M E A T   M A N A G E M E N T
IN THE UNITED KINGDOM, AUSTRALIA, NEW-ZEALAND AND ARGENTINA.

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INTRODUCTION

The present symposium is a sequel to "The World Future of Meat After the Transition Period", published in September, 1945. Following up the broader aspects of meat management problems outlined in that paper, this contribution proposes to summarize management practices in the foremost meat trading countries of the world. This will illustrate the problems and principles brought out in the general study.

Wartime management and recent trends have been emphasized in this report, especially when dealing with British Empire countries. An exception has been made in the case of Argentina, in devoting considerable space to prewar developments, on the assumption that the reader may be less familiar with conditions in that country. Barring this deviation, the subject has been generally treated along the same main lines: A chapter on "general considerations" informs on the importance of the livestock industry in the country under discussion and presents the broad setting for management problems; a second chapter describes the specific problems and the last chapter deals with postwar developments and probable future trends.

It is hoped that this contribution may prove useful at least in two respects: as a source of reference on meat management practices in the world's most important meat trading countries, and as an illustration of how world meat production has expanded in recent years. Together with the general study, it underlines the need for better nutrition throughout the world and for more ample opportunities to move meat from surplus to deficit areas.

BRITISH LIVESTOCK AND MEAT POLICY

I. General Considerations

Importance of meat in the British diet

Civilian meat consumption in the United Kingdom before World War II was relatively high. During 1930-34, about 140 pounds of meat were consumed yearly per head of the population,- a level considerably higher than the 119 pounds recommended by the Hot Springs Conference for prosperous nations. Furthermore, the latter figure includes fish and poultry, whereas the former does not.

Owing to wartime shipping scarcity, which affected both domestic output by way of a shortage of imported feedstuffs and direct imports of meat, prewar meat consumption levels could not be continued during the war years.

Changes in consumption from prewar (1934-38) weekly levels during the war years were as follows:

Table 1.- Meat and Meat Products: Civilian consumption per head per week, 1934-38 and annual 1940 to 1943, in the United Kingdom.

Commodity	1934-38	1940	1941	1942	1943
	oz.	oz.	oz.	oz.	oz.
Fresh meat	30.4	29.2	24.0	23.0	22.2
Bacon and ham	8.4	6.2	5.9	6.0	5.8
Canned meat	0.9	0.3	0.7	2.3	2.4

Source: "The Farmer and Stockbreeder", Dec. 5, 1944.

A special joint committee set up by the Combined Food Board of the United States, Canada and the United Kingdom, found that by 1943, the yearly quantity of meats in terms of carcase equivalent moving into civilian consumption was only 107.3 pounds in Britain, compared with 136.4 pounds before the war. This represented a decrease of 21 per cent, whereas supplies in the United States increased by 5 and those in Canada by 12 per cent above pre-war.

When the edible weight equivalent of poultry, game and fish, representing 18.8 pounds in 1943, is added to the 107.3 pounds of other meat, a total supply of 126.1 pounds is obtained as the average per capita meat, poultry, game and fish directed into civilian consumption channels during 1943 in the United Kingdom.1/

Taking into consideration the vulnerable position of Britain's livestock industry during the war and the difficult shipping situation, the fact that more meat, poultry, game and fish could be assured for civilian consumers than the quantity recommended by the Hot Springs Conference for prosperous nations, makes British wartime food management in respect to meat a definite success. It is the purpose of this report to examine the problems which confronted the planners of British meat policy and to survey the methods used to attain the aims pursued.

<u>Wartime meat supply problems</u>

Before the war, meat was the backbone of British diet, therefore it is understandable that the Government of the United Kingdom should have made special efforts during World War II to ensure a satisfactory supply of meat for the civilian population.

According to the Combined Food Board report, before the war 16.7

1/ "Food Consumption Levels in Canada, the United Kingdom and the United States", Report of a Special Joint Committee set up by the Combined Food Board, 1944.

per cent of the total energy value of the average British diet as expressed in terms of calories, was derived from meats. In Canada, only 12.9 per cent and in the United States 12.8 per cent of the total calorie intake was supplied by meat. As a consequence of wartime shifts, these proportions were reversed by 1943. During that year, energy derived from meat represented 14.1 per cent of total calorie intake in the United States, 13.9 per cent in Canada and 12.8 per cent in the United Kingdom.

The preoccupation of ensuring meat supplies at high per caput levels for the numerous armed forces of various nations based on the British Isles, in addition to civilian needs, made the task of planners in food management doubly difficult. Even in normal times, when armed forces and refugees from abroad do not add their needs to those of the standing population, only about one half of domestic meat needs is covered from local resources. Thus in 1924, out of a total annual meat consumption of 127 pounds per head, 67 pounds were imported from abroad, mainly from overseas countries.

Entirely apart from difficulties connected with imports of meat, serious handicaps arose in connection with maintaining domestic meat production. Livestock industry in Britain could not continue its pre-war output without considerable import of feedstuffs.

Available data concerning imports of certain groups of animal feeding stuffs show that supplies from abroad in these commodities declined steadily as the war progressed. By 1943 feed imports were whittled down to negligible quantities.

Table 2.- Feedstuffs: Imports into Britain, 1934-38 and annual 1940 to 1943.

Commodity	1934-38	1940	1941	1942	1943	1944
	-- long tons,	thousands i.e. 000 omitted --				
Grains and pulses (including rice)	1,524	1,095	514	164	257	137
Corn and cornmeal	3,395	2,192	702	135	66	118
Other livestockfeed	1,719	1,058	325	74	12	98

1/ "The Farmer and Stockbreeder, Dec. 5, 1944.

Hand in hand with this decrease in imported feed went a reduction of the domestic area under pasture. In order to provide more food per acre, even if this food was low in protective qualities, a policy was pursued during the war years which encouraged the breaking up of grassland with a view to obtaining more bread grains, potatoes and other "direct food crops". As a consequence, the area of land under the plow increased from 12.9 million acres in 1939 to 19.4 million acres in 1944 and at the same time, permanent grassland decreased from 18.8 to 11.7 million acres,- a loss of over 7 million acres.

Wartime adjustments in production

Obviously, this curtailment of local grass and imported feed called for a drastic revision of the country's livestock industry. In effecting the necessary changes, it was considered desirable to maintain the number of milk cows at a high level, in order to ensure indispensable supplies of fluid milk for children and other users whose development or health would be impaired if they had to dispense with it.

Accordingly, cattle numbers were maintained and even slightly increased throughout the war years, whereas hogs, sheep and poultry suffered considerable decline.

Table 3.- Livestock: Numbers in the United Kingdom annual 1939 to 1944, according to midyear census.

Year	Cattle	Sheep	Swine	Poultry
	- million	head	-	
1939	8.9	26.9	4.4	74.4
1940	9.1	26.3	4.1	71.2
1941	8.9	22.3	2.6	62.1
1942	9.1	21.5	2.1	57.8
1943	9.3	20.4	1.8	50.7
1944	9.5	20.3	1.9	55.2

Source: "The Farmer and Stockbreeder", Dec. 5, 1944.

Wartime imports of meat and meat products Meat imports were relatively well maintained throughout the war years; those of canned meat even increased sensibly due to the economy of cargo space. It must not be forgotten, however, that a very substantial part of this import was not for civilian consumption.

Table 4.- Meat and Meat Products: Imports into the United Kingdom, 1934-38 and annual 1940 to 1944.

	1934-38	1940	1941	1942	1943	1944
	- Long tons, thousands i.e. 000 omitted -					
Meat (incl.bacon)	1,423	1,298	1,203	1,301	1,358	1,546
Canned meat	63	116	230	282	300	214

Source: "The Farmer and Stockbreeder", Dec.5, 1944.
1944: "Modern Meat Marketing", Sept. 1945.

Wartime food management in general The curtailment of domestic meat production and the need to supply millions of additional wartime consumers has necessitated a complete recasting of the entire system of food management in Britain. It became obvious at the very outset that if certain kinds of food were going to be in short supply they must be replaced by others, if possible, and the available quantity must be so distributed that it would ensure a fair share for everybody. Thus, a summary description of the aims and methods of British overall food management during World War II forms an integral part of any discussion of single commodities or groups of commodities.

Wartime controls, in contrast with peacetime policy, were not merely aimed at assisting agriculture directly or indirectly. They were part of an administrative program, aimed at securing an adequate diet for everyone at all times, in accordance with needs and means of consumers, and for ensuring that foods in short supply are equitably distributed.

The ramifications of this policy comprise various aspects:

1. A social order which will ensure employment and resulting purchasing power to everyone. This phase of wartime organization lies outside the scope of the present paper and will not be dealt with here.

2. A nutritional consideration, aimed at securing the necessary diet for all but especially for war workers, a diet based on modern concepts, calculated to facilitate that development of energetic effort which is particularly important for success in a major war.

3. A production system geared not only to obtain a maximum output of nutrients from the land, but also to maintain the indispensable production of bulky protective foods whose importation from abroad would

unnecessarily tax available limited shipping facilities.

4. An import policy based on expediency in utilizing cargo space and complementing domestic production.

5. A distribution plan which takes into consideration the limited supplies of certain products available for consumption at a time when purchasing power is enhanced. This involves the establishment of a rationing system and price control.

(1) As mentioned before, the social policy underlying wartime controls cannot be discussed in this paper.

(2) Planning of supplies on the basis of nutritional needs was the responsibility of the Ministry of Food during the war. This planning began with forward estimates of home production, taking into consideration estimates of possible imports obtainable under allocations by the Combined Food Board of the United Nations. The program thus obtained was examined from the point of view of shipping and all the above factors having been considered, dietetic needs decided the final supply pattern. These needs were examined and analyzed from the viewpoint of calorie, protein, mineral and vitamin requirements with due consideration of palatability and consumers' food habits.

In this connection, it is probably necessary to emphasize the prominent place given fluid milk in planning British wartime food supplies. Although the overall agricultural production policy called for crops which give a great deal of feed per acre at the expense of meat and livestock products, fluid milk was exempted and given absolute priority over everything else: dairy herds had to be maintained before everything. As a consequence, milk became available to groups that most needed it and had not always been able to get it before the war.

(3) The general aim of the British Government in World War II was to obtain increased food from the land by the following methods:

Converting grassland to tillage and bringing derelict land into cultivation,- a procedure which resulted in less grass being available for cattle, since the acreage of cultivated grasses did not increase materially;

increasing the productivity of existing cultivated land;

emphasizing the production of milk and feeding stuffs,- which led to a virtually complete replacement of imported feeding stuffs by home grown;

increasing the production on all farms, with priority for the supply of milk and then for the supply of food for direct human consumption (like wheat, potatoes, vegetables). This phase of the wartime production system resulted in a 70 per cent increase in food obtained from the soil of the United Kingdom, as measured in calories. This takes account of the replacement of imported feeding stuffs by home grown and thus has direct reference to livestock and meat.

These goals were fostered by a series of measures of technical and economic character. A full discussion of these is outside the scope of the present paper, but it may be useful to review the economic aspect in passing. Measures falling into this category have been largely responsible for directing production into the channels required by nutritional and other considerations.

Control of prices paid to farmers and subsidies were the principal tools of this policy. The prices of agricultural products were fixed by the Ministry of Agriculture and the Ministry of Food for each season, and the farmers were guaranteed their markets for the duration of the war and a year thereafter. Later this guarantee was extended until the summer of 1948. This price fixing afforded security and a reasonable income to farmers. It both helped to increase production and ensured production of those commodities which the Government required. It further encouraged production and marketing at the time of the year when a given product was particularly needed, and finally discouraged wasteful forms of production. Certain branches of livestock production were particularly affected by this latter tendency. Thus, production of early fat lamb and highly finished fat cattle, which use imported feed or grains that would give more energy value if consumed directly, was discouraged; the Government ceased to offer the special prices these products commanded in peacetime. During the war, all fatstock was purchased directly or indirectly by the Government. Official price fixation became, therefore, the determing factor in regulating production.

Subsidies were not directly paid to farmers, except for some minor projects, such as the hill cattle and sheep schemes, but major payments were merged with the Government's general subsidies in aid of stabilizing the cost of living. In this manner, they became part and parcel of the final price paid to farmers for their various products by the Government.[1/]

[1/] The total cost of subsidies paid on livestock and livestock products by the Government will be shown later.

(4) The control of imports forming as it does a part of the general scheme of supply control, was in the hands of the Ministry of Food throughout the war years. Almost all food imports were purchased by the Ministry or obtained under Lend-Lease. In the particular case of meat, all imported meat was Ministry property until it reached the retail butcher.

(5) The Ministry of Food was in complete charge of consumption policy during the war years. This embodied a regime of maximum retail food prices, of equal shares of food in short supply and of constantly available supplies of unrationed "filler" foods like bread and potatoes.

So far as rationed foods were concerned the demand, both individual and total, was strictly limited by the ration, so that prices ceased to be the balancing factor between demand and supply. This applied to meat and meat products to a large extent.

This system, combined with the Government's social (general wage) and price policy meant that

- the individual and the national demand for certain foods was limited, controlled and predictable. This was true in the case of meat, in particular.

- the total demand for food only varied within narrow limits and was closely predictable;

- the effective demand for particular foods could be modified much more readily than in peacetime through price control, propaganda and diversion to special uses.

The above conditions provided essential prerequisites for a just and equitable wartime food distribution policy based upon considerations of social justice and overall efficiency for carrying on the war effort.

These principles were implemented by a general distribution technique whose main features may be summarized as follows:

- adjustments in agricultural policy and marketing machine designed to ensure the necessary stocks and supplies for the Ministry of Food in view of meeting the controlled demand of consumers. (This aspect of overall planning may be illustrated with regard to livestock and meat by the fact that seasonal changes in fat cattle prices were determined as much by available cold storage space for imported meat as by seasonal variations in home production);

- ability to control the movement from farms and the utilization of most farm products, in order to ensure equal supplies in rural and urban districts and to all classes of the population;

- an undertaking to buy everything the farmer produces, (with certain minor exceptions).

II. Features of Wartime Livestock and Meat Policy

Production policies Domestic production goals were set by the Ministry of Agriculture after consultation with the Ministry of Food. The production program was closely integrated with the system of rationing and with procurement from abroad. All meat, domestic or imported, was acquired by the Ministry of Food as the sole purchaser.

The Ministry of Food, in January, 1940, replaced the established system of livestock auctioning by a system of purchase at fixed prices, according to grade.

The purchase of livestock at fixed prices has enabled the authorities to direct production along the desired lines. Thus in 1940 and 1941 pig and poultry prices were adjusted to encourage producers to cull their stock. Prices were readjusted in 1941 when no further reductions were desired.

The quantity of shipping available during the war imposed severe limitations upon feed imports. Hence an especially radical curtailment of swine and poultry production became necessary, since these two lines of production are largely dependent upon the use of grain. (See table 3.) This regulation of production aims was greatly facilitated by rationing of feeding stuffs.

Import policy As regards imports, during the two years 1934 and 1935, about 51 per cent of the meat consumed in the United Kingdom, including bacon, came from abroad.1/ In order to achieve maximum nutrition in spite of limited shipping space, the Ministry of Food endeavoured to concentrate loadings on products high in protein and energy value per unit of shipping space. This involved switching, to a large extent, from carcase to boneless, compressed and canned meat. The increase in the density of imports was progressively applied with such success that despite shipping losses, considerably more first quality protein was

1/"Wartime Food Management in the United Kingdom", Br. Ministry of Food, FAO Interim Commission Subcom. on Food Management, Misc.Publ.4, Aug. 19, 1944, p.3.

imported than before the war. Meat imports were well maintained even in volume (See table 4.) throughout the war years. When their concentrated nature is taken into consideration, they represented more proteins than had been contained in prewar imports.

In the case of livestock and meat including bacon, the Ministry of Food was the sole importer. Being a central agency, the Ministry of Food was in a favourable position to conclude large contracts with overseas governments and producers. In some cases these arrangements, designated as "bulk purchase contracts" secured British control of the entire exportable meat and bacon surplus of certain countries for periods extending beyond the duration of the war.

By midsummer 1945, Britain had secured for herself the entire meat surplus of New Zealand and Australia up to June 30, 1948, and concluded bulk purchase agreements with Canada for a minimum of 450 million pounds of pork and bacon and 60 million pounds of beef. Negotiations with Argentina for acquiring almost the entire beef surplus of that country up to 1948 were reported late in August 1945 to have resulted in an agreement covering meat valued at between £150 and £200 million.

The actual handling of meat and bacon imports during the war was left in the case of associations of prewar importers. These acted as agents of the Ministry up to the time when the commodities passed out of the Ministry ownership,- i.e. on sale to primary wholesalers. Meat was an exception in this respect, as it remained property of the Ministry until it had reached the retailer. Associations were retributed by the

Ministry either in the form of block annual grants or on the basis of actual services.

Beginning from 1942, when Axis domination of Europe and Japanese conquest in Asia imperiled world supplies, independent purchasing by the Food Ministry became impossible. Existing food surpluses had to be shared by the Allied nations on an equitable basis. In order to bring about such a just allocation, a "Combined Food Board" was set up by the United Kingdom, Canada and the United States. This Board had authority to determine the United Kingdom's share in world meat supplies; once this share was established, the Food Ministry took charge of its importation. In addition to its national function, the British Food Ministry became the Combined Food Board's agent for purchasing meat for the United Nations in South America.

Fixing prices to producers

As already mentioned, Government price fixing was the principal means of directing livestock production during the war years.

Fixed prices for livestock were adjusted in accordance with normal seasonal trends. Announcement had been made each season of the prices which would rule or the increases which had been granted. The following table shows prices for certain grades at the end of June each year.

Table 5.- Livestock. Prices at the end of June in Britain, 1940-1945.

CATTLE - Home bred steers and heifers -

Year	Grade	Killing-out percentage	Price per live cwt. :
			s. d.
1940	Special	60 & over	68 6
1941	A ±	58 & over	72-0
1942	A ±	57 & over	76 6
1943	Special	58 & over	79 6
1944	Special	58 & over	80 6
1945 1/	Special	59 & over	82 0

FAT LAMBS -

Year	Grade	Price per lb.
		d.
1940	-	14
1941	1st	15½
1942	1st	16¾
1943	1st	17
1944	1st	17
1945 2/	1st	18¾

PIGS -

Year	Grade	Price per score 3/ deadweight
		s. d.
1940	Up to 9 score 3/	19 0
1941	8 sc. 1 lb. to 9 sc.	19 6
1942	6 sc. 11 lb. - 11 sc.	24 0
1943	6 sc. 11 lb. - 12 sc.	24 0
1944	6 sc. 11 lb. - 12 sc.	24 0
1945	6 sc. 11 lb. - 12 sc.	24 0

1/ In addition a quality premium of 2/6 per live wt. will be paid on steers and cow heifers weighing 9 cwt. or 13 cwt. net live weight and to heifers weighing 8½ cwt. to 12½ cwt. net live weight, with a killing-out percentage of 55% and over.

2/ In addition a headage payment will be made of from 1/6 to 2/6 per head, depending on carcase weight.

3/ "Score" is a measure of weight. According to Webster's Dictionary, it is equivalent to 20 (or 21) lb.

In addition to price inducements, some straight, specific subsidies were paid to encourage certain branches of livestock production. Thus, special assistance during the war was granted to hill farmers for pasture improvement and the home breeding of sheep and store cattle. This scheme became general in Britain at the end of December, 1942, with the payment of a subsidy of £3 a head to raisers of hill cattle. Previously, the principle had been operated only in Scotland, where hill sheep farmers had also been given a subsidy of 8/- a head for breeding ewes. The 1945 hill cattle subsidy scheme makes provision for the payments of £4.10 a head for cows and £2.10 a head for bullocks and heifers.

<u>Channels and methods of procurement</u>

In the case of livestock, bacon hogs are handled separately from "fatstock", a designation which includes cattle and sheep. Meat is again treated differently.

Bacon pigs: The Ministry of Food was sole buyer in the domestic market during the war, under authority of the Pigs Marketing Scheme, which replaced after early 1940 the suspended Bacon Marketing Scheme. Private slaughter of hogs was prohibited in January, 1940. Since that time, farmers were required to register 12 days ahead of the date when they wished to ship pigs. If approved, the nearest Government Collecting Center would receive the pigs on the appointed date and pay the fixed price according to grade. The Ministry of Food also maintained "Area Pig Allocation Officers" throughout the country who allocated the hogs thus received to bacon factories.

The Ministry of Food as sole purchaser normally accepted all pigs offered by farmers, subject to at least 12 days notice of delivery. Pigs were either consigned direct from farm to factory or sent to a Government Collecting Center, the Ministry designating in either case the factories to which they went. Special arrangements were made for "emergency slaughter".

During the war years, grading had been suspended as emphasis was on volume rather than quality. Suitability for curing or manufacturing was the main consideration. The highest prices applied to a wide weight range of from 131 to 240 lb., as compared with 140 to 170 lb. prewar.

Pigs delivered through collecting centers were paid for through County Chairmen of Auctioneers on behalf of the Food Ministry.
This provision made it partly possible to auctioneers who as a class had been the foremost pig marketing agents before the war, to stay in business. Pigs directly delivered to factories through Area Pig Allocation Officers, were paid for by bacon curers on behalf of the Ministry. In both cases, suppliers received payment within 3 to 10 days.

With the decline in pig production owing to reduced availability of feed, curing factories became too numerous for the available pig supply. Even before the war, curing establishments had been working at not more than 58 per cent of capacity and this proportion was further reduced to 44 per cent by July 1942. To save manpower and factory space, a concentration scheme was introduced. Only 169 out of 218 factories remained in operation, representing 77 per cent of total curing capacity. Under the scheme receipts and expenses of operating firms were pooled and the net proceeds were shared among firms within the industry whether working or not.

As a further measure of economy, all pigs of suitable weights were diverted to bacon production and over-weights, sows, boars and stags to manufacturing. Types of curing were reduced to three,[1] in an attempt at securing the maximum quantity of rationable bacon. To facilitate enforcement, the number of cuts that might be cured was also reduced and those which involved extensive removal of meat were excluded from curing.

With regard to administration, the Ministry of Food took over the staff of the prewar Pig Marketing, Bacon Marketing and Bacon Development Boards, which ensured continuity of contact between suppliers and administrators. In order to ascertain the effectiveness of Government controls, quarterly censuses of hogs on properties exceeding one acre were made during the war years. Deliveries of meat for curing and the number and weight of pigs killed for the fresh pork trade and for manufacturing were returned weekly. Pigs killed under licence for producers' household use were tabulated once a month.

The administration of fatstock (cattle and sheep) procurement followed essentially similar lines. Collection was entirely in the hands of Government Collecting Centers, with the only exception of casualties which went directly to Government slaughterhouses. Producers were normally tied to one collecting center, as in the case of pigs, a condition which resulted in no hardship with fixed prices and guaranteed sale. On the contrary, this system ensured a uniform flow of transit, prevented wasteful transport of stock and enabled better control of distribution. The Ministry

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[1] Wiltshire, Ayrshire and Ulster.

of Food was sole buyer as in the case of hogs, but while pigs were bought on an actual dead weight basis, cattle were generally purchased on a live weight basis, supplemented by certifying authorities' estimates of dead weight, and sheep on estimated dead weight.

Grades and prices were specified for some months in advance and definitions of various classes of fatstock were given. The classification and grading of certifying authorities was final.

Whereas pig prices were uniform during any season of the year, cattle prices were subject to seasonal differentiation. This partly reflected variations in production costs but was mainly designed to secure an even flow of fatstock, or at least a seasonal movement that could be complemented by arrivals and stocks of imported meat. In addition to seasonal changes, prices were so adjusted to dressing percentages as to encourage maximum meat production and discourage excessive finish, since in the late stages of fattening animals become less efficient converters of feed.

Prices shown in the following table clearly reflect the effect of this policy.

Table.- 6 Livestock prices in the United Kingdom, about July 1, 1943.

