

THE UTILISATION OF NEW ZEALAND
GRASSLAND.

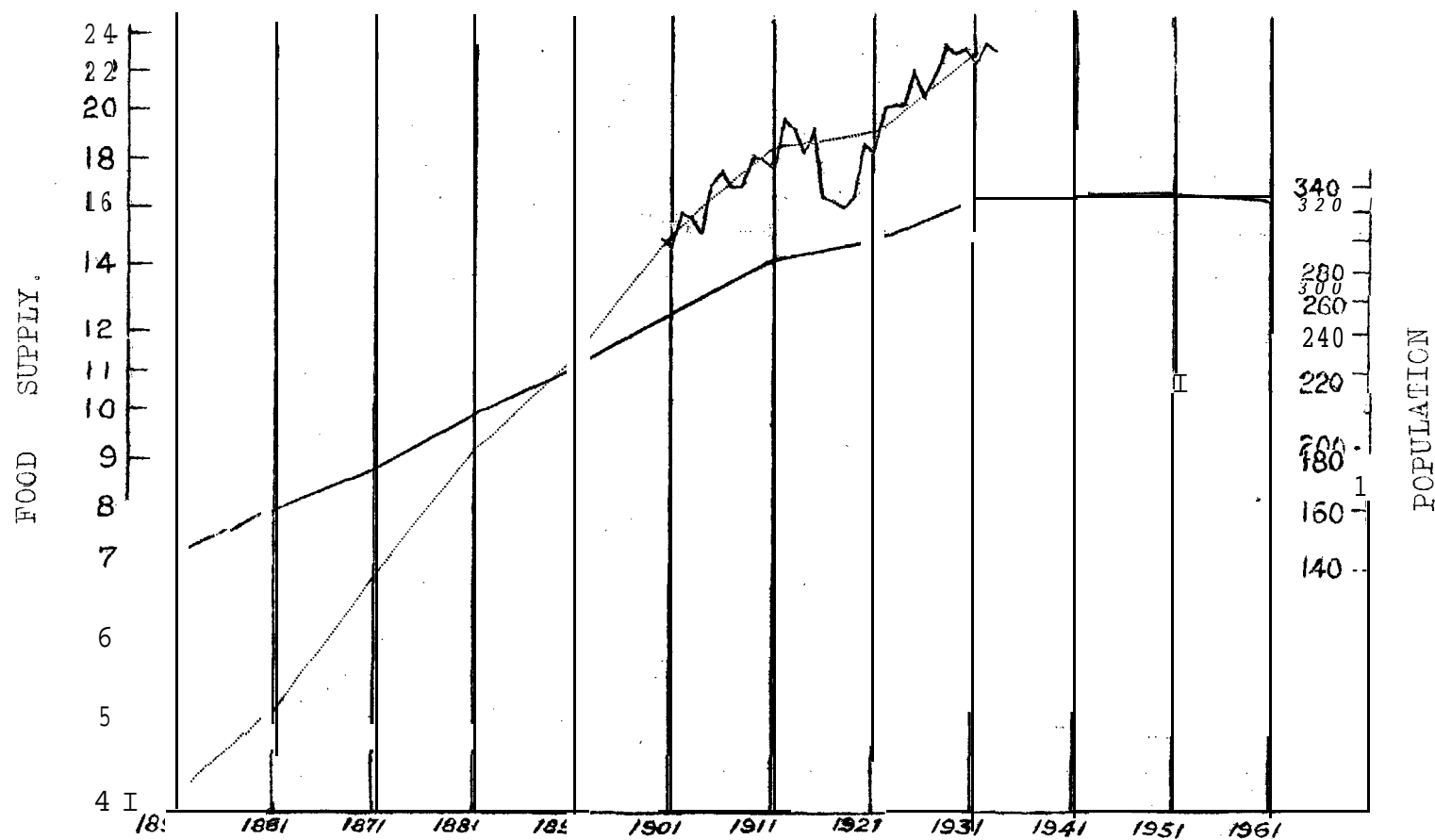
Present Position. E.J. Fawcett.

