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NEW ZEALAND'S

AGRICULTURAL PRODUCTION, MARKETING, AND TRADE POLICIES AND THEIR BEARING ON U.S. FARM EXPORTS

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Foreign Agricultural Economic Report No. 9

U.S. DEPARTMENT OF AGRICULTURE
Economic Research Service
Regional Analysis Division

PREFACE

New Zealand is like the United States in that the prosperity of its farm economy depends in large measure upon the export of certain temperate zone agricultural products. In fact, New Zealand is probably more dependent upon farm exports than is any other country in the world. Also, New Zealand has been a traditional market for a limited number of U. S. agricultural products. Most of New Zealand's exports are directly competitive with farm products produced in and exported from the United States.

This study, one of a series, was undertaken to obtain a more thorough knowledge and understanding of the competition faced by U. S. farmers from New Zealand's products in both local and foreign markets.

The author wishes to acknowledge the invaluable assistance given to her by J. V. White and other staff members of the Department of Agriculture and other Government agencies in New Zealand. However, the views expressed herein and conclusions reached are entirely those of the author.

Washington, D. C.

July 1963

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Note: All tonnage figures used in this publication are in short tons (2,000 pounds) unless otherwise specified.

SUMMARY

In land area. New Zealand is about the size of the State of Colorado. It is geographically divided into two parts, North and South Islands. The population is small, totaling about 2.5 million. The economy, chiefly agricultural with emphasis on production for export, is well developed. Living standards are high.

The rough terrain does not permit widespread cropping, so emphasis has been placed on pastures and livestock, namely sheep and cattle. The main commodities produced are meat, wool, and dairy products.

New Zealand has maintained its agricultural production at high levels through the employment of advanced technological methods in the development of pastures and in livestock breeding. In mechanization, use of fertilizers for top dressing, aerial agriculture, and seed propagation, New Zealand is one of the world's pioneers.

Marketing controls prevail for most farm products. Either commodity price control schemes or direct subsidy programs exist for many of the commodities, such as dairy products, wool, and wheat.

About 95 percent of the total export trade is agricultural and consists chiefly of wool, dairy products, and meat. Until recently the bulk of New Zealand's exports went to the United Kingdom, but since 1958 a larger proportion has been diverted to the United States, Japan, and certain West European countries.

Most imports are rigidly controlled by either protective tariffs or tight import licensing schedules. Little change in this policy is foreseen until New Zealand is able to overcome the extreme year-to-year fluctuations in its balance of payments.

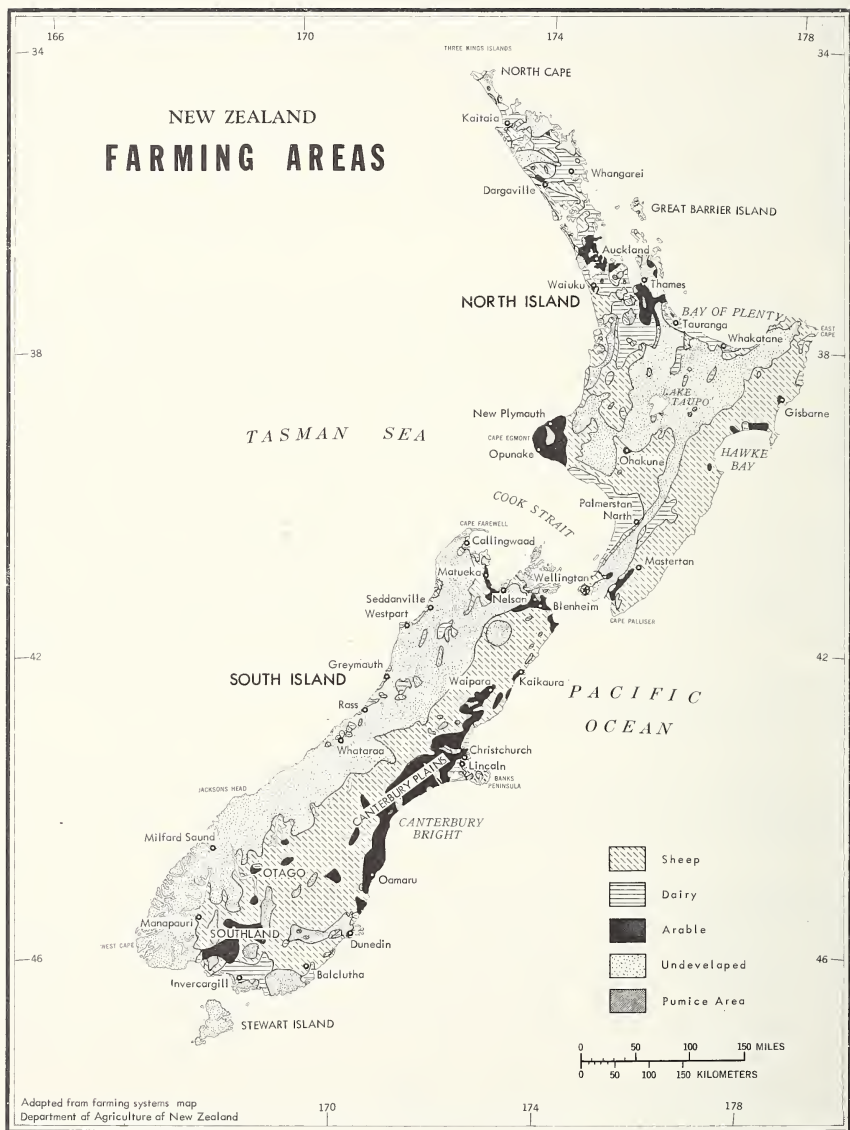
Competition with U. S. agricultural products in major world markets such as the United Kingdom, Western Europe, and Japan is affected somewhat by longer freight hauls and resulting

higher refrigeration costs of perishable products. New Zealand's bilateral arrangements with the United Kingdom, Japan, West Germany, and certain countries in southeast Asia, however, give her certain competitive advantages in these areas.

In the New Zealand market, the United States encounters stiff competition from Australia and the British West Indies, particularly with respect to rice, vegetable seeds, and certain fruits. New Zealand's program of developing local tobacco production and the maintenance of mixing regulations and voluntary agreements to encourage manufacturers to use domestic leaf create difficulties for U. S. tobacco traders in maintaining their exports to this market.

Since 1958, New Zealand has been enjoying a profitable market for its meat shipments to the United States, which averaged about \$50 million each year for the 4-year period 1958-61. This trade supplements U. S. production, which has been deficient in certain types of meat. Another important export item to the U. S. market is carpet wool, which has been in good demand in late years because of expansion of home construction in many parts of the United States. New Zealand supplements domestic production in the United States with shipments of certain dairy products, chiefly Colby cheese and casein. Quotas for New Zealand's butteroil, butter, cheddar cheese, and dry milk are authorized in Section 22 of the Agricultural Adjustment Act, as amended.

New Zealand's future agricultural production will depend largely on how capital investment is apportioned between agriculture and industry. New Zealand has in recent years vigorously sought to widen her export outlets, with less dependence on the United Kingdom. Increased trading difficulties would be created if the United Kingdom should join or become associated with the European Economic Community (the Common Market), and terminate the Commonwealth preferential tariff system, unless some marketing safeguards were at the same time established for New Zealand in the United Kingdom market.



U. S. DEPARTMENT OF AGRICULTURE

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NEW ZEALAND'S AGRICULTURAL PRODUCTION,
MARKETING, AND TRADE POLICIES
AND THEIR BEARING ON U. S.
FARM EXPORTS

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INTRODUCTION

New Zealand's agriculture benefits from a very favorable climate. Rainfall throughout most of the area ranges from 30 to 75 inches annually. Fluctuations in mean temperatures are small, varying from about 49 to 59 Fahrenheit throughout the entire year. Pasture growth continues throughout most of the year and the temperate climate eliminates the need for housing for cattle. Only limited shelter structures are necessary as milking sheds and for hay storage.

In 1960, land utilized in farming totaled 44.0 million acres (table 1). Slightly less than 20 million acres were under crop cultivation, or in nurseries or orchards; approximately 90 percent or 18 million acres of this area consisted of sown pastures. The remainder of the occupied area consisted primarily of native grasses, bush, and scrub. As of 1957, there were 84,604 farm holdings in New Zealand averaging 503 acres in size.

Numbers of all livestock, except horses, have steadily increased since World War II. The most dramatic increase has been in sheep, which in 1962 totaled 49 million as compared to around 31 million in the years immediately preceding World War II. Dairy cattle increased from 1.9 million in the 1930's to 3.2 million in 1962. During the same period other livestock made gradual gains in number (table 2).

Table 1.--Land use, averages 1934-38 and 1952-56,
annual 1959 and 1960 1/

Item	Average		Annual	
	1934-38	1952-56	1959	1960
	1,000	1,000	1,000	1,000
	<u>acres</u>	<u>acres</u>	<u>acres</u>	<u>acres</u>
Area planted to crops <u>2/</u>	1,372	<u>3/</u> 1,159	1,143	1,169
Land in fallow	126	<u>3/</u> 156	138	126
Cultivated pastures.	17,206	<u>3/</u> 17,605	17,816	18,344
Other farm lands	<u>24,374</u>	<u>24,210</u>	<u>23,546</u>	<u>24,380</u>
Total farm area <u>4/5/</u>	43,078	43,130	42,643	44,019
Percentage farm area	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
is of total land area . . .	64	65	64	66

1/ Years ending Jan. 31.

2/ Excludes private gardens and grounds.

3/ 4-year average. 1956 not available.

4/ Excludes cultivated forest areas.

5/ The statistics in this table do not reflect about 100,000 acres of virgin land being brought into agricultural use each year, because an equivalent amount is being diverted from agriculture to reforestation and urban development.

Source: (10) 1941-42, p. 8; (9) 1955-56 and 1956-57 p. 16, and 1959-60 p. 21.

Table 2.--Livestock numbers, averages 1934-38 and 1952-56,
annual 1958-62

Year, as of	Sheep <u>1/</u>	Dairy	Beef	Hogs
Jan. 31		cattle	cattle	
	<u>Thousands</u>	<u>Thousands</u>	<u>Thousands</u>	<u>Thousands</u>
Average:				
1934-38	<u>2/</u> 30,954	1,929	2,343	758
1952-56	<u>3/</u> 36,698	<u>4/</u> 3,010	<u>4/</u> 2,551	<u>4/</u> 631
1958	46,026	2,970	2,915	628
1959	46,876	3,004	2,970	692
1960	47,134	2,973	3,019	660
1961	48,462	3,111	3,334	655
1962	48,981	3,180	3,475	660

1/ Including lambs.

2/ As of April 30.

3/ As of June 30.

4/ 4-year average. 1956 not available.

Source: (10) 1941-42 p. 9; (9) 1959-60 pp. 23, 24.

On a volume basis, the greatest gains since prewar years have been made in production of dairy products, wool, and meat. Milk production has fluctuated in the last few years, but was 20 percent above the prewar levels in 1960. Wool production has increased steadily and in 1960 was almost double prewar production. Production of all meats except pork has increased since the 1930's, with lamb and mutton showing steady increases amounting to well over 90 percent by 1959.

Production of oats has declined below prewar levels, but production of most crops has increased significantly. Increased wheat production is currently being emphasized with the aim of reducing imports and saving foreign exchange. Production in 1959 was about 25 percent above that of the past decade, and it was achieved on a smaller acreage than was used for the large output of the midthirties and the early World War II years. The 1960 wheat yield was about 51 bushels per acre, the highest on record (table 3). Production of fruits, tobacco, and certain vegetable crops has also increased in recent years (table 4). Output per man in New Zealand agriculture is close to the highest in the world.

Table 3.--Crop yields per acre, averages 1934-38 and 1952-56, annual 1959-61 ^{1/}

Crop	Unit ^{2/}	Average		Annual		
		1934-38	1952-56	1959	1960	1961
Barley	Bushel	35	45	50	50	52
Corn	do.	46	<u>2/61</u>	57	84	62
Oats	do.	43	49	46	54	54
Wheat	do.	32	40	45	53	49
Onions	Ton	7.6	10.1	9.2	12.0	11.7
Peas	Bushel	<u>3/23</u>	28	32	33	33
White potatoes...	Ton	5.4	6.7	6.3	7.3	8.5
Tobacco	Pound	<u>4/650</u>	1,327	1,583	1,882	1,629

^{1/} Year of harvest.

^{2/} Barley, 50-lb. bushel; corn, 56-lb. bushel; oats, 40-lb. bushel; wheat, 60-lb. bushel; peas, 60-lb. bushel.

^{3/} 4-year average. Data not available for 1956.

^{4/} Estimated on basis of contract acreage.

Source: (10) 1941-42 p. 7; (9) 1955-56 and 1956-57 p. 14; 1959-60 p. 19; (16) April 1961 and April 1962; (20) p. 10.

Livestock Products:

Dairy Products: 8/	---	---	---	---	---	---	---	---
Butter	186.1	219.4	238.8	236.1	238.6			
Casein	3.9	12.3	34.3	35.8	40.3			
Cheese	100.7	112.3	111.0	111.9	110.9			
Milk, fluid	4,990.4	5,636.1	5,944.5	5,953.5	5,974.0			
Milk, nonfat dried:	7.8	54.5	67.1	72.8	76.2			
Meat: 9/ 10/	---	---	---	---	---			
Beef and veal	164.3	254.0	264.9	296.4	289.0			
Lamb and mutton:	249.0	379.0	503.4	515.6	530.9			
Pork	46.5	43.7	43.7	43.8	44.8			
Wool, greasy 8/	149.7	225.2	293.8	294.0	302.5			

1/ Estimated.

2/ Year of harvest.

3/ Not available.

4/ Threshed grain area.

5/ 4-year average, 1952-55.

6/ 1936-39 average.

7/ White potatoes only.

8/ Year beginning July 1.

9/ Year beginning Oct. 1.

10/ Bone-in-weight.

Source: (10) 1941-42 pp. 6,7; (4) pp. 55,56,58,61, and 62; (9) 1955-56 and 1956-57 pp. 14, 106. Supplemented by FAS despatches and statistics.

The gross income from farming in 1961-62 was £ 296 million (\$829 million), about 22 percent of the gross national product.

PRODUCTION POLICY

Farm policy in New Zealand since World War II has emphasized the development of grassland areas and increases in livestock production. As a result, dramatic increases have been realized in farm output. An agricultural production index computed on a 1952-54 base shows an increase from 78 points in 1934-38 to 127 points in 1962, or more than 60 percent. Production increases are especially reflected in such export commodities as wool, meat, casein, butter, apples, and pears. This increase in production was realized with a smaller labor force as the result of increased mechanization, improved technology, and the greater use of contract services by farmers.

Factors contributing to this marked growth in farm output are pasture development, increased use of mechanization, and expanded use of fertilizers including trace elements. Government agencies and farmers have given attention to improved extension services, livestock breeding, disease control, and other farm management techniques.

Price Stabilization

Most of the major commodities are subject to some form of statutory price stabilization program or direct subsidy payments. Price stabilization programs have been a part of New Zealand's production and marketing structure for a number of years. Until 1954, price programs for meats, dairy products, and wool operated in conjunction with long-term contractual sales arrangements with the United Kingdom. Reserve funds pertaining to all three of these commodity operations were built up through surplus accumulations. These funds are now being expended for the benefit of each individual industry in the form of price support programs, research, etc.

Commodity price programs other than direct subsidies apply to dairy products, meats, wool, tobacco, hops, and eggs.