I. In terms of British weights and currency.

A. Home bred steers and heifers per cwt., live weight.

Special	A +	A	A -	B +	B	B -	C +	C
58% & over	57%	56%	55%	54%	53%	52%	51%	50%
			s.	d.				
79 0	77 6	76 0	74 6	73 0	71 6	69 6	60 6	57 6

B. Fat Sheep per lb. dead weight.

Lambs			Light-weight	Heavy-weight		Unthrifty lambs & over-	Unthrifty
1st gr.	2nd Gr.	Sheep	ewes	ewes	Rams	fat sheep	sheep
			d.				
$16\frac{3}{4}$	$14\frac{3}{4}$	$15\frac{1}{4}$	$10\frac{3}{4}$	$9\frac{3}{4}$	$8\frac{3}{4}$	$9\frac{3}{4}$	$8\frac{3}{4}$

C. Fat pigs per score[1/] dead weight.

Up to 5 sc. 4 lb.	5 sc. 5 lb. to 6 sc. 10 lb.	6 sc. 11 lb. to 12 sc. 0 lb.	12 sc. 1 lb. to 13 sc. 0 lb.	13 sc. 1 lb. to 14 sc. 0 lb.	Over 14 score	Stag pigs	Sows
		s.	d.				
21 0	23 0	24 0	22 6	20 0	17 0	13 0	15 0

II. In terms of Canadian weights and currency.

A. Home bred steers and heifers per 100 lb. live weight.

Special	A +	A	A -	B +	B	B -	C +	C
58% & over	57%	56%	55%	54%	53%	52%	51%	50%
			$.	c.				
15.70	15.39	15.10	14.79	14.50	14.21	13.80	12.02	11.42

B. Fat sheep per 100 lb. dead weight.

Lambs			Light-weight	Heavy-weight		Unthrifty lambs & over-	Unthrifty
1st gr.	2nd gr.	Sheep	ewes	ewes	Rams	fat sheep	sheep
			$.	c.			
31.39	27.64	28.58	20.15	18.27	16.40	18.27	16.40

C. Fat pigs per 100 lb. dead weight.

Up to 104 lb.	105 lb. to 130 lb.	131 lb. to 240 lb.	241 lb. to 260 lb.	261 lb. to 280 lb.	over 280 lb.	stag pigs	sows
			$.	c.			
23.35	25.60	26.70	25.05	22.25	18.90	14.45	16.70

1/ 1 score equals 20 or 21 lb.

Source: "Farmer and Stock-Breeder", July 6, 1943.

Stock delivered at reception centers was examined by the certifying authority. This comprised a panel consisting of a farmer, a butcher and an auctioneer. District chairmen of auctioneers were furnished returns of previous gradings and were supervised by a staff of inspectors who reported to Headquarters. Payment to farmers was made locally through County Chairmen of Auctioneers, generally within four days, on behalf of the Ministry of Food. Payment for services rendered by auctioneers were made into an Auctioneers' Voluntary Pool. Individual auctioneers' shares in the pool's earnings were determined partly in relation to actual wartime services and partly on the basis of their volume of peacetime sales.

Statistical control of fatstock was somewhat difficult on account of the existence of dual purpose cattle. Quarterly census figures made no distinction between beef and dairy stock, although returns on intentions to fatten or to breed were sought in respect of cattle and sheep. Complete records of sales supplemented by import statistics nevertheless permitted close supervision of the utilization of fatstock.

<u>Channels and methods of distribution</u> The main objectives of the Government's meat distribution policy were to ensure that supplies reached all parts of the country and were distributed equitably, furthermore to bring about maximum economy of manpower and materials. This involved a machinery of technical control including a system of rationing, as well as the fixation of maximum prices at levels which were in keeping with the purchasing power of all classes of the population.

First hand distribution of imported meat was in charge of wartime companies of prewar traders, who acted on behalf of the Ministry of Food.

Bacon was thus handled by the "Bacon Importers' National Defence Association Ltd." (BINDAL) and meat by the "Meat Importers' National Defence Association Ltd." (MINDAL).

Domestic pigs received at collecting centers were routed by the Ministry into consumption channels or to curing factories. As regards livestock received at these centers, the Ministry determined the proportion destined to furnish rations for civilians or for manufacturing edible or non-edible food products. The portion alloted to cover human consumption needs could only be sold directly to the Ministry who undertook the slaughtering and selling of the resulting meat to butchers and meat manufacturers.

After leaving the slaughterhouse or meat factory, wholesale distribution of meat was in the hands of nine associations of prewar wholesale meat traders: one for London, the others covering the rest of the country. These agencies were called "Wholesale Meat Supply Associations". They received home produced meat from Government controlled slaughterhouses and imported meat from MINDAL.

From the Wholesale Meat Supply Associations, meat was distributed at prescribed prices to "Retailers' Buying Committees", a number of which were attached to each Wholesale Meat Supply Association Depot. These buying committees were formed by retail butchers of any given area.

Retailers' Buying Committees maintained their own "Allocation Committees" or a selected allocator, who determined the quantity of meat going to individual butchers. The quantity that each retailer could claim was calculated on the basis of his customers' ration allowances. To this end, every consumer had to register with his grocer or butcher.

This system of tying consumers to a given retail outlet also had distinct advantages in respect of distribution economy. Unnecessary cross-hauls could be avoided and the needs of any given district were met from the nearest available source of supply wherever possible.

Bacon and ham rationing was introduced on January 8, 1940, and meat rationing on March 11 of the same year. The system used was a straight rationing scheme and consumers were required to register with their grocers. The registration method had the advantage over the coupon system that it was not necessary for retailers to waste their time with cutting out coupons and handling them subsequently. Temporary ration books with coupons were provided only for travellers who could redeem these when claiming supplies. In the case of bacon and ham, the ration entitlement was fixed as a given quantity measured by weight per week, whereas in the case of carcase meat the weekly allowance was calculated on a value basis.

Control of retail meat prices became necessary as a corollary of rationing on account of the greatly reduced wartime supply, combined with the increase in civilian purchasing power. In April 1941 the Government announced that retail prices of commodities entering into the composition of the retail price index would be stabilized for the duration of the war. The method adopted in the case of meat and meat products was to fix maximum retail prices at the desired level. In cases when the procurement price, plus an adequate allowance for processing and distribution, was in excess of the intended retail price, a suitable subsidy was injected at the most appropriate stage of distribution.

The cost of subsidies paid by the Government on meat and meat products is not available for every year. In 1943, a total of £23.1 million was paid out in meat subsidies and £1.6 million in bacon subsidies. According to incomplete preliminary figures, the sums paid out on meat in 1944 up to late October totalled about £23 million and on bacon £2 million.

Thanks to these subsidies, the following reductions in retail prices were made possible:

	Actual price s.d.	Unsubsidized price level s.d.
Meat (home killed) per lb.	1 1¾	1 5
" (imported) " "	- 8¾	- 9
Bacon " "	1 10½	1 11

Results obtained in British wartime food management

When assaying the effect of Britain's wartime food policy with regard to meat and meat products, it is very difficult to dissociate this particular group of food from the overall food picture. It is obvious that the success or failure of such a policy cannot be measured in terms of changes in per caput meat consumption, since definite limitations existed throughout the war years which prevented any such increase. But there are some salient facts that offer an excellent measure of the effective operation of British wartime meat management:

Average meat consumption per caput during the war years did not decrease below levels recommended by the Hot Springs Conference for prosperous nations, (as already shown at the outset). There was practically no black market in meat and meat products, and the level of meat imports was well maintained.- Thanks to the operation of subsidies, the maintenance of communal feeding centers and other devices, it was possible even to improve the nation's nutritional status. There was less meat during the war, but what had been available was equitably distributed and the entire wartime diet cost 15 per cent less at prewar prices than the average national diet of 1938.

<u>Post-war livestock and meat policy</u> A long term policy for British agriculture has not been stated as yet and it is not expected that such a policy will be soon forthcoming.

In the meantime, a so-called "Four Year Plan" has been adopted to be effective up to and including the harvest of 1947. This plan was announced in the House of Commons on January 26, 1944. It constitutes a pledge on the part of the Government to maintain stable prices and an assured market for fat cattle, sheep, lambs, calves and fat pigs (as well as for various farm produce).[1/]

This assurance of markets and prices has placed the British livestock industry on a solid foundation for the transition period. It may be regarded as a guarantee for the continuity of production up to 1948, a condition much desired by the British Government on account of the country's unfavourable foreign exchange position which calls for maximum possible domestic food production.

The anxiety to assure ample supplies of meat from local resources is reflected in the Government's 1946-47 production goals. These provide for

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1/ For a more detailed description of this legislation see "Agriculture Abroad", June 1945, p.7.

an increase of 350,000 cattle and calves, 2,400,000 sheep and 870,000 pigs. In terms of food, these increases are calculated to yield 32,000 tons more beef and veal, 12,000 tons more mutton and 88,000 tons more pigmeat.

In order to bring about these increases in production, higher prices have been fixed for 1945 than for previous years. This is especially true in the case of hogs, whose numbers must increase rapidly. (See table 5.) There is also a trend to favour quality production in hogs, which is reflected in the price differential for the weight range particularly suitable for quality bacon manufacturing. The following table gives an idea of the relative price levels in 1945. A direct comparison with the corresponding figures for 1943 in Table 6 is possible only in the case of pigs, whose prices are not subject to seasonal changes.

In conclusion, it might be said that British producers seem to be well satisfied with the continuation of wartime livestock and meat controls during the transition period. These controls have not been relaxed to any appreciable extent since the end of the war; one minor concession has been the restoration of the prewar Bacon Marketing Board, more or less in a mere advisory capacity.

The Bacon and Pigs Marketing Boards have remained in existence but their powers were suspended at the beginning of 1940. In 1944, however, an order was passed permitting meetings of registered bacon producers and allowing the Bacon Marketing Board, with the consent of the Minister of Agriculture, to appoint committees for such purposes as the Board might determine. The Bacon Board at the beginning of 1945 submitted to the

Table 7.- Livestock prices in the United Kingdom, specified dates in 1945.

I. In terms of British weights and currency.

A. Home bred steers and heifers per live cwt.

Period commencing 1945.	Super-special 59% & over 1/	Special 58%	A + 57%	A 56%	A - 55%	B + 54%	B 53%	B - 52%	C + 51%	C 50%
					s. d.					
Oct. 1	76 6	75 0	73 6	72 0	70 6	69 0	67 0	64 6	55 0	52 0
Nov. 12	77 0	75 6	74 0	72 6	71 0	69 6	67 6	65 0	55 6	52 6
" 19	77 6	76 0	74 6	73 0	71 6	70 0	68 0	65 6	56 0	53 0
" 26	78 0	76 6	75 0	73 6	72 0	70 6	68 6	66 0	56 6	53 6
Dec. 3	78 6	77 0	75 6	74 0	72 6	71 0	69 0	66 6	57 0	54 0

B. Sheep: Per lb. estimated dressed carcase weight.

	Lambs 1st gr.	Lambs 2nd gr.	Ram lambs	Sheep 1st.gr.	Light-weight ewes	Heavy-weight ewes	Rams	Unthrifty lambs & over-fat sheep	Unthrifty sheep
					d.				
Oct. 22	17½	14¾	-	16	10¾	9¼	8½	9½	8½
" 29	17¾	15	13¼	16¼	10¾	9¼	8½	9½	8½
Nov. 5	18	15¼	13½	16½	11	9½	8¾	9¾	8¾
" 12	18¼	15½	13½	16¾	11	9½	8¾	9¾	8¾

C. Pigs, per score 2/ dead weight.

Up to 5 sc.4 lb.	5 sc.5 lb. to 6 sc.10 lb.	6 sc.11 lb. to 10 sc.0 lb.	10 sc.1 lb. to 11 sc.0 lb.	11 sc.1 lb. to 12 sc.0 lb.	12 sc.1 lb. to 13 sc.0 lb.	13 sc.1 lb. to 14 sc.0 lb.	Over 14 sc.	Stag pigs	Sows
				s. d.					
22 0	25 0	26 0	25 0 3/	23 0	20 0	17 0	16 0	13 0	15 0

Source: "The Farmers Weekly," London, Oct. 19, 1945. 1/ The Super-spec. gr. will apply only to steers & cow-heifers weighing 9 cwt. to 13 cwt. net live weight & to heifers weighing 8 cwt. to 12 cwt. net live weight (i.e.) gross live weight less 28 lb.). Animals of these classes estimated to kill-out at 59% or over, but falling outside the weight limits quoted, will be graded as special grade animals. 2/ 1 score equals 20 or 21 lb. 3/ Subject to proviso that no pig of 10 sc.1 lb. to 11 sc. shall be paid for at a lower price than that paid for a pig of 10 score.

Part II of this table following page

Table 7.- Continued.

II. In terms of Canadian weights and currency.

A. Home bred steers and heifers per 100 lb. live weight.

Period commencing 1945.	Super-special 59% & over 1/	Special 58%	A + 57%	A 56%	A - 55%	B + 54%	B 53%	B - 52%	C + 51%	C 50%
					$ c.					
Oct. 1	15.20	14.90	14.60	14.30	14.00	13.71	13.31	12.81	10.93	10.33
Nov. 12	15.29	15.00	14.70	14.40	14.11	13.80	13.41	12.91	11.03	10.43
" 19	15.39	15.10	14.79	14.50	14.21	13.90	13.51	13.01	11.12	10.53
" 26	15.49	15.20	14.90	14.60	14.30	14.00	13.60	13.11	11.22	10.62
Dec. 3	15.59	15.29	15.00	14.70	14.40	14.11	13.71	13.21	11.32	10.72

B. Sheep: Per 100 lb. estimated dressed carcase weight.

	Lambs 1st gr.	Lambs 2nd gr.	Ram lambs	Sheep 1st gr.	light-weight ewes	Heavy-weight ewes	Rams	Unthrifty lambs & over-fat sheep	Unthrifty sheep
					$	c.			
Oct. 22	32.44	27.35	-	29.66	19.93	17.15	15.76	17.61	15.76
" 29	32.91	27.81	24.57	30.13	19.93	17.15	15.76	17.61	15.76
Nov. 5	33.37	28.27	25.03	30.59	20.39	17.61	16.22	18.08	16.22
" 12	33.84	28.74	25.03	31.05	20.39	17.61	16.22	18.08	16.22

C. Pigs, per 100 lb. dead weight.

Up to 104 lb.	105 lb. to 130 lb.	131 lb. to 200 lb.	201 lb. to 220 lb. 1/	221 lb. to 240 lb.	241 lb. to 260 lb.	261 lb. to 280 lb.	Over 280 Lb.	Stag pigs	Sows
					$	¢			
24.45	27.80	28.90	27.80	25.60	22.25	18.90	17.80	14.45	16.70

1/ Subject to the proviso that no pig of 10 sc. 1 lb. to 11 sc. shall be paid for at a lower price than that paid for a pig of 10 sc.

Ministers of Food and Agriculture its views on the place of the bacon industry in the post-war period.

There seems to have been very little objection on the part of producers against the secondary part that these Boards have been assigned. Thus, at a committee meeting of the Scottish National Farmers' Union, held at Edinburgh, October 16, 1945, a resolution was passed to the effect that the majority of producers were satisfied with the present meat scheme. Their only suggestion was that more attention be paid to quality both in beef and mutton and more consideration be given to the condition of meat before it reached the consumer. The committee recommended that the present scheme be continued as long as the Government guaranteed markets and prices.1/

Nor have there been any serious complaints against the Government's methods of handling the meat situation on the part of consumers. It had been generally hoped that meat and bacon rations would be increased when the war ended. Instead, they have been further curtailed in 1945, but consumers realize that this condition cannot be attributed to defects in the Government's meat management. On the contrary, the Food Ministry has given proof of great foresight in this respect when securing for the British consumer even before the end of the war, and up to 1948, the entire exportable meat and bacon surpluses of a number of countries. These arrangements will prove invaluable in maintaining and possibly later increasing meat rations in the United Kingdom during the difficult immediate post-war period.

1/ "The Farmers' Weekly", London, October 19, 1945.

NEW ZEALAND MEAT POLICY

I. General Considerations.

Importance of livestock in New Zealand economy

New Zealand is more dependent upon export trade in livestock products for the prosperity of her population than most other trading nations, with the possible exception of Argentina, Uruguay and Paraguay. The country is poorly endowed in respect of basic raw materials for industry and discounting foodstuffs and wool most other needs must be imported. Climatic and soil conditions, on the other hand, are very favourable for the development of a highly specialized pastoral industry and this now forms the foundation of New Zealand's economy.

Dairying and meat production are the foremost national endeavours. The products of these industries do not only make possible high per caput domestic consumption, but also provide an overwhelmingly large proportion of the goods that the country can supply to her trade partners abroad in exchange for manufactured and other commodities that must be imported.

As regards the domestic use of meat, New Zealand ranks among the first in the world in per caput meat consumption. In 1939-40, the annual average for that country was 249 lb. of beef, pork and mutton.[1] Argentina, with 266 lb. in 1934 was the only country to have a larger consumption per head of population among 19 nations whose domestic meat consumption levels were known.

In 1938, New Zealand exported merchandize valued at £58,376,000 in round figures. Out of this total, £15,330,000 represented the value of

1/ See "The World Future of Meat After the Transition Period", L.Lorincz, p.10, Table 3.

exported meat. Thus, meat exports constituted slightly more than one quarter of New Zealand's export trade income.

Meat being the second most important export commodity,- dairy products are the first,- it is understandable that the Government should have gone to considerable lengths in trying to preserve the export market outlets during the war. These were largely located in the British Isles. In 1938, meat exports to the United Kingdom were valued at N.Z.£15,219,000 out of a total of N.Z.£15,330,000. This relationship clearly shows that New Zealand depended for something like one-quarter of her external trade income on meat exports to the United Kingdom.

Another illustration of the importance of meat exports is given by the relative proportion of farmers' income derived from domestic and export sales. Available data for the period of 1928-29 to 1940-41 show that between 74 to 84 per cent of the gross farm income obtained from pastoral produce (exclusive of dairying, poultry and bees but inclusive of wool) was marketed abroad.

Under these circumstances, it was the main preoccupation of the New Zealand Government's wartime meat management to prevent any avoidable disruption in meat deliveries to Britain and to promote goodwill conducive to further postwar development of that market.

Livestock numbers

Before the war, of 19 countries examined in a previous study on meat[1], New Zealand had the largest number of cattle, hogs and sheep combined, per 1,000 humans. There were 4,997 cattle units[2]

1/ "The World Future of Meat After the Transition Period", p.10, Table 3.
2/ In computing "cattle units", 10 head of sheep or 3½ hogs were considered equal to one head of cattle.

for every 1,000 humans in New Zealand, compared with 939 in Canada, 686 in the United States, 400 in Germany and 240 in the United Kingdom.

Livestock numbers increased by leaps and bounds after 1891, and have been maintained at more or less stable levels since, even during World War II.

Table 8.- Livestock: Numbers in New Zealand, 1891 to 1944.

Year	Total cattle	Dairy cows in milk	Breeding ewes	Total sheep	Pigs
	number	number	number	number	number
		000	(i.e. thousands)	omitted.	
1891	789	207		17,865	223
1926	3,452	1,181	13,948	24,905	473
1931	4,081	1,500		29,793	476
1935	4,293	1,828	17,812	29,077	763
1936	4,254	1,923	18,669	30,114	808
1937	4,389	1,805	19,332	31,306	802
1938	4,506	1,764	19,664	32,379	756
1939	4,565	1,744	19,960	31,897	683
1940	4,533	1,740	19,728	31,063	714
1941	4,576	1,780	20,031	31,752	769
1942	4,642	1,777	1/	1/	689
1943	4,484	1,736	2/ 20,655	2/ 33,155	612
1944	4,476	1,669	3/ 20,550	3/ 33,200	581

Source: N.Z. Official Year Books.
1/ Not enumerated.
2/ From "Primary Production in New Zealand", p.5.
3/ Monthly Abstract of Statistics, Jan. 1945.

<u>Meat production</u> Meat production increased after 1926 in a parallel manner with the growth of livestock. The following data relative to farm and commercial slaughterings reflect this condition: (Table 9.)

Table 9. Slaughtering (farm and commercial) in New Zealand, 1926-1944

Year	Cattle	Calves	Sheep	Lambs	Pigs
		thousands, i.e. 000 omitted			
	No.	No.	No.	No.	No.
		A. Year ending March 31			
1926	469	1/	3,570	5,206	406
1931	335	559	4,264	8,198	502
1935	503	763	3,943	9,766	941
1936	577	1,086	3,261	8,755	1,042
1937	516	1,055	3,464	9,358	1,106
1938	597	1,086	3,875	10,016	1,123
1939	594	1,020	4,697	9,973	1,044
1940	600	1,061	4,444	10,140	828
1941	728	1,068	5,148	12,036	981
1942	631	1,032	4,632	11,701	1,003
		B. Year ending June 30			
1937	548	1,055	3,400	9,487	1,124
1938	574	1,082	3,950	9,498	1,102
1939	626	1,037	4,667	10,168	972
		C. Year ending September 30			
1940	700	1,056	5,250	10,791	872
1941	654	1,084	4,185	11,697	1,005
1942	701	1,025	4,798	11,560	926
1943	760	1,065	4,488	11,525	767
1944	632	968	4,846	11,096	727
1945					679

Source: A) N. Z. Official Yearbook.
B & C) New Zealand Meat Producers' Board, 23rd Annual Report, June 30, 1945.

1/ Not available.

There was no considerable advance in slaughterings of calves, during the war years, and pig slaughter was even reduced. This was largely due to fluctuating demand for pigmeat from the United Kingdom, combined with the fact that hog production depends to a considerable degree upon grains for feed and feed grain imports during the war years suffered from scarcity of shipping.

Domestic Meat Consumption As already mentinned, per caput meat consumption in New Zealand is very high. The following official figures for a series of years have been obtained by taking into account total slaughterings and deducting the quantities exported or held for export. These disappearance data cannot be considered aa accurate, as statistics of slaughterings do not indicate the weight of carcass, which must be estimated. However, for comparative purposes, these figures are useful, as the same system for estimating consumption is in effect in the majority of other countries.

Table 10.- Meat: Consumption in New Zealand per head of population, specified by kinds, three year averages.

Three-Year periods ending	Beef	Mutton & Lamb	Pork	Ham & Bacon	All meat
	lb.	lb.	lb.	lb.	lb.
1932-1933	109	106	7	11	233
1935-1936	125	105	6	12	247
1936-1937	125	105	7	11	247
1937-1938	140	88	9	12	249
1938-1939	170	77	7	12	266
1939-1940 1/	127	81	11	12	231
1940-1941	145	85	10	12	252

Source: New Zealand Official Yearbooks.
1/ Revised data published in 1944 Official Yearbook.

The pastoral character of New Zealand agricultural production is clearly expressed in these consumption figures. Beef and mutton form the bulk of the meat consumed and both are produced by animals depending on grass for growth, whereas pork represents a relatively small percentage of the meat used by New Zealanders.

Another striking feature is that meat consumption did not increase during the war years, although it is generally recognized that in wartime there is a tendency toward larger meat consumption as earning power increases, provided that enough meat is available. This tendency would probably have been realized if the Government had not taken steps to check it so that more meat should be available for export to Britain and to the armed forces in the Pacific. By 1944, meat was rationed at 2½ lb. per week, representing a supply of 130 lb. per person per year. This compares with average prewar disappearance of 231 lb., as shown in the preceding table.

Meat exports.- The importance of production for export is further illustrated by the number of animals killed for export and the total quantity of meat thus obtained for shipping overseas. When the figures contained in the following table are compared with those in Table 9 showing total slaughter, the overwhelming importance of exports in New Zealand meat economy becomes clearly apparent.

Table 11.- Livestock: Slaughter for export in New Zealand, 1934-1935 to 1944-45.