The utilisation of grassland in New Zealand is directly affected by international considerations, and by agricultural policies adopted in the United Kingdom which determine, or will at least influence, our own agricultural development in the future. It is necessary, for us to review some of these factors and movements if we wish to form an opinion of the probable permanency of existing conditions, or to gain an appreciation of the problems confronting us as a country depending almost entirely upon the export of grassland products for our economic stability.

We have had agricultural depressions of varying degrees of intensity in the past, but factors have always been present or have arisen which allowed of recuperation in a comparatively short space of time. Do these factors exist today? The great expansion in agricultural production has taken place within the last hundred years. This is true particularly of production in younger countries which have been exploited mainly for the purpose of supplying food and raw materials to the rapidly-increasing populations of industrialised Europe. During that period the rise in world population, the rapid advancement of manufacturing industries and growth of international trade, all served to provide a set of conditions which guaranteed increasing buying power. The growing demand for foodstuffs and for manufactured commodities tended to rectify or limit the duration of price depressions or maladjustments. During the period of expansion, the United Kingdom, Germany, France, Italy, Belgium, Austria and Netherlands were the chief countries importing foodstuffs, with the United Kingdom predominating as the great market for the world's surplus. Today, the position is very different. The rate of population growth is slowing down, and is estimated to reach its peak in European countries by 1940. It is expected that the population of the United Kingdom will be on the decline after 1936. These countries do not now hold undisputed control of markets for manufactured goods, as industrialism has developed in eastern countries, in America and in primary production countries themselves. The recuperative powers of Europe have slowed down. Static or declining populations and trends towards national self-sufficiency in the production of manufactured goods entirely alter the outlook for agricultural development. It is commonly stated that the agricultural depression is due to over-production. It will be seen from the accompanying graph of production in relation to population of six countries that from 1921 onwards the upward trend in production has been steeper than the trade in population increase. This indicates that consumption per capita has increased since 1921, but volume of production has tended to exceed effective demand. -Disequilibrium has certainly occurred since 1930, but this chaotic state has not been wholly caused by over-production. In fact, it is remarkable that total consumption has been maintained at its present level when we consider that in 1933 the estimated

RELATION OF POPULATION AND FOOD SUPPLY,

Ratio Scale - Equal slopes represent equal rates of change.



World supply (ex. Russia) of food and tobacco - in mill. of dollars at 1923-5 prices (3 year average.)

— Same as above, with yearly data.

---- Population of U. S. A., Gt. Britain, France, Germany, Italy & Belgium in mill.

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number of unemployed and their dependents was equal to the combined population of the United Kingdom and Germany, and that this huge mass of people were living on some form of relief only. The fall in prices for agricultural products has been due mainly to chaos in industry and in finance, but has permitted the maintenance of a reasonable level of consumption, despite unemployment. The United Kingdom has been particularly fortunate in this respect. Industrially, she has not suffered so severely as the average European country, and incomes have not fallen so rapidly as food prices. This fact combined with a well organised relief system, has enabled her population to buy increasing quantities of foodstuffs, at a reduced aggregate cost, and if the same conditions had prevailed ~~throughout~~ universally, there could be no talk of over-production.