Dairy Stabilization Scheme

For many years, guaranteed prices to producers of butterfat used in the production of butter and cheese were maintained from funds accumulated in a Dairy Industry Stabilization Account from export sales in excess of the guaranteed price. The system was established in 1936 to protect farmers against losses which might result in seasons when export prices were low. Under amended legislation adopted in 1956, the basic fixed prices paid to producers on butterfat used in the production of butter and cheese are determined annually by the Dairy Products Prices Authority in consultation with the New Zealand Dairy Board and the Minister of Agriculture. Actual payment of the guaranteed prices is now made to processors of butter and cheese by the Dairy Production and Marketing Board. 1/ Farmers are then reimbursed on the basis of their butterfat deliveries to the dairy factories. Prior to 1958-59, the fixed prices for butterfat were set at the beginning of each season on the basis of cost of production on the farms and in the factories, cost-of-living indices, and estimated costs of marketing and handling. Adjustments were also made throughout the years for any increased costs which might be incurred (22). 2/

Following the complete depletion of the Dairy Industry Stabilization Account during the 1957-58 marketing season, financial assistance was obtained in the form of a loan from the Government to sustain the industry. As early as 1956, the Government considered a new formula for fixing prices of butterfat used in butter and cheese manufacture, based not on costs of production but on overseas realizations for dairy exports. In this connection, the dairy industry and the Government agreed that a conservative minimum basic price should be paid for butterfat at the beginning of the season with provision for an additional payment at the end of the season from any surplus accruing from sales. It was further agreed

1/ Formerly two separate agencies, the New Zealand Dairy Board and the New Zealand Dairy Products Marketing Commission, which were consolidated in September 1961.

2/ Underscored figures in parentheses refer to Literature Cited, page 79.

that, for the 1959-60 season, only 50 percent of any surplus earnings should be available for payment to producers, and the balance used for repayment of the debt incurred during the 1957-58 marketing year.

Some of these changes in price-fixing policy were not completely implemented until the 1961-62 season. For the 1961-62 distribution of annual surpluses realized from marketing operations, it was agreed that not more than 50 percent of any surplus of the New Zealand Dairy Production and Marketing Board should be made available for distribution to dairy companies and producers without consent of the Minister of Agriculture. The remaining balance would then go into a reserve account. If the deficit in the dairy industry reserve account is more than the surplus realized from trading operations in any single year, not more than 25 percent of the surplus may be distributed to dairy processors and farmers. It was also agreed that future changes in the basic fixed prices should not exceed 5 percent.

Average prices paid to farmers for butterfat used in butter and cheese manufacture remained the same during the period 1959-60 through 1961-62, 3/ namely 32d. (\$0.37) a pound for fat used in butter and 38d. (\$0.44) a pound for fat used in cheese. These prices applied to butterfat used in creamery and whey butter and cheese manufacture plus established allowance for butter overrun, cheese yield, and whey fat recovery. This increase from 3d. (\$0.03) per pound differential on butterfat going into cheese to 6d. (\$0.07) per pound was an effort to attract milk to cheese manufacture and away from butter and by-products such as casein. For the 1962-63 season, the butterfat price remained at the 32d. (\$0.37) per pound level for milk going into butter while the price for butterfat for milk used in cheese manufacture was reduced by 1d. to 37d. (\$0.43) per pound.

Meat Deficiency Payment Plan

Minimum prices for all meat exported are determined annually by a Meat Export Prices Committee under provisions of the Meat

3/ Years beginning July 1.

Export Prices Act enacted in 1955. If the f.o.b. (free on board) value of a specific type of meat for export falls below the fixed minimum price, producers receive a deficiency payment equal to the difference between the minimum price set and the f.o.b. value. These payments have been authorized intermittently, and have been limited primarily to lamb and mutton. A substantial payment was announced for lamb during the 1961-62 year because of the lower price for lamb on the United Kingdom market. Payments made from the Meat Industry Reserve Account were estimated at £2.4 million (\$6.7 million).

Wool Price Scheme

Although wool is marketed at auctions in New Zealand, prices are cushioned by a price stabilization scheme which was authorized by the Wool Commission Act of 1951. At that time, reserve funds that had accumulated during the war and postwar marketing period were transferred to the Wool Commission. The Commission is authorized to use the funds to buy wool at set floor prices when auction prices fall below the floor price levels. For the 1962-63 year the price was set at 33d. (\$0.38) per pound. The Commission usually holds the wool for future sale in New Zealand or London when market prices for wool improve.

Tobacco Guaranteed Price Program

The production of tobacco is controlled by a Tobacco Board provided for in the Tobacco Growing Industry Act of 1935. The main function of the Board is to encourage production and utilization of domestic leaf by acreage and price control and research. Growers are licensed by the Board and receive guaranteed prices for tobacco leaf set by a Price Tribunal. For the 1962-63 season, these prices were set at 4s. 5d. (\$0.62) per pound for flue-cured leaf and 4s. 0.5d. (\$0.57) per pound for air-dried leaf. Actual contracts for the leaf are made directly with manufacturers. Most of the leaf is flue-cured, but experimental work has been in progress on bulk curing with the use of electrical blowers for hot-air drying.

Manufacturers must use an established minimum percentage of domestic leaf before they are issued foreign exchange allocations by the Government for imported leaf. This percentage is

set by the Minister of Commerce and Industries at 30 percent but a voluntary agreement between the Board and the manufacturers has resulted in higher percentages of domestic leaf being used in most seasons. In 1962, the proportion of local leaf used as compared with imported leaf totaled 44 percent, or about 5 percent above the previous year.

Flaxseed Guaranteed Price Program

New Zealand flaxseed is grown on a contract basis with the price based on a fair average quality 92.5 percent pure whole seed with a moisture content of 10 percent. Bonus prices are paid for better quality seed and deductions are made for seed not meeting quality standards.

Subsidies

Although New Zealand's price policy emphasizes the guaranteed price incentive for production and marketing of farm produce for export, direct Government subsidies are paid on certain commodities consumed domestically in order to regulate the cost of living. Chief among these are payments made on wheat and flour, bread, butter, milk, and eggs. The total amount of these consumer subsidies has fluctuated over the years, but usually averages about £13 million (\$36 million) annually.

Wheat and flour.--Subsidies have been associated with the production and marketing of New Zealand's wheat and flour for many years. As an incentive for increased wheat production, Government-guaranteed prices to farmers in 1958-59 in both North and South Islands were substantially increased. Originally based on farmers' costs of production, these price guarantees have been increased to give extra stimulus to production.

For the past five crop years, 1958-59 through 1962-63, prices paid to South Island farmers for wheat have been set at 13s. 6d. (\$1.89) per bushel, or 2s. (\$0.28) above the 1957-58 price. North Island farmers received an extra premium of about 1s. per bushel for higher production costs, making the total price 14s. 6.5d. (\$2.04) per bushel. In addition, farmers receive an extra 2s.

(\$0.28) per bushel for producing certain Hilgendorf varieties of wheat or pay a penalty of 2d. (\$0.02) per bushel on Arawa wheat when it is marketed. These prices compare with average prices for imported wheat of 10s. 10d. (\$1.52) per bushel for 1961. The Government has announced guaranteed prices for wheat for the 1963-64 season as follows: 13s. 6d (\$1.89) per bushel for South Island producers and 15s. 6d. (\$2.17) for North Island producers. The extra premium paid to farmers producing Hilgendorf varieties will not be continued but the discount of 2d. (\$0.02) per bushel for Arawa wheats will be made.

The Wheat Committee, which operates as a monopoly, buys the domestic wheat from the farmer through its grain agents. It also imports wheat and sells all grain to the millers. Prices of domestic and imported wheats are equalized in sales to the millers by a Government subsidy paid by the Committee.

Part of the Government subsidy to millers is paid in the form of a consumer subsidy on flour. In 1962 this was set at 4s. 8.29d. (\$0.66) per 25-pound bag. A subsidy is also paid to bakers on bread. In 1962 it amounted to 4.18d. (\$0.05) per 2-pound loaf.

Eggs.--Market price schedules for eggs are set by the Egg Marketing Authority and are based insofar as possible on the farmers' production costs. Since 1953 a subsidy of 4d. (\$0.05) per dozen has been paid by the Government for eggs received by licensed distributors for sale in metropolitan areas. The purpose of the subsidy is to reimburse suppliers for freight and commission charges on eggs consigned to consumers in urban districts.

Butter.--In order to stabilize the retail price of butter to consumers, Government subsidies have been paid annually since 1942. For the fiscal year 1961-62, total payments amounted to £3.7 million (\$10.4 million) which was equivalent to a payment of 8d. (\$0.09) per pound.

Milk.--Milk prices to consumers have been subsidized for many years in order to stabilize the retail price of milk. The subsidies offset fixed prices paid to producers for butterfat used in butter and cheese manufacture and increases in prices to town milk producers. The 1961-62 payments totaled £4.4 million (\$12.3 million), or 4.3d. (\$0.05) per quart.

Lime Transport.--As an inducement to farmers to use greater quantities of lime, producers have been reimbursed over a period of years for transport charges from the lime works to the farm. The cost of this subsidy has been paid out of Government funds and the Dairy Industry and Meat Industry accounts. With the withdrawal of financial assistance by the Dairy Board and Meat Producers' Board in November 1959, the payments have been limited to lime used in development of virgin lands. The payments, now made entirely by the Government, have declined to about £35,000 (\$98,000) per year. About half of these payments are made on lime used in development of Government land.

Land Policy

Two types of land tenure prevail in New Zealand, leasehold and private ownership. In general, private ownership predominates.

In 1950, of a total of 90,290 holdings, 62 percent were privately owned, 22 percent were farmed under lease, and 16 percent were operated under part lease and private ownership arrangements. Sixty-nine percent of the land used for dairying was privately owned, while 31 percent was subject to lease arrangements. In contrast, 46 percent of the land used for sheep farming was privately owned, 47 percent was owned by the Government and leased to producers, and the remaining 7 percent was operated under various types of lease arrangements. The bulk of the land used for farming enterprises other than sheep or dairying was privately owned.

Nearly half of all holdings in 1957 ranged from 10 to 200 acres in size, but these farms accounted for less than one-tenth of the total farm area (table 5). Another 35 percent of the holdings varied from 200 to 5,000 acres in size. Farms over 5,000 acres accounted for slightly more than 1 percent of all farms but occupied two-fifths of the farm area. Classification of farms as to type of tenure is not available for 1957.

Land reclamation and resettlement has been one of the major programs administered by the New Zealand Government in recent years. The New Zealand Land and Survey Department is the

Table 5.--Land holdings: Number and total acreage, 1957 ^{1/}

Area of holdings (acres)	Holdings	Total farm area
	<u>Number</u>	<u>Acres</u>
1 to 10	11,765	50,871
11 to 50	10,396	265,188
51 to 100	11,932	882,805
101 to 200	17,949	2,521,234
201 to 320	10,289	2,579,161
321 to 640	11,184	5,061,457
641 to 1,000	4,357	3,452,809
1,001 to 5,000	5,745	11,125,375
5,001 to 10,000	531	3,592,587
10,001 to 20,000	261	3,704,443
20,001 to 50,000	141	4,326,151
50,001 and over	54	4,989,284
Total	84,604	42,551,365

^{1/} A holding is any land area of 1 acre or over situated outside borough boundaries.

Source: (17) 1962, pp. 285-6.

Government's major land holding agency. It conducts all land surveying and aerial mapping functions for the Government. It administers the program of land settlement under the provisions of the Land Settlement Act. About 50,000 acres of new land are developed by the Land Survey Department each year. In addition, 45,000 acres are developed annually by the Department of Maori Affairs and about 5,000 acres by private enterprise.

The resettlement program was originally intended for returned war veterans, but has been extended to financing and settlement of other qualified farmers. The Land Survey Department clears the land and initially divides it into blocks of 1,000 or more acres. This land is then fertilized, seeded, fenced, stocked and operated as farm units by the Land and Survey Department until fully developed. The land is then subdivided into smaller units for private ownership, with the size depending on the type of enterprise such as sheep, beef-cattle, or dairying. The land is sold to

qualified applicants on long-term mortgages financed by the State Advances Corporation with interest at 3 percent, after such amenities as houses and roads have been provided by the Government for the prospective farmers.

Irrigation

Most irrigation projects in New Zealand have been developed by the Government. They are confined mainly to the South Island in the Canterbury and Otago areas where dry weather conditions exist during certain growing seasons. The main obstacle to expansion of irrigation facilities has been that in many instances the increased pasture or crop output has not been commensurate with the increased cost of production, especially with the increased labor involved in the maintenance and operation of the various irrigation systems. Experiments are now being conducted by the Government in an endeavor to irrigate slightly larger acreages with a minimum of labor, in order to increase production and at the same time keep costs from rising.

As of 1962, approximately 170,000 acres were subject to some form of irrigation, either diking, ditching, or flooding. It has been estimated that over 650,000 acres are suited to irrigation.

Technological Advancement

Fertilizers

The demand for fertilizers began to build up in 1953. By 1955 about 1 million tons of fertilizer were available for use, or about double the fertilizer available for spreading in the 1930's. Since that time, the average overall total consumption of fertilizers has continued at about 1 million tons a year. In addition, an average of 1-1/4 million tons of lime are used annually. In the years 1958 to 1961, phosphates averaged about 88 percent of total fertilizer materials used. Consumption of potash in the late forties averaged about 4,000 tons annually, but increased rapidly in the following years and in 1961 reached a total of 139,000 tons (table 6). About 40 percent of all fertilizers used are now spread by airplanes.

Table 6.--Fertilizer materials: Quantities available for use in farming, averages 1934-38 and 1952-56, annual 1958-61 1/

Type of fertilizer	Average					Annual				
	1934-38	1952-56	1958	1959	1960	1961				
	Tons	Tons	Tons	Tons	Tons	Tons				
Superphosphate	431,001	909,234	924,163	1,040,582	1,171,454	1,093,230				
Basic slag	2/	67,009	46,657	28,385	33,230	35,298				
Guanos	2/	5,182	9,520	---	---	---				
Other phosphates	89,754	32,089	3,530	884	3,204	5,807				
Total phosphates	520,755	1,013,514	983,870	1,069,851	1,207,888	1,134,335				
Organic fertilizers	26,612	36,499	36,071	31,414	28,326	3/28,000				
Potashes		38,798	62,232	84,772	96,209	138,972				
Sulphate of Ammonia: and other nitro- genous fertilizers	4/18,997	11,367	11,259	11,151	16,410	19,215				
Nitrate of soda		793	434	5,377	5/	1,078				
Total fertilizer	566,364	1,100,971	1,093,866	1,202,565	1,348,833	1,321,600				
Lime 6/	7/394,248	3/1,596,000	1,171,520	1,133,304	984,250	2/				

1/ Gross weight; not converted to plant nutrients. Years beginning July 1 for phosphates and April 1 for other fertilizers.
 2/ Not available. 3/ Estimated. 4/ Includes potash and nitrate of soda. 5/ Negligible. 6/ Calendar years. 7/ Total production.
 Source: (5) P. 108; (7) table 10, p. 14; (6) 1961, p. 31; (17) 1962, p. 420.

The basic fertilizer needed for increasing the land productivity is phosphates. New Zealand soils are deficient in phosphate because of leaching and the effects of heavy rainfall in some areas. Phosphates perform a very important function by stimulating the growth of clovers, thus releasing the nitrogen from the legumes. Phosphates also make a valuable contribution to other types of pasture and grass growth and to general crop cultivation. All of New Zealand's superphosphate is manufactured in the country from rock imported from Nauru and Ocean Islands.