Year	Frozen Beef Quarters	Wether Mutton Carcases	Ewe Mutton Carcases	Lamb Carcases	Porkers Carcases	Baconers Carcases (Includ. Choppers)	Beef Boneless	Sundries	Weight Total in long tons
	No.	No.	No.	No.	No.	No.	60 lb. Freight carcases		
				Thousands, i.e. 000 omitted					
1934-35	341	950	1,197	8,839	430	157	335	469	256
1935-36	188	1,143	737	8,789	460	220	409	531	258
1936-37	196	971	806	9,183	437	243	517	585	269
1937-38	160	1,017	1,172	9,167	426	229	648	604	276
1938-39	173	1,445	1,148	9,763	351	190	751	682	297
1939-40	689	1,302	1,916	10,387	89	342	857	765	347
1940-41	698	612	1,563	11,240	230	292	869	737	339
1941-42	600	725	1,962	11,050	1/ 175	1/ 190	1,159	673	335
1942-43	561	610	1,711	10,969	1/ 122	1/ 105	1,264	691	315
1943-44	496	644	1,966	10,533	1/ 187	1/ 181	850	645	306
1944-45	672	720	1,872	9,967	126	2/	331	326	2/

Source: N. Z. Meat Producers Board, 23rd Report, 30th June, 1945.

1/ Figures incomplete.
2/ Not available.

Before World War II from 99 to 100 per cent of the frozen and chilled meat exported from New Zealand went to Britain. This proportion decreased considerably as the war progressed and the Combined Food Board assigned large quantities of New Zealand supplies to nearby war theaters.

Official statistics concerning the destination of New Zealand meat shipments are available up to 1942. From that year on, returns of the Meat Pool Account[1] offer some indication.

Table 11-A.- Meat. Exports from New Zealand average 1934-38 and annual 1939-42.

	1934-38	1939	1940	1941	1942
		I. Frozen and chilled			
		cwt. of 112 lbs., thousands, i.e. 000 omitted			
United Kingdom	5,194	5,876	6,930	4,965	5,010
Other	22	30	47	320	731
Total	5,216	5,906	6,977	5,285	5,741
		In percentage of total - % -			
United Kingdom	100	99	99	94	87
Other	0	1	1	6	13
Total	100	100	100	100	100
		II. Canned			
		cwt. of 112 lbs., thousands, i.e. 000 omitted			
United Kingdom	45	54	67	80	1/
Other	20	18	11	40	1/
Total	65	72	78	120	1/
		In percentage of total - % -			
United Kingdom	70	64	86	67	
Other	30	36	14	33	
Total	100	100	100	100	

Source: Official statistics. 1/ Not available.

The Annual Report of the New Zealand Meat Producers'' Board for the year ended June 30, 1945, shows that much of New Zealand's meat surplus was diverted to the United States' Armed Forces and other South Pacific units after 1942.

During the 1942-43 season meat valued at £6.5 million was shipped to the United Kingdom, representing 78 per cent of the season's total of £8.4 million. In 1943-44, shipments to the United Kingdom were valued at £7.0 million, i.e. 61 per cent of total exports worth £11.5 million.

1/ See later.

As the war progressed and shipping losses became more serious, a reduction in the volume of frozen and chilled meat loadings became apparent, whereas shipments of meat in a concentrated form, such as canned meat, increased considerably. With the conclusion of hostilities, this trend showed signs of an incipient reversal.

Table 12.- Meat: Exports, chilled, frozen and canned, 1934 to 1944-1945.

Year	Frozen & Chilled	Canned
	cwt. (112 lbs.) Thousands, i.e. 000 omitted	cwt. (112 lbs.)
1934	4,969	44
1935	5,207	74
1936	5,120	86
1937	5,411	70
1938	5,373	51
1939	5,906	72
1940	6,977	78
1941	5,285	120
1942	5,741	329
1943	4,404	330
1944	4,158	76

Source: 1934-42-: New Zealand Official Yearbook, 1944.
1943&44-: "Monthly Abstract of Statistics", Jan. 1945.

The wartime composition of exports, compared with peacetime distribution among the various classes of products is shown in the following table:-

Table 13.- Meat: Exports from New Zealand by marketing years ended June 30, 1934-35 to 1942-43 and 1944.

Years	Beef Chilled	Beef Frozen	Lamb Frozen	Mutton Frozen	Pork Frozen	Veal Frozen	Meat Canned
	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.
			Thousands, (i.e. 000) omitted				
1934-35	40	755	2,796	1,044	486	55	54 (54)
1935-36	202	551	2,396	888	578	115	96
1936-37	262	432	2,692	799	591	127	78
1937-38	370	589	2,805	988	586	153	57
1938-39	389	642	2,592	1,029	514	140	61
1939-40	49	914	3,152	1,578	492	168	78
1940-41	-	1,184	2,442	876	445	172	70
1941-42	779		3,248	893	499	3	244
1942-43	717		3,212	400	46	128	383
Calendar years							
(1943)	(381)		(3,198)	(445)	(10)	(126)	(330)
(1944)	(60)		(2,724)	(1,087)	(39)	(81)	(76)

Source: New Zealand Official Yearbook, 1944.
Data for calendar year: Monthly Abstract of Statistics, Jan. 1945.

Quality considerations, so important before the war, seem to have been yielded to the exigencies of cargo space economy and a more lasting degree of preservation which was important at a time when the movement of convoys was very irregular. While chilled beef had gained steadily to the detriment of frozen beef before the war, by 1940-41 no more meat was chilled. Frozen meat, which could stand long waiting until loaded and a slow rate of progress in convoy transports, was more practical than chilling, although chilled meat is superior in quality. With the return of speedy transports after the war, the prewar trend tending to replace freezing by chilling may develop again, unless quick freezing takes precedence.

Another significant wartime change consisted in a reduction of beef exports in favour of lamb.

II. Wartime Meat Management.

Aims pursued

The principal aim of British meat management during World War II was to ensure adequate supplies for the armed forces and the civilian population. In the case of New Zealand, local supplies for these purposes were greatly in excess of needs.

To maintain a high living standard for those gainfully employed and to secure a mode of life in keeping with human dignity has been the ideological background of the Labour Government's political platform since its inception in 1935. Realizing that the success of such plans was closely linked with domestic stability of the livestock industry and continued existence of the British market, the ultimate motive behind

New Zealand wartime economic and farm policy was to ensure stability for the livestock farmer and economic co-operation with Britain.

Accordingly, the Government of New Zealand did not leave anything undone during the war years to satisfy Britain's continually changing needs of New Zealand meat, thereby hoping to secure the goodwill and continued trade of that country when peace is restored.

As a direct consequence of these considerations, wartime meat management in New Zealand had as principal aim to provide as much meat to Britain as was required at any time, at a reasonable price which would maintain the country's competitive position after the war. Since there were few radical dislocations during the war and those that could not be avoided were handled in such a manner as to localize their effects, New Zealand has emerged from the war with unimpaired competitive strength and a solid foothold on the British meat market.

Control mechanism

As Britain's wartime requirements were the prime mover of New Zealand Government control measures with reference to meat, a pragmatic order of causality naturally offers itself for purposes of analysis, as follows:

A. British requirements from New Zealand;

B. Trade Agreements;

C. Adjusting output to British requirements;

D. Price policy;

E. Channels of procurement and marketing, marketing agencies and producer organizations.

A. British requirements from New Zealand

The early war period

At the start of the war, British negotiators' mentality was still under the influence of mercantile thinking processes. International commodity markets had been "buyers' markets" for a long time prior to the war and abundant supplies and offers contrasted with deflationistic scarcity of funds which made hand-to-mouth buying a common practice not only in trading between private concerns but even between nations.

Full New Zealand resources offered to Britain

This mentality obviously came to expression in the early negotiations between the United Kingdom Government and New Zealand. As soon as war was declared New Zealand offered its full resources to the United Kingdom Government, including its exportable surplus of farm produce. This broad offer was not accepted by cautious British negotiators at that early stage of the war. Fixed quotas were set for meat instead, as well as for most other farm produce. As the war progressed and it became obvious that supplies from all available sources were not sufficient to cover wartime requirements, the attitude of the United Kingdom Government underwent gradual changes. Quotas were made more liberal and as time went on British negotiators became anxious to secure all available supplies, not only for the duration but for some years after the war. This policy was only tempered by the vicissitudes of seaborne traffic between New Zealand and her principal customer.

Influence of shipping situation on requirements

As shipping space became restricted, preference was given to food which contained the highest possible nutritive value. Accordingly, the British Government decided in 1940 that meat shipments from New Zealand should be reduced for 1940-41 in order to make more space available for dairy products. Since the amount of meat killed for export during the previous season had reached a record total (347,000 tons), it was feared that unexported surpluses would accumulate, constituting a serious menace to the stability of the meat industry. The situation became so serious that by the end of May, 1941, the problem of handling future surpluses required a complete re-negotiation with the British Government. The resulting agreement, alternately desig-

The "Surplus Agreement"

nated as the "General Purchase Agreement" or the "Surplus Agreement" afforded a solid basis for planning wartime meat production in New Zealand. It also enabled the New Zealand Government to assay the financial obligations it would have to incur in connection with exports to Great Britain. And more important yet, a considerable measure of stability in the nation's meat economy was thereby created. The New Zealand producer did not have to worry any more about the shipping situation.

Change in emphasis from cheese to meat

When every step had been taken to shift the weight of New Zealand export supplies from meat to cheese, Australia experienced a damaging drought and also found local needs for meat greatly increased. With supplies from Australia curtailed, shipping space became available for additional New Zealand meat. Instead of 190,000 long tons named in the contract for 1941-42, more than 300,000 long tons of frozen meat had been exported by September 30, 1942, leaving a carry-over of only 44,000 long tons, less than half that of the previous year. Taking into consideration the requirements of the armed forces in New Zealand and the Pacific area, cold storages were practically clear of export produce when the new season's meat started to arrive on the market.

The "Four-Year Agreement"

By the middle of 1944 it became evident that world food supplies during the transition period would not be sufficient to cover all needs. It was recognized that British import requirements during the long period of reconstruction were likely to be difficult to cover. At the same time, the prospective unfavourable position of Britain's trade balance for several years after the war became more and more evident and it was feared that available food surpluses would be diverted during the years immediately following the end of the war to countries which would be in a position to make payment for supplies in gold, hard currencies or immediate shipments of goods.

In an effort to make sure that Britain has first call on available food surpluses during the transition period, especially from countries with which good possibilities for exchange against exports of British manufactured goods existed, the Government of the United Kingdom offered in June a four-year contract covering the entire New Zealand meat surplus available for export during that period. (Details are given in the next chapter.)

Wartime arrangements relative to meat entered into with the British Ministry of Food may be summarized as follows:

Contracts

1st Oct.1939 - 30th Sept.1940	300,000	long tons frozen meat.
1st Oct.1940 - 30th Sept.1941	248,000	" " " "
	6,000	" " canned corned beef.

"Targets" under "Surplus Agreement"

1st Oct.1941 - 30th Sept.1942	190,000	" " frozen meat
	37,150	" " canned "
	301,500	" " carcase equivalent.
1st Oct.1942 - 30th Sept.1943	24,900	" " canned meat.
1st Jan.1943 - 31st Dec. 1943 1/	328,000	" " all meat, carcase equiv't
plus	2,500	" " dehydrated meat
1st Jan.1944 - 31st Dec. 1944	No limit for frozen meat.	
	2,500	long tons dehydrated meat.

In addition to these contracts, considerable sales have been made to the United States Joint Purchasing Board for supplying troops in the South-West Pacific area.

B. Trade Agreements.

1939-1940 contract For the marketing year October 1, 1939 - September 30, 1940, the British Food Ministry had agreed to accept 300,000 long tons of meat including all classes and edible offals. In addition, the Ministry undertook to make every effort to provide shipping space for such additional quantities as might be available. The allotment of shipping space within the existing system of priorities was handled by a central agency, the Overseas Shipowners' Allotment Committee, and availability of cargo space for meat in excess of the contracted quantity depended upon decision of this committee. Once shipping facilities had been reserved for meat,

1/ Contract period changed from marketing to calendar year basis.

actual shipping arrangements became a responsability of the Marketing Department (See under "E", - channels of procurement, - later on).

1940-41 Contract.- The contract for the year October 1, 1940 - September 30, 1941, provided for the purchase of 248,000 tons of meat, shipped or unshipped, from the production season ended September 30, 1941, and from the carry-over of the previous season. Actual liftings of meat under the second year's contract were 268,650 tons, which left a carry-over of 77,902 tons of export meat.

The "Surplus Agreement".- From October 1, 1941, on, the "Surplus Agreement became operative. Under this plan, the United Kingdom Government was to purchase and pay for all New Zealand meat that could be shipped in any given season. New Zealand primary industries were to adapt their production to actual shipping possibilities by deboning, canning and pressing, dehydrating, and other means. Alternative ways of marketing were to be developed wherever possible. Reserve stocks of storable foodstuffs were to be determined by the two governments in relation to probable demands during and after the war and the importance of the industries concerned to New Zealand.

The expense attendant to acquiring and holding reserve stocks and the cost of storage insurance, deterioration etc. was to be shared equally between the two Governments. As a complement to this agreement, and as a guide to stockpiling and production in general, late in 1941 it was decided to establish "target figures" of proposed annual productions for export. These would apply for the duration of the war and one year after. As a consequence, annual figures shown for subsequent years in the present discussion do not represent limitations on the quantities that Britain needed and was willing to accept. They should rather be regarded as a realistic appraisal of what was likely to be actually shipped or kept in reserve, considering existing wartime transportation and storage difficulties.

1941-42 Targets.- Under the "Surplus Agreement" the United Kingdom undertook to assume equal liability with the New Zealand Government for a yearly quantity of 301,500 long tons of meat in terms of carcases. This was to be supplied in the form of 190,000 tons of frozen carcase meat, (shipped or unshipped), and 11,500 tons of carcases converted into 37,150 tons of canned meat.

Any production in excess of this total contraat figure was to be the responsability of the New Zealand Government. (This included a carry-over of 78,000 tons from last years' production). Both governments were to share equally the cost of meat covered by the Surplus Agreement which remained unshipped during the contract year. The United Kingdom undertook, however, to lift additional quantities of frozen meat if shipping space became available.

In 1942, it was agreed that bulk purchase agreements for meat would henceforth be based on a calendar year basis, instead of the former marketing year ending September 30.

1943 Targets.- The target for the calendar year 1943 was fixed at 328,000 long tons. This quantity included the carcase equivalent of canned and dried meat, inclusive shipments to the Middle East. New Zealand was to provide the maximum quantity possible in the form of canned and dehydrated meats in order to reduce the balance of the 328,000 tons, for which refrigerated space is required, to the lowest possible figure. Dehydrated meat included in the above figure was covered by an annual contract for not less than 1,200 long tons, later increased to a minimum of 2,500 long tons.

The Four-Year Agreement.- In August, 1944, the New Zealand Government entered into a four-year contract with the British Government, by which the latter has agreed to purchase all exportable surpluses of meat, with the exception of pig meats, until September 30, 1948. Further discussions on pig meats will take place before the end of the first two years of the contract to determine the amounts the British Government will take in the last two years; the British Government has thereby made provision for a possible expansion of home production, which may result from the new increased prices being paid to British farmers.

When negotiations began, the term "exportable surplus" was interpreted by the New Zealand Government as meaning the total surplus production over and above its domestic requirements. But the United Kingdom Government construed this term as covering "the quantity which having regard to available ships, could in fact be exported".

A compromise was later adopted whereby the British Food Ministry promised to endeavour to lift any additional quantities made available for expert, subject to changes in the British supply and shipping situation.

Particulars of this important agreement as it stands in its present form, which is not the final text, were given in the Annual Report of the New Zealand Meat Producers' Board for the year ended June 30th, 1945. The salient provisions are reproduced below; they indicate the scope of the four-year agreement as follows:

(1) A Government-to-Government sale and purchase arrangement covering the total available supplies of beef, veal, mutton, and lamb, and the frozen sundries and edible offals thereof. All the products named to be as normally graded for export and available for shipment in the period beginning 1st October, 1944, and ending 30th September, 1948.

(2) During the first two years of the agreement - i.e., up to 30th September, 1946 - the quantity of pig-meat covered by the contract to be the total available supplies. The quantities to be purchased in the third and fourth years of the agreement to be as notified by the United Kingdom Government to the New Zealand Government.

(3) The prices as finally settled, and the conditions of the agreement, will apply for the first two years of the contract. For the final two years, prices and conditions are subject to review at the instance of either Government on substantial grounds. (Such substantial grounds will be more fully defined in the final agreement).

(4) All purchases shall be f.o.b. New Zealand ports, and the responsibility for providing freight shall rest with the United Kingdom. Payment will be made in sterling in London as to 97½ per cent. within twenty-eight days after arrival. If the lifting of available supplies of meat is unduly delayed, the United Kingdom Government will make interim payments.

(5) As and when the shipping position permits, the United Kingdom Government will progressively resume the importation of chilled beef from New Zealand.

(6) In general, conditions of the contract regarding preparation of meat for export, surveying of meat upon arrival for quality, and payment and shipment procedure are on the lines of the wartime contracts between the two Governments. There will be appropriate provisions for consultation at all stages, particularly regarding the distribution of New Zealand meat in the United Kingdom, and the arrangements to apply at the conclusion of the four-year contracts.

C. Adjusting Meat Production in New Zealand to British Requirements

When meat requirements for 1940-41 were reduced,[1] stocks of frozen meat from the previous season's record production began to accumulate. It became necessary to retrench until more shipping space could be made available, without discouraging producers.

Statistical data concerning quantities available for export each year show that record levels were reached in 1940-41 and a reduction in surpluses was not obtained before 1941-42. To maintain the livestock producers' confidence and stability of the meat industry, the Government gave a guarantee in March 1941, that all meat killed and passed for export during the 1940-41 season would be paid for irrespective of whether or not the total quantity killed could be shipped. Provisions were also made for payment by the Government for meat in store and of storage charged in the event of undue delay in shipment.

Other emergency measures adopted to keep meat suepluses from glutting the market included:

- expansion of canning capacity;
- construction of dehydrating plants;
- provision of additional cold storage capacity.

Canning capacity was expanded considerably and arrangements were made for construction and installation of dehydrating plants.

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[1] See previous discussion of 1940-41 contract.

Millions of additional cubic feet of cool storage space were constructed. Insulating materials for emergency cold stores were purchased and imported on the Government's account. When the shipping position became serious in 1941, still further additions were made, the Government providing the necessary finance and assuming liability for loss due to superfluous capacity once the war is over. All these measures added eight million cubic feet to cool storage capacity required in normal times. As a consequence New Zealand now holds cold storage facilities sufficient for a whole season's production of meat.

It should be noted, however, that the expectations of continuing accumulation of meat stocks destined for Britain did not materialize. On the contrary, from the time on when the Surplus Agreement was signed, liftings became so satisfactory that stocks at the close of the 1941-42 season were reduced below normal peacetime levels.

Although the reduction in shipments from Australia made more shipping space available for New Zealand meat, refrigerated transport space continued to be a bottleneck. To reduce the strain on this tupe of accomodation, it was requested that canned and dried meat production be expanded to the maximum.

Expansion of canning and dehydrating capacity implied the purchase of new plant and erection of additional cannery buildings and accomodation. The necessary finance for this development was made available along lines similar to those applied when cold storage capacity was expanded.

D. Price Policy

General Considerations- With the 1939-40 contract fixed f.o.b. prices were paid to freezing companies and exporters by the Marketing Department. Deductions were made from the United Kingdom prices to cover administrative charges. It was left to the New Zealand Meat Producers Board [1] and the Department of Agriculture to see that farmers received fair prices for their stock.

Increases in prices were granted by the United Kingdom Government in the 1941-42 contract. As a result of an agreement between the New Zealand Government and the New Zealand Meat Producers Board it was decided to maintain prices to freezing companies and exporters at substantially the same level as in the previous season and to establish a "Meat Pool Account" into which would be paid the proceeds from sales to the United Kingdom at the higher prices. The funds of the account are used for maintaining the price of canning meat at a reasonable level, for meeting charges on unshipped meat and to provide for capital liability on emergency canning plants and cold stores.

After December 15th, 1942, as part of the general economic stabilization policy of the Government, all surpluses resulting from the sale of meat overseas ~~xxxx~~ in excess of the price paid to producers and of expenses, were credited to a "Meat Industry Stabilization Account", which had been established at the Reserve Bank. This is separate from the Pool Account but both are maintained under the general Meat Industry Account. Its

1/ See later under Chapter E.

purpose was to accumulate funds to maintain prices at levels not lower than those ruling on December 15th, 1942, and to provide any necessary subsidies.

Prices paid by the New Zealand Government to freezing companies and meat exporters for certain classes of meat were as follows:

1939-40 season	per lb. f.o.b. N.Z. d.	Can. ¢
Lamb - -(prime down cross)	6 15/16 - 7 7/8	10.3±
Mutton -(prime wethers)	3 11/16 - 5 5/16	5.5±
Beef -(ox and heifer hinds)	4¼ - 5 7/16	6.3 - 8.1
Pigs -(carcases, baconers)	7 1/8 - 7 1/2	10.6 -11.1

1940-41 season

With a few minor exceptions, prices were the same as those paid in the 1939-40 season.

1941-42 season

United Kingdom purchase prices were increased by 3/8d. sterling (0.7¢ Can.) per pound for beef and beef offals, lamb and lamb offals, baconer carcases and cuts, and by ¼d. sterling (0.46¢ Can.) per pound for mutton and mutton offals and pork offals, but producers received substantially the same prices as in the previous season, the difference being paid into the newly formed Meat Pool Account.

1942-43 season

Purchase prices for beef and veal were increased from 1st October, 1942, by 3/16d. sterling per lb. and for pig meats by 5%.

Pig meats were placed under special control by the Pig Marketing Emergency Regulations which were gazetted on 1st April, 1943. The regulations fixed maximum prices at which pigs might be purchased by operators for slaughter and prescribed the scale of basic values of frozen pig meats acquired by the Marketing Department. The Department became the sole buyer of pork after 20th May, 1943, and the consumption of pork in New Zealand had been entirely prohibited[1]. Special winter prices applicable from 1st June, 1943, were fixed.

1943-44 season

Purchase prices for wether and ewe mutton were raised from 1st October, 1943, by ½d. sterling per lb.

Pig meat prices showed successive rises; from 1st October, 1943, an estimated increase of 10% in producers' returns for porker pigs was effected. From 20th January, 1944, heavy-weight baconer prices were increased while from 1st May, 1944, there was an all-round increase of ½d. per lb. for all classes of baconer and porker pigs. Seasonal increases were again allowed from 1st June, 1944.

1944-45 season

Under the Four-Year Agreement with the United Kingdom, additional price increases were obtained. It was decided to base all prices to producers on the export schedule and to maintain local prices to consumers at their former level from the funds of the Meat Industry Stabilization Account, at an estimated cost of not more than £400,000 a year.

Purchase prices to freezing companies and meat exporters were:

1/ The emphasis on pork production was due to the heavy demand on this type of meat for the feeding of Allied servicemen who had a much greater preference for it than the New Zealand people.

	Per lb. f.o.b. N.Z. d.	Per lb. f.o.b. Can. ¢
Lamb (prime down cross)	7.425 - 8.425	11.01 - 12.49
Mutton(prime wethers)	5.750	8.53
Beef (ox and heifer hinds)	4.908 - 6.095	7.28 - 9.04

Producers' prices at the opening of the 1944-45 season, for certain grades, were:

	Per lb. N.Z. d.	Per lb. Can. ¢
Lamb - prime down cross	8.00 - 9.00	11.9 - 13.3
Wethers - prime - North Island	5.75	8.5
Beef quarters - Ox. O.A.Q.	4.80	7.1

The cost of the increase in Marketing Department purchase prices to enable these prices to be paid to farmers was debited to the Meat Industry Stabilization Account.