Governmental regulation and control of primary products are not altogether measures of recent origin, although it is true that since the war, and particularly from 1929 onwards, the interest of Governments in matters affecting the production and distribution of farm products has greatly increased. Immediately following the War years credit was easy and international trade was general. Europe wanted foodstuffs consequent upon depletion of live-stock, and shrinkage in area under cultivation during the War. This phase of agricultural production and distribution received a check in 1925, when Germany recovered her freedom to enforce duties, and at once proceeded to re-enact high tariffs on food imports. In the same year, Italy, Austria and certain other countries reintroduced or initiated duties on foodstuffs. With the advent of the slump in 1929 and the progressive fall in price levels, tariffs became general throughout Europe. As importing countries were compelled to restrict their external buying and felt the need to protect their own agricultural industries, quotas were added to tariffs, and a consequent congestion began on the only remaining free market, namely the United Kingdom. Exporting countries, all of which were endeavouring to increase output to compensate for price fall, dumped their increasing surplus into Great Britain. In an endeavour to reduce external indebtedness, all countries turned their attention to producing as much of their manufactured and primary requirements as was possible. In 1933 the Bureau of Agricultural Economics at Washington published a list of 38 countries which had adopted different methods of assisting their own rural industries. In 27 countries control was exercised over the purchase and sale of one or more commodities, the control in 25 countries being in the form of Governmental monopolies. Regulation of production- was practised in 15 countries whilst in 18, quotas were in force. So far as the United Kingdom was concerned, the cumulative result in imports was that between 1928 and 1934 butter increased from 306,000 to 485,008 tons per annum, mutton and lamb rose from 287,000 to 365,000 tons by 1931 (since when quantities have been reduced by regulation); pork and bacon from 530,000 tons in 1928 to 656,000 tons in 1932, whilst beef gradually declined till 1934 when increased supplies from Empire sources raised total imports considerably. The imports of meat and dairy products into the United Kingdom during the past seven years are as follows:-

IMPORTS TO NEAREST THOUSAND TONS.

Year:	Butter:	Cheese:	Mutton & Lamb:	Beef:	Bacon & Pork:
1928	306,000	150,000	287,000	666,000	530,000
1929	320,000	150,000	288,000	633,000	505,000
1930	341,000	156,000	327,000	640,000	553,000
1931	404,000	144,000	315,000	657,000	647,000
1932	422,000	150,000	356,000	616,000	656,000
1933	442,000	152,000	344,000	611,000	556,000
1934	485,000	149,000	335,000	641,000	499,000

With the continuance of the depression and shrinkage of her export trade in manufactured goods, the spending power of the United Kingdom fell rapidly. Although increasing imports of foodstuffs were an advantage industrially in that even with shrinking incomes, the workers of Great Britain (in the aggregate) were able to buy more food than previously, the effect of low prices on British agriculture caused the Government to take action calculated to improve the position of their own farmers.

In 1932 the Government embarked on a policy of agricultural protection, first, of all through the imposition of tariffs on foreign dairy produce, and later in 1932 through quantitative regulation of certain commodities. Following the Ottawa Conference held in 1932 (and also subsequent agreements ratified between Britain and foreign countries) the imports of mutton, lamb, pork, bacon and beef were restricted for the declared purpose of raising prices in the United Kingdom to such a level that agriculture would once more become profitable. This restrictive policy has been successful in raising the prices of mutton, but the price response in the case of beef was not satisfactory. In 1934, a system of Government subsidy to beef farmers was introduced, and this is still in operation.

In introducing the present quota system on meat, definite advantages have been given Empire producers. Reductions have been at the expense of foreigners, whilst the Dominions have actually expanded in exports of beef and pig products. Mutton and lamb agreements are also liberal in that recently arranged quotas are based on exports during our peak mutton production season. The only actual killing restrictions imposed on New Zealand farmers to date were in respect of calves and boneless beef during the latter half of 1934.