Use of potash has increased in recent years as deficiencies have become more prevalent in certain areas. Most of these deficiencies have been noted in areas which have been grazed over a number of years, and in sections of high rainfall.

The emphasis on clover in pastures has resulted in natural sources of nitrogen, so that only about 1 percent of the country's total fertilizer consumption consists of nitrogenous fertilizers.

Where deficiencies exist, the addition of very small quantities of certain minerals (trace elements) has been found to result in remarkable improvement in production. Small quantities of cobalt have proved to be the key to the development of central North Island pumice areas. Peat soils and some of the sand soils of the North Island require additions of copper. It has also been found in some areas that the addition of small amounts of molybdenum has doubled pasture growth.

Mineral deficiencies in the soil have also been related to animal disease. Experimental programs to determine the amounts of minerals to be added to pastures have been important factors in the maintenance of New Zealand's animal health standards and high quality dairy herds and sheep.

Mechanization

Farmers in New Zealand are machinery conscious, and as a result a high proportion of farms are electrified and equipped with such power equipment as milking and sheep-shearing machines and other electrical items to speed up farm operations

(table 7). About 95 percent of New Zealand's dairy cows are machine milked as compared to approximately 70 percent in the United States.



A high percentage of New Zealand dairy cows are machine milked.

With few exceptions, equipment is owned by the farmer or by contractors who are hired to perform such activities as aerial fertilizing, seeding, and spraying. Some farmers over the years have adapted farm implements to their own special needs for cultivating and harvesting. Some of this skill employed in the use of machinery has developed because in many years machinery items have been scarce, expensive, and restricted by import prohibitions.

Table 7.--Farm Machinery: Principal items on farms, specified years 1939 to 1960 1/

Type of equipment	1939	1947	1950	1951	1952	1957	1958	1959	1960
Milking machines	28,970	32,596	36,368	37,204	37,563	38,764	38,283	2/	36,721
Cream separators	55,665	48,194	54,421	2/	2/	2/	2/	2/	30,608
Shearing machines:									
Plants	10,064	14,564	18,791	19,473	20,810	26,592	27,158	2/	28,922
Stands	26,063	33,907	40,536	42,298	44,472	2/	2/	2/	61,637
Agricultural tractors	9,639	21,156	34,918	40,310	3/45,734	71,456	73,499	75,291	78,415
Rotary hoes and garden tractors	2/	4/1,646	4/3,093	3,812	4,380	2/	2/	2/	2/
Harvesters	2/	5/1,641	5/1,900	5/2,218	5/1,965	2/	2/	2/	6/5,946

1/ As of Jan. 31.

2/ Not available.

3/ Estimated.

4/ Rotary hoes only.

5/ This item covers only those machines actually used for threshing wheat or oats during the year specified.

6/ All harvesters.

Source: (10) p. 3; (11); and (9).

In land development programs, extensive use is made of heavy earth-moving machinery to break the ground, remove stumps, drain swamps, and construct roads and irrigation projects. Heavy tracklaying tractors and airplanes have become almost a necessity in large-scale land development programs in recent years.

The successful adoption of harvesting equipment has tended to lessen the labor shortage problems which have existed in certain localities for several years. But keen competition exists for seasonal labor because of the heavy demand for laborers to harvest fruit, hops, and vegetable crops produced in the same general areas.

Rabbit Eradication

Ever since the early postwar period New Zealand's Department of Agriculture has been actively engaged in a program of eradication of rabbits. The program has been generally successful. In the last year or so, however, in certain areas beyond the range of the Department's control programs, increased numbers of rabbits have been noted. Unfortunately, advisory officers have had difficulty in securing the full cooperation of individual farmers in the eradication program because the damage to farms and crops from the new infestation has not been great. It is now estimated that about 28 million acres of New Zealand's agricultural area is susceptible to rabbit damage. Through Government-farmer cooperative programs, large blocks of land have been treated with sodium monofluoroacetate, arsenic, and phosphorised pollard poisons. These treatments have been found to be very effective.

Airplane contractual services are widely used in the distribution of the poison bait both by cooperatives and individual farmers. This has proven to be an economical method of poison distribution, particularly in the hill country of South Island.

The special boards engaged in the eradication work are partly financed by annual Government subsidy payments. These payments increased from £376,565 (\$1,054,382) in 1953-54 to a high figure of £528,391 (\$1,479,495) in 1957-58, but have declined somewhat since that period (17, 1962 p. 420).

Aerial Agriculture

New Zealand is probably as advanced in aerial techniques of farming as any country in the world. Because of the rough terrain, much of the productivity of the hill-country pastures could not have been realized without airplanes. Fertilizing, seeding, distribution of fencing materials, spraying of insecticides and weed killers, and dropping of poison bait for rabbits are well developed aerial functions. Most of this work is carried on for farmers by contractors. Fifty-eight contractors were engaged in aerial fertilizing in 1958, with 225 aircraft in operation.



Airplanes are widely used for fertilizing and seeding hill areas.

Between 1950 and 1958, the aerial method of fertilizing provided a means of improving millions of acres of hill-country pastureland. The area fertilized from the air increased from 49,000 acres in 1950 to 4.2 million acres in 1958. The amount of fertilizer dropped increased from 6,000 tons to 522,000 tons

during the same years. Practically all of the larger farms are equipped with fertilizer and seed storage facilities at the base of small runways to facilitate aerial operations.

Extension and Research

New Zealand has pioneered longer than most countries in extension services to farmers. These services are well coordinated through staffs maintained by the Department of Agriculture; the New Zealand Dairy Production and Marketing Board; the Department of Scientific and Industrial Research; the agricultural institutions, Massey College and Lincoln College of the University of Canterbury; and private groups.

A recent development has been the provision of farm management services through Farm Improvement Clubs. In these clubs, farmers join in private groups and hire an extension officer, thus having the sole benefit of the consultant's services. Twelve of these clubs were operating in 1959. This innovation resulted from the farmers' realization of the value of extension services in promoting agricultural output, and the need for services beyond the ability of the country's Department of Agriculture to fulfill. The Department of Agriculture staff and the private clubs are cooperating in every way to give farmers the most effective farm servicing. Despite the Government's awareness of the necessity of extension services to farmers, the Department of Agriculture's staffing pattern has been largely limited to approximately 1 officer to 1,000 farmers.

The variability of soils in New Zealand, even within short distances, requires extension officers to engage in frequent field tests and demonstrations. Numerous experiments in application of fertilizer and correction of mineral deficiencies in the soil are in progress at all times. Much research has been employed in the establishment of new pastures in the scrub and tussock areas, in elimination of such plants as gorse, and in reseeded of old pastures.

Another important aspect of New Zealand's agricultural research is the work employed in the diagnosis and control of

animal diseases. The alfalfa and rich grass pasture areas developed in combination with the climatic conditions sometimes present special physiological problems. During portions of the year when rains are frequent and grass growth is rapid, dairy stock suffer from bloat. The facial eczema of sheep which has plagued animal research scientists for some time is now also believed to be connected with a fungus resulting from combined weather and pasture conditions. Tuberculosis in dairy cattle is kept at minimum levels by compulsory tuberculin testing of herds. Ordinary sheep parasites are controlled by compulsory annual sheep dippings.

Plant breeding research is highly organized in New Zealand, particularly in respect to grains, fruits, grass seeds, tobacco, and hops. The Department of Agriculture coordinates research programs of a number of research institutions, including Massey and Lincoln Colleges, Cawthron Institute, and the special Wheat Research Institute of the Department of Scientific and Industrial Research at Christchurch.

Animal disease and livestock breeding research is performed largely on a Government-industry cooperative basis under the direction of the Department of Agriculture. The New Zealand Dairy Board at its Dairy Research Institute at Massey College is responsible for dairy cattle breeding programs, formulation of standards for herd butterfat recording, and artificial insemination programs. In addition, the Dairy Research Institute has developed processing methods that have improved the quality of cheese and butter products.

A special Wool Research Organization under the direction of the Department of Scientific and Industrial Research was established in 1960. At present, the organization is financed jointly by a 5s. (\$0.70) per bale contribution from the Wool Board and an equal amount from the Government Wool Reserve Fund. Laboratories for the new research will be located at Lincoln College, near Christchurch. This research will deal primarily with crossbred varieties of wool and will be coordinated with research performed by the New Zealand Wool Industries Research Institute.

Research in the breeding of beef cattle, dairy cattle, and sheep, as well as animal nutrition and pasture experimentation

work, are carried on by the Department of Agriculture and the Department of Scientific and Industrial Research at such animal research stations as Ruakura and Wallaceville.

Three of New Zealand's fertilizer companies operate their own research programs to assist in the creation and maintenance of better pastures.

Farm Labor

Aside from sheep and dairy operations, farm labor in New Zealand is employed primarily in specialty crops--fruits, tobacco, and hops--particularly during the harvesting periods. In contrast to many other countries, in New Zealand the farm operations that ordinarily require hired labor are largely performed by service contractors using their own machinery and labor force. As a result, the number of identifiable agricultural laborers in New Zealand has remained relatively stable during the period 1951 through 1961, as indicated by the following estimates:

Year <u>1/</u>	:	Agricultural laborers
	:	<u>Thousands</u>
1936.....	:	2/150.8
1951-55 average	:	131.7
1957.....	:	130.0
1958.....	:	130.9
1959.....	:	129.7
1960.....	:	129.4
1961.....	:	128.9

1/ As of October.

2/ Census figure adjusted to Department of Labor statistics compiled for the later years.

Source: (8) p. 1.; (18) 1960 p. 79; 1961 p. 63

In the 1956 census, which provides the latest data available, it was reported that less than 40,000 people were engaged in

sheep farming and 47,000 people in dairy farming. On this basis, the average number of breeding ewes per unit of labor was computed at 720, and of dairy cows at 42 (23). In comparison to other livestock countries, this is believed to be a fairly high ratio.

Farm Credit Facilities

Several types of credit are available to farmers in New Zealand. Credit usage has been inspired by private land ownership and the Government's long-term veterans' land resettlement program in operation since World War II.

Aside from loans by such private lending agencies as trustee savings banks and life insurance companies, most long-term credit to farmers is provided by the Government. Two agencies, the Public Trust Office and the State Advances Corporation, are important Government lenders.

The State Advances Corporation provides special term loans to veterans in connection with the Land Survey Department's resettlement program. These special loans are made over a long-term period at 2 percent interest for the first year and 3 percent thereafter. They are available to the full value of the land and improvements, stock, and chattels within certain fixed value limitations. In addition, the State Advances Corporation also makes regular agricultural loans up to two-thirds the value of farms or other appropriate security at 5 percent interest. As of March 1959, rural mortgages held by the Corporation totaled about £54 million (\$151 million).

Intermediate or short-term credit funds are available from the States Advances Corporation, Maori Affairs Department (for Maori farmers), stock and station agents, dairy companies, and commercial banks. Probably the most important of these are the stock and station agents which operate all over New Zealand and issue credit on proceeds receivable from sales of wool, sheep, lambs, and cattle at interest rates considerably above long-term loan financing. These agents also advance funds to farmers engaged in contract production of such commodities as seeds, peas, malting barley, and tobacco. Short-term financing credit

for dairy farmers for purchases of fertilizer, dairy equipment, etc., is provided by dairy cooperative companies as part of their coordinated marketing functions.

Agricultural Taxation

New Zealand's present taxation laws are not as favorable for depreciation allowances to farmers now as in the 1950-59 period. In 1950, legislation permitted a 30 percent write-off in the first year of major capital investment on the farm. The remainder of this investment was then written off over a period of years. This policy was abolished in 1959. Depreciation on machinery, vehicles, and farm buildings is now computed on individually established allowances based either on the cost price or diminishing value of the item.

Beginning in 1962, deductions for expenditures on specified land improvements were set at £400 (\$1,120) during any income year. Any expenditures exceeding this limitation may be deducted in four subsequent years in amounts not exceeding £400 per annum. Special tax concessions have been granted to hill-country farmers. Farmers engaged in top-dressing hill-country may charge off this expenditure in any one year or any part of it over a period of 4 years from time of expenditure.

A land tax is assessed on the unimproved value of land after allowable deductions are made. These assessments are made on flat rates set for established property valuations. For the 1962-63 tax year beginning in April, a 50-percent rebate of land tax was authorized.

Estate duty taxes tend to affect adversely New Zealand's long-term capital investment in agriculture. The tax operates as a capital tax on the market value of farm assets at the time of the farmer's death. Widows as beneficiaries to estates valued up to £12,000 (\$33,600) are exempt from an estate duty tax. This exemption does not apply to estates valued at £12,000 and above. Variable rates exist for duty tax on estates; these rates were increased in 1958, with a 60-percent tax applying to estates valued at £30,000 (\$84,000).

Farmers' incomes are subject to the same tax regulations as other private income. During the early 1950's, however, when wool prices were high, farmers were permitted for tax purposes to amortize a certain portion of their wool sales income over a period of years, thus reducing their tax payments for any one year and lessening inflationary effects on the economy.

MARKETING POLICY

New Zealand's current marketing system for her major agricultural exports is for the most part subject to governmental statutory regulation. This system has evolved out of a series of arrangements enacted in the 1920's and 1930's. The present basic individual commodity schemes, originating in the postwar period from 1947 to 1953, are authorized either by specific commodity acts or by the overall Primary Products Marketing Act, 1953. Many of the functions of commodity boards, committees, and authorities which were active in prewar years have been revived. The various commodity boards and committees are composed jointly of industry and Government members.

Marketing Boards

The marketing of dairy products, both for export and domestic consumption, is the function of the New Zealand Dairy Production and Marketing Board. Meat exports are controlled by the Meat Producers Board. The Apple and Pear Board assumes full responsibility for marketing the two fruits. In 1953, the citrus and honey marketing authorities were created with full marketing responsibilities for these two products. The structure and functions of the chief commodity groups are described below.

Dairy Products Marketing Agencies

Prior to September 1961, the general administrative control of New Zealand's dairy industry was vested in the New Zealand Dairy Board. From 1947 to 1961, marketing of dairy products abroad was the sole responsibility of the Dairy Products Marketing

Commission, comprised of government and dairy industry representatives who exercised control over local sales of butter and cheese.

The new Dairy Production and Marketing Board coordinates the industry's production, marketing, and manufacturing functions. The new organization consists of 13 members, with 11 elected by producers and 2 appointed by the Government. With this reorganization, the industry hopes to have stronger negotiating and marketing policies, particularly abroad. There is no change contemplated in the Dairy Products Prices Authority, which is the dairy industry price-fixing agency.

Since 1957, the basic butterfat prices to producers have been fixed by the Dairy Products Prices Authority. Sales of fluid milk and processed dairy products at the local level are made largely through producer cooperatives.

Meat Board and Other Meat Marketing Organizations

In 1948, the Meat Producers Board, authorized under the Meat Export Control Act of 1921-22, was directed by the Government to resume responsibility for meat export operations. This function of the Board was performed by the Government during World War II. With the end of the United Kingdom bulk purchase agreements in September 1954, meat exports reverted to private trader transactions. The Board assumed the responsibility for the purchase of meat for export by guaranteeing minimum prices to freezing works and exporters in the form of deficiency payments. A small charge is made on each pound of meat exported to finance the Board's operations.

