge Philological Society, 1980), 73-99, p.89.

83. The argument is not simplified by the existence of a disagreement over the actual reading of the text at this point. Most read *intra*, which would, as I have translated it, mean men who live 'on' the estate - see C.I.L., VIII, 25,902; Flach, "Inscripfenuntersuchungen," pp.477 and 444, nn. 14-16. Saumagne, Tablettes Albertini, p.122, however, takes exactly the opposite point of view and reads *extra*, meaning 'outside' the estate. In this he follows Toutain, RD (1987), pp.374 and 377-78, who read *ultra*. The arguments of Saumagne and Toutain are apparently convincingly refuted by J. Lambert, "Les 'Tablettes Albertini'," RAf 97 (1953), p.206, n.31 (which I have not seen). The point is a vital one, but in the absence of any evidence either way - even Saumagne admits the letter before the ...*tra* could be a 'x', 'l' or 't' - it seems preferable to accept the opinion of the vast majority of scholars and see in this line a parallel with other references in the HM text to *in* or *intra*, especially IV.23-4.
84. Kehoe, "Lease Regulations," pp.205-06.
85. Interestingly, but not necessarily significantly, however, the AD inscription never refers to the men therein who are bringing unused land under cultivation as *coloni*.
86. See discussion on the meaning of *colonus* in de Neeve, Colonus, pp.31-62.
87. 'Belonging to the landlord' - Rostovtzeff, Studien, p.342; Flach, "Inscripfenuntersuchungen," p.481 ("Herrenhofe"); The Thesaurus Linguae Latinae provides a slightly different explanation, classing *dominicas* as used in this inscription as meaning *i.q. ad imperatorem pertinens*. This amounts to the same thing in terms of the problem at hand, but which solution is correct cannot be said.
88. In the opening passage of the HM inscription just discussed the word *habibunt* ('will live') is in fact reconstruction. Kehoe, "Lease Regulations," p.198 suggests a possible alternative, putting *villas habebunt* here in place of *habibunt*, which would be a parallel with the *villas... dominicas* passage, and possibly reduce the problems. Both references to *coloni* would mention *villae* and there would be no need for two groups - all *coloni* would be those with *villae*.
89. Kehoe, "Economics," p.85. The actual text reads *villas*

habent habebunt dominicas eius fundi, but most editions insert *dominis* between *dominicas* and *eius* - Flach, "Inscriftenuntersuchungen," p.477, following C.I.L., VIII, 25,902. J.J. Van Nostrand, "Imperial Domains of Africa Proconsularis: an Epigraphic Study," University of California Publications in History 14 (1925): 1-88, p.23 does not add *domini*. One possible solution to the whole problem is suggested by Kehoe, "Economics," p.133, who feels *dominicas* is the product of a corruption of *dominis* by analogy with *villas*, with the result that the text reads *villas... domini[ca]s eius fundi*. It is the opinion of M. Janon, however, that this is rather implausible (personal communication). Saumagne, Tablettes Albertini, p.125 also reads *domini[ca]s*, though his only reason appears to be to explain the conjunction 'and' in the *vilicisve* which follows the words quoted here. The whole matter must remain unsettled.

90. The text as preserved would support either *quintam* or *quartam*. See K.D. White, Roman Farming (Ithaca, New York: Cornell University Press, 1970), pp.190, 215 for qualities of beans as fixers of nitrogen; cf. Kolendo, Colonat, p.67, n.33.
91. See Kolendo, Colonat, pp.56-57 for discussion and possible solution.
92. *ibid.*, pp.57-58.
93. Though it is possible that this higher amount is the source of the *coloni*'s complaints. Cf. John Percival, "Seigneurial Aspects of Late Roman Estate Management," EHR 84 (1969): 449-73, p.459, n. 3.
94. Kolendo, Colonat, pp.60-61 for discussion of these; also Percival, "Seigneurial Aspects," pp.465-68.
95. But see Kehoe, "Lease Regulations," p.156, n. 60.
96. The reading here of *domum revertamur ubi libere morari possimus* is uncertain; *divertamur* and *convertamur* have been suggested. The sense of departure is clear. See Kolendo, Colonat, p.69, nn. 97-99.
97. Kehoe, "Economics," pp.7, 74.
98. Rostovtzeff, Studien, p.369.
99. Heitland, Agricola, pp.342-61, especially pp.345, 358-59.
100. Roth Clausen, The Roman Colonate: the Theories of its Origin (Rome, L'ERMA, 1965; orig. 1925); Broughton, Romanization, pp.157-75, especially pp.170-74; W. Held, "Einige Probleme des Kolonates in Nordafrika zur Zeit des Prinzipats," Afrika und Rom

- in der Antike, edd. H. Diesner et al. (Halle-Wittenberg, 1968-69), 143-53; Albert Deman, "Matériaux et réflexions pour servir à une étude du développement et sous-développement dans les provinces de l'empire romain," ANRW 2.3: 3-83; M.I. Finley, The Ancient Economy, 2nd ed. (Los Angeles and Berkeley: University of California Press, 1985), pp.87-88.
101. Picard, Civilisation, pp.63-66; Saumagne, Tablettes Albertini p.102; Pietro Romanelli, Storia delle Province Romane dell' Africa (Rome: L'ERMA, 1959), p.344; André Piganiol, "La politique agraire d'Hadrien," in Les empereurs romaine d'Espagne (Paris: Editions du CNRS, 1965), 135-46; Carcopino, "L'inscription d'Ain-el-Djemala," pp.403, 480-81; Lassere, Ubique Populus, pp.297-305.
 102. Garnsey, "Rome's African Empire," pp.233-34.
 103. Whittaker, "Land and Labour," p.357.
 104. Kehoe, "Economics," Chapter Two, pp.73-160.
 105. The best introduction to this issue is David Grigg, Population Growth and Agrarian Change (Cambridge: Cambridge University Press, 1980), Chapters Two and Three, pp.11-28. For a definition of overpopulation, pp.11-19; on shrinking farm sizes, pp.21-22; on fragmentation of holdings, pp.22-23; on increasing rents, pp.24-25. On decreasing investible capital, see David Grigg, The Harsh Lands: a Study in Agricultural Development (London: Macmillan and Co., 1970), p.35.
 106. Grigg, Population Growth, pp.24-25.
 107. Kehoe, "Economics," pp.77-78.
 108. The ancient population estimate is that of Picard, Civilisation, p.57; see above, Chapter Two, at n. 48 for other estimates. The estimate of the precolonial Maghreb's population is from Lucette Valensi, Fellahs tunisiens: l'économie rurale et la vie des campagnes aux 18^e et 19^e siècles (Paris: Mouton, 1977), pp. 14-15. The quote is the title of Chapter One of Lucette Valensi, Le Maghreb avant la prise d'Alger (Paris: Flammarion, 1969), pp. 20-30. R.J. Church et al. Africa and the Islands, 4th ed. (New York: J. Wiley and Sons, 1977), p.136 provides the modern population estimate (for 1975). Grigg, Population Growth, pp.244, Fig. 20, 246, Fig. 21, 247, Fig. 22 for population density maps. As these maps are based on population densities per 100 ha of *arable* land, they automatically negate the problem of comparison caused by the fact that modern Tunisia has a vast, largely uninhabited area in the far south (which *Africa proconsularis* did not have), since this southern area is largely not arable.
 109. Grigg, Population Growth, p.27.