The position with regard to dairy produce has not been so satisfactory. Tariffs failed to raise prices, but have tended to force foreign exporting countries out of production to some limited extent, with the result that their exports to the United Kingdom have dropped. Australia and New Zealand on the other hand have increased their output and through this increase have maintained the gross quantity going into the United Kingdom at a high level. Low prices for imported dairy produce exerted an influence on the dairy industry in the United Kingdom in that milk produced surplus to liquid requirements, had to go into manufacture of butter and cheese which sold in competition with the imported article. This fact combined with lack of organisation in the distribution of raw milk, led to the appointment of the British Milk Marketing Board in 1933. With organised marketing, the dairy industry in the United Kingdom is undergoing important changes. The

Government has guaranteed a price for surplus milk which goes into cheese manufacture, and production of milk is definitely on the increase under a system of price equalisation. This has resulted in an increase in cheese manufacture of from 12,000 to 15,000 tons in one year. During the past twelve months, there have been indications of a changed outlook in regard, to the regulation of foodstuffs entering the United Kingdom. The Government has had experience of quantitative restrictions and of subsidies, Their new outlook was indicated in the White Paper presented to Parliament last year, and has also been in evidence during recent meat discussions. With some recovery in manufacturing industries, it is unwise to perpetuate any system which aims at raising food prices, but at the same time, it is desired that the capitalisation of agriculture in Great Britain is not unduly upset. In other words, farmers must be enabled to meet their obligations, and the action taken up to the present has been towards that end. We therefore see looming ahead a general policy of preferential tariffs on imported food, the revenue from tariffs being used to subsidise British farmers. The Minister of Agriculture (Mr. Elliott) gave an indication of the wish to keep prices at a reasonable level when he recently expressed agreement with a suggestion that restrictions on bacon imports should be eased as control had raised prices to a point where consumption was affected detrimentally. It is expected in the trade, that bacon quotas will be opened up by 20%, and if this is done bacon prices in the United Kingdom will almost surely ease next season.

It is suggested therefore, that within a short space of time, we shall again be exporting animal products in open competition with foreign countries, the only difference between us being that Empire preference will be a recognised policy which will operate to our advantage.

We often hear the opinion expressed that artificial barriers to trade in primary products will be of a transitory nature, and that active international relationships will eventually be resumed. This presupposes that European countries will once more expose their own farmers to international competition - that they will take primary products in payment for their manufactured commodities. Is this likely? In European countries, agriculture has been undergoing active reconstruction for at least 15 years, and increased production has become part of their national economy in peace, and also an insurance in case of war. The importance now attached to agriculture in the national economy of these countries is such that it is idle to suggest a reversal of policy, even if the general price level rises considerably.

What then should be our approach to the future? The only market outlet we have other than local consumption is in the United Kingdom. We are told that there are huge potential markets in the East, and this may be true. Their development if systematically undertaken would be slow and expensive and the standard of income known to exist in the East would ensure that a large export in that direction would have to be at low prices. We are therefore dependent on Great Britain for many years to come, and must operate under the best possible conditions she is able to offer us.

Let us now consider our own production organisation in New Zealand, and see what we have done to meet the difficulties of the past few years, or to prepare for the new era which is facing grassland farmers, and consequently grassland research workers.

If it is assumed that the average per acre returns secured by farmers prior to the depression were sufficient to meet all obligations, the reduction in per acre income during recent years means that land obligations have been reduced, or have not been met. In an attempt to assist land to meet its obligations, the Government has taken certain lines of action consisting partly of general reconstruction measures, and partly of special measures directed to assist farmers. Briefly, those measures are as follows:-

WAGE AND SALARY CUTS:

The Government initiated a ten per cent cut in salaries of civil servants in 1931, and empowered the Arbitration Court to reduce award rates. Accordingly, by a general order dated May, 1931, the Court reduced all rates of pay prescribed by industrial awards and agreements by ten per cent. In 1932 a further cut ranging from 5 to 12½ per cent was imposed on civil servants, and the Government passed an amendment to the Industrial Conciliation and Arbitration Act which aimed at replacing voluntary conciliation and compulsory arbitration by compulsory conciliation and voluntary arbitration. This effected 8 further reduction in wages. The effect of wage and salary reductions on farming industries has been mainly indirect, although farm wages have also fallen.

INTEREST REDUCTIONS:

A general reduction in interest and rents was effected in 1932. The aim was "To effect reductions in rates of interest payable by mortgagors in rents and other fixed charges, commensurate with the reductions in salaries and wages made in 1931 and 1932".