The "Lump-Sum Payment" As a compensation to meet the abnormal increase in prices of New Zealand imports from the United Kingdom from 1939 to 1944, the United Kingdom Government agreed in the summer of 1944 to pay to the New Zealand Government a sum of £12,000,000 sterling, plus £4,000,000 per year for four years beginning July 1944.[1]

When this agreement became public farmers immediately laid claim to the proceeds in the form of increased prices for meat and some other farm produce. As a consequence, the Government invited both the meat and dairy industries to set up committees to confer with the Economic Stabilization Commission regarding the apportionment of this money.

A Joint Committee was subsequently set up by the Meat Board[2] and

1/ See "Agriculture Abroad", June 1945, pp.10-11 and
" " Sept. " pp.11-12.

2/ See next chapter.

the Dairy Board and after protracted discussions the following agreement had been reached:[1]

The Joint Committee were satisfied from the information supplied that the lump sum payment of £12,000,000 was not being paid in respect of produce sold and that it was being granted partly for the purpose of strengthening New Zealand sterling funds and partly towards the costs of Economic Stabilization in New Zealand up to 31st July, 1944.

The Committee were further satisfied that the payments of £4 million per annum for the four years commencing 1st August, 1944, were being paid towards the cost of Economic Stabilization in New Zealand and in recognition of the fact that benefit accrued to the United Kingdom through New Zealand's Economic Stabilization policy. From information which had been made available it appeared that the cost of such stabilization policy over the four-year period would at least be equal to the aggregate of such payments.

In exchange for this conciliatory attitude the Government undertook to extend protection to the meat industry against possible future increases in costs that may arise out of what might be called "a break in the stabilization plan". This was achieved by a proviso to the effect that increases in costs above the level existing on December 15, 1942,[2] could not be charged after March 1, 1945, to the Meat Industry Stabilization Account, especially as regards increased costs resulting from any Government

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1/ Annual Report of New Zealand Meat Producers' Board for June 30th, 1945.
2/ The date when economic stabilization began in New Zealand.

action in allowing wage increases. Only a few limited exceptions to this rule were foreseen in the agreement. These will be dealt with in more detail under the next heading.

<u>Operations of the Meat Industry Account</u> As originally constituted, this collective account was intended to record the financial results of New Zealand meat trading activities. It is composed of two separate banking accounts: a "Meat Pool Account" and a "Meat Stabilization Account".

The Meat Pool Account records the Meat Board's trading activities. Its income is derived from sales overseas at contract prices as stabilized December 15, 1942, whereas the debit side shows the cost of produce purchased domestically, plus cost of administration. The credit balance, if any, is transferred to the Stabilization Account.

The Meat Stabilization Account receives its income from the transferred balance of the Meat Pool Account, plus any amounts accruing from higher prices received abroad than those prevailing on December 15, 1942. Its expenditures consist of allocated portions of allowances and subsidies paid to held production costs. Any balance left at the end of the year in this account is to be applied to the benefit of the meat industry.

Findings and decisions of the Joint Board with reference to the Meat Industry Account were summarized as follows in a letter addressed by the Chairmen of the Meat Board and Dairy Board to the Chairman of the Economic Stabilization Commission under date of March 24, 1945:

It is considered desirable that both the Meat Pool Account and the Meat Stabilization Account should remain within the Meat Industry

Account as at present, the whole of the proceeds from the recent increase in the prices of meat payable by the United Kingdom Government to be credited to the Meat Industry Stabilization Account and conserved exclusively for the Industry, subject to such debits against the account as are contemplated in the Government's agreement with the Farmers' Federation of the 18th June, 1943.

All accretions to the Meat Pool Account will continue as in the past and no charges other than those already operative will be made against it except in agreement with the New Zealand Meat Producers' Board. This arrangement would have to be subject to review, in the event of the resources of the Meat Industry Stabilization Account being insufficient to meet charges against that account. The balance finally remaining in the Meat Pool Account and the Meat Industry Stabilization Account belong to and shall be held for the benefit of the Industry.

Costs incurred under Stabilization below "the level existing on the determined date"[1] are debitable to the Meat Industry Stabilization Account in appropriate amounts as agreed upon in the detailed schedules reproduced below, as from the 1st April 1943, to the 31st July 1946.

(1) Additional freezing costs coming to charge after 1st March, 1945, and not arising from wage increases granted after 1st March, 1945.

(2) Increases in farm wages to agricultural workers (on other than dairy farms) as fixed by Order under the Agricultural Workers' Act, up to £3/15/0 per week and found.

(3) Increases in farm wages above those provided for in (2) up to an aggregate amount of £400,000 per annum.

(4) Freezing costs additional to those mentioned in (1) up to a sum of £475,000 per annum.

[1] December 15, 1942.

(5) Any increase in allowance for interest on capital.

(6) Increases in subsidies or allowances arising out of increased import costs or increased usage of fertilizer or other materials used on farms or in factories.

(7) Generally, any increases on items chargeable under the Agreement with the Farmers' Federation and not arising out of increases in wages in New Zealand since 1st March, 1945.

It was further agreed that reasonable information be made available to officers of the Meat Board in respect of amounts debited and credited to the Stabilization Account, so that the Board can give assurances to producers that such entries are in accordance with the terms of the Agreement.

<u>Position of the Meat Industry Account at July 31, 1944</u>

According to the Annual Report of the New Zealand Marketing Department for the year ended July 31, 1944, large surpluses accumulated in both accounts composing the Meat Industry Account.

The Meat Pool Account showed a surplus of N.Z. £3,571,105 as of that date. The Meat Board estimated in June 1945 that the final purchase and sale account in respect of the 1943-44 season's killings would increase the balance to at least £4,000,000[1]

The balance in the Meat Industry Stabilization Account at the end of July 1944 amounted to £746,327. Substantial surpluses which resulted from each of the three seasons since the Meat Pool Account was established were mainly due to the fact that anticipated losses in canning ewe mutton had not eventuated. In addition, the credits to the account from increases in prices received from the United Kingdom Government were considerably

1/ The annual accretion to the credit balance in the Meat Pool Account was estimated at about £1,500,000 by the Meat Board.

augmented by increases in the prices of tallow and slipe wool which, in terms of the arrangement between the Government and the Meat Board, are also credited to the Meat Pool Account.

E. Channels of Procurement and Distribution

Producers' organizations

The Marketing Department

Under the Marketing Act of 1936, a "Primary Products Marketing Department" was created "to be charged with the special duty of marketing all primary products in which the Government has acquired ownership or over which the Government has assumed control". In the case of export produce, the Government was to acquire ownership at prices to be fixed from time to time. With regard to produce destined to be used domestically, the Government had the option of either buying outright or controlling their sale and distribution.

Prior to 1939, these powers were restricted to dairy produce, but during that year additional authority was obtained enabling the Department to deal with any commodity. Bacon and ham are considered as "dairy produce" in New Zealand, owing to the fact that pig production is largely a side line to dairying. As such, these two commodities came under the 1936 powers.

When the provisions of the Marketing Act were extended to cover farm produce in general, the Marketing Department assumed responsibility for the purchase and shipment of all kinds of meat. While actual arrangements for the acquisition and export of meat came under the jurisdiction of the Marketing Department, the Meat Board undertook to regulate deliveries by farmers in order to adapt them to demand for domestic use and export.

The Meat Board The New Zealand Meat Producers' Board was constituted under the provisions of the Meat Export Control Act of 1921-22. It consists of eight members; five representing the producers of meat for export, two representing the Government, and one representing the stock and station agents.

The Marketing Act of 1936 did not affect the functioning of the Meat Board, which continued to pursue its main object, i.e. control of meat exports in the interest of producers. Even in 1939 when the Primary Producers' Marketing Department obtained extensive additional powers enabling it to deal with any commodity, most activities of the Meat Board remained unaffected.

Functions of the Board include supervision of grading, inspection of loading and unloading of vessels, advertising abroad, trial shipments to new markets, scientific survey work, and grants to the Royal Agricultural Society and other bodies to encourage production of suitable export types of lambs, pigs and other meat animals.

One of the most important wartime functions of the Board was to regulate shipments so as to keep a steady flow of meat to the British markets over the twelve months of the year, having due regard to the months showing the highest consumption of each class of meat.

The Board took an active part in the development of the chilled-beef industry and also encouraged the expansion of the pig industry by grants to recording clubs and in other directions.

Immediately on the outbreak of war the Board placed its whole organization, both in New Zealand and in London, at the disposal of the Government, and was closely associated with the negotiations for the purchase and sale of New Zealand meat to Britain.

During the year 1944-45, the Board made every effort to increase meat production for shipment to Britain. Early in the season when the seriousness of Britain's meat position was especially emphasized, the Board appealed for a special effort by farmers to produce all the meat that was possible. A concurrent appeal was also made to domestic consumers to economize on meat. It was estimated in the summer of 1945 that at least an additional 30,000 tons of meat became available for export as a result of these appeals.

Internal Marketing controls

Meat output for use within New Zealand is not rigidly controlled. This is understandable in the light of the fact that only a relatively small percentage of total production is used domestically.

Indirect controls consist in regulating the operations of abattoirs. The Meat Act 1939, which became valid April 1, 1940, contains the following provisions enabling the Government and the Meat Board to regulate the output of meat for domestic use (as well as for export):

Every settlement with a population exceeding 2,500 must establish within twelve months and maintain an abattoir within its own district. All abattoirs must be registered and the registration of an abattoir may be at any time cancelled by the Governor-General in Council. For every registered abattoir there shall be a manager who has special powers, duties and functions under the Act. In addition to abattoirs, rural slaughterhouses may be authorized in rural areas situated at a distance of three miles or more from an abattoir district by the nearest available road.

No stock intended for human consumption may be slaughtered elsewhere than in the abattoir or in a rural slaughterhouse or in a meat-export slaughterhouse.[1] It is prohibited to sell, expose for sale or possess for the purposes of sale any meat derived from stock slaughtered elsewhere than in these establishments if such meat is to be sold for human consumption.

Statistical control is ensured by means of regular reports from managers of abattoirs and slaughterhouses on the number of stock killed for various purposes.

The Meat Board has been given powers under the Meat Act, 1939, to regulate the maximum capacity of slaughtering establishments.[2] This is accomplished by making alterations and additions dependent upon the Board's authority. In this manner, total meat output may be limited by the Board.

The Board also had power to fix the maximum number of specified kinds of stock that might be killed at certain works. Thus, annual restrictions have been in operation for some years now fixing the number of sheep and lambs that may be slaughtered in certain establishments.

On the other hand, the Government made strenuous efforts to ensure an even flow of pork products throughout the year. To alleviate the hardship caused by reduced feed imports, subsidy of £5 per acre was in effect

1/ Bona fide farmers may slaughter on their farms for their own use.
2/ New Zealand Meat Board 23rd Annual Report, June 30, 1945, p.22.

on land devoted to pigfeed. In 1944-45 only 5,250 farmers made claims under the scheme, involving some 23,000 acres of mixed crops.

Export marketing controls — The Meat Act, 1939, contains definite requirements with regard to export of meat. These are as follows:

Any person desirous of carrying on the business of a meat exporter must obtain a license.

Meat destined for export must be derived from stock slaughtered in an abattoir or meat export slaughterhouse. It must have been subjected to inspection and proper methods of preservation (freezing, chilling, salting, canning, etc.), as well as packing so that it is in good order and condition when it is placed on board ship for export.

Shipments of meat from New Zealand are further subject to conditions and restrictions as to shipping or otherwise, imposed by the Meat Board and the special requirements of the country of destination, so far as they can be complied with in New Zealand.

These provisions of the Meat Act enable the Meat Board to effectively regulate shipments abroad at any time.

As already mentioned, the Marketing Department is responsible for technical aspects of the purchase, sale and shipment of meat abroad. With regard to arrangements for the production, delivery and slaughtering of livestock and meat for export, the Meat Board is in possession of wide powers of control in the interest of producers. The Board has also been closely associated with negotiations for the purchase and sale of New Zealand meat to the United Kingdom and to the United States Joint Purchasing Board for supplying troops in the South-West Pacific area during World War II.

Supervision of the grading of all meat prepared for export was entrusted to the Meat Board in accordance with a condition laid down by the British Ministry of Food at the beginning of the war. This required that meat was to be of the usual grades shipped from New Zealand prior to the war, and that the grading standards were to be supervised by the Meat Board.

Consumption controls

Under normal conditions, limitation of meat consumption in a country producing such large surpluses of meat as does New Zealand, would hardly be justified. Indeed, no such action had been taken until early in 1944 when curtailment of output in Australia due to drought conditions began to have serious repercussions upon the supply situation of forces operating in the South Pacific theater.

To make more meat available for these forces and for export to Britain, meat rationing was introduced on March 6, 1944. The system adopted was based on value. Persons living on the North Island were entitled under this plan to buy 1s.9d. to 1s.11.d. worth of meat weekly, and those on the South Island 1s. 9d. to 2s. worth. The variations reflect regional and seasonal changes in price levels. Additional allowances amounting to 50 per cent of the basic ration were granted to certain classes of workers and to sick people; this was to be compensated by allowing only one half the adult ration to children aged 6 months to 5 years.

Certain classes of meat, such as edible offal, canned meats, sausages, rabbits, poultry and fish were not rationed. Even bacon and ham were unrationed, but the quantities of these available for sale were duly controlled. In 1945, domestic sales of bacon, ham and pork were entirely prohibited.

The saheme of meat rationing aimed at reducing consumption to about 2½ lb. per week for adults and half that amount for children. This represents an annual per caput adult consumption level of about 130 lb. compared with 252 lb. during the three-year period ended 1940-41 representing the average of the whole population.

Results obtained in New Zealand wartime meat management

New Zealand meat policy throughout the war was directed towards regulating production to cover home needs and supply as much meat to the United Kingdom and the armed forces in the Pacific as possible.

This objective has been attained to a large measure, as witnessed by considerably increased livestock slaughter for export during the war years, 1/ despite a serious reduction in manpower. Thus New Zealand offers an excellent example of a country highly dependent on exports to remote destinations which has successfully overcome wartime difficulties and has been able to maintain a stable and prosperous meat industry during World War II.

Postwar livestock and meat policy

The end of the war has not resulted in any noticeable dislocation of New Zealand's livestock industry. With the existence of the four-year British contract, the sale of meat surpluses is assured to July 1948, and the Meat Board continues to urge farmers to provide for an increase in pigmeats to 50,000 long tons and by 1947-48 to 60,000 tens, compared with 40,000 in 1944-45. The target for other meats for

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1/ See table 11.

1945-46 has not been increased.

Official pronouncements made recently continue to lay stress upon the importance of pastoral production as the nation's economic mainstay. Considerable attention is given to maintenance of quality as well, and it seems that the war has not disrupted the continuity of orientation toward the British market as the guiding principle of New Zealand meat policy for the future.

AUSTRALIAN MEAT POLICY

I. General Considerations

Importance of meat in Australian economy Taking the last prewar year, 1938-39 as an example, domestic markets absorbed a little over three-quarters of Australian beef production, an equal proportion of mutton and lamb and about two-thirds of pork, bacon and ham combined. Thus it was not only possible to cover the country's very high per capita meat consumption,[1] but to export fairly large quantities.

During the five years 1934-35 to 1938-39, the value of pastoral production represented on the average 19 per cent of the nation's total production, including primary and industrial output. This percentage includes the value of wool, but not that of dairy products. During the three years following the above period, i.e. up to and inclusive of 1941-42, this proportion remained at between 18 and 19 per cent.

In 1938-39, exports of meat represented a total value of Aust.£. 11.8 million (Can. $43.4 million), of which mutton and lamb contributed about 40 per cent, beef 36 per cent, pork, bacon and ham between 8 and 9 per cent, the balance being sundries and offals. During the last prewar year, meat thus contributed slightly less than 10 per cent of the country's total exports of £. Austr. 122.5 million (Can. $451.7 million), compared with 7.5 per cent during the five-year period ended that year. Despite this prewar progress, meat was much less important as a source of external income for Australia

1/ See later under "Domestic Meat Consumption".

than wool or even wheat and flour,[1] although it topped butter and dried fruits, which were other important items in the country's external trade.

Livestock numbers Sheep is by far the most important animal in Australian pastoral production. This is natural in a country possessing vast expanses of semi-arid and arid land that cannot support other kinds of livestock. The trend has been one of progressive increase in sheep numbers, despite difficulties in marketing wool. This tendency continued in the interwar period and even during the war years until 1944-45 when a damaging drought reduced the flock by almost 20 million head. Similar increases took place in dairy cows, and pigs almost doubled in number within the last quarter of a century.

Table 14.- Livestock. Numbers in Australia 1860, 1900 and 1919-20 to 1944-45.

Year	Cattle	Sheep & lambs	Pigs
	head	head	head
	thousands, i.e. 000 omitted		
1860	3,958	20,135	351
1900	8,640	70,603	950
1919-20 - 1923-24	13,669	82,816	861
1924-25 - 1928-29	12,294	101,049	977
1929-30 - 1933-34	12,296	109,719	1,093
1934-35 - 1938-39	13,479	111,320	1,182
1939-40	13,080	119,305	1,455
1940-41	13,256	122,694	1,797
1941-42	13,561	125,189	1,477
1942-43	14,005	124,615	1,563
1943-44	14,184	123,174	1,747
1939-40 - 1943-44	13,609	122,995	1,608
1944-45	14,133	105,415	1,630

Source: Official Year Book, 1941 and "Production Tables", a publication prepared by the Commonwealth Bureau of Agricultural Economics for the FAO Conference of October 16-Nov.1, 1945.

1/ Wool exports brought £42.7 million and wheat including flour £13.3 in 1938-39.

Meat production   Meat production statistics are not available for early years. However, an almost complete series has been compiled since the end of World War I, and this shows that the output of meat did not always closely follow the trend noted in livestock numbers.

The increase in cattle from the five-year period ended 1923-24 to the five-year period ended 1943-44 was only about four percent, whereas beef and veal output advanced 22 per cent.1/ The increase in slaughter of bullocks, cows and calves was almost 82 per cent during the same span of time, showing that larger meat production was not due to heavier animals being sent to slaughter. On the contrary, these figures rather indicate a degree of forced slaughter or liquidation at lower weights than usual. This might be attributed to drought during the five years ending 1943-44, combined with pressing wartime demands for meat.

Sheep and lamb flocks increased during the same twenty-year interval about 49 per cent and this was followed by an advance of 67 per cent in mutton and lamb output, corresponding to a 78 per cent increase in slaughterings. In this case the discrepancy between slaughter and meat production is not considerable, although the proportion of lambs in total killings almost doubled from 1929-30 - 1933-34 to 1939-40 - 1943-44.2/ This condition shows a developing preference for lamb, which may be partly attributed to greater emphasis on meat types owing to difficulties in disposing of wool.

Swine numbers advanced about 47 per cent from the five-year period

1/ "The World Future of Meat After the Transition Period", (quoted before.)

2/ Separate data for sheep and lamb slaughter is not available prior to 1929-30. From then on the following situation obtained: (thousands omitted).

Five-year period ended	1933-34	1938-39	1943-44
	head	head	head
Sheep	11,669	10,258	12,412
Lambs	5,871	8,435	10,383
Total	17,540	18,693	22,795

1929-30 - 1933-34 to 1939-40 - 1943-44. Total pig meat output increased 61 per cent during the same time, with a corresponding increment of 43 per cent in slaughterings. This reflects a change in wartime policy, which allowed pigs to be fattened to heavier weights than before the war.

Table 15.- Meat. Production in Australia, compared with livestock slaughter, 1919-20 to 1944-45.

Year	Meat Production: Beef & veal	Meat Production: Mutton & lamb	Meat Production: Pig meats	Livestock Slaughter: Cattle	Livestock Slaughter: Sheep & lambs	Livestock Slaughter: Pigs
	long tons	long tons	long tons	head	head	head
	Thousands, 000 omitted			Thousands, 000 omitted		
1919/20-1923/24	1/ 421	1/ 226	2/	1,746	12,740	1,005
1924/25-1928/29	3/ 510	3/ 207	2/	2,298	11,885	1,322
1929/30-1933/34	370	306	54	1,927	17,540	1,508
1934/35-1938/39	530	315	71	3,331	18,693	1,911
1939-40	533	320	79	3,383	18,951	1,952
1940-41	490	361	91	3,032	21,709	2,350
1941-42	523	374	102	3,184	22,155	2,594
1942-43	524	412	78	3,171	25,399	2,071
1943-44	518	425	85	3,130	25,759	1,802
1939/40-1943/44	517	378	87	3,180	22,795	2,154
1944-45	460	396	102	3,053	25,169	1,928

Source: Official Year Book, 1941 and "Production Tables", a publication prepared by the Commonwealth Bureau of Agricultural Economics for the FAO Conference of October 16-Nov.1, 1945.

1/ Average of 3 years ended 1923-24. 2/ Not available.
3/ " " 6 " " 1928-29.

The above outlined conditions show the complex nature of the problems that confronted planners of wartime meat policy in Australia. In the case of New Zealand, somewhat unpredictable British requirements were the main difficulty in adapting meat production to wartime needs. The Australian planners faced the same difficulty, to which were added those engendered by feed scarcity due to drought conditions and the need of shifting excessive emphasis from wool production.

Domestic meat consumption

Meat consumption in Australia is among the highest in the world. Among 19 nations whose consumption levels have been examined in a previous paper,1/ Australian meat consumption ranked third highest.

Year by year data are only available since 1929-30; these show fluctuations in consumption from 188 to 244 lb., the highest figure referring to 1937-38. After the outbreak of war, meat consumption increased materially over and above previous years' levels and finally it became necessary to introduce meat rationing early in 1944. (See later.)

Beef and veal constitute rather more than one-half of the meat used, although not entirely two-thirds. Mutton and lamb represent about one-third, whereas pork, bacon and ham consumption form less than 10 per cent of the total. This is in conformity with the country's pastoral character and underlines the importance of foreign markets for pig meat.

Table 16.- Meat. Per Capita Consumption by Classes in Australia, 1929-30 to 1939-40 and 1942-43.

Year	Beef & veal	Mutton & lamb	Pork, bacon & ham	Total all meats
	lb.	lb.	lb.	lb.
1929-30	105	78	17	200
1930-31	94	77	17	188
1931-32	93	80	17	190
1932-33	107	92	18	217
1933-34	110	84	19	213
Average 1929/30-1933/34	102	82	17	201
1934-35	121	77	20	218
1935-36	133	73	20	226
1936-37	146	71	21	238
1937-38	151	76	17	244
1938-39	140	76	18	234
Average 1934/35-1938/39	138	75	19	232

1/ "The World Future of Meat After the Transition Period", (quoted before.)

Table 16. continued.

Year	Beef & veal	Mutton & lamb	Pork, bacon: & ham	Total all meats
	lb.	lb.	lb.	lb.
1939-40	128	70	17	215
1940-41	1/	1/	1/	1/
1941-42	1/	1/	1/	1/
1942-43	149	99	12	260

Source: Official Year Books of the Commonwealth of Australia 1931 to 1941 and 1942-43.
1/ Not available.

Early in 1943 the British Ministry of Food informed the Australian Government that shipping had become available for whatever quantities of meat could be exported and that all the meat that coulc possibly be spared would be needed to maintain British meat rations. Combined with the needs of Australian and Allied armed forces in the area, these demands could not be met without some reduction in excessive Australian civilian consumption. Meat rationing was subsequently introduced, effective January 17, 1944. (See later, under "Consumption Controls".)

Meat exports During the interwar period meat exports from Australia showed a steadily advancing trend, which was particularly pronounced in the case of lamb and pork.

Table 17.- Meat. Exports from Australia by classes, 1919-20 to 1944-45.