110. Kehoe, "Economics," pp.93-95.
111. See above, at n. 13.
112. Kehoe, "Economics," pp.95-96.
113. *ibid.*, p.96.
114. Columella De re rustica 3.11-12.
115. Grigg, Population Growth, p.22.
116. *Octonarius* would thus refer to the amount of *stipendium* paid: 8 *denarii* per *iugerum* - Rostovtzeff, Studien, p.341; J.J. Van Nostrand, "The Imperial Domains of Africa Proconsularis," University of California Publications in History 14 (1925): 1-88, p.33, n. 38; Whittaker, "Land and Labour," p.357; Kehoe, "Economics," p.86. Henriette Pavis d'Escurac, "*Mundinae* et vie rurale dans l'Afrique du Nord romaine," BCH NS. 17B (1981): 251-259, pp.251-52 argues that *octonarius* refers to the land on which a rural market was held; the *colonus* presumably was taking his honey to sell at the market. The name *octonarius* would come from the eight day cycle of the market. Such a cycle would, however, be totally atypical of rural market cycles in Roman Africa - see above, Chapter Three, at n. 154.
117. Whittaker, "Land and Labour," p.357.
118. See below, at nn. 142-45.
119. See above, at n. 87.
120. As Kolendo, Colonat, p.71 notes.
121. Kehoe, "Economics," p.88.
122. *ibid.*, pp.102-04.
123. Grigg, Population Growth, pp.34-35.
124. *Partes aridae* is normally taken as grain, ie. Clausen, Roman Colonate, p.182, n. 2; Kehoe, "Economics," p.188, n. 34.
125. Duncan-Jones, Economy of the Roman Empire, pp.39-54; White, Roman Farming, pp.241-46; Kehoe, "Economics," pp.100-01, 141-43, nn. 64-70.
126. Columella De re rustica 3.3.8-9.
127. Based on Duncan-Jones' estimates (see above, n. 16); Kehoe,

"Economics," pp.100-01, in admitting that many of Columella's costs are irrelevant to this situation, discards his HS 8,000 for a *vinitor*. But a *colonus* expanding his holdings into viticulture might well have bought just such a professional slave, bringing up the cost further, to HS 10,000 for the first *iugerum*, (if Columella's figures have any meaning in Africa). The most interesting recent discussions of this passage are Andrea Carandini "Columella's Vineyard and the Rationality of the Roman Economy," *Opus* 2 (1983): 177-205; but see the refutation of Carandini's arguments by Finley, *Ancient Economy*, pp.180-81, 246-47, nn. 20-23; cf. J. Love, "The Character of the Roman Agricultural Estate in the Light of Max Weber's Economic Sociology," *Chiron* 16 (1986): 99-146. Whichever opinion is accepted, the whole discussion is an example of the level of economic enquiry which is possible concerning Italy thanks to the agricultural writers, and which cannot even be attempted for Africa.

128. Kehoe, "Economics," pp.104 on *aedificia*; p.105 on *villae* and draught animals; 106-07 on honey making equipment.
129. *ibid.*, pp.107-08.
130. *ibid.*, pp.110-121 discusses these, and lists numerous ancient sources.
131. *ILTun.*, 1,568.
132. Kehoe, "Economics," pp.110-21, especially p.119.
133. Cicero *2Verr.* 3.53, 91, 108; Kehoe, "Economics," pp.121-23.
134. See above, Chapter Three, at nn. 129-38; Kehoe, "Economics," pp.108-110.
135. Kehoe, "Economics," pp.122-23.
136. *ibid.*, p.73; Heitland, *Agricola*, p.357 ("permanent tenancies"); Crawford, "Imperial Estates," pp.48-49; A.H.M. Jones, *The Roman Economy*, ed. P.A. Brunt (Oxford: Basil Blackwell, 1974), p.295. It is not unfair to say that, even when the term is not explicitly used, this is still how the *coloni*'s status is conceived of.
137. David Seddon, *Moroccan Peasants: a Century of Change in the Eastern Rif 1870-1970* (London: Dawson, 1981), p.63; Fentress, *Numidia*, p.136; Poncet, "Statut foncier," p.189. The quote is from the *sermo procuratorem* of the AD inscription.
138. Poncet, "Statut foncier," p.192.
139. As by Kehoe, "Economics," p.2 and *passim*; Rostovtzeff, *Social*

- and Economic History, p.327; Fentress, Numidia, p.135; Haywood, "Roman Africa," pp.99-100; Heitland, Agricola, p.343; Crawford, "Imperial Estates," p.48.
140. Whittaker, "Land and Labour," p.343; see Gluckman, Politics Law and Ritual, p.40; see above, Chapter One, at nn. 92-109.
 141. On these terms, see de Neeve, Colonus, pp.20, 61.
 142. Kherredine cited in Poncet, "Statut foncier," p.192; see p.203; the quote from Poncet is "Statut foncier," p.193.
 143. Robert Montagne, The Berbers: their Social and Political Organization, trans. David Seddon (London: Frank Cass, 1973; orig. 1931), pp.57-70.
 144. René Gallissot, "Precolonial Algeria," trans., David Seddon Economy and Society 4 (1975): 418-46, p.426; see pp.421-29 generally; cf. Seddon, Moroccan Peasants, pp.46-50.
 145. Lucette Valensi, Fellahs tunisiens, p.102; see p.198 for definition of *māchia*.
 146. By the definition accepted by White, Roman Farming, pp. 385-88. See above, Chapter Three, at n. 68.
 147. Poncet, "Statut foncier," p.203: "... le 'locataire' actuel sous-loue en grand partie à des cultivateurs qui 'résident sur place' et qui, en outre, travaillent pour eux-mêmes, gratuitement, une autre partie du domaine".
 148. Darryl Forde and Mary Douglas, "Primitive Economies," in Tribal and Peasant Economies, ed. George Dalton (New York: The Natural History Press, 1967), 13-28, pp.21-22; Gluckman, Politics, Law and Ritual, pp.86-88; Marshall Sahlins, Tribesmen, (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1968), p.88.
 149. Whittaker, "Land and Labour," p.357; see the SK inscription, III.28-29; *contra* this, Kehoe, "Economics," p.136, n. 44.
 150. Other approaches are possible. John Percival, "Seigneurial Aspects of Late Roman Estate Management," for example, analyses the 'grandes inscriptions' in comparison with the manorial system of mediaeval Europe. There are similarities, it is true, but this avoids the problem of where the Roman system -the earlier system- originated.
 151. Kehoe, "Economics," pp.86, 134, n.34; Whittaker, "Land and Labour," p.357.
 152. On the *stipendium* amount, Hyginus De lim. const., in Blume,

