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AGRICULTURAL PRODUCTION IN NEW SOUTH WALES DURING THE WAR YEARS.

BY

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Prior to the outbreak of war in 1939, marketing was the dominant problem confronting Australian agriculture. In normal years, scarcity in production was not anticipated; instead, over-production and market saturation were feared. With the advent of war, particularly after the outbreak of hostilities with Japan, the scene changed abruptly. The spectre of over-production was replaced by the more nationally dangerous problem of acute shortage and strong measures were deemed necessary to even roughly equate demand from all sources to the available supply.

This new situation arose because demand expanded rapidly as the war developed, whilst production declined as the result of wartime difficulties which grew in intensity. Australia's growing military forces, increasing numbers of American service personnel and the civilian population had to be maintained and overseas commitments on behalf of the British Ministry of Food had to be met. At the same time, manpower engaged in rural occupations was depleted, fertilizers, farming equipment and other materials were in very restricted supply, while severe drought in some seasons added to the difficulties of mobilising agriculture to meet wartime needs.

Agriculture in New South Wales played a big part in the Australian war effort and with the cessation of hostilities it is opportune to attempt a review of the problems which confronted farmers and the authorities in this State between 1939 and 1945, the steps taken to overcome them and the resulting trends in production.

Area Under Crop.

For the five years ended 31st March, 1939, the total area under crop in New South Wales averaged 6,175,000 acres and for the same period the area under wheat averaged 4,542,000 acres. Table I and figure 1 compare similar figures for each of the years 1940-1945 with these averages. Although by no means a complete index of agricultural activity, the figures give some idea of production trends during the war.

Table No. 1—Total Area under Crop in New South Wales and Area under Wheat in New South Wales.
(Expressed as percentages of 1935-1939 average.)

Year ended 31st March.	Total Area Under Crop.	Area under Wheat.
	%	%
1935-39 average ...	100	100
1940	103	103
1941	102	107
1942	95	95
1943	85	74
1944	77	65
1945	81	69

Production Problems.