Year	Beef & veal 1/	Mutton & lamb	Pig meats	Included in the foregoing figures: Mutton	Lamb	Pork	Bacon & ham
	million lb.				million lb.		
1919/20-1923/24	137	119	2.6	70	49	0.2	2.4
1924/25-1928/29	192	71	1.8	25	46	0.2	1.6
1929/30-1933/34	161	143	8.3	45	98	6.5	1.7
1934/35-1938/39	252	193	27.9	40	153	26.2	1.7
1939/40	285	249	56.4	48	201	52.2	4.2

Table 17. continued.

	Beef & veal 1/	Mutton & lamb	Pig meats	Included in the foregoing figures: Mutton	Lamb	Pork	Bacon & ham
	million lb.			million lb.			
1940/41	199	239	81.6	19	220	74.9	6.7
1941/42	117	175	40.0	11	164	34.2	5.8
1942/43	22	203	4.6	19	184	2.0	2.6
1943/44	47	172	24.6	30	142	16.0	8.6
1939/40-1943/44	134	207	41.5	25	182	35.9	5.6
1944/45	63	147	48.4	38	109	39.9	8.5

Source: Official Year Book, 1941 and "Production Tables", a publication prepared by the Commonwealth Bureau of Agricultural Economics for the FAO Conference of October 16-Nov.1, 1945.

1/ Veal exports represented a maximum of 5 per cent in this category during the years under review.

The upward trend of exports was interrupted during the war years, firstly owing to shipping difficulties, and when these had ceased in 1943, on account of drought.

In contrast with the decrease in chilled and frozen meat exports, shipments of canned meat increased by leaps and bounds. This was due to an attempt at saving shipping space. During the five years ended 1939-34, only 5.2 million lb. of canned meat were exported from Australia; the following five years showed little advance at 9.8 million. But beginning from 1939-40 there was rapid progress:

	million lb.		million lb.
1939-40	23.2	1942-43	69.3
1940-41	42.5	1943-44	79.7
1941-42	94.1	1944-45	81.5

The United Kingdom was the principal market for Australian beef, mutton, pork, lamb and preserved meats before the war, whereas the bulk of bacon and ham went to nearby Asiatic destinations. Very little Australian meat was sent to the European continent.

Table 18.- Meat. Exports from Australia by Principal Destinations, five-year averages 1929-30 to 1938-39.

Country of destination	Beef	Mutton	Lamb	Pork	Bacon & ham	Canned meat
			million lb.			
			1929-30 to 1933-34			
United Kingdom	117	41	95	6	0	3
Other	44	4	3	0	2	2
Total	161	45	98	6	2	5
			1934-35 to 1938-39			
United Kingdom	170	38	151	26	0	7
Other	20	3	3	0	2	3
Total	190	41	154	26	2	10
			In percentage of total			
			1929-30 to 1933-34			
United Kingdom	73	91	97	100	0	60
Other	27	9	3	0	100	40
Total	100	100	100	100	100	100
			1934-35 to 1938-39			
United Kingdom	89	93	98	100	0	70
Other	11	7	2	0	100	30
Total	100	100	100	100	100	100

Source: Official Statistics.

Statistical data relative to the destination of wartime meat exports from Australia are not available in detail. However, the Annual Report of the Australian Meat Board for the year ended June 30, 1944, and the year before shows exports to the United Kingdom, as well as total shipments. Data for previous war years were not published by the Meat Board. The Meat Board data show marked changes in regard to destinations, especially in the case of bacon, ham and beef, which was largely reserved for the use of American Forces operating in the area. During the two years mentioned, 100 per cent of the bacon and ham surpluses was thus affected.

Table 19.- Meat. Exports from Australia by classes and destinations, years ended June 30, 1943 and 1944.

Destination	Beef & veal	Mutton & lamb 1/	Pig meat 2/	Canned meat & other meat products	Dehydrated mutton	Total meat
	cwt. of 112 lb., 000, i.e. thousands, omitted.					
		I. 1942-43				
United Kingdom	99	1,845	12	218	1	2,175
Others	62	12	16	112	12	214
Total	161	1,857	28	330	13	2,389
			In terms of percentages			
United Kingdom	62	99	43	66	7	
Others	38	.1	57	34	93	
Total	100	100	100	100	100	
		II. 1943-44				
United Kingdom	45	1,399	139	97	17	1,696
Others	294	83	24	194	24	620
Total	339	1,482	163	291	41	2,316
			In terms of percentages			
United Kingdom	13	94	85	33	7	91
Others	87	6	15	67	93	9
Total	100	100	100	100	100	100

Source: Australian Meat Board, Annual Report for the year ended June 30, 1944, p.13.

1/ Mutton accounted for less than one-fifth of the total.

2/ In 1943-44, baconer carcases represented about 80 per cent of the total. In 1942-43, bacon and ham accounted for almost one-half.

II. Wartime Meat Management

Aims pursued During the first two years of World War II, Australian meat production levels continued to exceed domestic requirements and the demand from abroad. As a consequence, the Government's principal preoccupation in the field of meat management continued to be the securing or rather maintenance of outlets for existing surpluses. When, in the second year of the war, shipping space became so scarce that many classes of meat were excluded from contracts with Britain, the Government was compelled to take emergency measures with respect to surplus meat. But there was little or no interference with domestic markets which absorbed, as before, the lion's share of the total output.

When Japan entered the war and large contingents of Allied troops came to depend on Australia for food, these surpluses soon became depleted. Beginning with 1943, the problem has not been one of clearing surpluses, but rather how to satisfy the greatly enhanced demands of allied forces in the South Pacific, those of Britain and of the domestic population. From that time on, the planners of Australian meat policy have concentrated on increasing the output in spite of adverse climatic conditions and labour difficulties.

Control mechanism

British and Allied requirements largely determined the course of Australian meat marketing policies during the war years. These led to quota agreements and bulk purchase contracts, the fulfillment of which necessitated adjustments in production and price policies and the granting of powers to executive agencies that were entrusted with the implementation of decisions. The course of Australian wartime meat management can, therefore, be followed systematically by analyzing the aspects enumerated above.

A. British requirements from Australia

The Government of the United Kingdom submitted to the Dominion Governments in August 1938 a plan for food control in the event of war.

This provided for handling meat imports through long term contracts for bulk purchases. The plan was accepted in 1939 and thus the United Kingdom Government was in a position to begin negotiations for annual bulk contracts immediately when the war broke out. (Resulting trade agreements are discussed in the next chapter.)

Season of Oct.1, 1939-40 to Sept.30, 1940-41 As in the case of New Zealand, British calls upon Australian meat during the initial stages of the war were characterized by a note of restraint. There was much uncertainty regarding availability of shipping for such long haul as that from the Antipodes to Britain, and the British Ministry of Food was responsible for the payment of extra storage charges on meat held in cold store in Australia for unduly long periods by reason of hold-ups in sailings.

Until the middle of 1940 British demand within the limits of the year's contract was buoyant and no difficulty had been experienced in shipping all available supplies. About the middle of that year, the shipping position took a serious turn and the Ministry of Food announced a program which implied considerable restriction of shipments for the second year of the war.

1941-42 season. Early in this season shipping difficulties were further aggravated and serious doubts arose as to the possibility of securing enough space even for the reduced seasonal contract for frozen meat. (See later.) These complications, combined with the arrival in Australia of large Allied forces, made it necessary early in 1942 to revamp the entire meat management plan.

Periodical changes in United Kingdom requirements had been a serious threat to the stability of Australian meat industry up to 1942. Pig producers incurred particularly damaging losses and the outlook became so uncertain that a big drop in pig meat production resulted for the seasons 1942-43 and 1943-44 after the peak of 1941-42.

With the diversion of a large proportion of Australian surpluses to South Pacific armed forces, a radical improvement set in and by 1944-45 pig meat output was up again at the 1941-42 record level. (See Table 15.)

1942-43 season Whereas up to 1942 the necessity for restricting production was always a probability, beginning from 1942 there has been a definite call to maintain production. Whereas formerly British requirements had been the determining factor in steering the course of Australian surplus disposal, supplies of frozen and canned meats available for the United Kingdom during the 1942-43 season were limited by the priority given to the needs of the Australian and Allied services. Shipping space during this season was sufficient to lift all available supplies.

1943-44 and 1944-45 seasons The general call for increased output especially in the case of canned meat, continued during both seasons. The demand for pork and pork products was especially keen as American servicemen stationed in the area required a considerably larger proportion of pork in their total meat intake than was the case with Australians. The call from Great Britain also continued and in order to make available more meat for British needs, rationing of domestic meat consumption was introduced.

B. Trade Agreements

British-Australian contracts for meat refer to marketing years beginning October 1 and ending September 30. The following is a list of the agreements made for the war years and the postwar transition period.

1939-30 season. The first year's contract covered originally a basic quantity of 240,000 long tons of all classes of frozen meat, plus such additional quantity as freight could be made available for. On July 22, 1940, this quantity was increased to 260,000 tons.

Prices stipulated in the British contract are listed in Table 20. (See later.)

1940-41 season. In August, 1940, when negotiations for the second contract began, the season's surplus was estimated at 290,000 long tons. Owing to the shipping situation, the British Ministry of Food undertook to purchase only 249,000 tons, of which 24,000 tons was to be baconer pork. Early in January, 1941, cargo space was further reduced and the Ministry of Food decreased the basic quantity covered by the contract to 198,000 long tons including 24,000 tons of baconer pork. Beginning with February, shipments of baconer pork were to be discontinued but porker pork was then accepted. In March the contract was reduced to 144,000 tons but at the end of April the British Government again agreed to attempt to ship 198,000 tons.

1941-42 season. In April, 1941, advice was received in Australia that shipping would not be available during the third contract year for more than about 81,000 long tons of frozen meat including 54,000 tons of beef for the fighting forces. After December, 1941, when the war with Japan got under way, the bulk of Australian surpluses was assigned to the forces in the Australian area, a circumstance that greatly relieved the pressure on domestic markets.

1942-43 season. During this season, the upper limit of exports to the United Kingdom was no longer determined by the availability of shipping space but rather by the priority given to the requirements of the Australiah and Allied services. Allocation of supplies was in the hands of the Combined Food Board and no definite quantity could be included in the year's contract. It was, hqwever, expected that exports would be about the same in quantity as in the previous year.

1944. The United Kingdom allocation for 1944 had been originally fixed at 200,000 tons, but was subsequently reduced to 178,000 tons. 158,000 tons were to be supplied to American armed forces in the area and 124,000 tons to Australian forces.[1]

The Four-Year Agreement. On September 28, 1944, the Australian Prime Minister announced the conslusion of a long-term contract for the purchase of Australia's entire exportable surplus of meat from October 1, 1944, to September 30, 1948. The "exportable surplus" has been defined as the quantity left over from the country's total production after deduction of:

(a) domestic requirements including those of Australian armed forces;

(b) allocations to Allied armed forces based on Australia;

(c) deliveries to UNRRA in quantities to be agreed upon with the United Kingdom Government;

(d) deliveries to other markets, whose volume will have been established by mutual agreement between the British and Australian Governments.

[1] "Foreign Commerce Weekly", Washington. D.C.. December 9. 1944.

The assured market applies to beef, mutton and lamb for four years and to pork for two years. The Prime Minister stated that prices prevailing in 1944 would be continued, subject to review at the end of two years at the request of either Government.

C. Adjusting Meat Management in Australia to Export Requirements

<u>Restrictions on meat storage</u> Prior to 1942, difficulties in the shipping situation imposed drastic limitations upon exports and the changing policy of the United Kingdom regarding the type of pigmeat to be exported added to the gravity of the problem. As a consequence, surplus meat continued to accumulate in cold storages whose capacity was taxed to the limit. In order to conserve cold storage space, it became necessary to place restrictions on the receipt into store of cheaper meats. These restrictions affected various classes of meat, such as all ewe mutton other than maiden ewe mutton, all third quality wether and/or maiden ewe mutton, all mutton cuts, third quality cow beef, bull beef, veal and all pork cuts other than sides. These restrictions came into force on August 12, 1940.

On February 1, 1941, further limitations were imposed on deliveries into store and the final list included 17 items. On April 21, 1941, and until the beginning of the lamb season, all contract mutton and lamb was barred from admission into store. The resulting hardship to producers was subsequently alleviated by the introduction of the so-called "Commonwealth Government Purchase Plan", whose operations are described later under "Internal Marketing Controls".

In the implementation of the restriction policy, the Government took into consideration the relative importance and value of various classes in Australian economy, the requirements of the British Food Ministry and the Australian storage position. Accordingly, beef was not affected to the same extent as mutton and lamb, although a series of restrictions were imposed between April and July 1941, mainly on third quality beef.

In July 1941, the shipping situation improved considerably and a number of restrictions were removed. Towards the end of 1942, when pressing demand for the fighting forces located in the Pacific area developed, restrictions of all kinds became unnecessary and planning turned toward stimulating meat production.

<u>Cold store development</u> When shipping difficulties multiplied during the early part of the war, the Australian Meat Board recommended to the Government that freezing plants be required to provide storage sufficient to accommodate six weeks' peak period slaughterings. This was adopted and later in the 1940-41 season the Government raised the minimum to three months and undertook to finance half the cost of new storage in excess of what was required to store six weeks' output.

By May 1, 1942, available cold storage space in Australia totalled 10.6 million cubic feet, sufficient for storing 112,000 tons of meat. An additional 1.65 million cubic feet for 20,000 tons was under construction. This additional space forestalled many difficulties that might have arisen before 1943. Owing to their scattered location, however, they were not capable of providing frozen storage under all circumstances for the use of troops in the field and large reserves of canned meat had to be built up for that purpose.

Meat processing   Late in April, 1941, the Australian Government notified that refrigerated cargo space would not be provided for more than about 81,000 tons of frozen meat during the third contract year. This quantity included 54,000 tons of beef for the fighting services. To meet this position, it was decided to can or dehydrate beef, mutton and pork surpluses that could not be shipped in the frozen form. In the case of beef, this was not merely an emergency measure, as there was a very large demand for canned beef for the armed forces.

The decrease in frozen beef shipments during 1941 was compensated for by an increase in canned beef and this trend became more accentuated as the war progressed. (See Table 19.) By 1941-42, as high a proportion as 80 per cent of the beef surplus and more than half of the normal meat surplus were canned.

Australian canned meat production prior to the war was approximately 10,000-15,000 tons per year. Output increased to over 80,000 tons in 1943 and the 1944 plan required a further advance to over 90,000 tons.[1]

In 1941 experiments were made to test the possibility of dehydrating mutton. A product acceptable as an emergency field ration was obtained and used by Australian forces. Dehydrated mutton production was 500 tons in 1942,- 2,300 tons in 1943 and about 3,000 tons in 1944.[1] In 1943 and 1944 fairly substantial quantities were also exported to the United Kingdom and some other destinations. (See Table 19.)

Production goals   It will be noted that all the measures outlined

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1/ "The Food Front", December, 1944.

in the present chapter aimed at preventing a congestion of domestic markets and removing surpluses as they developed. Production levels were not directly interferred with, as any such attempt would probably have met with considerable opposition on the part of Australian farmers who are noted for their independent attitude and resistance to compulsion. Such production controls as existed[1] were rather of an indirect nature,- refusal to accept deliveries into cold stores, price controls, availability of feed grains and other supplies. Nevertheless, this indirect approach had its effect upon producers, a condition illustrated by the fall in pig production following the vicissitudes of changing British requirements in 1941.

As long as the problem was one of insufficient demand for existing surpluses, the above mentioned indirect controls were sufficient. But with the outbreak of war in the Pacific, demand accelerated rapidly and it became necessary to seek means for increasing production. In so doing, existing shortages of labour and supplies had to be considered and available supplies allotted in a manner that would ensure balance in agriculture and the meeting of the most essential requirements. This type of planning implied a determination of the relative approximate quantity of each product year by year. These quantitative estimates or recommendations were expressed in annual "production goals". When a production goal was established, it was an indication to the States in the Australian Commonwealth that a certain level of output was wanted and that the Commonwealth Government would do whatever it could to make available sufficient resources to enable the achievement of that output.

1/ See later under "Internal Marketing Controls".

The technique of determining production goals is fully described in the June, 1944, issue of "The Food Front", a news bulletin of the War Agricultural Committees of Australia, an organization set up to help farmers in achieving these goals:

"All goals are set by Production Executive of Federal Cabinet, following recommendations from the Production Goals Committee. This Committee is chaired by the Department of War Organisation of Industry, and has representation from the Commonwealth Food Control, the Manpower Directorate, the Prices Commission, the Rationing Commission, the Ministry of Post-War Reconstruction and the Bureau of Census and Statistics. In making recommendations to Production Executive, the Committee is thus able to give due consideration to all relevant aspects, such as manpower, price and postwar possibilities. Furthermore, since close contact is maintained with State Departments of Agriculture, the State targets formulated are kept in appropriate relationship with State production capacities. Frequently, indeed, tentative goals are sent out to the States for their comments before a recommendation is sent to Production Executive."

The few goals set in the early days of planning, in 1942, did not receive much attention and had little effect, since the organization to promote their attainment had not yet been fully developed. In subsequent years, the inroads of drought interfered seriously with their realization.

Production goals for meat were set beginning with 1944. Goals for that year are listed below, compared with actual production. Goals for 1945 are also shown.

Table 20.- Meat. Production Goals in Australia, by Classes, 1944 and 1945, compared with production in 1944.

Class of meat	1944 estimated production	Goals 1944	Goals 1945
	Long tons, thousands, i.e. 000 omitted		
Beef and veal	473	560	485
Mutton and lamb	424	477	380
Pigmeat	130	143	135

Source: "The Food Front", W.A.E.C. Bulletin, June 1944 and June 1945.

Owing to drought in some of the important producing sections, the 1944 goals could not be achieved and doubts were expressed in June 1945 as to the possibility of attaining the 1945 goals.

D. Price Policy

Prices to producers "Commonwealth Government Purchase Plan"

The Australian Government undertook for the first time in 1941 to guarantee meat prices to producers. As mentioned before, meat surpluses were backing up in Australian cold stores during 1940-41 owing to the then prevailing precarious shipping situation. In order to prevent a collapse on internal markets the Government agreed to purchase lamb and canned mutton as well as canned pigmeat beginning from July 1, 1941, at prices somewhat below those received from the British Food Ministry. There was no limitation on the quantity of lamb and canned mutton that would be accepted, whereas canned pork receipts referred to determined quantities.1/

Early in 1942, the Purchase Plan was extended to a number of classes of mutton, pork and beef for freezing and canning.

For mutton, beef and pork, the original plans provided for the

1/ These quantities are shown under "Internal Marketing Controls" later.

purchase of specified classes of meat at the United Kingdom purchase prices less 15 per cent. Up to August 22, 1942, lamb was purchased at prices representing an all-round reduction of about 10 per cent on United Kingdom prices. From that date full United Kingdom prices have been paid for both lamb and mutton. Full contract prices for beef were paid from September 26, 1942, until April 12, 1943, when a revised price schedule was introduced. Full contract prices for pigmeats were paid from September 26, 1942, until June 14, 1943, when a new pigmeat acquisition plan was brought into operation. Under this plan baconer pork of 100 to 180 lb. available for export was purchased in the form of Wiltshire sides at prices calculated to return the producer 8d. and 7½d. respectively for first and second quality pigs. Further alterations were announced on June 7th, 1945, which reduced temporarily the weight of acceptable pigs, but increased the prices paid. This change is a reflection of the serious feed position brought about by the drought.

Altered arrangements for meat prices were announced on March 7, 1945, by the Minister for Commerce and Agriculture. The Commonwealth purchase prices for mutton were increased from March 12, 1945, to coincide with increases in prices paid by the British Ministry of Food. Certain classes of beef and veal were to be purchased at the Australian currency equivalent of the current British prices.

The funds built up during the operation of the purchase plans out of the margin resulting from the sale of meat to the United Kingdom and the prices paid by the Australian Government have been used to subsidize the price of meat sold to canners. In 1941-42, even certain higher grades of beef were made available to canners at a discount.

The relationship between prices obtained from the British Ministry of Food and those paid to producers by the Australian Government is shown in the following table for one grade in each class.

Table 21.- Meat. Prices f.o.b. Australia paid by the United Kingdom and Australian Governments for specified classes and grades, 1940-41 to 1943-44.

Paid by	1940-41	1941-42	1942-43	1943-44 1/
	Australian pence per lb.			
	I. LAMB.- First Quality (20-28 lb.) 2/			
United Kingdom	7.27	7.73	7.73	7.97
Australia	6.50	7.47	7.73	7.97
	II. MUTTON.- First quality wether or maiden ewe (under 40 lb.)			
United Kingdom		3.83	3.83	4.37
Australia	3/	3.25	3.83	4.37
	III. BEEF.- Ox and Heifer, 1st quality hinds, bone in.			
United Kingdom		5.70	5.70	5.94
Australia	3/	4.85	5.70	5.94
	IV. PORK.- Headless porker sides, 1st quality (36-49 lb.)			
United Kingdom		8.20	8.20	10.50
Australia	3/	6.97	4/ (8.20)	10.50

Source: Annual Reports of the Australian Meat Board.
1/ Mutton prices valid from October 1, 1943, lamb prices from September 4, 1943 and other prices from December 1, 1943.
2/ Australian prices refer to spring lambs.
3/ Purchase plan not in operation.
4/ Valid up to June 14, 1943.

The prices payable by the British Government under the Four Year Agreement are not yet available.

Consumer Prices 1/ When meat demand for consumption by Australian civilians and Allied Pacific forces, as well as for export to Britain, increased to levels in excess of supplies after the entry of Japan

1/ See "The Food Front", June 1944, and December 1944.

into the war, pressure began to develop on local prices. To prevent prices from running away, an order was issued early in 1943 pegging them at the levels ruling at February 26, 1943.

Restrictions applied to meat only, whereas the prices of stock on hoof were not affected. This meant that butchers at times were compelled to pay more for livestock than could be realized from the sale of meat under ceiling prices. Owing to the difficulty of placing definite valuations on live stock, this condition has not been altered.

The first step in regulating meat prices was to fix specific wholesale ceilings, which were later followed by maximum retail ceilings for certain types of meat. Adjustments were made from time to time for seasonal variations in cost, but on the other hand quality considerations were largely neglected in favour of quantity.

Consumer price control of meat has been justified by the Australian Government on the grounds that under the Price Stabilization Plan the cost of farm supplies have been pegged and therefore they could afford to sell at ceiling prices. It has further been pointed out that a 10 per cent increase in meat prices would have required a 1s. addition per week to basic wages. This might have upset the entire Price Stabilization Plan.

The possibilities offered by price control regulations eventually became a means in the hands of the Controller of Meat Supplies[1] for building up reserves of various classes of meat, particularly beef. In periods of peak production, prices were maintained through the operations of the Government Meat Purchase Plans.[1]

[1] See next chapter.

E. Methods of procurement and distribution. Administrative Agencies.

- Internal Control -

Commonwealth Government Purchase Plans When shipping difficulties multiplied in 1941, lamb surpluses began to accumulate in Australia. In order to prevent any possible decline in production that might have resulted if producers had lost faith in future marketing possibilities, the Government of the Commonwealth undertook beginning from July 1, 1941, to buy unlimited numbers of lambs at fixed prices. (See previous chapter on price control.)

Lambs acquired under this Plan went into storage and the Australian Government had assumed the responsibility of paying storage charges beyond 28 days, as well as the risk of re-sale to the United Kingdom Ministry of Food, this latter organization being required to cover storage during the first 28 days. These expenditures and risks had justified the span that existed between the Government's purchase price and that paid by the British Ministry of Food, as shown in a previous chapter. The Australian Government further proposed to use, if necessary, part of the funds thus accumulated, for the canning of mutton.

Following on the improvement of the shipping position in subsequent years, full prices obtained from the Food Ministry were restored to producers.

Mutton. In order to promote lamb sales, the Government attempted to remove some of the competing grades of mutton from the market. This end was achieved between July 1, 1941, and January 26, 1942, by the purchase of canned mutton manufactured from meat not lower than third grade.