- Lachmann and Rudorff, Gromatici Veteres, p.205 cites examples of one-fifth and one-seventh. Rostovtzeff, Studien, p.341 accepts this idea. See Kehoe, "Economics," pp.134-35, n. 35.
153. Rostovtzeff, Studien, p.341; Van Nostrand, "Imperial Domains" pp.32-33, n. 38.
 154. Crawford, "Imperial Estates," p.48 suggests the possibility of the *coloni inquilini* being migrant labour and the *stipendiarii* being locals. There is no evidence in support of this, whereas the term *stipendiarius* could mean 'hired', which *would* apply to migrant harvesters. Saumagne, "Essai sur la législation agraire," pp. 102-03 discusses the *stipendiarii*.
 155. Rostovtzeff, Studien, pp.341-42; Van Nostrand, "Imperial Domains," p.32, n. 37; see Heitland, Agricola, pp.346, 360-61; Kolendo, Colonat, p.54. Kehoe, "Economics," accepts this, but has apparently since come to reject the concept (see next note).
 156. Flach, "Pachtbedingungen," p.442, n. 41; and Flach, "Inscripfenuntersuchungen," p.460, whose text of the HM inscription is included in the Appendix. This is also the view of Kehoe, "Lease Regulations," p.154. Nonetheless, I am not certain that the evidence permits such confidence. Much of the relevant text is only restoration, and the appearance of the addition '*inquilini*' to the word '*coloni*', unique to this passage, remains unexplained.
 157. See above, Chapter Three, at n. 129; Agennius Urbicus De controversiis agrorum, in Blume, Lachmann and Rudorff, Gromatici Veteres, pp.84-85.
 158. Kolendo, Colonat, pp.66-69.
 159. *ibid.*, p.73.
 160. Grigg, Harsh Lands, p.108; Kolendo, Colonat, p.70; Fentress, Numidia, p.135 cites the Sicilian *gabellato* system of modern history as an example of such destructive tendencies of short tenancies.
 161. Kehoe, "Economics," pp.176-77.
 162. Finley, Ancient Economy, p.88, for example, believes that the effect of the imperial intervention on behalf of the *coloni* would have had little or no real effect; but his *coloni* are poor peasants; wealthier ones may have been better able to defend their interests. Kolendo, Colonat, p.74 assumes from the later dependant status of farmers in the Late Empire, that the *coloni* eventually lost their battle.
 163. Kolendo, Colonat, pp.70-71.

164. There is evidence that the food supply of Rome was at this time insufficient to meet demands - Herodian 1.12.3-5; Dio. 72.13. 1-2; SHA Commodus 14.1; SHA Septimius Severus 8.5; 23.2. Commodus did feel it necessary to organize (or reorganize) the African grain fleet - SHA Commodus 17.7. There need not necessarily have been any connection between food shortages and stagnating or falling production in Africa, but it is a possibility - see Broughton, Romanization, p.175. Kolendo, Colonat, p.67 refuses to speculate on the connection. Evidence summarized by Kehoe, "Economics," p.178. This theory, of course, implies that the government pressured the *procuratores* into in turn pressuring the *coloni*, and then withdrew the pressure when it realized that it depended on the *coloni* continuing to produce. The *procuratores* would thus have been victims of the shifting orders of the government.
165. Kehoe, "Economics," pp.195-200 summarizes modern research on sharecropping.
166. Kolendo, Colonat, pp.204-08. As Houston, Western Mediterranean World, p.660 has put it, "Drought is the most fundamental character of the Maghreb." Grigg, Harsh Lands, p.107 points out that some farmers *prefer* to be sharecroppers, precisely because of the security it gives them in areas of high year-to-year crop fluctuations.
167. Pliny Epist. 3.19. See Heitland, Agricola, pp.321, 436-37; White, Roman Farming, pp.347, 407-08; Jones, Roman Economy, p.291, who cites references in the Digest to *relicta colonorum* (ie. XXXII, 78, 91, 97, 101, and more).
168. "'It was agreed by all writers' during the agricultural revolution in England 'that one of the major instruments of agrarian change was the long term lease'." Finley, "Private Farm Tenancy," p.109, quoting R.A.C. Parker, "Coke of Norfolk and the Agrarian Revolution," Economic History Review, 2nd series, 8 (1955), p.158.
169. Pliny, N.H. 18.31, 35 (quoting Mago); Cato De agri cultura 1.2; 2.4; Columella De re rustica 1.Pref.12; 1.1.18, 19-20.
170. Kehoe, "Economics," pp.162-65.
171. Jones, Roman Economy, Chapter VIII ("Taxation in Antiquity"), pp.151-86 *passim*.
172. Kolendo, Colonat, p.61.

CONCLUSIONS

The aim of this thesis has been to investigate how agriculture was organized in *Africa proconsularis* during the Principate, at every level - how the government administered agricultural production, how farm lands were owned and held, how actual estates were managed and manned. The central question which has run throughout the enquiry has been, how much did Rome alter the agrarian organization that existed before her arrival? A number of important conclusions have been reached.

The first is that agriculture in pre-Roman Africa was very much a native African affair. Carthage created a zone of intensive farming and introduced slavery to an extent, but the area in which all this occurred was limited to the region immediately around the Punic capital. Across the rest of what would become *Africa proconsularis* agricultural practice continued to be conditioned by the fact that society remained tribally organized. The change from this was not complete even in the region around Carthage.

The changes to this situation caused by Roman rule turn out to have been less than might have been expected. The immigration of Italian farmers was not inconsiderable, but it never came close to seriously diluting the overwhelmingly aboriginal population of the countryside. This population was never deeply romanized. The Romans brought no technological superiority that would have caused massive

change to agriculture. They also do not appear to have introduced agricultural slavery to any great extent. (As a corollary to this, the commonly held view of a widespread use of farm slaves in Republican times, followed by a decline in favour of tenancy during the Principate has been shown to be false.) And the Roman government almost certainly made no attempt to forcibly settle the pastoral, nomadic herders who had always formed a vital part of the African economy; these herders continued to interact profitably with settled farmers, and particularly to act as a very significant source of hired, seasonal labour throughout the Principate. All these things suggested that the agriculture of the Roman period should be reconsidered, to see if native African elements in its organization were not present.