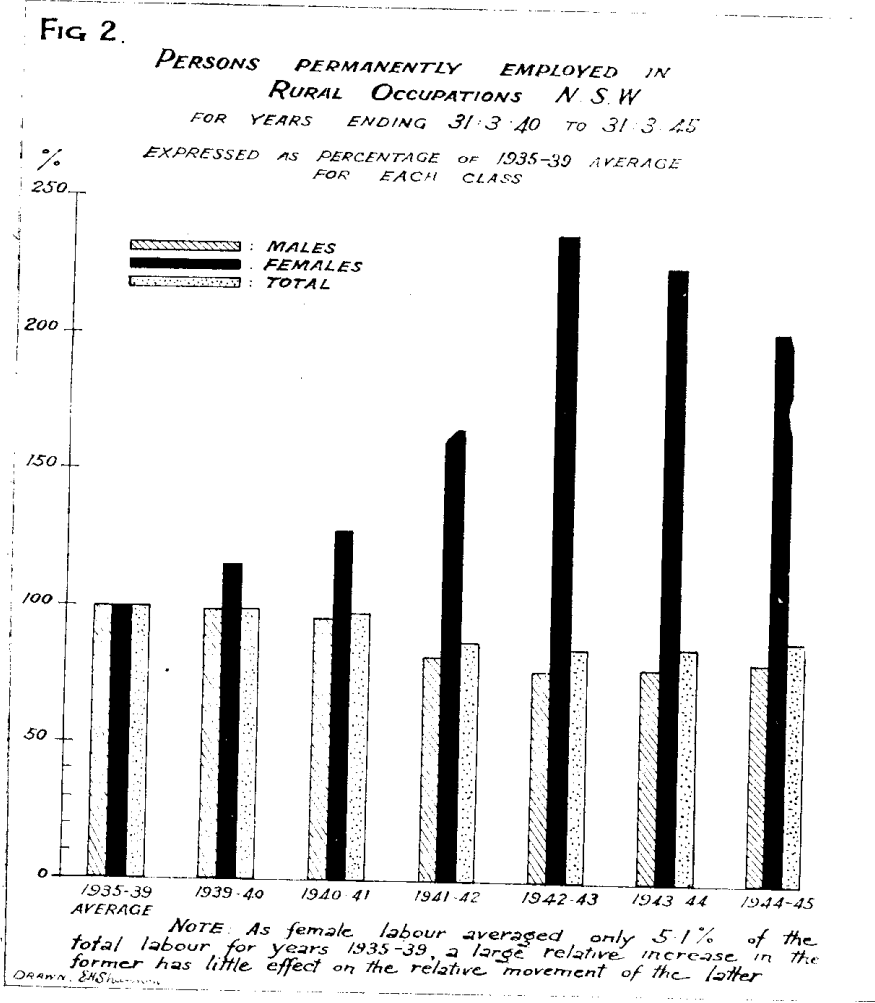
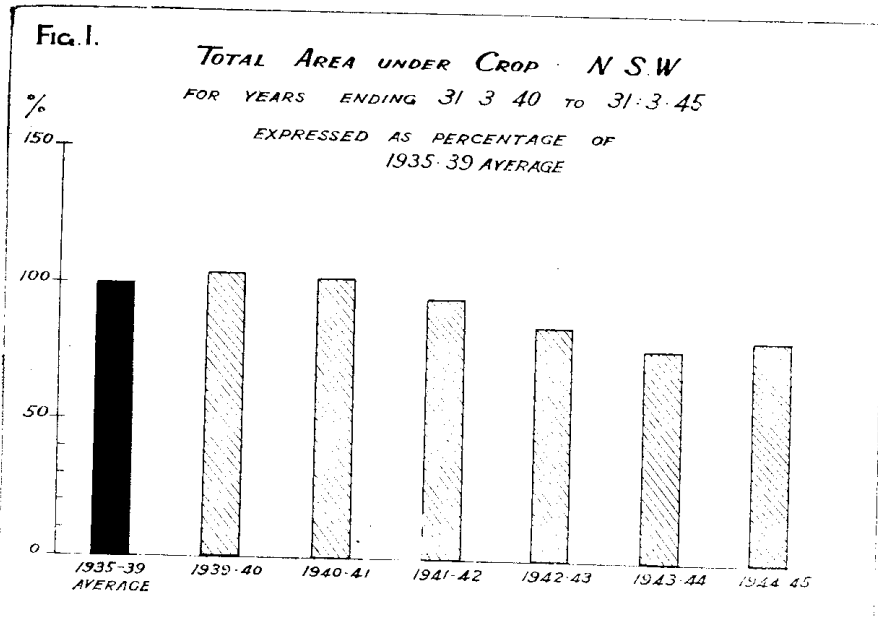
In common with other industries, and Australian agriculture as a whole, agriculture in this State suffered from manpower and materials shortages during the war years. In addition, severe drought over wide areas added to production problems. Tables 2, 3, 4 and 5 and figure 2 illustrate the intensity of some of these difficulties.

Manpower.

Table No. 2—Persons Permanently Employed in Rural Occupations.
(Expressed as percentages of 1935-39 average.)

Year ended 31st March.	Male.	Female.	Total.
	%	%	%
1935-39 average ...	100	100	100
1940	99	115	100
1941	95	127	97
1942	82	105	87
1943	77	237	85
1944	79	225	86
1945	81	202	88

Enlistments in the armed forces were the principal cause of the sharp decline in the male labour-force after 1941, but transfer to more attractive or more remunerative employment was a contributing factor. These losses occurred amongst the more able men in the industries concerned and to the extent to which efficient labour was replaced by inexperienced youths or older men the figures understate the manpower problem. Female labour increased at a very commendable rate during the same period—by an average of 80 per cent. on that available in 1941—but the yardstick of relative efficiency, particularly in the early years, must be applied to this labour if a proper appreciation of the manpower problem is to be gained. As the immediate danger of invasion receded and the drift in agricultural production became



more acute, steps were taken by the Manpower Authorities to release experienced rural workers from the armed forces. These releases eased the labour situation but they were not always fully effective because of transfers taking place after release and the retirement of older men who were no longer physically capable of carrying on. Seasonal labour difficulties were also eased by temporary service releases at harvesting and other periods.

With manpower losses mounting, New South Wales farmers endeavoured to overcome some of their difficulties by increased use of mechanised units. An acute shortage of implements and spare parts retarded this movement but nevertheless it steadily expanded. Table 3 illustrates the increase in the number of tractors used after the outbreak of war.

Table No. 3—Tractors in use on Rural Holdings in New South Wales.

(Expressed as percentage of 1937-1939 average.)

Year ended 31st March	Holdings on which Tractors Used.	Tractors Used.
	%	%
1937-39 average ...	100	100
1940	124	125
1941	128	130
1942	124	125
1943	n.a.*	132
1944	128	131
1945	145	147

* Not available.