MORTGAGORS' AND TENANTS' RELIEF ACT:

Under this Act passed in 1931, mortgagors^{or} were given protection in that a mortgagee was restrained from enforcing his rights until the mortgagor had had an opportunity of applying to the Supreme Court for relief. The Court was empowered to make an order - (a) Prohibiting the mortgagee from taking action, (b) Postponing the due date of interest and principal payments, (c) Reducing the rate of interest - (d) Remitting arrears of interest wholly or in part.

SUBSIDIES:

Subsidies have not been used to any great extent to assist agriculture during the crisis. In October, 1931, a subsidy of 11/- per ton was paid to manufacturers of super-phosphate, provided the cost to farmers was reduced accordingly, and this provision still holds, but at a lower rate. In 1933, freight concessions of 15% of schedule charges were made on a prescribed list of primary products carried on railways. This concession was reduced to 12½% in 1934, and the list of goods revised.

RATES AND TAXES:

The Government has given some relief to rural ratepayers by means of subsidies on rates. The graduated land tax was replaced by a flat tax in 1931.

Increased production of animal products in New Zealand is essentially a reflection of progressive establishment of pastures and of an intensification in the exploitation of established pastures. It is possible to divide the last 35 years into three distinctive progress periods, namely 1901 to 1920 - 1920 to 1927 and from 1927 to the present time.

During the first 20 years of this century our progress in live-stock production was continuous with but minor irregularities, particularly during the war years. The volume of output was almost doubled, the trend in production approximating a straightline between the two points.

Between the seasons 1920-1921 and 1926-1927 the rate of volume increase was accelerated. This was due to rapid settlement of returned soldiers, the spur of heavy interest commitments, and to a vigorous instructional policy aiming at improved management methods, particularly in the use of artificial fertilizers and in the conservation of surplus grass in the form of hay and silage. During that period, the total area in grass rose by only 0.5%. The density of stock carried per acre however, rose by 8.4% which gives some measure of pasture improvement during that time. Coincident with improvement in carrying capacity, production per stock unit rose by 11.0%. This may have resulted from better stock or better feeding, or a combination of both these factors. The combination of more stock with higher production per unit gave a total increased output amounting to 20.6% during the period ending in 1927.

We now enter upon a new era - an era of falling prices and economic chaos. From 1928 onwards, farmers have been making sustained efforts to meet diminishing returns by selling more produce. Both grassland and stock has been exploited to the maximum. The rate of increase in live-stock production has been twice as rapid as in the preceding seven years. A slight decrease - namely, 1.4%, has been registered in grassland farmed, but stock units carried per acre of grass have increased by 14.2%. At the same time, production per stock unit has advanced by 22.8%, the combined effect of these two factors being an increase of 38.3% in the volume of total live-stock products. This achievement is a phenomenal one, and has been effected through the initiative of farmers themselves and to some extent through their adoption of the results of research particularly those connected with pure strains of grasses and clovers, and with improved pasture associations. Although the tendency has been to use less artificial fertilizers, stock density per acre has been increased, until the margin of safety must be very narrow in many cases. Great advances have been made in the exploitation of stock, particularly in meat production and notably in the form of pigmeat, beef and lamb.

This spurt in production commenced in the 1927-1928 season and was not artificial to commence with. At a later stage, certain practices were introduced to compensate for falling prices. From 1920-1921 until the commencement of the present price depression, increased production tended to give a greater gross return each year with the exception of the seasons 1921-1922 and 1925-1927. From 1928-1929 onwards however, the position became acute in that the price fall outweighed increases in production, the trend becoming progressively worse until 1933-1934 when the drop was arrested by a combination of improved prices and internal adjustments which tended to raise farmers' returns. It is feared however, that the position will not be maintained in the 1934-35 season.