Early in June 1960, announcement was made of the formation of the Meat Export Development Company, New Zealand, Ltd., to promote exports of meat to new markets, and particularly to develop lamb shipments to North America. The new organization is made up of members of the Meat Producers Board and the Freezing Works Association. In line with this development, the Meat Export Control Act of 1921-22 was amended to give wider powers to the New Zealand Meat Board in the promotion of new markets.

Greater emphasis is expected to be placed on increased exports of meat by-products. This policy may result in the release of additional supplies of variety meats for export, which would tend to increase competition with U. S. exports in certain markets, such as the United Kingdom.

Wool Board and Wool Commission

Marketing of wool in New Zealand is implemented through the functions of two wool organizations subject to two separate legislative authorities.

The Wool Board was created under the authority of the Wool Industry Act of 1944; the Wool Commission was established under the provisions of the Wool Commission Act of 1951. Although three members of the Wool Board are also members of the Wool Commission, the two organizations have widely differing functions.

Wool Board.--The powers and responsibilities of the Wool Board center around the promotion of sheep breeding research aimed at maintaining the quality of New Zealand wool. The Board also regulates foreign marketing. It engages, as a member, in market promotion programs of the International Wool Secretariat to assure the best export marketing conditions for all Commonwealth producers. In addition, it performs miscellaneous functions related to production, storage, and domestic marketing of wool.

The Board's activities are financed entirely by wool growers, who pay a statutory levy on each bale of wool sold. In 1960 this levy amounted to 4s. (\$0.56). In October 1961, the levy was increased to 5s. (\$0.70) per bale, and was increased again in 1962 to 7s. 6d. (\$1.05) per bale. Most of this increase in funds is to be used in trade promotion and research.

Wool Commission.--The primary function of the Wool Commission is to insure minimum prices for all New Zealand wool sold either in New Zealand or at the United Kingdom auctions. In this connection, the Commission administers the Wool Price Scheme described on page 9.

Apple and Pear Board

A quasi-governmental organization created by the Apple and Pear Marketing Act of 1948, the Apple and Pear Board is responsible for marketing of the bulk of apples and pears. It administers guaranteed price schemes based on costs of production determined by a committee consisting of growers and Government representatives.

Marketing Authorities

Citrus

The Citrus Marketing Authority Regulations of 1953 originally provided for the marketing of fresh lemons only, but have now been extended to oranges. Control of marketing and distribution of imports of all citrus fruits has been allocated to Fruit Distributors Ltd., a coordinated marketing agency servicing trade interests.

Eggs

Regulations adopted in 1951 and 1952 authorized the National Egg Marketing Committee to control the marketing of eggs and egg products. Prices paid to poultry producers were fixed from time to time by the Minister of Agriculture on the Committee's recommendation, while the wholesale and retail selling prices to the public were fixed by price order of the Price Tribunal on the basis of the Committee's recommendation.

Legislation passed in 1953 gave the Egg Marketing Authority, which is administered by the New Zealand Poultry Board, the power to regulate and control commercial marketing and distribution of eggs and egg pulp. The Marketing Authority operates principally through licensed distributors in the various districts.

Honey

Most of New Zealand's honey is marketed for domestic consumption by producers directly to consumers or retail packers and distributors. The remainder, which averages about 1,000 tons, is exported through the Marketing Authority for honey, which is the sole exporter.

Marketing Committees

Wheat

Established in 1936, the Wheat Committee controls the imports of wheat and flour and the distribution of both imported and domestic grain throughout New Zealand, except for South Island poultry wheat. In addition to arranging for the purchase and distribution of domestic and imported wheats, the Committee is the sole selling agent of domestic flour, bran, and pollards.

A quasi-governmental organization, the Committee is chaired by the Minister of Industries and Commerce. It is made up of flour millers, bakers, and wheat growers. It is primarily concerned with the administration of the Government's guaranteed price and subsidy policies for wheat and flour.

Hops

A central Hops Marketing Committee controls the sale and distribution of all hops. Growers are required to deliver their hops to authorized brokers who receive, grade, and sell the crop for the Committee.

Authorized under a 1962 amendment to the Hops Marketing Regulations, a joint committee composed of three grower and three brewer representatives has been established to assist producers in the production and marketing of hops.

Under a 10-year agreement between the Hops Marketing Committee and New Zealand's Brewer Association, the joint committee fixes grades of hops, registers growers, controls production quotas, and arranges for growers' use of hop-picking machines and kilns. Brewers are obligated under the agreement to purchase all hops of acceptable quality and arrange for the marketing.

Cooperatives

Cooperatives have had a sketchy existence in New Zealand's marketing history. At the present time, governmentally regulated

cooperatives, other than commodity boards, are limited primarily to dairy products. All producers of milk and cream are required to sell their output to cooperative dairy factories in the district in which they reside. The factory arranges for the collection, sampling, testing, and grading of the milk either for processing or for sale in fluid form. After they are processed, dairy products for foreign marketing become the property of the New Zealand Dairy Production and Marketing Board. Local wholesale distribution of all dairy products is the function of cooperatives which channel dairy products to grocers and merchants.

Voluntary cooperatives are limited largely to trading in livestock and meat. There are several meat freezing works owned by farmers and there is also a small cooperative wool marketing company.

TRADE POLICY

Trade Patterns

New Zealand's economy is very susceptible to fluctuations of prices in international markets, especially prices of such primary agricultural commodities as wool, dairy products, and meat. About 90 percent of New Zealand's agricultural exports, by value, now consist of these three items (table 8.) In recent years, agricultural exports have accounted for about 95 percent of the total value of New Zealand's exports (table 9).

In the years just before World War II, 82 percent (by value) of New Zealand's agricultural exports were destined for the United Kingdom. In the early fifties, the United Kingdom share dropped to 66 percent; by 1959 it had declined to 56 percent. New Zealand's heavy prewar reliance on markets in the United Kingdom and other Commonwealth countries was partly due to the Commonwealth preferential tariff system inaugurated under the provisions of the Ottawa Agreements of 1932.

Since 1950, much of the trade with the United Kingdom has been diverted to the United States, France, West Germany, Benelux, Italy, and Japan (table 10). Some of the shift in trade

Table 8. -- Trade: Value of principal agricultural exports and total agricultural exports, averages 1934-38 1/ and 1951-55, 2/ annual 1958-61 2/

Commodity	Average				Annual		
	1934-38		1951-55		1959	1960 <u>3/</u>	1961 <u>3/</u>
	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars
Butter <u>4/</u>	55.5	137.2	108.8	156.3	140.4	110.3	
Cheese	19.5	45.0	34.7	61.9	52.0	55.8	
Dried nonfat milk <u>5/</u> .....	.5	8.2	7.3	11.8	10.0	7.7
Hides and skins	10.9	29.8	23.3	37.1	37.2	33.8	
Meat: <u>6/</u>							
Beef and veal, fresh, chilled, frozen	5.0	18.9	73.0	62.1	62.2	61.8	
Lamb and mutton, fresh, chilled, frozen..	39.7	90.4	119.8	121.8	136.1	125.7	
Other	8.0	24.4	17.4	19.8	18.9	18.1	
Tallow	2.2	8.2	9.6	9.2	8.2	8.7	
Wool.....	49.1	266.9	224.1	251.0	286.5	280.4	
Other countries	9.8	35.0	44.2	48.1	50.1	46.9	
Total agricultural exports	200.2	664.0	662.2	779.0	801.6	749.2	

1/ Conversion rate - \$3.829 = 1 N. Z. £.

2/ Conversion rate - \$2.80 = 1 N. Z. £.

3/ Preliminary.

4/ Includes dried butterfat and ghee.

5/ Includes dried buttermilk.

6/ Excludes sausage casings.

Source: (12) Pts. I and II; (14); (13); (3).

Table 9.--Trade: All products and agricultural products, averages 1934-38 and 1951-55, annual 1956 to 1961

Year 1/	Total trade		Agricultural trade		Agricultural trade as percentage of total	
	Imports 2/	Exports 3/	Imports 2/	Exports 3/	Imports	Exports
	Million dollars	Million dollars	Million dollars	Million dollars	Percent	Percent
Average:						
1934-38 4/..	171.2	211.1	16.7	200.2	10	95
1951-55 5/..	595.5	682.0	65.3	664.0	11	97
Annual: 5/						
1956	657.4	770.3	65.1	736.4	10	96
1957	732.9	768.1	71.5	730.6	10	95
1958	707.8	694.4	70.1	662.2	10	95
1959	574.2	814.8	59.7	779.0	10	96
1960	705.1	839.4	63.5	801.6	9	95
1961 6/	804.0	783.6	65.4	749.2	8	96

1/ Calendar years.

2/ Excludes specie.

3/ Produce of New Zealand only.

4/ Converted at \$3,829 = 1 N. Z. £.

5/ Converted at \$2,80 = 1 N. Z. £.

6/ Preliminary.

Source: (12) Pts. I and II; (14); (15); and (16) May and July, 1962 issues.

Table 10.--Trade: Value of agricultural exports by principal countries of destination, averages 1934-38 and 1951-55, annual 1956-59 1/

Country of destination	Average			Annual 2/		
	1934-38 3/	1951-55 2/	1956	1957	1958	1959
	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars
United Kingdom	164.7	436.5	493.6	449.1	385.8	459.1
United States	9.5	45.8	50.0	52.7	98.7	116.6
France	4.1	40.2	46.9	60.7	41.3	48.3
West Germany	2.4	35.2	28.6	35.3	19.4	26.7
Italy	0.2	12.0	18.5	18.5	17.1	16.5
Japan	5.1	7.2	5.7	17.1	13.1	15.5
Belgium	2.2	10.5	15.6	17.6	12.5	14.4
Netherlands	0.5	8.9	12.4	16.4	8.2	11.6
Australia	3.1	6.0	7.0	8.3	6.8	7.7
Other countries	8.4	61.7	58.1	54.9	59.3	56.9
Total	200.2	664.0	736.4	730.6	662.2	773.3

1/ Excludes specie and shipstores.

2/ Conversion rate - \$2.80 = 1 N. Z. £.

3/ Conversion rate - \$3.829 = 1 N. Z. £.

Source: (12) Pts. I and II; (14); (3).

that occurred in wool, meat, hides and skins, tallow, and certain dairy products has been mainly the result of better prices received for those commodities in markets other than the United Kingdom. Also, the United Kingdom over the years has emphasized domestic production to the extent that import requirements of certain farm products have been reduced. New Zealand has found alternative markets for some commodities, particularly beef and mutton.

The United States since 1958 has been New Zealand's second largest market. The major U. S. imports are wool, meat, and other animal products, chiefly hides and skins and some dairy items (table 11).

Seasonal fluctuations in prices of wool and the competitiveness of foreign markets for meat and dairy products sometimes cause violent reactions in New Zealand's balance of payments. This situation is also aggravated by high freight rates for the long transport of exports to such major markets as the United Kingdom and continental Europe. New Zealand's overall freight costs are probably as high as any trading nation's in the world. No other country approaches New Zealand in the high proportion of perishable export items and the need for refrigerated cargo space. It is estimated that about 5 percent of this nation's gross national product is absorbed in freight costs for overseas exports.

Tariffs

A new customs tariff was introduced effective July 1, 1962. The new schedule is divided into 5 columns showing the British preferential tariff, the Australian agreement rates, the Canadian agreement rates, the most-favored-nation rates, and the general tariff. All commodity items have been rewritten and reclassified in the Standard International Trade Classification nomenclature. In addition to the commodity classification changes, the new tariff simplified the calculation of ad valorem duties by application of the "current domestic value," 4/ which omits the 10 percent adjustment formerly added to valuations. Other changes were the

4/ Fair market value of goods when sold for cash for home consumption in the principal markets of the exporting country.

Table 11.--United States--New Zealand agricultural trade,
calendar years 1960 and 1961

U. S. IMPORTS FROM NEW ZEALAND		
Commodity	1960	1961
	Million dollars	Million dollars
Beef and veal--fresh, chilled and frozen	46.5	52.9
Mutton, goat, and lamb--fresh, chilled and frozen..	2.0	2.7
Other meat .....	.2	.3
Wool, raw	40.7	43.2
Hides and skins, raw	13.2	15.8
Casein or lacterene	3.9	3.7
Cheese	1.5	3.8
Sausage casings--sheep, lamb, etc.	2.1	2.3
Apples, fresh	1/	.1
Other agricultural commodities	2.9	1.9
Total agricultural	2/113.0	2/126.7
Nonagricultural	3.9	3.8
Total trade	2/116.9	2/130.5
U. S. EXPORTS TO NEW ZEALAND		
Sausage casings, hog .....	.5	1.0
Oranges, fresh .....	.3	.1
Prunes, dried .....	.3	.3
Raisins and currants .....	.4	.4
Other fruits and preparations .....	.4	.2
Vegetable oils and fats .....	.1	.1
Seeds, field and garden .....	.1	.1
Tobacco, unmanufactured	4.1	5.0
Rice, milled .....	.1	.1
Other agricultural commodities .....	.4	.4
Total agricultural	6.7	7.7
Nonagricultural	67.8	60.6
Total trade	74.5	68.3

1/ Less than \$100,000.

2/ U. S. census totals adjusted for transshipment of Western Samoa cocoa through New Zealand.

Source: (2) 1960, pp. 4, 7, 38, 61, 62; 1961, pp. 4, 7, 43, 68.

elimination of the 3 percent primage duty, formerly applied to many raw material items, and the removal of the surtax duty charge.

New Zealand's tariffs are generally high and protective of domestic producers, although some reductions in rates have been made through GATT 5/ negotiations over the years.

Licensing

Imports have been subject to licensing since the early part of World War II. In most years, restrictions under the licensing system have been adopted for balance-of-payments reasons.

Certain restrictions have been relaxed in some years, most noteworthy being the elimination of discrimination against dollar area suppliers which was completed in 1963. General restrictions were tightened, however, by abolition in 1961-62 of a token licensing scheme and the licensing of commodities because of seasonal shortages. For the year beginning July 1, 1962, imports of most agricultural and food commodities are subject to either embargoes or restricted quota allocations.

Butter and cheddar cheese are exempt from licensing, but they are not imported because foreign producers could not compete in the New Zealand market. Sugar is the only other agricultural commodity allowed to be freely imported. Tobacco is free from direct licensing, but its entry is effectively restricted by the mixing regulations and exchange allocations.

Quarantine Regulations

Imports of plants, livestock, and certain foodstuffs are controlled through strict quarantine measures. Imports are permitted from disease-free areas only and special certification is required for plants, nursery stock, and certain meat items.

5/ General Agreements on Tariffs and Trade, of which New Zealand is a member.

Bilateral Arrangements

Like other members of the British Commonwealth of Nations, New Zealand negotiates bilateral trade arrangements.

Most of these agreements tend to give New Zealand market assurances in specific markets for such major export items as meat, wool, dairy products, fruits and vegetables, tallow, and hides and skins. The principal agreements now in effect have been negotiated since 1958.

United Kingdom

A formal agreement with the United Kingdom was negotiated in 1958, but was not formally signed in Wellington until August 12, 1959. The chief terms of the negotiation, which became effective in November 1958, were as follows:

(a) Free-entry rights for certain New Zealand goods entering the United Kingdom were continued.

(b) Guaranteed tariff margins of preference 6/ accorded New Zealand goods in the United Kingdom were continued. The principal agricultural commodities to which these guarantees applied were butter, cheese, apples, pears, eggs, evaporated milk, and dried milk.

(c) The New Zealand Government was permitted to reduce existing tariff margins of preference accorded to the United Kingdom on specified manufactured items. This provision was effective on commodities where there is no active United Kingdom trade interest. New Zealand agreed to consult with the United Kingdom on all items to be considered for reduction in margins of tariff preferences.