As from January 26, 1942, a number of classes of mutton were directly purchased by the Government, along lines similar to the Lamb Purchase Plan, at prices shown previously.

Beef. Beef came under the Purchase Plan as from March 2, 1942, and the Government was primarily concerned with securing a market for first and second quality quarter beef.

Pigmeat. First and second quality porker and Wiltshire sides came under the Plan on March 2, 1942. From June 14, 1943, on pigmeat was acquired only in the form of Wiltshire sides.

The Purchase Plans did not disrupt internal trade channels established in peacetime and auctioneers, slaughterers, freezing and canning works, wholesalers and retailers continued to operate on the domestic market as before. The Government merely supplied a final outlet for temporary surpluses at fixed prices.

Internal Control Agencies

After Japan's entiry into the war, it became necessary to stimulate meat production in Australia, In the first half of 1942, Government control of the meat industry as a whole was proposed with the aim of stabilizing the industry and securing a higher level of production. As the program developed, the following agencies took charge of its implementation:

The Australian Meat Board, an agency primarily concerned with exports,[1] submitted to the Commonwealth Government definite recommendations aimed at stimulating production and facilitating meat marketing, as early as the be-

[1] See next chapter.

ginning of July, 1942. At its meeting held late in September of the same year, the Board supplemented these proposals by suggesting that it should be constituted the authority to administer "such plan of meat industry control as should be decided on." 1/ These suggestions were not accepted and in October, 1942, the Government created a new organization to administer meat policy.

The Australian Meat Industry Commission came into being under these circumstances. Before it could be effectively organized, the Senate disallowed the regulations under which it was constituted and the Meat Board renewed its previous attempts. These were again rejected and early in 1943 the final form of control came into being.

The Commonwealth Controller of Meat Supplies thus became the central authority in directing Australian meat policy beginning from 1943. The Chairman of the Meat Board and three leading officials became Deputy Meat Controllers in four States.

The Controller has extensive powers under the supervision of the Minister for Commerce and Agriculture. Allocation of meat is controlled down to retail outlets and deliveries to butchers are related to their sales during a base period. Quotas are fixed even for the different types of meat they may receive each week.

A Commonwealth Meat Canning Committee was set up under National Security Regulations in February 1942 to handle meat or canned meat purchases, and to can, store or sell any meat or cannet meat. Although the Committee's terms of reference were couched in the above broad terms, its

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1/ Australian Meat Board Annual Report for the year ended June 30, 1943.

activities, which began in April, 1942, were rather restricted to coordination of purchases of meat for canning and distribution of canned meat supplies. In this way, greater economy and efficiency were gained by centralized placing of orders and standard terms.

Export control   Meat exports became a Government Monopoly in 1939 in Australia when the war broke out. Transactions for the sale of Australian meat surpluses to Britain were made between the two Governments, but actually shipments continued to be handled by the then existing meat export companies, under supervision of the Australian Meat Board.

The Australian Meat Board was set up in 1935 under the Meat Export Control Act, 1935-36.

The powers of the Meat Board enabled it to:

license, control and regulate meat exports;

advertise Australian meat overseas;

recommend quality and grading standards for export meat and to assure preservation of its quality in transit;

advise the Commonwealth Government on meat export policy;

arrange shipping and insurance contracts;

encourage research tending to promote meat exports.

During the early war years when difficulties had been experienced in moving meat surpluses from Australia, the Meat Board was active in recommending remedies or at least palliatives to the Government. It determined the maximum quantities of certain types of meat that the Government was to purchase for canning and took an active part in the negotiations which preceded the conclusion of agreements with the United Kingdom.

Thus, negotiations for the first bulk-purchase agreement covering the year 1939-40 were carried on by the Department of Commerce and Agriculture, which acted on the advice of the Meat Board. Throughout the negotiations close touch was maintained with the trade and with exporters' organizations through their representatives on the Board. The executive officer of the Meat Board in London acted as assistant to the Australian High Commissioner who was in charge of negotiations.

Consumption controls

When demands upon Australianmeat resources exceeded the supply as the war against Japan gathered momentum, it became necessary to reduce domestic consumption by means of rationing.

After the effective date of the plan, as of January 17, 1944, meat has been divided into five groups, the first four (A-D) being subject to rationing. The system adopted was one based on coupons; adults receive four non-cumulative coupons every fortnight and children half the adult ration. The value of coupons has been stated as follows:

Group "A"	(steaks) - - - - - - - - - - - - - - - - - -	$\frac{3}{4}$ lb.
" "B"	(leg of lamb, mutton, etc.) - - - - - -	1 "
" "C"	(chuck steak, shoulder of lamb) - - - -	$1\frac{1}{2}$ "
" "D"	(gravy beef, boned brisket, etc.) - - -	2 "

In 1945 there were two cuts in the ration, the first on February 26, the second on May 7, reducing the ration by 9 per cent and an additional $12\frac{1}{2}$ per cent respectively.

Rationing was expected to reduce domestic meat consumption from its

650,000 long tons prewar level to 540,000 tons in 1944.

F. Results obtained in wartime meat management.

Considering that Australia suffered a series of damaging droughts during practically every year of the war, the country's performance in the field of meat exports is a remarkable one. Livestock numbers as well as meat exports in terms of carcase equivalent were not only maintained at pre-war levels, but even increased appreciably. The fact that there were shifts from certain types to others, such as an increase in canned meat exports to the detriment of frozen beef, did not affect the overall gain in exports.

The principal aim of Australian meat management during the war years was to secure maximum supplies for the Pacific forces and for export to Britain, without serious curtailment of domestic civilian consumption, which was excessively high before the war. This goal has been achieved to a considerable extent, as attested by the increase in exports despite the serious situation created by drought.

III. Postwar Livestock and Meat Policy

Owing to the Australian people's reluctance to extend wartime powers to the postwar period, no official long term policy can be developed at the present time. The powers underlying plans made by the Reconstruction Department are not broad enough to enable the Government to make any such declaration with regard to livestock and meat.

Nevertheless, there are straws in the wind that may be interpreted to indicate a possible reversal of the nation's intransigent stand on granting more extensive powers to the central authority,[1] once wartime prosperity begins to wane. A draft memorandum on agriculture in Australia, submitted to the United Nations Interim Commission on Food and Agriculture on July 29, 1944 by the Australian representative, carries the following statement under "Post War Period":

"Indications are that there may be pressure from producers for guaranteed prices. It is felt, however, that if the Commonwealth Government is to guarantee prices to producers, it will need to have control over production". This statement indicates that guaranteed prices might become the lever by means of which the powers required for systematic planning may be obtained.

The same source indicates the probable general trend of Australian agriculture after the war:

"At the moment it appears that any expansion in Australian agricultural production will take the form of intensive farming in already settled areas rather than the opening up of new areas."

Intensive farming means more livestock. An article published in the "Farm Front"[2] in August 1945, by W.A. Cunningham, seems to bear out this view. The author assures in his article entitled "Livestock Slaughterings and Graziers' Income in New South Wales":

[1] In August 1944 a referendum was held on proposed amendments to the Constitution that would have extended the Commonwealth Government's wartime powers with respect to certain phases of social and economic planning for a number of years after the war. These included centralized control over the marketing of farm produce, as well as control and regulation of primary production. The amendment was defeated by a fairly narrow margin of 1.7 against 1.5 million votes.

[2] Issued by the Economists' Department of the Rural Bank of New South Wales.

"Australia's readiness to maintain a high level of livestock production appears indisputable. As in the past, the difficulty after the war will be to find suitable avenues on the domestic and export markets where a reasonable price for the Australian meat producer will be assured ...... Increased income furnished to meat producers . . . has rested on the enhanced prices payable under conditions of wartime demand rather than from expanded production alone. The maintenance of this high price-level for meat products should not necessarily be presumed."

This seems to indicate continued high output of meat at lower prices. In such a case, external markets will have to be relied upon heavily, since dietary levels recommended by the Australian Food Council[1] suggest a one per cent decrease in Australian meat production, compared with the output of the ten-year period ended 1939-40, when meat production was much smaller than during the war years.

Preparations for maintaining and developing export markets are already in progress. A call for increased efficiency and lower costs of production has been echoed by many farm authorities. The Commonwealth Prices Commissioner warned graziers in June, 1945, that in the Spring meat prices would have to be reduced "until they are reasonably related to export values". He also advised farmers against paying high prices in replacing stock lost during the drought. Also in June, the Minister for Commerce and Agriculture admonished pig producers to avoid producing over-fat pigs which were objectionable in Britain and to concentrate on the true bacon type.

All these indications seem to point to a strong desire on the part

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1/ See "Agriculture Abroad", September 1945.

of the Australian Government to maintain their foothold on external markets and to continue the production of livestock and meat for export at a high level.

MEAT POLICY IN ARGENTINA

I. General Considerations

Importance of meat in Argentine economy

"There is little doubt that the Argentine Republic is one of the world's foremost beef producing and exporting countries ...... There is no other country that has the same advantages of climate, soil and economy which enable Argentina to produce at such low cost the large volume of quality meat which has given fame to the Argentine product",- asserts Dr. Ezequiel C. Tagle, Director of Livestock Husbandry in the Argentine Ministry of Agriculture.1/ When the absolute volume of exportable beef surpluses is considered, Argentina takes the first place among the world's nations. Mutton and pork exports also form the object of appreciable foreign trade.

Meat exports represented only about 11 per cent of all Argentine exports in 1930. This increased to 31 per cent by 1942. The proportion of meat in total exports does not fully illustrate the industry's growth, since fluctuations in exports and relative prices of other commodities influence the importance of each group in total exports. With the growth of grain exports the relative proportion of meat and livestock declined, although progress in absolute export value continued. Annual values are a better measure, although subject to price fluctuations.

Table 22.- Meat Exports: Value compared with total value of Argentine export trade, 1930 to 1944.

Year	Value of meat exports	Value of all exports	Livestock and meat in per cent of all exports
	million gold pesos	million gold pesos	Per cent
1930	131	1,212	11

Table cont'd

1/"La Argentina como pais productor de carne bovina", in "La Res", Sept.5,

Table 22 cont'd

Year	Value of meat exports	Value of all exports	Livestock and meat in per cent of all exports
	million paper pesos	million paper pesos	Per cent
1939	333	1,573	21
1940	308	1,428	22
1941	386	1,465	26
1942	557	1,789	31
1943	592	2,192	27
1944	369	2,360	16

Source: Official sources.

The above figures clearly show the outstanding importance of the livestock industry in Argentina. It is a highly developed branch of agriculture which has excellent prospects for further expansion. At present, livestock is produced in a mild climate where year-round grazing is possible; the plains where cattle graze will mostly grow alfalfa on which steers reach a rapid rate of growth; slaughtering can be spread over the entire year; ports for overseas shipping are comparatively close to feeding areas and there is ample and modern equipment in the country for slaughtering, processing and shipping.

The above advantages have enabled Argentina to produce large quantities of good quality meat at a relatively low cost. At present, this is possible owing to moderate land values and fairly inexpensive labour, although production costs have increased of late.

During the war years, when little cargo space could be spared to move grain from Argentina, the livestock industry helped to relieve the pressure on internal grain markets. With shipping facilities provided by the Allied Shipping Board for huge quantities of meat, fattening operations absorbed more and more feed and fodder, thereby contributing to the disposal of grain surpluses. In addition to this, enormous quantities of grain were used as fuel by the processing plants and transport enterprises handling meat.

Livestock numbers   Considering absolute figures, sheep tops cattle numbers in Argentina; but if animal units are compared, the cattle herd by far exceeds sheep. Since early days, the trend has been for an increase in cattle, decrease in sheep and a spectacular progress in swine numbers.

Table 23.- Livestock numbers in Argentina, 1888-1945.

Year of census	Cattle	Sheep	Swine
	million head	million head	million head
1888	22.0	66.7	0.4
1895	21.7	74.4	0.7
1908	29.1	67.2	1.4
1914	25.9	43.2	2.9
1922	37.1	36.2	1.4
1930	32.2	44.4	3.8
1937	33.2	43.9	4.0
(1942)1/	(31.4)	(50.9)	(5.7)
1945	34.0	56.2	8.0

Source: "Boletin Estadistico", Argentine Ministry of Agriculture, August 1945, p.17 - except 1922.
1922: "La Production Mondiale de Viande", International Institute of Agriculture, Rome, 1938.

1/ Evaluation.

The tendency to increase cattle and swine in Argentina is in keeping with what has happened in most other livestock surplus producing countries. Industrial progress and wartime demand in recent years have created more ample markets for beef and pork, whereas the demand for mutton is not nearly as elastic. Since the advent of synthetic fibers, the future of wool has become somewhat doubtful, and livestock producers in many surplus producing countries were impressed with the desirability of replacing sheep with other livestock where climatic controls permit of such substitution. This does not seem to have been the case in Argentina. Although slaughter for export increased steadily during the war years and between 1942-1945 exceeded the prewar average by 3-5 million head, the nation's flock in 1945 numbered about 28 per cent more than in 1937. Favourable climatic conditions in the southern provinces and high prices fixed during the war for fine and medium wool by the United States Office of Price Administration were responsible for continued interest in sheep breeding.

<u>Meat production</u> Meat production statistics are not available for early years. Merely for purposes of guidance, one might arrive at a rough approximation of production about 1908, if it is assumed that home consumption in 1908 was about the same as in 1912. Data on population and exports are available for that year, whereas the first consumption figure the present writer could discover refers to 1912. A local authority, Juan Richelet, placed per capita consumption in 1912 at 282 lb.[1] The country's population was about 6 million in 1908; at the rate of 282 lb., domestic consumption reached approximately 1,692 million lb. Exports of beef and pork, frozen, preserved or canned, represented in terms of fresh meat 407 million lb.[2] with mutton exports negligible. This shows an approximate total meat production in the neighbourhood of 2,100 million lb. in 1908.

By 1941, population was up to 13,517,000, whereas apparent meat con-

1/T. Richelet: "Salvaguardando nuestra ganaderia", Revista Zootecnica, 1912, p.708.

2/El Comercio Exterior de la Republica Argentina - Estadisticas Retrospectivas sumption decreased to 242 lb., indicating that about 3,271 million lb. of meat was used domestically. Exports of beef and pork in terms of fresh meat reached 1,530 million lb., to which mutton exports of 110 million lb. (carcase equivalent) should be added. The total of about 4,911 million lb. represents approximate meat output in 1941,- more than double the 1908 production.

Meat production increased between 1908 and 1941 out of all proportion to the changes in livestock numbers. The cattle herd grew merely 8 per cent, the sheep flock decreased 24 per cent. Swine numbers increased materially, but their importance in Argentine meat production is almost negligible.

The progress achieved in meat production was largely due to replacement of local breeds by highly productive English meat type cattle, combined with widespread reseeding of the Pampas with alfalfa instead of native grasses. Most of the beef in Argentina being grass-fed, this change over to alfalfa had an important effect upon the finished weight.

The first pure bred bull was imported in 1843, for the improvement of the native Criollo breed. Since that time imports of Shorthorn, Hereford and Aberdeen-Angus bulls have continued, without interruption. Today about two-thirds of the Argentine herd is made up of Shorthorn cattle and more than three-quarters belongs to the above three breeds. Precocious animals and highly nutritious pastures have combined to produce much more meat per head in 1941 than in 1908.

Argentine "chilled beef" is now prepared from two-year old animals weighing about 1,100 lb. alive; "baby beef" comes from steers 1½ years of age with a live weight of about 850 lb., both types dressing 65 per cent. "Continental beef" is the product of older animals with a less rapid growth rate.

"The relative growth of the ... industry ... cannot be measured properly by ... the mere change in the livestock population. ... So much has been done in improving the animals that a three- or four-year-old steer will yield a carcase of very much greater weight than one of twice the age from the Criollo herds." 1/

During the past decade and a half, meat production continued to increase, although several dry seasons during the war years resulted in a slight decline by 1943 and 1944.

Table 24.- Meat: Production by kinds in Argentina, annual, 1929-1943.1/

Year	Beef	Mutton	Pork	All meat
	- million lb.,	(millions, i.e.	000,000	omitted) -
1929	3,559	263	66	3,888
1930	3,493	328	61	3,882
1931	3,270	287	71	3,628
1932	3,293	272	69	3,634
1933	3,386	276	106	3,768
1934	3,599	252	141	3,992
Aver.1930-34	3,408	283	90	3,781
1935	3,765	263	157	4,185
1936	3,820	269	172	4,260
1937	4,128	266	177	4,571
1938	4,195	273	145	4,613
1939	4,297	291	134	4,723
Aver.1935-39	4,041	272	157	4,470
1940	4,042	269	121	4,432
1941	4,134	263	207	4,604
1942	4,039	338	286	4,664
1943	3,885	422	386	4,693
Aver.1940-43	4,025	323	250	4,598

1/Straight totals of carcase meat and meat products without conversion of canned and other processed meats into carcase equivalents.
Source: "La Res". December 5, 1944. p.18624.

A large percentage of the meat produced in Argentina is handled by packing plants. About 40-44 per cent of the country's beef and veal output was the product of packing establishments between 1934 and 1942. During the same period, about 60-66 per cent of mutton and lamb and 48 to 68 per cent of pork was contributed by packers.1/ Beef is the most important item in domestic consumption, whereas a much larger proportion of mutton, lamb and pork finds its way overseas. The products destined for export are usually handled by packing plants, which explains why a larger proportion of the lamb, mutton and pork output originated in commercial plants.

Quite apart from relative proportions, the absolute volume of inspected slaughter has considerably increased since the five-year period prior to World War I.

Table 25.- Livestock: Slaughter in packing plants and inspected slaughterhouses in Argentina, 1909-1944.

Period	Cattle	Sheep	Hogs
	Head, (million, i.e. 000,000 omitted)		
1909-13	3.0	1/5.0	0.1
1914-18	3.8	3.7	0.3
1919-23	4.3	5.3	0.6
1923-28	7.0	5.6	0.6
1928-33	5.7	6.9	1.0
1934-38	6.7	7.0	1.4
1939	7.5	7.7	1.2
1940-44	7.0	10.0	2.7
1944	6.5	12.6	4.5

1/ Average 1910-13.
Source: "Foreign Crops and Markets", May 26, 1941, p.770, and "Boletino Estadistico" (Argentine Ministry of Agriculture), August 1945, p.18.

Although actual slaughter data are not available as yet for 1945, a decrease in slaughterings during that year has occurred. The summer drought of 1944-45 (December-February) in the cattle zones, which is expected to have

1/ "Foreign Crops and Markets", June 1943, p.128.

even more serious effects than that of 1942-43, is mainly responsible for the curtailment. A strike of three months' duration from April to June 1945, also contributed to reduce slaughter. However, an increase in the official prices for chiller and freezer steers in the heavier categories, granted by the Meat Board about mid-year, is expected to encourage feeding to heavier weights.

Domestic meat consumption

Among 19 countries whose per caput meat consumption before World War II has been compared in another paper,1/ Argentina occupies the first place. Beef accounts for something like 90 per cent of all meat in the Argentine diet, with mutton consumption slightly in excess of pork.

Table 26.- Meat: Per caput disappearance in Argentina by kinds, 1929-1943.

Year	Beef	Mutton & lamb	Pork	All meat
	lb.	lb.	lb.	lb.
1929	201	8	4	212
1930	199	13	4	216
1931	136	9	4	193
1932	186	10	4	200
1933	189	11	6	210
1934	206	12	8	226
Aver. 1930-34	183	11	5	209
1935	216	12	10	238
1936	213	13	10	236
1937	225	12	10	246
1938	226	13	8	247
1939	226	13	8	247
Aver. 1935-39	221	13	9	243
1940	221	10	9	239
1941	216	11	10	237
1942	197	12	11	219
1943	211	15	13	239

Source: "La Res", December 5, 1944, p.16824.

1/ "The World Future of Meat After the Transition Period" (already quoted), p.1(

Still another indication of consumption trends is given by the number of animals slaughtered for domestic consumption in packing plants and inspected slaughterhouses:

Table 27.- Meat: Inspected slaughter for domestic consumption in Argentina, 1936 to 1944.

Year	Cattle	Sheep	Hogs
	- Million head (i.e. 000,000 omitted) -		
1936	4.5	3.1	1.0
1937	4.7	3.3	1.1
1938	4.9	3.6	0.9
1939	4.9	3.7	0.9
Aver. 1935-39	4.7	3.4	1.0
1940	4.9	2.9	1.0
1941	4.8	3.4	1.2
1942	4.5	3.7	1.5
1944	4.4	3.5	1.0
Aver. 1940-44	4.6	3.4	1.6

Beef is the most important item in the Argentine diet. The domestic market usually depends on the meat obtained from cows and heifers, whereas the best types of steers are largely used by packing plants for export. The average Argentinian eats more beef than any other nationality. Comparative data for the four countries where most beef is used are reproduced below:

Table 28.- Beef and Veal: Per caput consumption in four countries.

Country	1931	1932	1933	1934	1935	1936
	lb.	lb.	lb.	lb.	lb.	lb.
Argentina 1/	191	197	205	218	228	231
New Zealand 2/	108	108	133	141	161	151
Australia 3/	94	93	107	110	121	133
Uruguay	120	110	120	147	155	136

1/ Excludes meat produced on farms.
2/ 12 months ending 31st March of year subsequent to that shown.
3/ " " " 30th June " " shown.

Source: "Meat", Intelligence Branch of the Imperial Economic Committee, London, 1938, p.20.

Meat exports Beef is the most important item in meat exports from Argentina. Prior to the first World War, beef was shipped from Argentina in the frozen state or as jerked or canned beef. In 1899, about 10 thousand short tons of frozen beef were exported, compared with 21 thousand short tons of jerked beef and 2 thousand tons of canned beef. From 1920, chilled beef shipments became more and more important, whereas jerked meat declined gradually to insignificance. Canning of meat had occupied a place of relatively little importance until the first World War, when wartime demand made this product quite popular. When the war was over, however, the much more tasty product of chilling began to leave the country in ever increasing volume.

Table 29.- Beef: Exports from Argentina by classes, selected years, 1899 to 1924.

	1899	1905	1910	1913	1918	1920	1924
	million lb. (million, i.e. 000,000 omitted)						
Frozen (and chilled)	20	336	560	808	1,092	918	1,668
Jerked	42	56	20	8	6	6	34
Canned	4	6	26	28	422	30	180

Source: G.B.L. Arner, "The Cattle Situation in Argentina", U.S. Department of Agriculture, 1924, pp.50-52.

The rapid advance of chilled beef between 1919 and 1924 is illustrate by the following figures:

Table 30.- Beef: Exports from Argentina by types, annual 1919-1924.

	1919	1920	1921	1922	1923	1924
	million lb. (million, i.e. 000,000 omitted)					
Frozen	878	806	532	349	475	803
Chilled	5	112	327	544	721	812

Source: Official export statistics.

When World War II broke out, the uncertainties of ocean shipping made chilled beef susceptible to deterioration and a return to frozen meat took place. At the same time, quality considerations receded into the background and those of space saving became of paramount importance. During the war, a much larger proportion of the beef supply was used for canning than before. Because of intensified canning activities, a large proportion of the better grades commonly utilized for chilled and frozen beef production were processed. Another wartime development was that after 1942 by far the largest part of frozen beef shipments was "deboned". This process removes the bones with the exception of the blade-bone of the forequarters and thus effects a 20 per cent saving in weight. Beginning with 1943 further space economies became possible through dehydration of beef.

Table 31.- Beef: Exports from Argentina by types, 1935-1944.

	Average 1935-39	1940	1941	1942	1943	1944
	million lb.	(million, i.e. 000,000 omitted)				
Chilled & frozen	935	823	821	821	649	647
Canned	165	176	293	249	209	297
Dehydrated	-	-	-	-	18	11

Source: Official statistics.