That they were has been confirmed by the examination of what details are known of agriculture in the Roman era. The chief conclusion is that the effect of romanization was greatest at the upper levels of organization, though incomplete even here, but much less apparent further down.

Thus, the government's attempts at directing agriculture were purely Roman (the creation of a system of administrative districts and a bureaucracy to run it), but they concerned only the lands belonging to the emperor. All the rest of African agriculture was left utterly unregulated. The cities which grew up created 'villa economies' around themselves, but this effect was of limited scope geographically, and in fact incomplete even near the cities. Landowning patterns did come to reflect Italian practice in that much land was owned by rich men, including the emperor, who was the greatest landowner of all; and land

was accumulated into huge estates. Yet where small landowners can be discerned (such as in the Lamasba register) the way in which they held land appears to reflect tribal African practices. And even for the large estates, the methods of managing them which can be uncovered, even if only fragmentarily, all reveal significant aspects of native practice, especially in the continued existence of the village community as the centre of agrarian life.

The chief among these management programs was, of course, the Mancian system, best known from the estates of the *Bagradas* area, but which has been shown to have been used across much of *Africa proconsularis* for many centuries. Examination of this system has revealed that in several respects the standard analyses of it are incorrect. It has shown that the well-known *lex Manciana*, often thought to be a government scheme for utilizing marginal land, was actually a private estate lease regulation for whole estates, which was later adopted by the government for imperial estates. The roles of the various kinds of agriculturalists on the Mancian estates have been re-evaluated as well. The government rented estates to rich *conductores* who made their profit not from large scale cultivation, as is usually thought, but by farming rents. The estates were supervised by imperial *procuratores*, whose role was not to run individual estates, but to supervise groups of them. The estates were sub-let to *coloni*, who were not poor peasants, but rather fairly well-off medium sized landholders, the notable men of their villages. The actual farm labour was done mostly by poorer men, called *inquilini* and *stipendiarii*.

What is perhaps most significant of all is that Mancian

management was a mixture of Roman and non-Roman traits. Administered at the top by typically Roman *procuratores*, there were also *coloni*, *conductores*, *inquilini* and *stipendiarii* who corresponded in many ways to various ranks of a tribal society. The system is so thoroughly penetrated by non-Roman tribal elements, such as the right of every farmer to land and the obligation to give tribute to societal superiors, that it is not accurate to think of it, as is usually done, as a form of tenancy at all.

The Mancian system, and African agriculture generally, appear to have been extremely successful. If there is an overall conclusion to which this investigation has come, it is that this success was due to the fact that Rome did not attempt to recreate the agriculture of Italy in Africa, so avoiding the cultural shocks this would have entailed. The effect of Roman colonialism was rather to add to African agriculture in those upper levels of management, the 'estate of administration', where Roman civilization was more advanced, while leaving the lower levels, the 'estate of production', much as it was before her arrival. The agricultural prosperity for which Roman Africa was famous bears witness to the success of the fusion.

Epigraphical Evidence for the Management of African Imperial Estates

1. The Henchir Mettich Inscription (C.I.L., VIII, 25,902)

[Pro salute
[Aug(usti) n(ostri) im(p(eratoris))] Caes(aris) Traiani
prin(cipis)]
- totiusque] domus divin(a)e-
[op]timi Germanici Pa(r)thici. Data a Licinio
[Maximo et Feliciore Aug(usti) lib(erto) proc(uratoribus) ad
exemplum
legis Man(c)lian(a)e. Qui eorum [intra fund(um) Villae Mag-
n(a)e Varian(a)e id est Mappalia Siga (habitant)], eis eos
agros, qui sub-
cilesiva sunt, excolere permittitur lege Manciana
vix ita, ut eos qui excoluerit usum proprium habe-
at. Ex fructibus, qui eo loco nati erunt, dominis aut
conductoribus vilicisve eius f(undi) partes e lege Ma-
nciana pr(a)estare debebunt hac cond(itione) coloni:
fructus cuiusque cultur(a)e, quos ad area(m) deportare
et terere debebunt, summas reddant arbitrato
[suo conductoribus vilicisve eius f(undi); et si conducto-
r(ibu)s vilicisve eius f(undi) in assem partes colonicas
(se) datur-
(o)s renuntiaverint, tabellis intra dies tres cavea-
nt eius fructus partes, quas in assem dare debent
conductor(ibu)s vilicisve eius f(undi): ita coloni colonic-
as partes pr(a)estare debeant. Qui in f(undo) Villae Mag-
nae sive Mappalia(e) Siga(e) villas habent habebunt
dominicas. (dominis) eius f(undi) aut conductoribus vilicisve]

eorum in assem partes fructum et vinearum ex
 consuetudine Manciana, cuiusque gene-
 25 ris habet, praestare debebunt: tritici ex a-
 [r]lea[m] partem tertiam, hordei ex area[m]
 [p]alrtem tertiam, fabae ex area[m] partem qu-
 [ar]ltam, vini de lacu partem tertiam, olle-
 i colacti partem tertiam, mellis in alve-
 30 [is] mellaris sextarios singulos. Qui supra

II

quinque alveos
 habebit, in tempore quo vin]l-
 demia mellaria fue[rit, aut]
 dominis aut conducto[ribus vili]-
 5 cive eius f(undi) qui<ntam> in assem [partem]
 d(are) d(ebebit). Si quis alveos, examina, apes, [vasa]
 mellaria ex f(undo) Villae Magnae sive M-
 appaliae Sigae in octonarium agru[m]
 transtulerit, quo fraus aut dominis au[t]
 10 conductoribus vilicisve eis <f(undi)> quam <(maxime?)> fiat,
 a[llv]-
 ei[s], examina, apes, vasa mellaria, mel, qui inflati]
 erunt, conductorm v[ili]corumve in assem eius]
 f(undi) erunt. Ficus aridae arbor[es eius f(undi)], quae
 extra pom[al]-
 rio erunt, qua pomarium [ita int]ra villam ips[am]
 15 sit, ut non amplius iu[geris tot patelat, col[on]-
 us arbitrio suo colactorum fructum con[ducto]-
 ri vilicisve eius f(undi) par[tem tertiam d(are) d(ebebit)].
 Ficeta ve[te]-
 ra et oliveta, quae ante [h(anc) legem [sata sunt, e]
 consuet[u]-
 dine[m] fructum conductori vilicisve eius <f(undi)> praestar[e]
 20 debeat. Si quod ficetum postea factum erit, eius fic[eti]
 fructm per continuas ficationes quinque
 arbitrio suo ei, qui se[r]verit, percipere permittitur,
 post quintam ficationem eadem lege[m], qua s(upra) s(criptum)
 est,
 conductoribus vilicisve eius f(undi) p(raestare) d(ebebit).
 Vineas serere
 25 colere loco veterum permittitur ea[us] conditione, u[t]
 ex ea satione proxumis vindemiis quinque fructu[m]
 earum vinearum is, qui ita <se>verit, suo arbitrio per-
 cipiat itemque post quinta vindemia quam ita sata
 erit, fructus partes tertias e lege Manciana conduc-
 30 toribus