(d) New Zealand was granted the right under certain conditions, to engage in bilateral arrangements with third countries,

6/ Differences between the preferential rate and the next higher rate of duty, which is generally either the most-favored-nation rate or general rate.

providing the terms of such agreements did not cause injury to the United Kingdom's trade.

(e) The two Governments also made provision for "remedial action" on the part of either Government, if the trade of either country should be injured by dumping of third countries in either the New Zealand or United Kingdom market.

(f) It was guaranteed that no quantitative restrictions would be imposed on New Zealand butter, cheese, nonfat dried milk, dried buttermilk, casein or chilled and frozen pork entering the United Kingdom market through May 1967. This portion of the agreement was modified in April 1962 when the United Kingdom placed quota restrictions on imports of butter. New Zealand's quota for the 1962-63 period beginning April 1 was 175,000 tons and was increased to 184,000 tons for 1963-64.

(g) Unrestricted entry of all meat (other than pork) into the United Kingdom was also guaranteed until 1967. This provision perpetuated the earlier negotiation.

Japan

A 3-year trade agreement was signed by New Zealand and Japan on September 9, 1958, and was later extended through 1962. Terms of the agreement were as follows:

(a) Japan was accorded most-favored-nation tariff treatment by New Zealand and considered as a nonscheduled and soft currency country for the purposes of import licensing.

(b) In return, Japan granted the following concessions to New Zealand:

(1) New Zealand was assured of nondiscriminative rights of competition for a maximum 90 percent of wool exchange allocations for any one year. It was also agreed that Japanese duties on New Zealand wool, which were bound until July 5, 1960, would not be increased after that time.

(2) New Zealand was given the right to compete for the full allocation of Japanese foreign exchange allocations for meat. It was anticipated that New Zealand might export about 11,200 tons of meat to Japan each year. Actual shipments in calendar years 1960 and 1961 totaled 21,392 and 26,275 tons, respectively.

(3) New Zealand was given equal rights of supplying beef tallow, cattle hides, calf skins, and kip skins to Japan on the automatic approval list for foreign exchange. 7/

(4) Japan agreed to maintain casein on the automatic approval list for foreign exchange allocations. New Zealand was assured approximately 50 percent of Japan's casein imports during the period 1958 to 1961.

West Germany

Probably the most specific of the formal agreements negotiated by New Zealand was the one with West Germany. Signed on April 20, 1959, the agreement was extended on March 31, 1962, for an indefinite period. Specific annual quotas established for New Zealand exports to Western Germany are given in table 12.

Australia

New Zealand has maintained since 1933 a formal bilateral trade arrangement with Australia which was negotiated as a part of the Ottawa Agreements. This trade pact is confined largely to the mutual extension of preferential tariffs. New Zealand accords special duties to Australia on such commodities as meat and meat products, fish, oats, raisins, dried peas, hops, certain fresh and frozen vegetables, certain canned vegetables, canned fruits, and specified timber items. Some of these preferences on such items as raisins, canned fruits and vegetables, and pulses create

7/ At the time this agreement was signed New Zealand enjoyed freer trading rights in the Japanese market for these products than the United States, as U. S. products were restricted to the fund allocation system. Since mid-1961, however, both countries' products have been competing equally in this market.

Table 12.--Annual quotas for New Zealand exports to West Germany,
1959 agreement and extension 1/

Item	Unit	Original : quotas : (1959)	1961 : quotas
Beef, frozen.....	Metric ton	6,500	<u>2/</u>
Beef, canned	do.	250	250
Mutton and lamb, frozen.....	do.	250	500
Meat extract	Dollars <u>3/</u>	250,000	<u>4/</u>
Blood meal and dried blood			
for animal feed	do.	150,000	<u>4/</u>
Buttermilk powder for animal			
feed	Metric ton	750	800
Dried whole milk	---	No quota	<u>2/</u>
Nonfat dry milk	---	No quota	<u>2/</u>
Cheese, cheddar	Dollars <u>3/</u>	525,000	<u>4/</u>
Butter	---	No quota	<u>2/</u>
Apples and pears, fresh	do.	875,000	875,000
Red and white clover; other			
grass seed	do.	250,000	<u>5/</u> 250,000
Vegetables, canned	do.	62,500	62,500

1/ Years beginning Apr. 1.

2/ Unrestricted entry but subject to future quota limitations.

3/ Converted from deutsche marks. 1 DM= \$0.25.

4/ Unrestricted entry subject to original quota limitations if imports are restricted.

5/ White clover seed only.

competition for U. S. products in the New Zealand market. Wheat, however, is the main Australian agricultural export to New Zealand, and it is admitted duty free from all sources.

Australia, under the terms of the agreement, also extends special duty concessions to New Zealand. New Zealand's exports of farm products to Australia are limited chiefly to small quantities of carpet wool, hops, flower and garden seeds, and timber.

Federation of Malaya

A trade agreement with the Federation of Malaya, ratified in July 1961, provided that each country should accord preferential tariff rates to the other on certain agricultural products.

New Zealand agreed not to increase the rates of duty and to maintain the margins of preference on imports of canned pineapple, sago, and tapioca originating in the Federation. Current tariff rates for specified varieties of Malayan rough-sawn timber were to be maintained. In addition, New Zealand agreed to make no distinction between duties applied to imports of Federation natural rubber and latex and duties on imports of synthetic rubber from other sources. She also agreed to abolish the primage duty of 3 percent on natural rubber and latex and not to increase the duty on these items.

The Federation, on the other hand, agreed to duty-free entrance of certain New Zealand products such as beef, veal, mutton, lamb, nonfat dry milk, infant foods (milk based), and tallow. The Federation also agreed to maintain margins of preference on imports of New Zealand's dry full-cream milk, nonfat dry milk, tinned and frozen butter, and certain canned fruits.

Export Promotion Schemes

New Zealand's Department of Industries and Commerce and the commodity marketing boards and commissions have been actively engaged in various foreign market development programs during recent years. Attention has been given to the extension of markets for dairy products, meats, and apples and pears.

A Trade Promotion Council was formed in early 1962 to advise the Government on foreign trade policies. The 14 members of this organization were chosen on the basis of their experience in foreign trade fields as individuals, and not as representatives of trade or marketing groups.

Emphasis has been placed on increased exports of butter, cheese, and nonfat dry milk to Ceylon, Singapore, and Malaya, and to Latin American countries, principally Peru, and the British West Indies.

The Dairy Production and Marketing Board in 1961 adopted a plan for the establishment of milk companies in less developed countries. These plants process New Zealand butterfat and nonfat dry milk into liquid milk. Plants already established or under construction are located at Singapore, Mauritius, and Hong Kong.

The New Zealand Meat Producers Board and the New Zealand Export Development Company are concentrating on new markets for meat outside of the United Kingdom. Markets have been established for meat in Peru, Venezuela, Japan, Greece, West Germany, Canada, Israel, Hong Kong, and the United States.

Special trade surveys are being made in potential market areas. Included in the surveys are studies of special packaging, labeling, and advertising of New Zealand products in foreign countries.

Trade inquiries are also made on behalf of New Zealand exporters by representatives of the Department of Industries and Commerce. To facilitate this service New Zealand's trade representation has been increased considerably in certain areas during the past 2 years.

Promotion of apple exports by the New Zealand Apple and Pear Board has resulted in increased exports to northern European countries, Ceylon, Hong Kong, Singapore, the West Indies, and Venezuela.

COMPETITION WITH U. S. FARM PRODUCTS

Since New Zealand's agricultural exports are similar to those of the United States, commodities of the two countries compete not only in foreign markets but within the countries themselves.

In the New Zealand Market

In the New Zealand market, U. S. products tend either to supplement domestic production, as in the case of tobacco, garden seeds, and off season imports of certain fruit items, or to complement it, with such products as dried fruits and rice.

The future of U. S. exports to New Zealand will depend largely on the viability of New Zealand's economy, as well as its ability to maintain high living standards and consumption levels for its people. U. S. exporters will be interested in maintaining and, if

possible, increasing their exports of tobacco, citrus, dried fruits, and rice to this market, and if cotton mills should be established, of sharing in any market that might develop for raw cotton.

Tobacco

In recent years considerable emphasis has been placed on increased production of tobacco in an effort to reduce New Zealand's dependence on imports. Government and industry are both engaged in this endeavor, with emphasis on research on new areas for production and on better varieties of leaf.

Areas for expansion are being considered in the Whakatane, Bay of Plenty, and Hawkes Bay areas of North Island to supplement the main commercial producing area near Motueka in the Nelson area of South Island. So far, experimental production has been very successful at Whakatane, but more work by manufacturing interests, the Department of Agriculture, and the Soil Bureau of the Department of Scientific and Industrial Research is anticipated before this new production is a commercial success.

A record crop of 9 million pounds in 1962 narrowed the margin of required imports. Since 1959, an increase in production has resulted from increased acreages, increased use of mechanization, and development of leaf varieties that yield more per acre. Most of New Zealand's tobacco is produced under a contract program. Both acreage and production have been steadily increasing since the 1957 harvest. Production has also been encouraged by voluntary agreements by manufacturers to increase usage of domestic leaf, higher minimum prices to producers, and increased use of domestic leaf resulting from an import duty of approximately \$0.47 per pound on all tobacco leaf imported for manufacture into cigarettes and other tobacco products other than cigars. Cigar leaf is admitted duty free. Average crops for the 3-year period 1959-61 totaled over 6 million pounds, about 35 percent above previous years.

Prior to 1958, imports of U. S. leaf made up about 99 percent of total imports and approximately 55 percent of the total supply of unmanufactured tobacco. Since that time, the U. S. portion of

total imports has fallen as low as 84 percent, and in 1960 it comprised only about 43 percent of the total leaf supply (table 13). Much of this slack has been taken up by larger imports of leaf from the Federation of Rhodesia and Nyasaland, with trade from that area increasing from 27,000 pounds in 1957 to 892,000 pounds in 1960. In 1959, about 77,000 pounds of tobacco leaf were imported from Mainland China.

In per capita consumption, New Zealand ranks high among the tobacco-consuming countries of the world. If the population increases, there is every indication that continued imports of unmanufactured tobacco will be needed to meet domestic requirements. A reduction in tariff from 3s. 9d. (\$0.52) to 3s. 4d. (\$0.47) per pound was made in the United States-New Zealand tariff negotiations at the 1961-62 session of GATT.

In the long run, it is likely that New Zealand will obtain her unmanufactured tobacco from a greater variety of sources, particularly as more types of tobacco are beginning to be used for blending. Since 1957, other countries have begun to provide keen competition for the United States, and this is expected to continue. Many of the countries with which New Zealand is seeking to expand trade are exporters of tobacco, particularly the Far Eastern, Latin American, and Middle Eastern countries.

Fruits

Citrus--Citrus fruits are grown in various localities of New Zealand's North Island. Domestic production of oranges and mandarins provides about 4 percent of the country's requirements. Domestic production of oranges is supplemented by imports from Australia, Cyprus, the British West Indies, Cook Islands, the United States, and in some years the Republic of South Africa (table 14).

U. S. oranges compete with oranges from the British West Indies and Cyprus, which are all imported during the Australian off-season, generally during the period December through March. California oranges retail at about the same price as Jamaican, but are much more regular in size and appear to be higher quality

Table 13.--Tobacco: Area, production, and imports by principal country of origin, averages 1935-39 and 1951-55, annual 1958-62

Year	Area ^{1/} Acres	Production lb.	Imports						Total supply lb.	
			Republic of South Africa	Indo- nesia	Federation of Rhodesia and Nyasaland	Canada	U. S.	Other countries		
Average:		1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1935-39..	2,419	1,703	0	4	7	0	3,007	9	3,027	4,730
1951-55..	3,319	4,397	0	5	0	0	6,671	5	6,681	11,078
1958.....	3,265	4,651	0	24	350	72	6,984	1	7,431	12,082
1959.....	3,534	5,607	38	22	430	79	6,891	2/83	7,543	13,150
1960.....	3,750	7,076	94	38	892	0	5,459	43	6,526	13,602
1961.....	4,151	6,777	70	60	1,011	0	5,172	49	6,362	13,139
1962.....	4,699	9,327	3/	3/	3/	3/	3/	3/	3/	3/

1/ Contract acreages.

2/ Chiefly imports from Mainland China.

3/ Not available.

Source: (20) p. 19, (12) Pt. I; (15) 1960; (13) 1961; also, Foreign Agricultural Service Despatches.

Table 14.-Oranges: Imports by country of origin, averages 1934-38 and 1951-55, annual 1959-61 1/

Country	Average		Annual		
	1934-38	1951-55	1959	1960	1961
	Tons	Tons	Tons	Tons	Tons
Australia.....	6,116	9,850	7,901	9,152	7,393
Cyprus	0	3	1,529	2,234	2,833
British West Indies.....	1,262	2,437	1,428	1,966	1,835
United States.....	1,170	186	2,015	1,511	1,234
Republic of South Africa,:	0	1,398	655	0	619
Other countries	161	3	0	0	0
Total.....	8,709	13,877	13,528	14,863	13,914

1/ Excludes imports from Cook Islands, which were estimated at 1,600 tons in 1961.

Source: (12) Pt. I; (13); (15).

fruit when displayed in the shops. Oranges from the British West Indies and Cyprus enter New Zealand free of duty, while the duty on U. S. oranges is 0.5d. (0.5¢) per pound.

California lemons are imported at irregular intervals when local production is insufficient to meet requirements, particularly in the first few months of the year. This trade is expected to continue. Domestic grapefruit production appears to be generally adequate for local marketing demands.

With the high perishability of citrus fruits, off-season imports of oranges will continue to be needed. The extent to which U. S. oranges can compete will depend largely on the price of California and Florida oranges in the New Zealand market as compared to those from Jamaica and Cyprus. The small British tariff preference on the latter could affect U. S. imports in seasons when U. S. prices are particularly high.

Dried fruits--Before World War II, the United States was the main supplier of prunes to the New Zealand market. Since World

War II, U. S. imports have encountered increasing competition from Australia and the Republic of South Africa (table 15).

New Zealand imports of prunes fluctuate from year to year depending on the balance of payments situation. In some years, the high price of prunes, shortages of dollars, and rigid import licensing controls have limited shipments from the United States. However, New Zealand importers and consumers do have a preference for quality California prune packs, and importers tend to import the U. S. product when dollar balances and import licensing permit.

The extent to which U. S. prunes may continue to dominate the New Zealand market, even with consumer preference, will depend largely on the future output of quality fruit in Australia and the Republic of South Africa, and the ability of these countries to sell at prices competitive with the United States. So far, both Australia and the Republic of South Africa have been minor producers of prunes and have had difficulty in competing with the U. S. industry.

Table 15.--Prunes, dried: Imports by country of origin, averages 1935-39 and 1951-55, annual 1958-60

Country	Average		Annual		
	1935-39	1951-55	1958	1959	1960
	Tons	Tons	Tons	Tons	Tons
Australia	164	465	192	87	170
Czechoslovakia.....	0	1	0	0	0
Hong Kong	0	1/	2	1/	1/
Italy	0	9	0	0	0
Netherlands	0	20	0	0	0
Republic of South Africa..	0	11	46	0	0
United States.....	1,088	174	1,185	426	521
Other countries	1/	0	0	0	2
Total	1,253	680	1,425	513	694

1/ Negligible.

Source: (12) Pt. I; (15).