ASSISTANCE FROM UNEMPLOYMENT FUND:

The Unemployment Board has introduced schemes, to assist in the absorption of unemployed men by placing them on farms. These schemes have been based on a wage subsidy to farmers, and in some instances, allowances have also been made in respect of food. The assistance given from the Board's funds has essentially been in the direction of land improvement, but much of the work performed can be broadly classified as maintenance and has been of immediate financial benefit to land-owners.

EXCHANGE DEPRECIATION:

The Government took direct action to depreciate exchange in January 1933 when the Banks Indemnity (Exchange) Act was passed, and the rate fixed at £125 New Zealand = £100 sterling. This action was taken as a direct method of raising prices of primary products.

THE RURAL MORTGAGORS' FINAL ADJUSTMENT ACT, 1934-1935.

This legislation was passed consequent upon the decision that recovery could not be hoped for from any substantial rise in overseas prices within a reasonable period, and the view that finality must be reached in respect of excessive liabilities. This final adjustment legislation is of the utmost and far reaching importance in the production economy of New Zealand grassland. It establishes the principle that labour and working expenses become first charges on land and that its capital indebtedness is relegated to its correct position.

The adoption of the measures briefly discussed above has enabled primary producers to carry on without strict adherence to so-called economic principles. The result has been an increasing output of live-stock products, and an expanding export trade. Between calendar years 1928 and 1934 our butter exports rose from 73,000 to 131,000 tons, cheese from 78,000 to 100,000 tons; mutton and lamb from 140,000 to 178,000 tons with a false peak in 1932 of 195,000 tons; beef and veal from 23,000 to 51,000 tons and pigmeats from 6,000 to 21,000 tons.

These figures of export tonnages may be supplemented by the actual numbers of stock killed which are perhaps of greater significance. In round figures, we killed 3,700,000 ewes and wethers in 1928. The number rose to 5,000,000 in 1932, and is now back to 3,500,000. A total of 6,200,000 lambs were killed in 1928, whereas in 1934, the figure was 9,200,000. In 1928 we killed 420,000 cows, bullocks and heifers, and 500,000 in 1934. We killed 476,000 pigs in 1928, and 785,000 in 1934. We produced 264,000,000 pounds of butterfat in the season 1927-1928 and 427,000,000 pounds in 1933-1934. Now Zealand has clearly demonstrated during these most trying years, that it is possible to expand production without increasing the area farmed, and without appreciable, if any, additional expenditure on goods and services required in production. It does appear that these results have been achieved through improved management of both stock and pastures, and undoubtedly at a lowering cost per unit of production. The questions now arising are:- shall we have continued scope to dispose of an increasing output, and if so, at what level of prices? I have tried to indicate briefly that international markets are not likely to be reopened to our agriculture products. We must rely more and more on our own resources,

and upon the extension of the policy of "Trade within the Empire". There are some indications that we shall have an expanding market in the United Kingdom, but even with Empire preference, the potential exportable surplus, from Empire and foreign producing countries, combined with the gradual development of certain branches of production in Great Britain, will ensure that prices for meat and dairy produce will be kept on a low level. This level will probably be lower, or will approximate that which we now regard as inadequate despite direct assistance through a high rate of exchange. It seems certain that production must be so organised that it becomes economic at a low price level, either by an adjustment in costs or through currency manipulation.

The Government has provided the legislative machinery whereby costs can be controlled to some extent, and the manner in which this legislation is used will largely determine the limits to which production can increase at low price levels. Although the term planned production is anathema to many people, it does appear that recent trends towards controlled marketing as adopted by consuming countries, necessitates a clear understanding of where we, as a producing country, are heading. It seems reasonable to suggest that New Zealand should have a recognised policy for primary production, and in framing that policy land settlement, farm finance, diversification, production alternatives, distribution internally and externally, should be fully considered.

Until such a policy is laid down, grassland research has no clear objective, and workers in this field are not able to give the service which is calculated to be of maximum advantage to the individual and to the State.