III

vilicisve eius <f(undi)> in assem dare debe-
 bu[n]t. Olivetum serere colere in
 eo loc[o], qua quis incultum excolu-
 erit, permittitur ea condici[ci]one u-
 5 t ex ea satione eius fructus oliveti, q-
 uo>d ita satum est, per olivationes pro-
 ximas decem arbitrio suo per[mitte-
 re] <cipi>at, item pos[ti] olivationes <decem> ole[i]
 coacti partem t[er]tia[m] c[on]ducto-
 10 ribus vilicisve eius <f(undi)> d[are] d[eb]ebit). [Q]ui
 inse[r]ve-
 rit oleastra, post [vindemias] quinq[ue] par-
 tem tertiam d[are] d[eb]ebit). [Q]ui agri herbosi] in f(undo)
 Vill<a>e Magn<a>e Var[ian<a>e sive] Mappaliae
 Sig<a>e sunt eruntve extr[ea] eos] agros, qui
 15 vicias habent, eorum a[gl]rorum fruct-
 u[s] conductoribus vilicisve de[be]nt[ur]. Custodes e-
 xigere debebu[n]t pro pecor[ibus], q[u]lae intra f(undum) Vill<a>e
 M-
 agn<a>e Mappali<a>e Sig<a>e] pascentur: in pecora sin-
 gula aera quattu[or] conductoribus vilicisve do-
 20 minorum eius <f(undi)> pr<a>estare debeb[un]t. Si quis ex f(undo)
 Vill<a>e
 Magn<a>e sive Mappali<a>e Sig<a>e fructus stantem pen-
 dentem maturum immaturum caeciderit excider-
 it exportaverit deportaverit conbu[er]it dese[c]uer-
 it, sequ[en]tis] [b]li[n]e[n]t[i]i detrimentum conductoribus vilicisve
 ei
 25 us <f(undi)>

IV

[pr<a>estare
 c]oloni erit; ei, cui det[r]imentum intulerit, quanti fuerit],
 tantum pr<a>estare d[eb]ebit. Qui in f(undo) Vill<a>e Magn<a>e
 Varia]-
 n<a>ve si<v>e Mappali<a>e Sig[<a>e ficetum olivetum vineas sel-
 verunt severin[t], eis eam superficiem heredibus],
 5 qui e[st] legitim[is] matrimoniis nati sunt eruntve,
 testamen[t]o relinquere permittitur. Si quae sup[er]-
 ficies [post] hoc tempus lege Ma[n]ciana pigno-
 ri....fiduci<a>e data<e> sunt dabuntur, [heredibus]
ius fiduciae lege Mancian<a> serva[bitur]. Qui
 10 sulperficiem ex inculto excoluit excoluer[it] eive qui
 ibi] aedificium deposuit posuerit eive qui [coluerit, si]
 desierit perdiesierit, eo tempore quo ita ea superfic[ies]

coli desit desierit, ea, quo fuit fuerit ius colendi, dumta[xa]-
 <t> bienn<i>o proximo ex qua die colere desierit servatu[r]
 15 servabitur, post biennium conductor<ibu>s vilicisve eor[um].
 Ea superficies, qu<a>e proximo anno {f} culta fuit et coli
 [desi]-
 erit, conductor vilicusve eius f(undi) <ei, cuius> ea
 superficies esse d[icit]-
 ur, denuntiet superficiem cultam testato negita[visse]
 denuntiationem. Denuntiatur Mappaliasigalis testan[nd]-
 20 o, itemque <i>nsequentem annum [si negit]at, ea<m> sine que[rell]-
 a eius {eius f}post bien<n>ium conductor vilicusve <eius f(undi)>
 cole[re] del-
 beto. Ne quis conductor vilicusv[e] {eoru[m]} in[qu]ilin[u]m eius
 f(undi) <amplius quam ter binas operas praestare praecipiat>:
 Coloni,
 qui intra f(undum) Vill<a>e Magn<a>[e] sive Mapplali<a>e Sig<a>e
 ha[bit]-
 abunt, dominis aut conduct[or]ibus vilicisve eorum] in assem [q-
 25 uo<t>annis in hominibus [singulis in aratio]nes oper-
 as n(umero) II et in messem op[er]as n(umero) II et cuiusque
 generi[s]
 singulas operas bin[as] p[re]stare debebunt. Colon[i]
 inquilini eius f(undi) [int]ra [pr(idie) kal(endas) primas
 cuiusque] anni n-
 omina sua con[duc]tor[ibus] vilicisve i[n] custo-
 30 dias singulas, quas in agris p[re]stare debent, nominent,
 ratam seorsum-----[seor]sum.
 Stipendiarior[um], qui intra f(undum) Vill<a>e Magn<a>e sive
 Mappa-
 li<a>e Sig<a>e habitabu[n]t, nomina sua nominent in custodias,
 quas c-
 onductoribus vilicisve eius f(undi) p[re]stare debent. Cust-
 35 odias f(undi) servis dominic[is]-----] est
 --- sequuntur quinque versus, qui restitui non possunt---

2. The Ain-el-Djemala Inscription (CIL., VIII, 25,943)

I

.....ituant, rogamus, procurato-
 [res, per pr]ovidentiam vestram, quam
 [nomine] Cal[is]t[ar]is praestatis, velitis nobis
 [et utilitat]i illius consulere, dare no[s]-
 5 b[is] eos agros], qui sunt in paludibus et
 in silvestribus, instituendos olivetis
 et vineis lege Manciana, condicione

10 [s]altus Neroniani vicini nobis. Cu[m]
ed]eremus hanc petitionem nostr[am,
fulndum suprascriptum N[eronian-
um i]ncrementum habit[atorum]
---desunt complures versus---

II

.....
.....

iubeas. Sermo procuratorum [im]-
p(eratoris) <C>aes(aris) Hadriani Aug(usti): Quia Caesar n(oster)
pro