Australia is the primary supplier of raisins to New Zealand, and in late years has furnished about 90 percent of total imports (table 16). In many seasons, California raisins are competitive in price with Australian raisins. The California Thompson Seedless pack differs somewhat from the Lexia and Sultana raisins imported from Australia. U. S. raisins have been imported in relatively modest quantities over the years, but in 1960 increased to about one-fifth of total imports.

Table 16.--Raisins: Imports by country of origin, averages 1935-39 and 1951-55, annual 1958-60

Country	Average		Annual		
	1935-39	1951-55	1958	1959	1960
	Tons	Tons	Tons	Tons	Tons
Australia	4,018	4,720	6,124	4,400	4,856
Greece	1/	14	0	0	0
Republic of South Africa.:	1/	377	236	9	0
Spain	0	1/	0	0	0
Turkey	28	95	0	56	0
United States.....	1,213	298	264	236	1,173
Total	5,260	5,505	6,624	4,701	6,029

1/ Negligible.

Source: (12) Pt. I; (15).

The United States will probably encounter greater future competition from such Middle East suppliers as Greece, Turkey, and possibly Iran as a result of New Zealand's trade promotion programs in the Middle East.

If, however, the United States should continue as a major outlet for New Zealand beef, and if an expanded market for lamb should develop in the United States, it is possible that New Zealand could buy more traditional import commodities such as dried prunes and raisins from the United States with the increased dollar exchange that would be generated.

Canned fruits--From time to time New Zealand importers have shown considerable interest in U. S. canned fruits, chiefly pineapple, apricots, peaches, fruit cocktail, and plums. Unfortunately, U. S. exporters have difficulty in selling canned fruit in this market because of high British Commonwealth preferential duties, varying from 20 to 22.5 percent ad valorem, which favor packs from Australia and the Republic of South Africa. Under these circumstances retail prices of the U. S. products are virtually prohibitive.

Grains

Wheat--Prior to 1958, New Zealand was dependent upon imports for about 70 percent of her total wheat requirements. By 1963, expanding domestic production had reduced import needs to less than 40 percent, despite an increase of about 2.5 million bushels in annual consumption. Wheat consumption requirements are now estimated at about 15 million bushels a year.

The Wheat Committee, which controls the procurement of imported wheats, has traditionally confined its purchases to Australian wheats. The proximity of Australia as a supplier and the accompanying lower transport costs of delivery is the main factor involved in New Zealand's almost total reliance on this source.

Even with development of new varieties of wheat and blending of imported Australian wheat, New Zealand bakers have complained of the low quality protein content of New Zealand flour. Australian wheats are chiefly of the soft varieties, and the baking industry has recommended to the Government that harder wheats be imported for blending with the soft wheats produced locally. It is in this area that the United States has hoped to find a small market for U. S. hard wheats, depending on the competitive price situation with Canadian wheat. In 1960, New Zealand imported a small amount of U. S. flour. Future prospects for U. S. exports of wheat or flour do not appear bright, until such time as New Zealand modifies its subsidy on domestic wheat production and relaxes control of imports.

Rice--Although Australia is the primary supplier of rice to New Zealand, the United States entered the market with milled rice beginning in 1959. In 1960, imports from the United States totaled 854 tons, 22 percent of New Zealand's total rice requirements (table 17). It is believed that some consumer preference has been built up for U. S. long grain rice in contrast to the short grain rice obtainable from Australia.

Table 17.--Rice: Imports by country of origin, averages 1934-38 and 1951-55, annual 1958-60

Country	Average		Annual		
	1934-38	1951-55	1958	1959	1960
	Tons	Tons	Tons	Tons	Tons
Australia	1,953	2,197	3,354	2,440	2,051
United States.....	7	0	0	85	855
Thailand	287	352	340	510	318
China, Mainland	519	5	8	65	18
Hong Kong	109	2	7	1	4
Federation of Malaya	1/6	1/3	7	0	4
Burma	1,120	39	0	0	0
Other countries	232	160	9	128	0
Total	4,233	2,758	3,725	3,229	3,250

1/ Includes Singapore.

Source: (12) Pt. I; (15).

U. S. milled rice shipments will probably encounter more competition from Far Eastern suppliers in the future because of New Zealand's efforts toward expansion of trade in southeast Asian markets.

Should licensing be sufficiently liberalized, U. S. sales of instant rice would probably be increased.

Vegetable seeds

New Zealand is both an importer and exporter of vegetable seeds. The United States is the main supplier in the New Zealand

market, competing with the United Kingdom, Australia, and the Netherlands. The main crops for which seeds are supplied by the United States are garden peas, beans, carrots, beets, lettuce, cucumber and cabbage. Imports of vegetable seeds from the United States totaled over 270 tons in both 1958 and 1959, with an average value of more than \$100,000 (table 18).

Table 18.--Vegetable seeds: Imports by country of origin, average 1951-55, annual 1958-60 ^{1/}

Country	Average	Annual		
	1951-55	1958	1959	1960
	Tons	Tons	Tons	Tons
United States	132	272	272	152
Tanganyika	25	16	96	36
Morocco	10	6	60	28
United Kingdom	39	64	57	26
Australia	10	21	31	21
Netherlands	13	24	26	12
France	2	4	2	1
Other countries	12	3	3	1
Total	243	410	547	277

^{1/} Prewar data not available.

Source: (12) Pt. I; (15).

Although New Zealand produces and exports seed peas, she also imports certain types of seed peas from the United States to supplement varieties that are domestically grown.

In the World Market

Dairy products

New Zealand is the world's largest exporter of butter and the second largest exporter of cheese. Favorable climate and years of concentration on pasture fertility and management

efficiency have resulted in the development of an efficient dairy industry, particularly in sections of North Island. Levels of milk production and output of dairy products are influenced by domestic and export prices for dairy products, the foreign marketing situation, and export prices obtainable for wool, meat, and other livestock products. Butter, cheese, milk powders, and casein are among the chief products produced for export and are highly competitive in world markets with products from other major dairy producers.

Should the United Kingdom continue to limit imports of butter by quantitative quotas to maintain domestic production, it is possible that New Zealand will adopt producer incentives for the channeling of more milk into other processed products. If this happens, it is highly possible that certain New Zealand dairy products may become even more competitive both in the United States and foreign markets.

Butter--In recent years New Zealand has encountered some small competition from U. S. commercial sales of butter in West Germany, the Philippines, and Peru. But U. S. exports are steadily declining. Unless the U. S. export price is reduced somewhere near the level of New Zealand butter--about 38¢ per pound in European markets--it is unlikely that the two countries will compete commercially in foreign markets.

Cheese--New Zealand's cheese exports consist entirely of cheddar or cheddar types. Exports declined by about 12 percent in the period 1958 to 1960, chiefly because of a price policy which favored the diversion of milk into butter and casein production rather than into cheese, thus lowering the output of cheese during 1959 and 1960. Trade approached normal levels again in 1961 with total exports of 98,000 tons. In recent years, over 90 percent of New Zealand's cheese exports have been consigned to the United Kingdom market.

The bulk of U. S. exports of cheese, which totaled about 4,000 tons in 1961, are either natural or processed cheddars. Both the United States and New Zealand export cheese to the British West



Cheddar cheese removed from presses and ready for aging rooms.

Indies, Japan, the United Kingdom, and in some years, West Germany (table 19). The cheese products of the two countries are generally competitive in type and quality.

Even with the allowance for greater freight rates paid by New Zealand to some competitive markets, it is difficult for U. S. exporters to compete with prices charged by New Zealand exporters. Wholesale prices of American cheddars f.o.b. Wisconsin in 1960 averaged about \$0.36 per pound, while New Zealand finest and first grade cheddars were sold wholesale on the United Kingdom market at about \$0.30 per pound. New Zealand's cheddar cheese is admitted into the United Kingdom free of duty, while the U. S. product is subject to a tariff rate of 15 percent ad valorem. In 1961, the f.o.b. value of New Zealand's finest cheddar cheese shipments to Japan averaged \$0.26 per pound as compared to \$0.33 per pound f.o.b. for U. S. cheddar.

Nonfat dry milk--U. S. producers are particularly concerned with New Zealand trade in nonfat dry milk. U. S. shipments to foreign markets in 1960 were almost double New Zealand's. There was considerable competition between these two suppliers

Table 19. Cheese: Exports by country of destination;
 averages 1934-38 and 1951-55, annual 1959-61

Country	Average		Annual		
	1934-38	1951-55	1959	1960	1961
	Tons	Tons	Tons	Tons	Tons
United Kingdom	96,475	98,324	87,446	82,787	87,026
United States	1/	2,608	2,159	3,553	7,265
British West Indies	10	1,168	2,378	1,773	2,115
Japan	0	82	69	277	1,047
Australia	11	54	217	147	168
British Guiana	0	160	171	127	131
Canada	59	1,737	Neg.	4	2
West Germany	0	876	680	0	0
Republic of South Africa	0	12	130	0	0
Other countries.....	77	1,305	216	274	349
Total.....	96,632	106,326	93,466	88,942	98,103

1/ Negligible.

Source: (12) Pt. I; (14); (13).

in the British West Indies, Peru, India, and the Philippines (table 20). Some of this competition to such markets as India and the Philippines, however, results from sales by the United States under Public Law 480. From a solely commercial standpoint, New Zealand in 1960 replaced the U. S. as the world's leading exporter of nonfat dry milk.

Since 1961, New Zealand has established milk processing plants in Singapore, Hong Kong, and Mauritius. These plants will operate as outlets for New Zealand's raw materials such as nonfat dry milk and butteroil, and will increase competition for U. S. exports of nonfat dry milk to Far Eastern and African markets.

Greater competition in nonfat dry milk sales can also be expected in developing areas such as the British West Indies and Latin America. These are areas in which New Zealand is trying to expand market outlets in her program of market promotion.

Table 20.--Nonfat dried milk: Exports by country of destination; averages 1934-38, annual 1959-61

Country	Average		Annual		
	1934-38	1951-55	1959	1960	1961
	Tons	Tons	Tons	Tons	Tons
United Kingdom	5,746	32,204	41,536	30,504	24,454
Philippines.....	16	171	52	5,087	7,413
British West Indies.....	8	369	3,842	4,329	3,046
India	60	5,515	2,821	3,506	3,054
Peru	0	0	1,538	1,658	1,156
United States	25	915	573	544	508
Federation of Malaya	<u>1/47</u>	<u>1/172</u>	65	150	1,032
Ceylon	35	0	638	83	184
Federation of Rhodesia and Nyasaland.....	0	47	184	78	77
Singapore.....	0	0	142	69	1,210
Japan	54	898	56	30	512
Netherlands.....	0	0	672	0	84
Republic of South Africa :	0	5	77	0	0
West Germany.....	0	0	2,204	0	319
Other countries	70	1,301	1,290	1,002	2,701
Total.....	6,062	41,597	55,690	47,040	45,750

1/ Includes Singapore.

Source: (12) Pt. I; (14); (13).

Tallow

In recent years, New Zealand has produced about 2 percent of the world's output of tallow and greases. Total output of beef and mutton tallow since 1958 has averaged about 80,000 tons per annum. Of this amount, two-thirds consists of inedible types.

The United States, which far outranks other exporters of tallows and greases, furnishes about three-fourths of all tallow entering world markets. New Zealand is the third ranking world exporter, with about 6 percent of world exports. In 1959 and 1960, New Zealand's shipments averaged 66,000 tons, or more than four-fifths of total production (table 21).

Table 21.--Tallow, edible and inedible: Exports by country of destination; averages 1934-38 and 1951-55, annual 1959-61

Country	Average		Annual		
	1934-38	1951-55	1959	1960	1961
	Tons	Tons	Tons	Tons	Tons
United Kingdom	18,962	31,711	32,313	14,566	6,936
Mainland China	230	0	4,131	14,487	7,472
India	3,132	2,738	2,642	6,648	5,783
Australia.....	436	1,046	0	6,633	2,061
Republic of South Africa..	22	58	3,367	2,829	717
Burma	0	328	1,587	2,724	3,423
Japan	1,500	832	4,655	2,460	5,683
Ceylon.....	0	304	1,131	2,355	1,720
British West Indies	34	905	9,177	1,874	1,214
Netherlands	120	2,425	301	962	373
Federation of Malaya.....	$\frac{1}{2}$	$\frac{1}{248}$	657	814	1,305
Pakistan	$\frac{3}{0}$	250	17	279	349
Egypt	0	664	463	217	0
West Germany	320	222	22	11	236
Federation of Rhodesia and Nyasaland.....	0	44	2,341	0	594
Other countries	5,391	3,108	3,890	9,560	3,676
Total	30,147	44,883	66,694	66,419	41,542

1/ Includes Singapore.

2/ Negligible.

3/ Prewar included in India.

Source: (12) Pt. I; (14); (13).

The bulk of New Zealand exports are of mutton tallow, and are not strictly comparable with U. S. shipments of beef tallow. Nevertheless, New Zealand has provided considerable competition for the United States in markets such as the United Kingdom, Japan, and Southeast Asia, as well as the British West Indies and some African areas where regular shipping service from Oceania is becoming better established.

The products of the two countries seem to be about in line in price. U. S. best grade tallow in early 1963 was priced at 5.4 cents per pound f.o.b. New Orleans, while New Zealand tallow was quoted

at 5.5 cents per pound at New Zealand ports. On a c.i.f. (cost, insurance, and freight) basis, Liverpool, U. S. best grade tallow was quoted at 6.4 cents per pound and New Zealand tallow at 7.1 cents per pound. The United States and New Zealand price quotations for tallow in the Republic of South Africa in 1961 were reported at the same level, namely, 6 cents per pound. Preferential tariff treatment in some of the Commonwealth markets gives New Zealand some price advantage.

Future competition between the two countries may be intensified in markets such as Japan and the United Kingdom as a result of New Zealand's adoption of the bulk method of shipping tallow late in 1962. About one-third of New Zealand's exports are expected to be transported in this way. In addition, New Zealand tallow will probably continue to move to other Commonwealth markets such as the British West Indies and Pakistan, and competition with U. S. tallow is also expected to continue in Egypt and the Republic of South Africa.

It is possible that New Zealand could promote exports of tallow to the Middle East, Asia, Africa, and Latin America, if her meat production continues to increase in the next few years, thus creating even closer competition for U. S. exports to some of these areas.

New Zealand has an advantage over the United States in marketing tallow in India because of its predominance of mutton tallow. This product satisfies the religious requirements of the Hindus, while beef tallow from the United States does not. India's textile industry has also built up a preference for mutton tallow because of its whiter color, as well as the fact that it is somewhat lower in price than U. S. first grade beef tallow.

Keen competition between the United States and New Zealand may be expected to continue in the countries of the European Economic Community, namely Belgium, Luxembourg, France, the Netherlands, West Germany, and Italy, as the external tariff rate for tallow will be only 2 percent ad valorem when the common tariff comes into effect.

Deciduous fruits

Apples and pears are the two most important fruits in New Zealand's export trade. Both foreign and domestic marketings of these products are regulated by an Apple and Pear Board. The greater part of the exports of both fruits are consigned to the United Kingdom.

New Zealand's apple and pear orchards are being converted to hardy dwarf trees which facilitate picking and handling operations. Both in the picking operations in the orchards and in the grading and packing of the fruit in sheds, the processes such as sorting, grading, and packing have been speeded through wider use of bulk-handling equipment. This not only lessens damage to the fruit from too much handling but also facilitates harvesting and packing with a minimum of labor.