The United Kingdom has been Argentina's most important customer for beef since the inception of large scale exports. Between 1935 and 1939, virtually all the chilled beef went to Britain, compared with only about 15 per cent of the frozen beef and more than half of the canned meat. Continental Europe absorbed the greater part of frozen beef, with Germany the principal customer. The United States ranked second as a customer for canned beef.

Table 32.- Beef (frozen and chilled): Exports from Argentina, by countries of destination, specified years, 1899-1924.

Year	United Kingdom	United States	Other Countries	Total
	million lb. (million, i.e. 000,000 omitted)			
1899	20	0	0	20
1905	282	0	55	337
1910	556	0	3	559
1913	783	7	17	807
1914	680	131	3	813
1918	612	2	479	1,093
1920	771	14	132	918
1924	1,154	5	508	1,667

Source: "Anuario del Comercio Exterior".

The Ottawa Agreement concluded in 1932 was expected to seriously affect beef exports from Argentina. While there was a decrease in shipments to Britain during the five years following 1932, this may have been partly due to the economic depression then prevailing. It is a fact, nevertheless, that only 25 per cent of the Argentine beef output found its way to foreign markets during 1932-36, compared with 31 per cent during the five years preceding 1932.

In 1935 and 1936, 92 and 89 per cent of Argentine meat went to the United Kingdom, the percentage proportions being based on values, not volume. Shipments to the United States represented 2 and 3 per cent respectively, followed by Germany (1 and 2) and France (1 per cent). The Netherlands, Belgium and Italy shared the remaining small balance.

Taking the years 1938 to 1940 as representative of the prewar recovery period following the depression, the following table gives an idea of the types of beef preferred by Argentina's principal customers, and of their relative importance as buyers of Argentine beef in its various forms.

Table 33.- Beef (and Veal): Exports from Argentina by types and countries of destination, annual 1938-1940.

Destination	Chilled			Frozen			Canned		
	1938	1939	1940	1938	1939	1940	1938	1939	1940
	million lb.			million lb.			million lb.		
United Kingdom	755	772	531	27	39	27	96	115	125
France		7	32	17	69	121	2		3
Germany				108	97				
United States							41	41	19
Other Countries			63	73	39	49	25	26	29
Total of above 1/	755	779	626	225	244	197	164	182	176
	In terms of percentages								
United Kingdom	100	99	85	12	16	14	59	63	71
France		1	5	8	28	61	1		2
Germany				48	40				
United States							25	23	11
Other Countries			10	32	16	25	15	14	16
Total 1/	100	100	100	100	100	100	100	100	100

1/ Total of 5 items, not including exports of little consequence to a few countries.

Source: "Foreign Crops and Markets", (U.S. Office of Foreign Agricultural Relations), May 26, 1941, pp.771-2.

During the war, the United Kingdom Food Ministry had a virtual monopoly of Argentine meat trade. Acting as an agent for the Combined Food Board, it handled all Allied purchases of meat in Argentina. As a consequence, Argentine meat shipments to Britain,- most of which consisted of beef,- represented an even larger proportion of the imported British meat supply during the war years than before the war. The same is not true with regard to canned meat, since the need for saving cargo space was followed by an increase in canned meat shipments from countries formerly not interested in this trade.

Table 34.- Meat: Imports into the United Kingdom and exports from Argentina to the United Kingdom 1934 to 1944.

Commodity	Average 1934-38	1940	1941	1942	1943	1944	Average 1940-44
	million lb.	(million, i.e. 000,000 omitted)					
Meat, excluding canned meat							
Imports into U.K.	3,187	2,908	2,695	2,914	3,042 1/	3,462	3,004
Argentine exports 2/ to United Kingdom	890	749	983	1,109	1,023	1,082	989
			per cent				
Argentine supplies in per cent of total	28	38	27	26	29	31	33
Canned meat			million lb.				
Imports into U.K.	141	260	515	632	672 1/	479	512
Argentine exports to U.K.	86	130	194	97	141	197	152
			per cent				
Argentine supplies in percent of total	62	51	38	16	21	41	30

1/ Beef, pork and mutton, from: Board of Trade Accounts on Import Trade, 1938-44
2/ Beef, pork and mutton.
Source: "Statistics Relating to the War Effort of the United Kingdom", and official Argentine Statistics.

Whereas Argentina supplied about 33 per cent of Britain's wartime frozen meat imports, compared with 28 per cent during the five years preceding the war, the proportion of Argentine canned meat in British imports decreased from 62 to 30 per cent during the five war years. This shift in relative importance as a source of canned meat supply was not a sign of decline in the volume of deliveries. On the contrary, canned meat imports increased from 86 million pounds prewar to 152 million pounds in the average of the five war years.

The quantities of beef received by the British Food Ministry from Argentina during the years 1943 and 1944 were 645 and 589 million lb. of frozen beef, as well as 150 and 200 million lb. of corned beef.

Mutton and lamb exports Argentine sheep are primarily reared for wool and the meat is considered as incidental. The domestic population is not fond of mutton and lamb, consumption of which did not account for more than about 5 per cent of Argentine meat consumption in normal years. (See table 26.) As a consequence, more than half of the country's mutton is normally exported.

Prior to the first World War, mutton and lamb exports reached their peak in 1911, when they exceeded the next record of 184 million lb. reached in 1924. Shipments during the five years following the end of World War I were as follows,- in million lb.:

1920	122
1921	145
1922	180
1923	179
1924	184

During the depression years of the following decade there was a decrease in the volume of mutton and lamb exports, but the second World War saw another boom, in the course of which previous records were topped.

Table 35.- Mutton and Lamb: Exports from Argentina, 1935-1944.

Average 1935-39	1940	1941	1942	1943	1944	Average 1940-44
		million lb.	(million, i.e. 000,000 omitted)			
112	135	110	177	193	1/ 238	171

1/ Preliminary.
Source: Argentine official statistics.

Before the second World War, more than 90 per cent of Argentine mutton and lamb exports went to the United Kingdom and the greater part of the balance was absorbed by France.

During the years 1943 and 1944, the British Food Ministry received 193 and 212 million lb. of mutton and lamb from Argentina, i.e. almost the entire quantity exported went to Britain.

Pork Exports Very little pork is used by the Argentine population. Prior to 1935, pork represented less than 3 per cent of total meat consumption. During the early war years, large surpluses of corn accumulated in the country. At the same time, beef prices increased considerably on account of active demand for export. Inexpensive corn was then fed to swine on a large scale and consumption of pork nearly doubled. Even at that rate, pork did not account for more than 6 per cent of total meat disappearance. (See Table 26.)

Prior to the second world war, pork exports from Argentina were insignificant. Frozen pork was the largest item, with practically no bacon or ham shipments.

Table 36.- Pork: Exports from Argentina, annual 1919 to 1924.

	1919	1920	1921	1922	1923	1924
			million lb.			
Frozen	9.9	27.5	16.0	16.9	4.0	0.3
Bacon	1.5	0.4	.1	.1	.1	.1
Hams	0.8	0.1				
Total pork	12.2	28.0	16.1	17.0	4.1	0.4

Source: Official export statistics.

With such small exports went a relatively unimportant herd of swine and most of the pork produced was used domestically. But when a bulk purchase agreement with Britain was concluded in October 1941, interest in pig raising began to soar. Stimulated by an extremely favourable hog-corn price ratio, production and exports of pork increased by leaps and bounds until the end of 1944.

In October 1941 the hog-corn ratio was 20:1 compared with 7½ in September 1940 and 6½ a year earlier. At the end of 1942 and early in 1943 corn prices more than doubled on account of severe drought. Despite this setback, 1943 hog slaughter exceeded that of 1942 by about 40 per cent. In April-May 1944 an abundant corn crop was harvested and feeding pigs became highly profitable again. Demand from Britain continued strong and by 1944 Argentine deliveries abroad increased to about 15 times the average of the five prewar years.

Pork: Exports from Argentina, 1935 to 1944.

1935-39 average	1940	1941	1942	1943	Preliminary 1944
		million lb.			
19	4	68	125	176	280

The 1944-45 corn crop was again sharply reduced by dry weather and the hog-corn ratio became less favourable for pig raising in 1945. Resumption of corn exports contributed to the scarcity of corn and pork exports during the first half of 1945 ran behind the same period in 1944, despite higher prices paid.for pork by the British Ministry of Food. Practically all pork exported from Argentina went to the United Kingdom before and during the war.

II. General Meat Management

Trade Agreements

The United Kingdom has always been Argentina's most important trading partner and meat customer. Relatively large quantities of canned meat found their way to the United States, whereas beef shipments were discontinued after 1930. This was due to a provision in the Hawley-Smoot Tariff Act of 1930 which prohibited imports of animals or animal products from countries where foot-and-mouth disease is widespread. No such discrimination exited with regard to canned meat and the United States maintained her position as the second largest importer of Argentine canned meat throughout the war. Canned (and corned) beef was imported mainly for the armed forces under government monopoly of the import trade.

Roca-Runciman Treaty

With the conclusion of the Ottawa Agreement in 1932, the British market for Argentine meat became limited to certain maximum annual quantities. In the case of frozen meat, the ceiling was set at 65 per cent of the quantities taken in the year ending June 30, 1932. Chilled beef imports were not to exceed the full quantity shipped during the year ended June 30, 1932. Later, this limit was reduced by 10 per cent.

In order to prevent further cuts of her quota, the Argentine Government sought to obtain an undertaking to that effect from the British Government. These efforts resulted in the conclusion of the Roca-Runciman commercial treaty, signed in May 1933. This gave an assurance to the Argentine Government that imports from Argentina would not be further reduced by more than 10 per cent and that only in case compelling reasons existed. This treaty expired in November, 1936 but was renewed to stay in effect until November 1939. The renewed agreement imposed duties on Argentine beef, not to exceed ¾ d. per lb. on chilled beef and veal, 2/3 d. on frozen or salted beef and veal, 20 per cent ad val. on other beef and 30 per cent on canned tongues.

An important feature of the Roca-Runciman treaty was that if the Argentine Government, or Argentine producers operating under special by-laws, should undertake to own or operate a meat enterprise, the British Government would reserve 15 per cent of the total Argentine chilled beef quota for that agency. It was understood that the agency should not primarily operate for profit, but for the producers' benefit and better regulation of the trade. This provision paved the way for the establishment of the Argentine Meat Producers' Corporation (C.A.P.)[1/]

<u>Contracts covering the period November 1939- August 1940</u>

With the expiration of the Roca-Runciman treaty, negotiations began for a new agreement. The resulting arrangement was of temporary character and covered only a period of 16 weeks. Under this contract, 25 per cent more meat could be shipped to the United Kingdom than during a similar period in 1938. This contract was extended for four-weekly periods several times during 1940.

<u>Contract for the year September 1940-August 31,1941</u>

Under this agreement, the United Kingdom proposed to purchase approximately 92 per cent of the amount imported during 1939. The British Government was not bound to buy this amount if conditions necessitated smaller purchases, and could take larger quantities if necessary. All shipments, except of canned meats, were to be frozen, and the proposed purchases were divided as follows:

Kind	Million pounds
Chilled grade beef	463
Grade B beef	44
French continental and boned beef	99
Lamb and mutton	66
Cattle and sheep offals	33
Pork	122
Canned beef	143-165

The order for canned beef was later increased to 200 million pounds.

1/ See later, under "Administrative Agencies".

Contract for the year September 1, 1941 - August 31, 1942 The new agreement for 1941-42 specified 411,000 tons of beef, i.e. more than 900 million lb.

Contract for 1942-44 In October 1942, the British Government, acting as sole purchaser for the United Nations, contracted with Argentina for its entire exportable surplus. The contracts covered a two-year period, ending September 30, 1944. Prices were somewhat higher than in previous contracts, and were later raised (retroactive to the beginning of the contract) in view of the rise in the cost of production. Frozen beef prices ranged from $5\frac{3}{4}$¢ to $13\frac{1}{2}$¢ per lb. (Canadian currency), an increase of about 3/16 d. per lb. During the war, the British Ministry of Food acted as purchasing agent for the United Nations. Practically all the frozen and cured meat acquired under this contract was to be used in the United Kingdom, whereas canned meat was reserved mainly for military uses of the Allied Nations. The sharing countries included for this type of meat were Canada, the United States, the Soviet Union, the United Kingdom and the Union of South Africa.

The period after September 1, 1944 The two-year contract which terminated in September 1944, was not extended upon expiration for political reasons. Despite the absence of any formal arrangement between September 1944 and June 1945, deliveries of Argentine meat continued without interruption during this period, along the lines of the previous agreement.

The four-year contract In June 1945, a four-year contract similar to the ones concluded with various Dominions was signed with Britain. This bulk-purchase agreement secured the entire Argentine meat surplus for the United Kingdom for a period of four years dating from October

1, 1944. The only exceptions permitted are certain shipments for neutrals and neighbouring countries. Distribution of the meat thus acquired was to be in c charge of the Combined Food Board and after dissolution of that Board the share of each country on whose behalf the British Food Ministry had been acting during the war, was to be determined through joint consultation.

The terms of this agreement were not published in 1945; but official spokesmen admitted that prices were increased to some extent. These prices will probably be subject to review at the end of the first two contract years.

United States - Argentine trade agreement

An agreement signed in October 1941 reduced the duty on prepared and preserved meats imported from Argentina to 3¢ per lb. but not less than 20 per cent ad valorem. This is half the previous rate established by the 1930 United States Tariff Act. Argentine efforts to have the prohibition on frozen and chilled beef imports removed did not prove successful.

Argentine-Chilean trade agreement

Under a trade agreement concluded in 1933, an annual quota of 4,000 metric tons (8.8 million lb.) of chilled and frozen beef was admitted free of duty to Chile. A Chilean decree published December 15, 1944, increased this quota to 10,000 tons (about 22.2 million lb.) per year and extended its validity to December 31, 1946.

Price Policy

Owing to the importance of foreign trade in Argentine meat economy, prices on domestic markets are usually deeply affected by changes in the export price situation. This was particularly true during the war years and the period following the war while contracts with the British Ministry of Food continued to set the course of Argentinian meat economy.

Although the Argentine Government did not trade directly in animal products during the war, it became the sole agency to deal with the United Kingdom Food Ministry. This was in accordance with the Food Minister's standard policy, which consisted in refusing to enter into contractual relations with a multitude of private firms abroad, instead of which each nation was asked to appoint one central agency for the purpose. This was usually the government of the country concerned.

Under the resulting so-called "bulk-purchase" agreements, determined quantities of products were to be delivered at specified prices. It is easily seen that these prices would exert a powerful influence upon the prices paid to farmers.

Prices were first fixed by the Argentine Ministry of Agriculture to be effective January 27, 1941. Chiller grade prices were set 10 per cent lower than those prevailing at the time, but canner grade prices were higher. Reason for the government's action was that the reduction in market outlets for the high grade chiller and continental grade steers in the United Kingdom and continental Europe, estimated at 30 per cent, resulted in a diversion of fat, high quality steers for canning purposes at canner prices.

Prices were fixed as follows, effective January 27, 1941:

Grades and description	Canadian dollars per 100 lb.
Chiller steers - first grade	4.16
Chiller steers - second grade	3.76
Frozen steers - B grade	3.54
Continental type	3.30
Canner steers - central	2.97
Canner steers - regional	2.60

The new regulations were designed to cover losses resulting from the use of high grade, fat steers for canning and to maintain the incentive for breeding and feeding the chiller grade of steer. Under the new order there was one price for all steers of a given grade, regardless of utilization or market outlet. Losses involved, because of the necessity of subsidizing packers for the higher price of canner steers, were to be provided by a government subsidy of 15 million pesos from exchange control profits.

In October 1943, after completion of the contract with the British Government, prices paid by packers were readjusted on the basis of the higher price received for export beef under the contract. Successive renewals of the bulk-purchase agreement in October 1943, January 1944, and June 1945, brought further changes to prices paid by the Ministry of Agriculture to Argentine farmers. The new four-year agreement concluded in September 1945, raised the prices paid by the British Food Ministry to the Argentine Government by undisclosed amounts. To the end of January 1946, no information was received to show that the increment had found its way to Argentine producers in the form of increased prices.

The prices set in the contracts for 1943 and 1944 recognized differences in quality. These considerations had been dropped in 1945, in order to encourage feeding to heavier weights. The intention is to provide as much meat as possible regardless of quality, while the world is critically short of meat, after which traditional production policies will be resumed.

Table 37.- Meat: Prices paid per 100 lb. to producers by the Argentine Government, for representative types, during specified periods.

Kind and grade	From August 23, 1943	From January 3, 1944	From June 18, 1945
	Canadian $	Canadian $	Canadian $
Beef			
Chiller type (sides), First Grade(J) up to 375 lb.	9.36	9.33	9.24
Over 397 lb.	7.65	8.09	9.24
Frozen type, Superior (N), up to 375 lb.	7.99	7.98	7.88
Over 397 lb.	6.33	6.77	7.88

Source: "Foreign Crops and Markets", May 1944, p.231; July 16, 1945, p.37.

The prices set in the contracts for 1943 and 1944 recognized differences in quality. These considerations had been dropped in 1945, in order to encourage feeding to heavier weights. The intention is to provide as much meat as possible, regardless of quality, while the world is critically short of meat, after which traditional production policies will be resumed.

Regulating the Domestic Market

In order to understand the policies adopted by the Argentine Government for regulating the domestic meat market during the war years and the period immediately following the war, it is necessary to reach back to the early 'twenties. It was at that time, following a sudden decline in previously ravenous foreign demand arising out of the first world war, that a severe crisis overtook meat producers in Argentina. The ensuing series of measures taken by the Argentine government laid the ground work for some of the organizations and schemes that became during recent times decisive factors in the country's meat economy.

National Packing Plant

In 1923, a law was enacted providing for the purchase or construction of a national packing plant in Buenos

Aires, as a protection against exploitation of producers by private concerns and middlemen. Provision was also made for the fixing of minimum prices. The private packing plants struck when the law came into effect and their refusal to buy cattle was followed by suspension of the law within three weeks.

The first government-owned packing plant began to ship in 1932; it paid lower prices than private plants. A municipal plant opened in Buenos Aires in 1931, was run at a loss throughout the 'thirties, despite many privileges.

Meat Controller During the same year, another legislative act established a controller in the meat industry. His office was in charge of studying trade regulations, consumer preferences, developments in the industry in general and of collecting information needed by government authorities for the formulation of policies.

Conditions in the world market having improved by the end of 1923, little more was done by the government for a number of years.

Minimum prices When self-sufficiency became the watchword in Europe during the late 'twenties, Argentine meat exports declined again. The agitation for government intervention was renewed at that time. In 1930, the government put pressure on packing companies to pay minimum prices for chiller beef. The companies were compelled by the government to continue these prices through 1932. Packing plants refused the government's demands to furnish data on operating costs and profits and cases were taken to Court.

Exchange control In 1931, exchange control was introduced and the value of the Argentine peso was artificially reduced by 20 per cent. In this way, the same pound sterling obtained in payment for Argentine meat exported to Britain brought an additional 20 per cent in pesos for the Argentine exporter. Without change in the prices paid by the British importer, the Argentine exporter thus could obtain a straight 20 per cent higher return.

By 1933 further assistance became necessary and to cover expenditures without directly burdening the Treasury, the Government decided to raise further revenues from exchange manipulation. In that year, a practice which is still followed, had been initiated; it consisted in the establishment of a margin between official buying and selling rates of foreign exchange. An exporter wishing to convert into the national currency foreign exchange obtained in payment of exported goods, was paid the equivalent at the official exchange rate. An importer who needed transfer for use in covering the value of goods imported from the same foreign country was charged an appreciably higher exchange rate. Through the control system which required all foreign currency or transfers to be transmitted to the National Bank at predetermined rates of exchange, this margin produced a net profit for the National Bank of Argentina.

The proceeds from exchange operations were to be applied to covering losses from agricultural price support activities in general. No floor prices were in existence for meat, but expenditures of the Meat Board were to be met from this source.

In addition to the above purposes, profits arising from exchange manipulations were to provide means for subsidizing exports to certain markets.

<u>Meat subsidies</u> An emergency Commission was set up by the Argentine Government in 1934 for the promotion of meat exports. The Government allotted a grant of 3 million pesos in cash to this Commission, from which 2,406,100 pesos were spent in 1935 and 412,700 pesos in 1936, mostly to subsidize packers and to enable them to accept meat contracts for continental European countries. This was necessary in order to offset the detrimental effects of currency devaluation in amny of those countries.

Meat prices having reached relatively high levels by 1937, this Commission was dissolved on October 31 of that year.

<u>Increasing domestic meat supplies</u> Foreign demand for meat at relatively high prices continued during 1938 and 1939 in preparation for the second world war. When it broke out, gradually the drain on domestic supplies had become so extensive that certain types of meat were hard to obtain on local markets at prices within reach of consumers with moderate incomes.

Diversion of well finished steers for canning purposes, arising out of sustained pressing demands from abroad, was mainly responsible for the scarcity of prime quality meat. Previously, well-finished young steers had been reserved for chilling and sale as fresh meat, whereas the canning industry used meat of lower quality.

Accordingly, in July 1944, the Government decreed that a daily minimum of 1,000 head export-type steers was to be reserved for the domestic market. Slaughterings and sales of meat were placed under the supervision of the Secretariat of Industry and Commerce in the Ministry of Agriculture, who acted jointly with inspectors of the Secretariat of Labour and of the Buenos Aires police force.

In 1945 it became evident that 1,000 head per day was not sufficient to cover increased wartime meat needs for domestic consumption. A new curtailment of export sales was, therefore, decreed in March 1945. This time no definite volume was fixed; instead, a rather elastic system was adopted.

The decree provided that given types of beef needed for supplying domestic requirements could not be acquired by packing plants for export, at times when prices of steers exceeded certain levels. These levels were the official prices fixed by the Government for export type beef.

This regulation was designed to prevent packing companies from recovering at the domestic consumers' expense any temporary losses incurred on exports when steers commanded prices too high in relation to those paid by the Government for export meat. In this manner, demand for cattle automatically became curtailed when the price rose beyond the desired level. As a reflex effect, prices eventually have to return to normal.

<u>Ceiling prices in Buenos Aires</u>

Another step intended to make meat available at moderate cost for domestic consumers, the Government proceeded in 1944 to fixing ceiling prices for meat. As a start, these applied only to the capital city. Prices were fixed by a Commission, under the chairmanship of an official seconded from the Ministry of Agriculture and composed of representatives from municipal authorities, from the National Meat Board, the Argentine Meat Producers' Corporation and from retail butchers' organizations.

Organizations Concerned with Meat Management

The National Meat Board This organization came into being in October 1933. The effects of the depression were keenly felt by Argentine livestock producers at that time and they partly blamed the packing plants for their plight. These plants were largely controlled by American and British interests, which owned extensive ranches. They were alleged to have kept down domestic livestock prices to lower levels than those justified by prices obtained for their products abroad. To remedy this situation, the National Meat Board (Junta Reguladora de Carnes) was created and given authority to reorganize the nation's livestock and meat trade.

The Board's power include the following functions:

1. To administer laws and regulations concerning meat;

2. To establish standard grades for livestock and its products and by-products, destined for export or domestic use;

3. To set up packing plants and processing or marketing agencies in Argentina or abroad;

4. To take measures in view of expanding the market for Argentine livestock products at home and abroad;

5. To supervise the utilization of cargo space for meat and to regulate exports;

6. To gather and disseminate information on the Argentine livestock industry;

7. To build up and administer a fund for the financing of various bodies established under the Meat Act;

8. To advise the President on all matters relating to the meat trade.

The broad powers given to the Board made it imperative that its members should be carefully selected. Accordingly, the Board's nine members and alternates were to be appointed by the President, subject to approval by the Senate. The by-laws of the Board require that three of the eight members be government experts, two appointees of the Argentine Rural Society,1/ an additional two designated by other rural societies located in the country's interior, and the last one to sit for regional slaughtering and packing plants controlled by producers. The chairman must be one of the three Government specialists.