5 infatigabili cura sua, per quam adsi-
due humanis utili<ta>tibus excubat, om-
nes partes agrorum, quae tam oleis au[t]
vineis quam frumentis aptae sunt, e[x]-
coli iubet, i<d>circo permissu[m] prov[id-
en]tia eius potestas fit omnibus e[tia]-
m eas partes occupandi, quae in cent--
uri<i>s elocatis saltus Blandiani e[t] U
densis <et> in illis partibus sunt, quae ex
saltu Lamiano et Domitiano iunctae
Tuzritano sunt, nec a conductoribus
exercentur;
... <i>isque qui occupaverint pos-
sidendi ac fru<en>di {i} eredique su-
o relinquendi id ius datur,
quod e<s>t lege Ha<drian>a compre-
hensum de rudibus agris
et iis, qui per X an<n>os conti-
nuos inculti sunt;

AW 7

AW 10

III

a nec ex Blandiano et Udensi
b saltu maiores partes fruc[tuum]
captorum quisquam debebit dare
cond[uc]torib[us] q[ua]m M[ancianas],
sed quli ea loca neglecta a co[n]du-
ct[oribus] ocupaverit, quae da-
5 ri sollent, tertias partes fructuu[m]
dalbit. De eis quoque regionibus, quae
e] ex Lamiano et Domitiano
[saltu] iunctae Tuzritano sunt,
[tantundem] dabit. De oleis, quas quisq(ue)

10 [clonductoris artibus gratiosissimi
 [ult]imo indulserit, ut missis militib(us)
 [in eu]ndem saltum Burunitanum ali-
 [os nos]trum adprehendi et vexari, ali-
 [os vinc]liri, non<n>ullos- cives etiam Ro-
 15 [manos]- virgis et fustibus effligi iusse-
 [rit, scilicet] eo solo merito nostro, qu-
 [od euntes] in tam gravi pro modulo me-
 [diocritat]is nostrae tamq(ue) manifesta
 [iuniuria im]ploratum maiestatem tu-
 20 [am immodesta el]pistula usi fuissetus. Cu-
 [ius nostrae ini]iuriae evidentia, Caes(ar),
 [inde profecto] potest aestimari, qu-
 [od]-----
 ---sequuntur complures versus, qui restitui non possunt---

III

[Quae res co]mpulit nos miserrimos homi-
 [nes iam rur]sum divinae providentiae
 [tuae sup<p>]llicare, et ideo rogamus, sa-
 cratissime imp(erator), subvenias. Ut kapite le-
 5 [gis Hadrian<a>e, quod supra scriptum est, ad-
 emptum est, ademptum sit ius etiam proc]cb.,
 nedum conductori, adversus colonos am-
 pliandi partes agrarias aut operar(um) prae-
 bitionem iugorumve et, ut se haben litter<a>e
 10 [proc(uratorum), quae sunt in taulario tuo tractus Kar-
 thag(ini)ensis), non amplius annuas quam binas
 aratorias, binas sartorias, binas messo-
 rias operas debeamus; i<d>q(ue) sine ulla contro-
 versia sit, utpote cum in aere inciso et ab
 15 [omnib(us) omnino undiq(ue) versum vicinis nostr[is]
 perpetua in hodiernum forma praestitu[m],
 tum et proc(uratorum) litteris, quas supra scripsimus,
 ita confli[r]matum. Subvenias et, cum homi-
 nes rustici tenues manu<u>m nostrarum ope-
 20 [ris victum tolerantes] conductori profusis
 largitionib(us) gratiosis<si>mo impares apu<d>
 proc(uratores) tuos simul[s], quib(us) [pel]r vices successi-
 on(is) per condicionem conductionis notus est,
 miser<e>a<ri>s ac sacro rescripto tuo n(on) ampli-
 25 [us praestare nos quam ex lege Hadriana et
 ex litter<i>s proc(uratorum) tuor(um) debemus, id est ter
 binas operas, praecipere digneris, ut bene-
 ficio maiestatis tuae rustici tui vernulae
 et alumni saltu<u>m tuorum n(on) ultr(a) a conduc-
 30 [torib(us) agror(um) fiscalium inquietem]ur].
 ---desunt quaedam---

IV

- [Imp(erator) Cales(ar) M. Aurelius Commodus An-
[tonius Aug(ustus) Sarmat(icus) Germanicus
Maximus Lurio Lucullo et nomine a-
5 liorum. Proc(uratores) contemplatione dis-
cipulinae et instituti mei -ne plus
quam ter binas operas- curabunt
ne qui<d> per iniuriam contra perpe-
tuam formam a vobis exigatur.
Et alia manu: Scripsi. Recognovi.
10 Exemplum epistulae proc(uratoris) e(gregii) v(iri):
Tussanius Aristo et Chrysanthus
Andronico suo salutem. Secundum
sacram subscriptionem domini n(ostri)
sanctissimi imp(eratoris), quam ad libellum
15 suum datam Lurios Lucullus [accepit],
---col. IV 16-21: versus erasi---
[Et alii]-
a manu: [Opt]imus te feli-
cissimum be[ne] vive[re]. Vale. Dat(a)
pr(idie) idus Sept(embres) Karthagin(e).
25 Feliciter
consummata et dedicata
idibus M[ai]i<i>s Aureliano et Corne-
lian[o] co(n)s(ulibus), cura agente
C. Iulio P[ro]clope Salaputi mag(istro).

APPENDIX TWO

TRANSLATIONS OF THE EPIGRAPHICAL EVIDENCE FOR THE MANAGEMENT AFRICAN IMPERIAL ESTATES

This appendix contains translations of the inscriptions found in Appendix One. The translations are based on those of: Dennis Kehoe, "Lease Regulations for Imperial Estates in North Africa," Zeitschrift fur Papyrologie und Epigraphik 56 (1984): 193-219 and 59 (1985): 151-72; J.J. Van Nostrand, "The Imperial Domains of Africa Proconsularis: an Epigraphic Study," University of California Publications in History 14 (1925): 1-88; and Naptali Lewis and Meyer Rheinhold, edd. and comm., Roman Civilization: Selected Readings, Vol. II The Empire (New York: Columbia University Press, 1966), pp.178-184.

1. The HENCHIR METTICH INSCRIPTION (C.I.L., VIII, 25,902)

For the safety of our Augustus Emperor Caesar Trajan Princeps optimus Germanicus Parthicus and of all the sacred family.

Presented by Licinius Maximus and Felicior, freedmen of Augustus, procurators, according to the example of the law of Mancian.

Those of them who shall live [within] the estate of Villa Magna Variana, that is, of Mappalia Siga, are permitted to bring under cultivation those fields that are classified as unused, in accordance with the law of Mancian, under the condition that whoever brings the land under cultivation have provisional title. Tenants shall be

obliged to furnish shares, in accordance with the law of Mancian, from the crops that will be raised in that place, to the landlords or lessees or baliffs of this estate, under the following terms: they shall give to the lessees or baliffs of this estate their own estimate of the total yield of every kind of crop which they must bring to the threshing floor and thresh; and if the lessees or baliffs of this estate announce that they will give the tenants their tenant's share in full, the tenants shall pledge in writing [within three days] the total amount they are obliged to give to the lessees and baliffs of this [estate,] and the [tenants] shall be obliged to furnish their tenant's share.