Output of New Zealand apples and pears should increase appreciably in the future. Increased plantings of newer varieties should come into full bearing in the next few years. In addition, the deciduous fruit growers and exporters are making every effort to reduce labor costs in the orchards and packing sheds and on the docks through increased use of bulk handling and other mechanized processes.

Although New Zealand's peak marketing periods in Europe and the British West Indies are the opposite of U. S. marketing periods, improved cold storage facilities for fruit at its destination has increased New Zealand-U. S. competition and lengthened marketing periods for fruits from both countries.

New Zealand has made considerable progress in recent years in the provision of cold storage warehouses, inspection depots, and dock and loading facilities for direct overseas shipping of fresh fruits from Nelson in South Island and Port Napier in North Island.

As a result of the above developments, it is quite possible that the United States can expect closer price competition from New Zealand fruits in Canada, the United Kingdom, and several

of the Western European areas, particularly now that New Zealand exports to these markets in U. S. off-season periods are beginning to overlap into the regular seasons.

Apples--Since 1958, an average of about 90 percent of New Zealand's exports of fresh apples have been destined for the United Kingdom and the EEC countries West Germany, the Netherlands, France, and Belgium, all of which are important markets for U. S. exporters (table 22).

Table 22.--Fresh apples: Exports by country of destination; averages 1934-38 and 1951-55, annual 1959-61

Country	Average		Annual		
	1934-38	1951-55	1959	1960	1961
	Tons	Tons	Tons	Tons	Tons
United Kingdom	18,357	20,014	23,295	19,085	21,792
West Germany	1,010	840	3,118	2,523	5,324
France	164	0	0	2,141	1,861
Belgium	105	58	2,193	1,604	1,842
Netherlands	1,280	0	1,796	676	1,531
Canada	1,166	431	519	633	808
Venezuela	0	0	349	626	600
British West Indies	10	38	136	133	120
Federation of Malaya	<u>1/17</u>	<u>1/91</u>	31	0	350
Sweden	208	0	1,194	0	0
Other countries	86	401	2,609	953	1,113
Total	22,403	21,873	35,240	28,374	35,341

1/ Includes Singapore.

Source: (12) Pt. I; (14); (13).

New Zealand's apples are harvested from February to May and arrive at their destination in the United Kingdom and continental countries in the March to June period. U. S. apples are marketed in the United Kingdom and Europe in the fall and winter months, beginning in September and extending into spring. New Zealand shipments to the United Kingdom and Europe in April to June tend to overlap with late U. S. fruit offerings. The chief

varieties of New Zealand apples which compete with U. S. fruit, particularly in the United Kingdom and West Germany, are Delicious, Sturmers, and Jonathan.

Pears--Pear production fluctuates considerably from season to season but since 1958 has averaged around 13,000 tons. Exports, marketed chiefly in the United Kingdom, average about 15 percent of total production (table 23). Like apples, New Zealand's pears overlap with U. S. fruit in the United Kingdom market, mainly from April through June. New Zealand's Packham Triumph, Williams Bon Chretien and Bosc pears, in particular, are competitive with U. S. winter pears marketed in the United Kingdom.

Table 23.--Fresh pears: Exports by country of destination, averages 1934-38 and 1951-55, annual 1959-61

Country	Average		Annual		
	1934-38	1951-55	1959	1960	1961
	Tons	Tons	Tons	Tons	Tons
United Kingdom	1,790	177	3,099	447	2,846
Fiji	1/	12	28	22	16
Canada	8	0	0	8	47
Western Samoa	1/	3	6	5	6
United States	6	0	0	1	1
Other countries	109	1	1	2	11
Total	1,907	193	3,134	485	2,927

1/ Negligible.

Source: (12) Pt. I; (14); (13).

Variety Meats

In most years, New Zealand ranks as the fourth largest exporter of variety meats, specializing particularly in lamb and mutton. Since 1958, total exports of variety meats have increased by more than 25 percent.

Some of the rapid increase in New Zealand's production in the last few years has been attributed to more effective research

programs in the control of hydatids and diseases of the liver which for many years tended to limit the country's output of livers by about 50 percent.

More than 85 percent of New Zealand's exports of variety meats are consigned to the United Kingdom which is one of the chief areas of competition with U. S. variety meats (table 24). Since the United Kingdom liberalized imports of variety meats, the United States has been able to increase substantially its exports to this market, and in 1961 was the second largest United Kingdom supplier of beef variety meats and the third largest supplier of lamb variety meats. New Zealand in 1960 and 1961 was the largest supplier of lamb variety meats to the United Kingdom market.

Table 24.--Variety meats: Exports by country of destination, average 1951-55, annual 1958-60 ^{1/}

Country	Average	Annual		
	1951-55	1959	1960	1961
	Tons	Tons	Tons	Tons
United Kingdom	15,220	16,307	18,737	18,969
Italy	240	446	792	633
British West Indies	324	712	348	568
United States	4	250	289	321
Netherlands	40	495	141	5
Other countries	557	737	1,242	1,267
Total	16,385	18,947	21,549	21,763

^{1/} Prewar data not available.

Source: (12) Pt. I; (14); (13).

Although New Zealand's total exports of red meats to the United Kingdom and EEC countries were lower in 1961 than in 1960, exports of variety meats continued at about the same levels. Over the years, New Zealand's variety meat exports have not been proportionate to other meat exports. But research programs

for hydatids and other animal diseases have been relatively successful, and expansion in New Zealand's variety meats can be expected over the long term.

New Zealand's variety meats are expected to continue to be competitive with U. S. variety meats in the United Kingdom, the EEC countries, and Hong Kong.

At present, New Zealand's beef variety meats (other than tongues and sweetbreads) enjoy a 20-percent ad valorem tariff preference in the United Kingdom market as compared to imports from the United States. The United Kingdom imposes no tariff on sheep, lamb, and pork variety meat imports from any source. If the United Kingdom joins EEC, it is possible that New Zealand and U. S. variety meats would both be subject to increased tariffs which might result in greater competition in the United Kingdom and other EEC markets.

Seeds

Grass seeds--New Zealand is an outstanding producer of quality grass and clover seeds. Much of the seed is produced in the South Island areas of Canterbury, Southland, and Otago under controlled conditions which favor development of high quality strains. The climate particularly favors seed cultivation.

For many years, the New Zealand Government has maintained a coordinated seed certification scheme which has aided farmers in producing seeds of superior quality for domestic use and export. The introduction of the header harvester speeded up harvesting and eliminated much of the uncertainty in obtaining high yields and quality seed.

About 50 percent of New Zealand's export trade in grass seeds consists of clover varieties. Exports have increased significantly since World War II years, with approximately 75 percent of the trade destined for the United Kingdom and Australian markets (table 25). New Zealand's total exports of all grass and clover seeds from 1958 through 1960 averaged about 7,000 tons as compared to U. S. exports of 25,000 tons during the same

Table 25.--Grass and clover seeds: Exports by country of destination, averages 1934-38 and 1951-55, annual 1959-61

Country	Average		Annual		
	1934-38	1951-55	1959	1960	1961
	Tons	Tons	Tons	Tons	Tons
United Kingdom	1,260	3,104	1,958	3,854	3,569
Australia	1,305	2,265	1,777	1,922	2,346
Ireland	0	289	336	682	243
France	3	123	262	349	387
United States	577	885	343	103	60
Kenya and Uganda	Neg.	4	3	77	40
Canada	155	190	52	64	41
Netherlands	52	190	110	58	132
Republic of South Africa ..	29	25	14	16	18
Belgium	6	130	22	13	24
West Germany	$\frac{1}{3}$	265	31	8	79
Other countries	24	316	160	40	344
Total	3,414	7,786	5,068	7,186	7,283

1/ Includes all Germany.

Source: (12) Pt. I; (14); (13).

period. In addition to the United Kingdom and Australia, the United States and New Zealand compete in grass seed shipments to Canada, Japan, West Germany, France, Netherlands, Belgium, Ireland, the Republic of South Africa, and Uruguay.

Recent shifts have taken place in New Zealand's seed cropping. Increased production of rye grass, orchard grass, and white clover seed has been emphasized, but smaller quantities of clover and rye grass seed will be available for future export because of increased local demand for grass seed in the expansion of the country's pastures.

New Zealand does not produce enough timothy seed for domestic use. It makes up the deficiency with imports from the United States.



Harvesting white clover seed near Timaru, South Island.

Peas--New Zealand is a producer and exporter of seed peas as well as an importer of certain varieties. The United States not only supplies New Zealand with garden peas to enable it to maintain its production of fresh peas for freezing, but also competes with New Zealand exports of all seed peas to the United Kingdom, the Republic of South Africa, the Netherlands, West Germany, and Uruguay. New Zealand's exports of seed peas have been fairly steady, and since 1957 have averaged about 8,000 tons a year (table 26).

Honey

A natural potential for honey exists in New Zealand because of the emphasis on clover pastures. Production varies from year to year, and exports have averaged from 1 to 3 million pounds a year. The bulk of the shipments are consigned to the United Kingdom and West Germany and compete with U.S. honey in these markets (table 27). New Zealand generally ranks as the sixth largest supplier of honey to the United Kingdom.

Table 26.--Seed peas: Exports by country of destination, 1955 and 1958-60 ^{1/}

Country	1955	1958	1959	1960
	Tons	Tons	Tons	Tons
Australia	3,144	3,357	3,352	3,745
United Kingdom	4,001	5,168	4,059	3,580
Republic of South Africa	6	80	112	140
Mozambique	0	0	0	39
Netherlands	11	26	0	28
West Germany	22	81	6	27
United States	0	0	0	25
Uruguay	0	22	0	17
Denmark	0	13	28	5
Kenya and Uganda	0	24	21	1
Sweden	0	46	0	0
France	0	39	0	0
Other countries	1	11	7	1
Total	7,185	8,867	7,585	7,608

^{1/} Prewar data not available. No separate breakdown for years before 1955.

Source: (14); (13).

Table 27.--Honey: Exports by country of destination, averages 1934-38 and 1951-55, annual 1959-61

Country	Average		Annual		
	1934-38	1951-55	1959	1960	1961
	1,000	1,000	1,000	1,000	1,000
	lb.	lb.	lb.	lb.	lb.
United Kingdom	934	1,508	1,022	768	1,201
West Germany	---	301	237	55	79
Ireland	---	---	144	22	184
Kenya and Uganda	4	1	18	33	20
Singapore	<u>1/12</u>	<u>1/8</u>	18	8	18
Australia	10	3	14	12	17
Fiji	5	7	8	5	6
Belgium	<u>2/</u>	7	6	12	0
United States	<u>2/</u>	1	3	3	2
Other countries	6	13	23	24	85
Total	971	1,849	1,493	945	1,612

^{1/} Includes Federation of Malaya.

^{2/} Less than 500 pounds.

Source: (12) Pt. I; (14); (13).

Government honey export regulations prescribe the standards for all exports. Exports of honey are controlled by a quasi-government Honey Marketing Authority. This authority promotes oversea sales. A demand for packed honey has been built up in Australia, Singapore, Malaya, and Kenya, as well as in Europe.

Hides and Skins

New Zealand is an important producer of calf and kip skins and the second largest producer of sheep and lamb skins. Because domestic utilization is low, a larger proportion of total production is exported than in many other producer countries. New Zealand's calf and kip skins and cowhides compete with U. S. skins in such major markets as the United Kingdom, Japan, and the EEC countries. Most of this United States-New Zealand competition in foreign markets is in calf skins (table 28).

In the U. S. Market

By value, New Zealand in 1960 was the eighth largest foreign supplier of agricultural commodities to the U. S. market. The main products were wool, meats, dairy products, and hides and skins.

Wool

New Zealand is the world's largest producer of crossbred wools. About two-thirds of the crossbred wools, which comprise the bulk of New Zealand's wool marketings, are produced in North Island. Only a small percentage of New Zealand's wool is of the finer Merino types, and these are produced entirely in the high country areas of South Island.

Since 1950, over 12 percent of New Zealand's wool shipments have been routed to the United States as compared to 5 percent in the years just before World War II. About 80 percent, by volume, of the U. S. wool imports from New Zealand in the past 5 years ranged from 44s to 46s fiber counts and were generally suited to carpet manufacture. This wool is not competitive with U. S. wools, as only about 1 percent of U. S. production consists of

Table 28.--Hides and skins: 1/ Exports by country of destination, averages 1934-38 and 1951-55, annual 1959-61

Country	Average		Annual		
	1934-38	1951-55	1959	1960	1961
	1,000	1,000	1,000	1,000	1,000
	<u>pieces</u>	<u>pieces</u>	<u>pieces</u>	<u>pieces</u>	<u>pieces</u>
United States	17,331	14,103	17,726	15,902	17,541
United Kingdom	7,560	4,961	3,735	4,798	3,529
Netherlands	171	1,083	1,759	1,979	1,683
Belgium	364	532	1,250	1,468	1,644
France	810	814	948	1,302	1,706
West Germany	<u>2/189</u>	652	300	1,229	875
Italy	18	540	708	1,090	1,139
Australia	638	98	10	359	184
Finland	8	9	67	298	293
Sweden	17	46	239	236	75
Japan	221	157	212	120	112
Yugoslavia	2	2	54	75	9
Poland	<u>3/</u>	15	57	69	88
Denmark	10	6	1	20	31
Canada	795	170	118	4	0
Other countries	50	57	516	109	109
Total	28,184	23,245	27,700	29,058	29,018

1/ Cowhides, calf and kip skins, and sheep and lamb skins.

2/ All Germany.

3/ Less than 500.

Source: (12) Pt. I; (14); (13).

these coarse types. Much of the increased trade has been associated with the expanded housing construction in many metropolitan areas of the United States, which has led to an increased demand for carpeting.

New Zealand's exports of coarser wools to Japan have also increased significantly since 1960. Much of the increased demand for carpet wools in the Japanese market has been associated with exports of wool carpets from Japan to the United States. Japanese carpet exports to the United States in the 3 years 1958-60 averaged about 16,000 tons per year.

In 1960, about 60 percent of New Zealand's wool exports, by volume, were divided among the three most important markets, namely the United Kingdom, France, and the United States. West Germany, Belgium, and Italy also took increased quantities in the 1950's as compared to prewar (table 29).

Table 29.--Wool: Exports by country of destination, averages 1934-38 and 1951-55, annual 1958-61

Country	Average		Annual			
	1934-38	1951-55	1958	1959	1960	1961
	Tons	Tons	Tons	Tons	Tons	Tons
United Kingdom	82,707	75,191	35,558	89,338	76,698	85,871
France	10,453	29,712	42,384	46,665	48,007	46,400
United States.....	6,537	21,309	27,902	45,289	37,633	37,185
West Germany..	1/4,557	11,791	13,419	17,308	18,106	15,078
Belgium	5,985	7,914	12,547	13,826	17,558	21,374
Italy	351	6,354	10,926	12,915	14,731	14,723
Japan	9,673	2,420	7,942	9,960	11,127	23,188
Other countries	14,387	40,485	77,786	29,031	36,883	33,122
Total	134,650	195,177	228,464	264,332	260,473	276,941

1/ All Germany.

Source: (12) Pt. I; (14); (13) 1960, Supplemented by FAS statistics.

From 1958 to June 1960, most of the coarser wools were admitted into the United States free of duty on a temporary basis. Since July 1, 1960, however, wools not finer than 46s have been permanently placed on the free duty list.