Revenues for the Board's maintenance are mainly derived from a levy on the sales price of all livestock sold in the country. This must not exceed 1.5 per cent of the sales price at any time, its actual rate being fixed annually. Prior to the second world war, the rate remained unchanged at 1 per cent year after year, but had been increased subsequently to the maximum 1½ per cent. In addition to the levy, grants from the Treasury, interests on investments and proceeds of fines and penalties were to provide funds for covering the Board's expenditures.

Proceeds from this sales tax continued to accumulate, and by

1/ A private agricultural organization composed of large landowners and stockbreeders, powerful financially, socially, and politically.

September 1940 enabled the Board to increase its capital from the initial 30 million to 60 million pesos. With the higher tax of $1\frac{1}{2}$ per cent, further increases in funds resulted during the war years and the Board's capital was raised to 72 million pesos in 1944. In June 1945, plans were being made for a further increase to 100 million pesos.[1]

The Board's income is reserved under its by-laws to the extent of 80 per cent for purposes of producer-controlled marketing and processing organizations, whose creation was provided for by the Meat Act of 1933. The remaining 20 per cent may be used to defray overhead, advertising and collecting statistics.

Argentine Meat Producers' Corporation. (C.A.P.) The first producer-controlled agency to be established by the Meat Board was the Argentine Meat Producers' Corporation (Corde Carne,- shortly, C.A.P.). This organization came into being in October 1934, with the aim in view to secure higher returns for livestock producers by forcing packing plants to increase prices.

The C.A.P. had been granted authority to acquire or construct meat packing plants, through which it was intended to provide a paying outlet for livestock. In order to strengthen the organization's competitive position, the Argentine Government obtained the inclusion of a special clause in the Roca-Runciman trade agreement with Britain (already discussed). This reserved up to 15 per cent of Argentine chilled beef exports to Britain for "an agency operating for better regulation of the meat trade rather than for profit", on condition that deliveries be made through

1/ "La Res", July 5, 1945.

normal channels. Four per cent of this special quota had already been allotted to co-operatives when the C.A.P. came into being; the remaining 11 per cent. were transferred to the C.A.P.

While the Meat Board is a government agency, the C.A.P. is an autonomous commercial enterprise, in which stockmen are shareholders. The Board is a supervising organ, whereas the C.A.P. is an action agency that intervenes directly in the market. The Board establishes procedures for grading, selling and shipping livestock and meat, whereas the C.A.P. actually purchases and slaughters cattle and processes the meat.

The aims of the C.A.P. have been described as follows in the "Almanaque" of the Ministry of Agriculture:[1]

"The fundamental function of this institution is to regulate meat marketing and to assure reasonable prices for livestock producers. While profit is the ultimate goal of their operations, their actions are not primarily motivated by this end. For this reason, their aim is to secure reasonable profits as the outcome of their main purpose which is the intelligent regulation of meat marketing in accordance with sound economic principles in an atmosphere of social justice."

Actual operations began in May, 1935, when the C.A.P. purchased cattle and sheep on markets. In June, direct purchases from producers were initiated. During the first year of its operations (1935-36) a sales office was opened in London, and an organization for the inspection of the plants in which its livestock was slaughtered was set up. The net profit

1/ The following is a free translation.

of the corporation during the first fiscal year of its operations represented 6.16 per cent on the average amount of capital employed in the business.

During the second year, (1936-37) offices of the C.A.P. were set up in the United States to manage business in that country and in the rest of North and Central America. Sales in the North American market increased, as did those to the United Kingdom, and operations were carried on in Germany, France, Italy, Belgium and Japan. Sales to these countries had been increased during the following years, until imports were interrupted by the war. During the third year, (1937-38) Bolivia, and during the fourth, (1938-39) Chile, were added to the list of markets.

Up to 1940-41, the C.A.P. killed in packing plants situated throughout the entire livestock zone, and sold the resulting meat through the intermediary of six selling agencies abroad. In 1938 a bill was sent to Congress providing for the construction of a packing plant specially for its use. Because of the expense and time delay involved, the C.A.P. decided instead on the purchase of a network of plants which would give them the added advantages of increased export quotas, established brands, experienced personnel, and direct sales organizations with the British and domestic markets. By the end of the 7th fiscal period, (May 31, 1942), three plants had been acquired, the corporation had entered the retail meat trade in Buenos Aires and had begun to export from the Municipal Packing Plant in Buenos Aires.

With the beginning of the war, the C.A.P. intensified their efforts to expand sales in the Western Hemisphere, and enlarged their sales organization in the United Kingdom. During the war years, experiments were conducted with new cuts, preparations and products. Investigations into the possibility of technical improvements and cost reductions in processing and freezing methods were also pursued.

During the first fiscal year of its operations, from June 1, 1935, to May 31, 1936, the C.A.P. transacted sales to a total value of around 33 million pesos. By 1941-42 the annual volume of sales increased to 92 million pesos. During that year, the C.A.P. slaughtered about 16.4 per cent of the total number of cattle handled by packing plants in Argentina; it killed more cattle than any other plant in the country. Statistics for subsequent war years are not available, but progress continued owing to the large volume of exports.

In July 1945, the Government limited the capital of the C.A.P. to 100 million pesos. Previously no such restriction had existed and the measure was widely criticized by livestock producers' interests. Subsequently the need for an extensive reorganization of the Corporation became felt in order to adapt it to postwar conditions. Rural societies and other representative producers' organization were invited to present their views on what changes were required and to suggest what modifications of the Corporation's by-laws were indicated. At the present writing, these changes are still under consideration, but one fact clearly emerges: the C.A.P. has come out of the war with a greatly strengthened position and is likely to become a permanent feature of Argentine livestock and meat management.

Meat and livestock markets Markets in the interiof of Argentina often lack cold storage facilities. As a consequence, the large packing plants, which are concentrated in coastal cities, find it difficult to send to these markets meat products of good quality, which are not locally obtainable. To remedy this situation, a decree was issued, at the instance of the National Meat Board in June 1937, providing for the modernization or replacement of the existing municipal meat and cattle markets of Buenos Aires, and the establishment throughout the country of a network of markets equipped with cold storage facilities. To this end, a new agency was constituted under the National Meat Board, known as "The Producers' Cattle and Meat Market Company".

The new organization was to be independent of the C.A.P., with ownership held exclusively by livestock producers. It was authorized to purchase, build and operate stockyards and refrigeration facilities; to develop a unified meat inspection service, and to improve the distribution of livestock products in the interior. It was to be financed by the same methods as the C.A.P.

The organization was not a success, and a decree dissolved it in April 1940. In February 1943, the C.A.P. took over all its functions, with a view to affording a better supply of meat in rural districts at prices that can be paid by lower income groups.

III. Postwar Livestock Prospects

There seems to exist general understanding among agricultural leaders in Argentina on the desirability of further developing the nation's livestock industry. "La Res", a leading Argentine livestock review, wrote on April 20, 1945:

"The trend must be toward an increase in our livestock output. In this matter we are all interested: Government and people, producers and consumers alike". About the same time the "South American Journal" published in London, England, maintained that "the natural growth of our economy points the route to be followed: Intensification of our efforts to expand livestock and agricultural production".

There is some controversy about the probable effect of closer settlement upon the future of livestock production in Argentina. A "National Agrarian Council" was created in 1941 to give impetus to dividing the vast domains of the fertile and well-watered Pampas (prairies) among landless or tenant farmers. In 1945 a "Public Lands Council" was inaugurated to handle settlement on lands owned by the State.

The Pampas is at present a vast grazing area, where cattle are raised and finished on grass. Ranches often cover hundreds of square miles on which herds of remarkably high quality are maintained. If these were split up into smaller units and the rich land were broken with a view to initiating intensive methods of agriculture, three changes of cardinal importance would probably follow:

1. Livestock numbers might increase considerably;

2. Herd quality would temporarily decline as small operators could not afford to import Britain's best breeding stock, a practice extensively followed by large operators. This condition might be overcome in due course

if artificial insemination is properly encouraged by the Government and small farmers acquire the necessary skill to turn out quality products.

3. The cost of producing beef might increase if grain-feeding becomes imperative on intensively managed moderate-size farms, to the point where it will lose its competitive power in certain markets. This would tend to limit the export-radius of Argentine beef. Considering, however, that the present world trend is toward gradual disappearance of vast, extensively managed grazing areas, it appears doubtful that other countries might in future be able to produce beef much cheaper than the mixed farms in Argentina.

Intensification of agriculture would help, on the other hand, the development of hog industry. Natural controls affecting production in the great central grain belt suggest a parallelism between the probable future farming system in that area and the evolution of present-day farming patterns in the United States Corn Belt. Wartime experience has shown how rapidly the hog industry could be developed in Argentina, although it might require some time to educate hog producers before they can turn out such highly specialized products as first-class bacon. Whether or not the Argentine hog industry will continue to grow also depends to a great extent on future import policies in Europe. European countries are anxious to develop their own livestock industry and may discriminate against buying pork abroad in favour of importing feed grain. In that case, Argentina being practically the only large source of supply for feed grains left in the world bent upon intensifying agriculture, feed grain prices may be too high to enable feeding to pigs. This will be especially true if at the same time high tariff protection will require low pork product prices.

B I B L I O G R A P H Y

I. INTERNATIONAL

Agrarian Problems from the Baltic to the Aegean, Royal Inst. of Intern. Affairs, London 1944.

Consumption of Meat, Monthly Bulletin of Agricultural Economics and Sociology, Rome, December 1937.

Economic Development in S.E. Europe, Political and Economic Planning, London 1945.

Final Act and Section Reports, United Nations Conference on Food and Agriculture, Hot Springs, Va., May 18-June 3, 1943.

Critchell, J.T., and Raymond, Joseph, History of the Frozen Meat Trade, Constable, London 1912.

International Yearbook of Agricultural Statistics, Annual issues, Intern. Inst. of Agriculture, Rome.

Monthly Letter to Animal Husbandmen, Armour's Livestock Bureau, Vol. VIII, Chicago, July 1926.

Brandt, Karl, Reconstruction of World Agriculture, Stanford University Press, 1945.

Statistical Year Books of the League of Nations, Pub. League of Nations, Geneva.

McFall, R.I., World's Meat. D. Appleton & Co., New York, 1927.

II. ARGENTINA

Cuannia, Camillo, Agrarian Problem of Argentina, in Boletin Agricola, (Direction of Industrial and Agricultural Development) Mendoza, Argentina, Oct.-Dec. 1944.

Anglo-Argentine Meat Agreement, 1943-44. Modern Meat Marketing (Monthly Review), pub. Empire House, London, Vol. XVI, No.5, 1943.

Hanson, Simon G., Argentine Meat and the British Market, Stanford University Press, California, July 1937.

Argentine Meat. Modern Meat Marketing (Monthly Review), Vol. XVIII, No.9, 1945; Vol. XVI, No.5, 1943.

Argentine Hog Industry, Modern Meat Marketing (Monthly Review), Vol. XVII, No.11, 1944.

Richelet, Juan E., Argentine Meat Trade, London 1929.

Escudero & Rothman, El Consumo de la Carne en la Republica Argentina, Inst. Nac. Nutricion, Trad. Pub. 1939.

Richelet, Juan E., Salvaguardando Nuestia Ganadenia, Revista Zootecnica, 1912.

References from The Review of the River Plate (weekly pub.) Buenos Aires, Argentina, as follows:

Argentina's Cattle Market and Meat Trade, Mar. 27, 1942.

Argentina's Meat Trade with the United Kingdom, April 15,1938; Feb.24 & Oct.20,1939; April 15,1940; Feb.28,1941.

Argentina's Population, Feb. 3, 1939; Oct.2,1942.

Argentine Frigorifico Industry, 1938. Mar.1, 1940.

Breakdown of U.S.-Argentine Treaty Negotiations, Jan.19, 1940.

Evolution of Argentine Agriculture and Livestock Production, Mar.5,1943.

Le Breton, Tomas A. Immediate Position and Prospects of Argentine Agriculture and Livestock Production, April 24, 1942.

Meat Consumption. Feb.19, 1943.

New Cattle Market Procedure. Jan. 31, 1941.

III. AUSTRALIA

Agricultural Production 1939-1944. The Food Front, Vol.II, No.3, Department of Commerce and Agriculture, Commonwealth Food Control, Bull. Melbourne, 1945.

Edwards, E.T., Australian Food Position, Jour. of Aust. Inst. of Agric. Science, Vol.X, No.1, Aust. Medical Pub., Sydney 1944.

Australia's Economy and Trade, Sept. 29, 1945. Commercial Intell. Journal, Dept. Trade and Commerce, Ottawa (weekly),Sept.29,1945, King's Printer, Ottawa.

III.

Goodman, F.L., Australia's Wartime Food Effort. Modern Meat Marketing, Vol. 17, No.6, (Monthly review) Empire House, London, 1944.

British-Australian Agreement, Commercial Intelligence Journal, Dept. Trade and Commerce, Ottawa, Can. (Weekly), Dec. 16, 1944. King's Printer, Ottawa.

Pawley, W.H., Economic Background to Postwar Agricultural Reconstruction. Jour. of Aust. Inst. of Agric. Sc., Vol. 9, No.9. Aust. Medical Pub., Sydney, 1943.

Meat Production in Australia, Modern Meat Marketing, Vol. 18, Nos. 1 & 9, Vol. 17, Nos. 7 & 12. (Monthly review). Empire House, London, 1944 and 1945.

Meat Rationing in Australia, Comm. Int. Jour., Dept. Trade and Commerce, Ottawa, March 11, 1944. King's Printer, Ottawa.

Noble, K.F., Meat Situation in Australia. Comm. Int. Jour., Dept. Trade and Commerce, Ottawa. Dec. 4, 1943. King's Printer, Ottawa.

Official Year Books of the Commonwealth of Australia, Commonwealth Bureau of Census and Statistics, Government Printer, Canberra.

Production Bulletin Part II, Primary Industries and Total Recorded Production. Commonwealth Bur. of Census and Statistics, Govern. Printer, Canberra.

1944-45 Production Goals for Livestock, Comm. Int. Jour., Dept. Trade and Commerce, Ottawa, Dec. 16, 1944. King's Printer, Ottawa.

Quarterly Summary Australian Statistics, Commonwealth Bur. of Census and Statistics, Government Printer, Canberra.

Tendency of Livestock Production, Foreign Crops and Markets, (Weekly pub.), Office of Foreign Agric. Relations, U.S.D.A., Washington, D.C., Mar. 5, 1945.

IV. BRAZIL

Annuario Estadistico do Bresil, 1939-40.

V. CANADA

Robertson, J.G., Canadian Meat for Britain. Modern Meat Marketing (Monthly review) Empire House, London. Jan. 1, 1945.

Johnston, C.I. and Hopper, W.C., Consumption of Beef and Veal in City Households; Consumption of Lamb in City Households; Consumption of Meat in City Households; Consumption of Pork, etc., in City Households. Dom. Dept. of Agriculture, Ottawa, Can., Economics Div., Marketing Service.

<u>Livestock and Animal Product Statistics,</u> Dominion Bureau of Statistics, Ottawa, Can.

VI. CHINA

<u>China Handbook,</u> 1937-43. Macmillan, New York, 1944.

VII. GERMANY

Lichtenfeldt, <u>Die Geschichte Der Ernaehrung.</u> Berlin 1913.

Herter and Wilsdorf, <u>Importance of Cattle in Meat Production.</u> Translated title in <u>Deutsche Landwirtschafts-Gesellschaft, Berlin,</u> Arbeiten. No. 206.

VIII. NEW ZEALAND

<u>Annual Report and Statement of Accounts.</u> New Zealand Meat Producers Board. Ferguson and Osborn Ltd., Wellington, 1945.

Birkett, C.B. <u>Livestock and Meat Industry of New Zealand.</u> Commercial Intelligence Journal (Weekly pub.), Dept. of Trade and Commerce, Canada, King's Printer, Feb. 15, 1941.

<u>Lump Sum Payments, Meat Trade (World Outlook),</u> Meat and Wool, (The Jour. of the N.Z. Pastoral and Stud Stock Industries). Wellington, May 10, 1945.

<u>Meat Act, 1939.</u> Governement Printer, Wellington, N.Z.

<u>New Zealand Official Year Books,</u> Census and Statistics Dept., Governement Printer, Wellington, N.Z.

<u>Primary Production in New Zealand,</u> N.Z. Dept of Agriculture. Governement Printer, Wellington, 1945.

<u>Statistical Report on the Agricultural and Pastoral Production of the Dominion of New Zealand.</u> Census and Statistical Dept., Government Printer, Wellington, N.Z.

IX. RUMANIA

Ionescu-Sisesti, Rumaenien's Baeüerliche Landwirschaft.

X. UNION OF SOUTH AFRICA

Viljoen, P.R. Agricultural Industry after Four Years of War, 1943. Farming in South Africa, (month. bull.) Dept. of Agriculture and Forestry. Vol. 19, No.216. Mar. 1944. Government Printer, Pretoria.

Ortenstein, A.J. Dietetics of Natives Employed on the Witwatersrand Gold Mines. Africa, Vol. IX, No.2, 1936.

Brown, H.L. Economic Conditions in South Africa. Commercial Intelligence Journal, Dept. of Trade and Commerce, Ottawa, Can. (weekly pub.) King's Printer, May 19, 1945.

Livestock and Meat. The Farmer's Weekly (a journal devoted to the interests of South African Agriculture). pub. in Bloemfontain, S.Africa, June 13, 1945.

Main Features of the New Meat Scheme. The Farmer's Weekly, as above, Nov. 22, 1944.

Meat Scheme. The Farmer's Weekly, as above, June 13, 1945.

More Meat for Consumers. The Farmer's Weekly, as above, May 30, 1945.

Viljoen, P.R., New Conditions and the Agricultural Industry. Farming in South Africa, (month. bull. of Dept. of Agriculture and Forestry) Government Printer, Pretoria, Vol. 18, No.202, Jan. 1943.

Official Year Books of the Union of South Africa, Office of Census and Statistics, Government Printer, Pretoria.

Viljoen, P.R. Report of the Reconstruction Committee of the Department of Agriculture and Forestry. Government Printer. Pretoria, Jan. 1943.

Viljoen, P.R. Review of the Agricultural Industry, 1944. Farming in South Africa, (month. bull. of Dept. of Agriculture and Forestry) Government Printer, Pretoria. Vol. 20, No.228, Mar. 1945.

Macgillvray, J.C. South African Agricultural Situation. Commercial Intelligence Journal, (Dept. Trade and Commerce, Ottawa, Can.) (weekly pub.) King's Printer, Ottawa, Dec. 19, 1942.

Macgillvray, J.C. South African and Pastoral Production. Com. Intell. Journal, (Dept. Trade and Commerce, Ottawa, Can.) King's Printer, May 22, 1941.

Hellman, E. Urban Native Food in Johannesburg. Africa. Vol. IX, No.2, 1936.

XI. UNITED KINGDOM

Agricultural Marketing in the United Kingdom Before and During the War. British Ministry of Food, 1944.

Agricultural Statistics, 1938. Vol. LXXIII, Part I., Ministry of Agriculture and Fisheries (England and Wales), H.M. Stationery Office, London, 1939.

Agricultural Production and Trade by Countries, U.S. Dept. of Agriculture. Office of Foreign Agric. Relations, Washington, Oct. 1945.

Argentine-United Kingdom Meat Deal, 1941, Review of the River Plate, (Weekly pub.), Buenos Aires, Feb. 28, 1941. April 15, 1940.

Communal Restaurant. Council of Social Service, London. 1943.

Draft Memo. on Agriculture in the United Kingdom, FAO Interim Subcom. on Agric. Production. Misc. Report No.4.

Farming in Wartime Britain. British Information Services, March 1944.

Food Consumption Levels in Canada, the United Kingdom and the United States, Combined Food Board. 1944. Pub. King's Printer, Ottawa, 1944.

Future of Anglo-Argentine Commercial Relations. Review of the River Plate, (Weekly pub.), Buenos Aires, Feb. 24, 1939.

Ley Farming, Welsh Agricultural Organisation Society Bulletin, No.7, Aberystwyth, June 1945.

Our Food To-day, Ministry of Food Bulletin No.4, H.M. Stationery Office, London 1940.

Production and Distribution of Food in Great Britain. British Information Services. Oct. 1943.

Montell, Ogdon. United Kingdom Agricultural Production and Price Support Policy Foreign Agriculture, U.S.D.A., Office of Foreign Agric. Relations, Washington, Feb. 1945.

Jones, David D., United Kingdom Production and Marketing Policy for Hogs. Foreign Agriculture, U.S.D.A., Office of Foreign Agric. Relations, Washington, Oct.45

Wartime Food Management in the United Kingdom, FAO Interim Subcom. on Food Management. Misc. Report 4.

The following list of references was obtained from "Modern Meat Marketing", (Monthly review), Pub. Empire House, London:

Anglo-Argentine Meat Agreement, Vol. 16, No.11; Vol. 18, No.9, 1941 to 1944.

Bacon Industry, Vol. 18, No. 3, 1945.

Davidson, H.R., British Pig Industry, Vol. 17, No.12, 1944.

Turner, H.S.E., Future Meat Supplies, Vol. 17, No.11, 1944.

Orr, John B., Food the First Thing, Vol. 17, No.2, 1944.

Livestock and Meat Targets, 1946-47, Vol. 18, No.7, 1945.

Livestock Industry, Vol. 18, No.3. 1945.

Livestock Population, Vol. 18, No.10. 1945.

Markets and Post-War Policy, Vol. 18, No.10. 1945.

Guido, Mario M., Meat Before Wheat, Vol. 17, No.6. 1944.

Meat Inspection, Vol. 18, No. 8. 1945.

Meat Ration Holds, Vol. 17, No.6. 1944.

Meat (Maximum Retail Prices) Order, 1942, Vol. 16, No.1. 1943.

Meat Position, Vol. 18, No.5. 1945.

Meat Ration, Vol. 16, No.4. 1943.

Plan for Institute of Meat, Vol. 18, No.9. 1945.

Meat-Sales Agreement with the United Kingdom and Argentina, Vol. 18, No.3, 1945.

Slaughtering Industry, Vol. 18, No.5. 1945.

Subsidy for Cattle, Vol. 18, No.5. 1945.

Wartime Meat Imports, Vol. 18, No.9. 1945.

World Food Shortage, Vol. 18, No.5, 1945.

XII. UNITED STATES OF AMERICA

Michael, Louis G., Agricultural Survey of Europe, France. U.S.D.A., Washington, 1943.

Family Food Consumption in the United States. U.S.D.A. Misc. Pub. No. 550, Washington, 1944.

Livestock, Meats and Wool Market Statistics and Related Data, 1943. U.S.D.A., War Food Administration, June, 1944.

Nutrition and Food Supply, the War and After, American Academy of Political and Social Science. (Annals). Philadelphia, Pen., Jan. 1943.

United States as a Meat Supplier, Modern Meat Marketing, Empire House, London, April and Dec. 1944.

XIII. U.S.S.R.

Bugakov, A., and Vlahov, K., Ley Farming, the Basis of Intensive Agriculture, Sozialisticheskoe Zemliedelie, pub. by the U.S.S.R. People's Commisariat of Agriculture 14 April, 1945.

- Series of several articles published from April to June 1945, on rotation farming and livestock improvement in the above periodical.

Lorinez, L. Livestock Policy in the Soviet Union, Agriculture Abroad, Vol. 1, No. 2, (Quarterly) Economics Div., Marketing Service, Dept. Agriculture, Ottawa, Sept. 1945.

Lorinez, L. U.S.S.R. as a Potential Livestock Exporter, The Economic Annalist, (Quarterly) Economics Div., Marketing Service, Dept of Agriculture, Ottawa. Aug.1944.