Those who [have] or will have farmsteads *which are property of the landlord*¹ in the estate of Villa Magna Variana, or Mappalia Siga, will be obliged to furnish the total shares of crops and vines they have, in accordance with the customary Mancian practice, to the landlords of this estate or the lessees or the baliffs: one third of the wheat from the threshing floor, one third of the barley from the threshing floor, one fourth of the beans from the threshing floor, one third of the wine from the vat, one third of the oil from the press, one sextarius of honey from each hive. Anyone who has more than five hives when the honey shall be gathered shall be obliged to give the landlords or lessees or baliffs a one fifth [share] in total. If anyone shall have transferred hives, swarms, bees, or honey-[jars] from the estate of Villa Magna Variana, or Mappalia Siga, to *land where the share is one-eighth*², (that is, off the estate) with the intent to defraud as much as possible either the landlords or lessees or baliffs, the hives,

swarms, bees, honey-jars and the honey in them shall all belong to the lessees or baliffs of the estate.

In the case of fig trees [of this estate] that stand outside the orchard, if that orchard [be on] the farmstead itself and does not extend more than an [iugerum], the tenant shall be obliged to give the lessee or baliff of this estate a one third share of the [picked fruit] at his own estimate.

The old fig and olive groves which [were planted] before [this regulation] (was published) shall be obliged to furnish to the lessee or baliffs of this estate their share according to customary practice.

If any fig grove shall have been planted after this time, he who shall have planted it shall be allowed to dispose of the fruit of that fig grove at his own pleasure for five consecutive harvests, but after the fifth harvest he will be obliged to furnish to the lessees or baliffs of this estate (the amount fixed by) this law, which is written above.

Permission is given to plant and cultivate new vines in place of old on the following condition: he who shall have planted them shall dispose at his own pleasure of the fruit of these vines from that planting for the next five harvests, but after the fifth harvest from vines thus planted they shall be obliged to give to the lessees or baliffs of this estate a one third share of the crop in accordance with the law of Mancian.

Permission is given to plant and to cultivate an olive grove in that place where someone has brought uncultivated land under cultivation on the following condition: that for ten consecutive

harvests after the planting he shall be permitted to dispose at his pleasure of the crop of the grove thus planted, but after the tenth crop, he shall be obliged to give a one third share of the pressed oil to the lessees or baliffs of [this estate].

Those who shall graft wild olives shall be obliged to furnish a one third share after the fifth [harvest].

Whatever [grass fields] are or will be in the estate of Villa Magna Variana, [or] Mappalia Siga, besides [those] fields which have vetches, the products of those fields [should be given] to the lessees or baliff.

They are required to provide watchmen for the animals which are pastured within the estate of Villa Magna, that is, Mappalia Siga: they shall be obliged to pay four asses for each animal to the lessees or baliffs of the landlords of this estate.

If anyone from the estate of Villa Magna, or Mappalia Siga cuts or chops out or carries out or carries away or burns up or cuts down crops, whether standing or hanging, ripe or unripe, it will be the duty of the tenant to furnish the loss for the next two years to the lessees or the baliffs; to him (the tenant) on whom he [will have inflicted] the loss, he will be obliged to pay [the equivalent to the loss].

[Whoever in the estate of Villa Magna Variana] or Mappalia Siga have or will have sown [figs, olives or vines, it is permitted to them] to bequeath [these to heirs] who [have been or will have been born] from legitimate [marriages]. [If any] surfaces of land [after] this time have been or will be given [by right of] pledge or security in accordance with the law of Mancias, the right of security will be

maintained [for the heirs] in accordance with the law of Mancian.

If anyone has brought or shall bring under cultivation land hitherto uncultivated, [whether or not] he has built or shall build a building thereon, then he who [shall cultivate] (there), [if] he shall have ceased or shall cease cultivating the right of cultivation which belonged or shall belong to the cultivator is and shall be preserved for the two years succeeding the day on which he ceased cultivation, (and) after the second year the lessee or baliffs (shall cultivate them). As to that piece of land which was cultivated in the previous year, and ceases to be cultivated, the lessee or baliff of that estate shall report to the men whose property this land is said to be that the land must be cultivated. If, after this report, the man continues to delay, and likewise in the following year he persists, after the second year the lessee or baliff of this estate shall cultivate the land with no right of redress.

Let no lessee or baliff order any of [their] *inquilini*^s of [this] estate to owe more than two days work. The tenants who shall live within the estate Villa Magna, [or] Mappalia Siga, shall be [obliged to furnish] to the landlords or lessees [or baliffs] in total per year, per [man], two days' work at the [plow], two days' work at the harvest, and at each sort of cultivating one days' work, making two days' work total.

The *coloni inquilini*^s of this estate should submit their names, [before the eve of the first day of each] year to the lessees [or the baliffs] for single days of guard duty, [which they are obliged to furnish in the fields,] each day of guard duty reckoned seperately...

The *stipendiarii*³, [who live within the estate of Villa Magna, or] Mappalia Siga, should give their names for guard duty, which they are obliged to give, to the lessees or bailiffs of this estate. Slaves of the landlord of the estate... guard duty...

1. See Chapter Four, pp.213-14 and n. 116 on the meaning of this.
2. See Chapter Four, P.223 and nn. 87-88.
3. Due to the difficulties surrounding the interpretation of these words, it has been thought best to leave them untranslated. See Chapter Four, pp.232-34 and nn.151-57 for a discussion of their possible meanings.

2. The Ain-el-Djemala Inscription (C.I.L., VIII, 25,943)

...we ask you, procurators, [through] your foresight, which you exercise in the [name] of Caesar, to have regard for us, and for his advantage [and] to grant to us [those fields] which are in marsh- and forestlands, to be set up with olive orchards and vineyards in accordance with the law of Mancian, under the terms of the [Neronian] estate neighbouring us.

... ordered.

The commentary of the procurators of the emperor Caesar Hadrian Augustus: Since our Caesar, in his untiring care with which he assiduously watches over the interests of humanity, has ordered that all parts of the land which are suitable for olives or vines as well as grain be cultivated, therefore, with permission by his providence, the

authority accrues to everyone to occupy even those parts which are in the leased out centuries of the estate of Blandus and Udens and in those parts which have been joined to the Tuzzritan estate from the Lamian and Domitian estate, and are not being worked by the lessees... to those who have occupied them that right of possession and enjoyment and bequest is given, which is included in the law of Hadrian concerning vacant lands and those which have been uncultivated for ten consecutive years.