Future U. S. requirements for New Zealand carpet wools will depend on the extent to which synthetic fibers may become more competitive with wool. Imports will also be determined by levels of housing construction, as well as by any increased competition which may develop from Argentina, New Zealand's largest competitor in the U. S. carpet wool market.

Meat

During the past 4 years, much of New Zealand's meatpacking and storage facilities have been renovated and modernized to enable meat exports to satisfy U. S. inspection and sanitation requirements. In light of this increased capital investment, it is believed that New Zealand will make a major effort to export beef, lamb, and mutton to the United States as long as a market prevails or until such time as the U. S. prices for manufacturing types of meat cease to be profitable to New Zealand exporters.

New Zealand's ability to supply a continuing U. S. demand for manufacturing-type meats will also depend upon the United Kingdom's future meat requirements. Other factors for consideration will be prices prevailing in the United Kingdom market for all types of New Zealand beef, lamb, and mutton, and competition which might develop in the United Kingdom from other suppliers.

Beef and veal--Beginning in 1958, the United States became the largest single market for New Zealand's beef and veal. In 1960 and 1961, New Zealand was the next to largest supplier of boneless beef to the United States, second only to Australia. In 1961, U. S. imports of New Zealand boneless beef totaled 69,500 tons, or 26 percent of total imports of this type of meat.

In 1960, shipment of all beef to the United States by New Zealand totaled more than 66,000 tons, or about 3 times the quantity shipped to the United Kingdom in that year (table 30). Until 1958, the United Kingdom was New Zealand's main market for beef. Practically all of New Zealand's beef shipments to the United States are of the boneless variety used in manufacture of processed meats.

The United States has been a good market for New Zealand beef in recent years for the following reasons: (1) U. S. shortages of beef have occurred because producers have held back stock in an effort to increase cattle numbers; (2) U. S. prices for beef have been high enough to be attractive to outside suppliers; and (3) New Zealand's cattle are free of foot-and-mouth disease. A

Table 30.--Beef and Veal: Exports by country of destination, averages 1934-38 and 1951-55, annual 1959-61

Country	Average		Annual		
	1934-38	1951-55	1959	1960	1961
	Tons	Tons	Tons	Tons	Tons
United States	678	6,024	78,636	66,289	78,396
United Kingdom	51,762	48,268	8,234	22,762	12,528
Canada	45	488	3,793	4,265	3,976
Japan	197	1/	1,464	4,012	3,407
Venezuela	0	0	671	2,888	0
West Germany	1/2/	444	878	2,724	76
British West Indies	1/	2,465	1,772	2,552	3,021
Netherlands	0	2,097	140	684	190
Belgium	0	377	0	536	1,186
Italy	0	2,801	151	177	330
Philippines	0	156	143	165	88
Other countries	74	3,493	3,292	3,459	3,391
Total	52,756	66,613	99,174	110,513	106,589

1/ Negligible.

2/ Includes all Germany.

Source: (12) Pt. I; (14); (13).

1959 ban on imports from Argentina and other Latin American countries of boneless, lightly salted, frozen meat used in processing in the United States opened up a new market outlet for New Zealand beef.

Lamb and mutton--The United Kingdom has been and continues to be New Zealand's largest market for mutton and lamb. In 1960, this market absorbed almost 90 percent of New Zealand's total exports of lamb and mutton.

Since 1957, the U. S. market, although still small, has become an important outlet for New Zealand lamb and mutton. New Zealand lamb exports to the U. S. in 1960 totaled about 2,000 tons, approximately 50 percent consisting of prime lamb carcasses. U. S. imports of both New Zealand mutton and lamb in the peak year 1959 totaled over 6,000 tons as compared to about 230 tons a year in the early 1950's (table 31).

Table 31.--Lamb and mutton: Exports by country of destination, averages 1934-38 and 1951-55, annual 1959-61

Country	Average		Annual		
	1934-38	1951-55	1959	1960	1961
	Tons	Tons	Tons	Tons	Tons
United Kingdom	200,231	279,959	334,579	344,457	331,353
Japan	1/	1	3,664	18,304	22,865
Canada	37	1,389	3,111	5,591	6,640
Greece	0	421	5,451	5,423	4,000
United States	10	233	6,444	4,198	3,806
Jordan	0	0	0	1,556	2,374
British West Indies	4	581	823	914	1,246
Netherlands	0	1,237	521	605	59
Peru	0	0	1,637	503	719
West Germany	2/10	885	1,396	71	562
Italy	0	7	13	54	82
Other countries	41	4,381	2,606	4,630	9,384
Total	200,333	289,184	360,245	386,306	383,090

1/ Negligible.

2/ All Germany.

Source: (12) Pt. I; (14); (13).

It is difficult to foresee any sizeable increase in New Zealand exports of prime cuts of lamb to the United States over the long-term unless the market and consumer demand for lamb in the United States can be extended significantly beyond the coastal areas.

Dairy Products

New Zealand and the United States compete for trade in dairy products in both the foreign and the U. S. markets. In 1959 and 1960, the United States was New Zealand's seventh largest market for butter and butteroil (table 32). Under the provisions of the U. S. Agricultural Adjustment Act, New Zealand was granted a

Table 32.--Butter: 1/ Exports by country of destination, averages 1934-38 and 1951-55, annual 1959-61

Country	Average		Annual		
	1934-38	1951-55	1959	1960	1961
	Tons	Tons	Tons	Tons	Tons
United Kingdom	150,261	152,897	196,390	159,768	172,442
British West Indies	483	1,443	3,630	3,186	3,418
West Germany	224	5,143	3,689	2,643	2,133
Peru	0	5	1,805	1,369	1,436
Republic of South Africa	0	6	1,960	1,344	0
Panama Republic	877	699	913	917	926
United States	1,251	105	853	829	547
Hong Kong	127	118	645	709	368
Japan	57	189	1	476	177
Singapore	<u>2/</u>	<u>2/</u>	365	324	367
Ceylon	4	45	372	307	456
Bermuda	12	260	419	260	395
Philippines	63	512	385	217	385
Federation of Malaya	225	224	7	86	376
India	158	338	17	16	16
Federation of Rhodesia and Nyasaland	0	704	<u>3/</u>	0	0
Italy	0	1,012	8	0	3
Other countries	713	9,686	4,671	3,445	1,352
Total	154,455	173,386	216,130	175,896	184,797

1/ Includes butteroil and other butter substitutes.

2/ Included with Malaya.

3/ Negligible.

Source: (12) Pt. I; (14); (13).

substantial share of U. S. Section 22 8/ import quotas for butter, butteroil, and cheddar cheese on the basis of its position as a postwar supplier. New Zealand also participates in the Section 22

8/ As of July 1, 1953, the President was authorized to impose additional fees or quotas under Section 22 on the importation into the United States of specified commodities, the importation of which tends to render ineffective or materially interfere with any U. S. Department of Agriculture price support or other program relating to agricultural commodities.

program for small quotas of dried buttermilk and dried whole milk shipments to the United States. It is unlikely that New Zealand's future exports of butter, cheddar cheese, dried buttermilk, and dried whole milk to the United States will be changed from the quota allowances currently provided for under Section 22.

Of a total U. S. annual quota of 707,000 pounds for imported butter, New Zealand's share is 47 percent or 332,000 pounds. Aside from this butter quota, New Zealand participates in a global quota for butteroil.^{9/} The annual import quota for cheddar cheese is 2,780,100 pounds, with New Zealand's share roughly 81 percent or 2,251,900 pounds.

In addition to dairy commodities for which quotas were in effect, New Zealand exported an estimated 10 million pounds of Colby cheese to the United States in fiscal year 1961 and 11.6 million pounds in 1962. These shipments are supplemented with exports of dried skim milk on quota transfers from regular Section 22 suppliers.

All of these dairy imports supplement U. S. domestic production and satisfy the U. S. obligations under GATT.

Next to Argentina, New Zealand is believed to be the world's largest producer and exporter of casein. Since 1957, the United States has been New Zealand's largest market for lactic casein used in high-grade paper and plastic manufactures (table 33). Casein shipments to the United States from New Zealand and Argentina have increased sharply in recent years, while U. S. production of this milk by-product has dwindled to less than 1,000 tons per annum. U. S. imports of casein in 1960 and 1961 totaled 46,000 and 51,000 tons respectively, of which about a fifth came from New Zealand. It is doubtful that New Zealand's share will increase much beyond that level.

^{9/} Some of the difference between butter exports as shown in table 32 and the butter quota allocations for New Zealand mentioned above are accounted for by the inclusion in table 32 of data on butterfat derivatives.

Table 33.--Casein: 1/ Exports by country of destination, averages 1934-38 and 1951-55, annual 1959-61

Country	Average		Annual		
	1934-38	1951-55	1959	1960	1961
	Tons	Tons	Tons	Tons	Tons
United States	51	3,111	11,239	10,424	8,275
United Kingdom	883	4,340	6,922	8,511	8,298
Japan	2,426	1,037	3,773	5,083	9,098
Italy	0	527	5,156	3,008	2,869
West Germany	<u>2</u> /87	355	3,200	1,680	1,699
Netherlands	57	136	2,100	1,241	1,594
India	<u>3</u> /	64	120	113	130
Australia	12	29	41	104	40
Hong Kong	0	10	8	24	13
Burma	2	3	37	16	8
Philippines	0	0	8	11	11
Other countries	95	87	68	32	449
Total	3,613	9,699	32,682	30,247	32,484

1/ Lactic and rennet.

2/ All Germany.

3/ Negligible.

Source: (12) Pt. I; (14); (13).

In 1962 casein was permanently placed on the U. S. duty-free list.

Hides and Skins

For many years the United States has provided a market for more than half of New Zealand's exports of hides and skins, which supplement U. S. production. Shipments have generally totaled 15 million pieces or more, consisting of calf, sheep and lamb skins (table 28).

The United States will probably continue as the major export outlet for New Zealand's hides and skins. A steady demand exists in the United States to fulfill the requirements of the shoe and leather industries, despite the competition offered by synthetics.

OUTLOOK

Expansion of Agricultural Production

Considerable attention has been given by Government and private economists in late years to the problems of New Zealand's future potential in agriculture and its productive capacity over the long term. It is generally agreed that production will have to be increased in order to maintain high living standards.

New Zealand's population is steadily increasing. Government and private population forecasts based on present day living standards indicate that this country can support a population of about twice its present size of 2.5 million. With immigration at the 10,000 level per annum and with a continuation of the present rate of natural increase, New Zealand's population should attain about 4 million by 1985 and about 5 million by the year 2000.^{10/}

Using the above cited population estimates, Government forecasts made in 1960 indicate that by 1985 production could expand to the extent that exports of both cheese and meat should increase by 50 percent over 1958-59 levels. In this same period, wool shipments are expected to increase by about 60 percent. Butter exports, on the other hand, will probably increase at a much lower rate of about 20 percent. These projections are, of course, subject to a wide margin of error. It is also assumed that, in order to attain these production and export goals, the total farm labor force will reach 150,000 or 155,000, as compared to 129,000 in 1960 (23, pp. 3-5).^{11/}

^{10/} Population and Labour Force Projections (16, Apr. 1961, p. 18).

^{11/} This assumption that the labor force may increase more than 16 percent over the next 20 years in order to attain the projected increases in production indicated for 1985 may be unrealistic. According to some estimates, the volume of farm production increased approximately 50 percent in the 1950's, with a steadily declining labor force. There is also the element of competition for labor by industry as well as agriculture.

Prospects for greater diversification of New Zealand's agriculture are limited, as the scarcity of level land for cropping and the lack of variation in climate does not favor a wide range of crops. Most of the farm expansion is expected in livestock production.

In 1956, the Department of Agriculture made a survey by districts which indicated that 10 to 15 million acres of unimproved land in New Zealand could be made available for greater intensification of agriculture (21, p. 569). Each year newly developed areas are coming into use. Some new acreage has been utilized in cropping, but the major portion of newly developed land has been used for new pastures, grazing, and increased livestock production. This trend is expected to continue, particularly in the hill country of North Island and Otago and the Southland areas of South Island.

The potential exists for increasing the yield of the flat, low-moisture areas of Canterbury by expansion of irrigation facilities. Irrigated land areas are not expected to increase substantially in the near future, however, because of the high costs of constructing irrigation facilities. In addition to expansion of cultivated pastures, additional acreages could be made available for fruit crops.

Certain agriculturists believe that many dairy and sheep farmers now engaged in fat lamb production could further intensify their farming operations with a combination of livestock and such crops as wheat, barley, or grass seed. This wider extension of the farming enterprise, particularly on farm units of about 200 acres, could result from greater use of fertilizers and technology now available to farmers in New Zealand. This would tend to cushion farmers from the sharp marketing repercussions which develop from seasons of unfavorable prices, particularly in a single-type farm enterprise.

The Monetary and Economic Council, in its report to the Government on long-term economic problems confronting New Zealand, strongly recommends that even greater attention be given to technical and scientific agricultural research (19, p. 41).

Other economists believe that livestock numbers and the carrying capacity of many pasture areas could be increased through greater application of research and extension methods (23, pp. 3-4). Yields of most crops are already high but more research could be concentrated on the improvement of seed varieties and strains of grains, particularly in regard to disease resistance and better-baking qualities of wheats.

It is generally felt by economists that capital investment in agriculture has been inadequate and that more expenditure will be needed in all phases of agriculture if substantial gains are to be accomplished in the future.

New Zealand's economy will be dependent upon agricultural production for export commodities for many years to come. The extent to which New Zealand can produce competitively for export will be determined not only by her production efficiency but also by future trade developments. This is particularly true with respect to market opportunities, shipping services, and prices prevailing for New Zealand products in foreign markets.

Agricultural Trade Situation

From a trade standpoint, New Zealand is making every effort to extend the range of marketing outlets for such items as dairy products, meat, wool, apples and pears, hides and skins, tallow, and grass seeds. The major exports are either marketed through organizations or promoted through export agencies, while the exporters of the lesser products receive Government assistance in every way possible to establish new markets abroad. Market promotion plans are expected to receive even greater emphasis as time goes on.

Increased attention is being given to improved marketing and storage facilities in an effort to provide a longer marketing season at home as well as to assure higher quality exports to foreign markets.

One of the critical factors involved in New Zealand's marketing of agricultural products, in both the domestic and foreign

markets, has been the lack of ocean transport. Only in recent months has New Zealand been able to make definite progress in arranging for regular shipping service to the West Indies, Latin America, and the Far Eastern countries. Shipping lines to Western Europe, the United Kingdom, and the United States have been established for some time, and no doubt future improvements in service to all markets will be forthcoming.

The expansion of New Zealand's agricultural exports in future years will also depend on the amount of capital expenditure and emphasis given to the promotion of industrial development, not only to satisfy domestic needs for certain manufactured goods, but also to increase production of manufactured or processed agricultural products for export. Overemphasis on certain types of industry, especially with New Zealand's lack of raw materials, may prove to be costly and uneconomical. This could result in placing an even greater burden on the agricultural sector of the economy as a foreign exchange earner.

New Zealand has shown an increasing desire to expand and diversify her export trade outlets. This desire was intensified with the United Kingdom's decision to negotiate with the European Economic Commission for membership in the Common Market. Despite the United Kingdom's inability to secure membership at the present time, it is expected that New Zealand will continue its policy of market promotion in an effort to lessen its dependence on the United Kingdom as its main market. Much of this emphasis in finding new markets will be directed toward the Far East, particularly Southeast Asia and Japan, and toward Latin America, the Middle East, and the United States.

New Zealand can be expected to continue to press for international commodity arrangements, particularly for dairy products, in order to make her markets more secure.

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