Nor [will anyone] from the estate of Blandus and Udens [be obliged to give] to the lessees greater shares of [gathered] crops than Mancian shares, [but whoever] will have occupied those places neglected by the lessees will give one third shares of his crops, which are customarily [given]. Also from those regions which have been joined to the Tuzzritan estate from the Lamian and Domitian [estate], he will give [the same amount]. From the olive trees which anyone sets out or grafts onto wild olives no [part] of the crop obtained will be exacted for the next ten years; nor of fruits for the next seven years, nor shall fruits at any time be subject to division other than those which are sold by the possessors. Whatever dry shares of crops each person will be obliged to give, he will be obliged to give them for the next five years to that person, in whose lease he will have occupied the field, after that time to the general account.

[E]larinus and Doryphorus send greetings to Primigenius. Please

take notice of a copy of a letter written to us by Tutilius Pudens, of equestrian rank, and publish what is attached below in the most public places. Verridius Bassus and Ianuarius send greetings to Martialis. If any fields are unused or vacant, [or if there are any fields] in forest- or marshland in that estate, [you should not prohibit] those who wish [to bring those fields under cultivation] in accordance with the law of Mancian.

3. The Souk-el-Khmis Inscription (C.I.L., VIII, 10,570)

[... the collusion your procurator] has practised without limit, not only with our adversary Allius Maximus, but with practically all the lessees, in violation of right and to the detriment of your treasury, with the result that he has not only for the last many years refrained from investigating our applications and representations and supplications to your divine order, but has even yielded to the wiles of this Allius Maximus, the lessee, to the point of sending troops into the said estate of Burunitanus and ordering some of us to be arrested and tortured, others put in irons, and some -even Roman citizens- beaten with clubs and sticks, when in fact all we did to deserve this was that, faced with [injury] that was, in proportion to our [insignificance], so grave and manifest, we had written a [frank] letter, imploring your majesty (for aid). The evidence of our injury, Caesar, can [surely] be gauged from the fact that...

[... which] forces us, the most miserable of men, to again beg [your] divine providence, and we thus ask, most sacred emperor, that you help us. Since by the section of the law of Hadrian, which is cited above, even the procurators and not just the lessees, are deprived of the right of increasing crop shares or the labour or animals to be furnished, so let them be deprived of that right, and that, as the procurators' commentaries in your archives of the Carthaginian district have it, let us owe no more than two days of ploughing, two of harvesting, and two of cultivating; and let there be no dispute, inasmuch as these have been inscribed in bronze and observed as established practice down to the present by absolutely all our neighbours everywhere, and in the same way confirmed by the procurators' commentaries, which were mentioned above. Help us, poor peasants, men who earn their daily bread with their own hands, who, in our relations with your procurator, are no match for the lessee, who stands very high in their favour because of his lavish gifts and is well known to each of them in succession by virtue of the lease, take pity on us and deign to instruct by your sacred order that we are to give no more than we are obligated to by the law of Hadrian and the procurators' commentaries, that is thrice two days works, so that by the benefaction of your majesty your peasants, born and bred on your own estates, may be harrassed by the lessees of imperial land no more.

[Emperor] Caesar M. Aurelius Commodus Antoninus Augustus Sarmaticus Germanicus, to Lurius Lucullus and others. Procurators will, in view of the law and my orders, take care that no more than thrice two days of work be required of you, lest there be an injustice in violation of established practice.

And in another hand: I have written. I have certified.

A copy of the commentaries of the procurators, of equestrian rank, Tussanius Aristo and Chrysanthus, to their Andronicus, greetings. According to the sacred rescript of our master the most sacred emperor, which rescript to their report Lurius Lucullus [sent]...

In another hand: We wish you all the best. Farewell. Written the day before the Ides of September, at Carthage.

Happily completed and dedicated the Ides of May, in the consulship of Aurelianus and Cornelianus, under the supervision of Caius Iulius Pelops Salaputis, magistrate.

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ABSTRACT

The subject of this thesis is the organisation of agricultural production in the Roman province of *Africa proconsularis* (modern Tunisia) during the early part of the imperial era. It seeks to reveal how farming in this agriculturally important province was run, and particularly to what degree it was the product of Roman methods. To do this it examines the major aspects of agricultural organisation, including landownership, farm management and rural labour.

The first chapter examines the evidence for agriculture in North Africa in the pre-Roman period. It shows that, despite the presence of Carthage, agriculture was very much a native African affair. Carthage created a small zone of intensive farming around that city, employing slavery to some extent. Across the rest of what was to become *Africa proconsularis* agricultural practice continued to be conditioned by the fact that society remained tribally organised; and the change from this was not complete even in the zone around Carthage.

The second chapter discusses the possible changes to this situation caused by the imposition of Roman rule. These turn out to have been surprisingly few. The possible major agents of agrarian change include immigration of Italian farmers, a Roman technological superiority in farming, the introduction of agricultural slavery such as was common in Italy and the widely accepted destruction of the nomadic pastoralist way of life of much of pre-Roman Africa's

population. In fact, immigration never came close to diluting the native population of the countryside, the Romans had no technological superiority, slavery does not appear to have been introduced on a large scale and there is considerable evidence for the continuation of nomadic herding. All these indicate that farming in the Roman period was probably not all that different from earlier times.

The third and fourth chapters investigate this hypothesis. Their chief conclusion is that agriculture was most romanized at the upper levels of organisation, though incomplete even here, and much less so further down. Thus, Chapter Three shows that the imperial government's attempts at directing agriculture created a purely Roman system of administrative districts and a bureaucracy to run it, but that all this concerned only lands owned by the emperor. All the rest of African farming was left unregulated. Cities grew up and created 'villa economies' around themselves, but over only a small area. Landowning patterns did come to reflect Italian conditions, in that much land was owned by the rich and was accumulated into huge estates. Yet small landowning persisted and it reflected native concepts of land tenure. And even on the large estates, the methods of farm management reveal aspects of native African practices.

This is most clear in Chapter Four, which covers the one well documented group of estates, the imperial *saltus* of the *Bagradas* area. These estates were managed by a complex system in which estates were supervised by very Roman *procuratores*, and leased in Italian fashion to large-scale tenants, but which were actually farmed by 'sub-tenants' who were quite un-Roman in that they possessed rights such as permanent

hold on their land and the ability to bequeath it - rights that in fact are best explained as manifestations of tribal concepts of land tenure. The system was thus a mixture of Roman and non-Roman elements.

The thesis concludes that the organisation of agriculture in *Africa proconsularis* remained non-Romanized to a large degree, and based on native African, tribal agricultural practice. The main contribution of Rome was to add Roman expertise in the upper levels of organization, while leaving actual production more or less African.



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STOOL MEASURE 25% AT REDUCTION

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