Mechanization on an individual basis could only apply to large holdings; costs and the shortage of supplies both deterred the small farmer. To overcome this disability, and in an endeavour to assist in increasing milk production by means of a policy of more intensive cultivation and conservation of fodder crops, the New South Wales Government introduced a co-operative farm mechanisation scheme in June, 1943. Co-operative Dairy Societies and specially formed Co-operative Societies were assisted by the Government to obtain various agricultural implements and work within the scope of the machinery available, *e.g.*, ploughing, discing and rotary hoeing, was carried out by them, on a contract basis, for local farmers. By December, 1945, 72 societies, centred on the coast and tablelands, were operating under the scheme and about 100 tractors were in use.

Materials and Equipment.

Artificial fertilisers are used extensively in New South Wales, particularly in the wheat areas where the soils are generally deficient in phosphoric acid. Import difficulties and the Japanese invasion of Nauru and Ocean Island greatly reduced the materials available for the manufacture of prepared fertilisers and after 1941 recourse had to be made to strict rationing of available supplies. Rationing was based on the principle of pre-war use, coupled with the importance of the product to be treated in the

war-time agricultural regimen. In addition, manufacturers of artificial fertilisers in Australia were subsidised by the Commonwealth Government from 1st July, 1941, at the rate of 25s. per ton and in 1943 payments to manufacturers of superphosphate to cover increased costs of manufacture were authorised. Table 4 illustrates the relative decline in the use of superphosphate after rationing commenced.

Table No. 4—*Superphosphate used on Crops in New South Wales.*
(Expressed as percentages of 1935-39 average.)

Year ended 31st March.	%	Year ended 31st March.	%
1935-39 average	100	1943	58
1940	102	1944	44
1941	101	1945	42
1942	88		

In addition to fertilisers, almost all materials and agricultural implements were in exceedingly short supply during the war years, due to importation difficulties and the diversion of local manufacture to munition production. Examples are vegetable seeds, bags and twine, machinery and spare parts, building materials, fencing wire, wire netting, saddlery and horse drawn vehicle parts, petrol, tyres and transport. In general, supply authorities set up systems of priorities for scarce materials, the nature of the priority allotted to an individual farmer depending on the national importance of his products.

Drought.

Droughts seriously affecting production were experienced in the 1940-41 and 1944-45 seasons. Both had an adverse effect upon cereal production and fodder conservation and this in turn led to reduced production of other commodities. Table 5 illustrates the relative reduction in the yield of the principal grain crops for seasons affected by drought.

Table No. 5—*Grain Production: New South Wales.*
(Expressed as percentages of 1935-39 average.)

Year ended 31st March.	Wheat.	Maize.	Oats.	Barley.	Rice.	Rye.
	%	%	%	%	%	%
1935-39 average ...	100	100	100	100	100	100
1941	45	132	47	90	98	86
1945	31	79	42	62	74	5

The incidence of the drought in the 1944-45 season was State-wide. In addition to the fall in grain production, dairy production seriously declined chiefly as a result of the acute shortage of natural grass and conserved fodder. Not all of this decline can properly be attributed to drought conditions, but it is impossible to separate the effects of natural conditions and wartime shortages.

Planned Agriculture.

The main agricultural problem was that of obtaining the maximum possible production of nationally-important commodities with the limited resources available. Manpower, materials and equipment had to be used to the best possible advantage and this end could not be achieved whilst uncontrolled competition continued to bid for factors of production in gravely short supply. Some form of planning was a vital necessity and this took the form of setting production goals for various commodities after all aspects of demand and the distribution of scarce factors of production had been fully considered.

Production Goals.

Australian production goals for a number of commodities were set by the Commonwealth Government and targets were allotted to each State. These goals represented a compromise between demand and possible supply, and in each case consideration was given to the effect of a particular goal on the production of other commodities. The intention was to guide available manpower and materials into the most important channels. State targets were administered by the separate Departments of Agriculture and in this State they were broken down into district quotas and, in some cases, into farm goals. The latter step enabled the farmer to work towards a definite individual target and provided the means by which he could respond to the many national appeals for increased production.

In addition to setting a target for production, production goals guided the various supply authorities in the best allocation of limited resources amongst the commodities competing for their use, and they enabled the farmer to form a more accurate estimate of the manpower and materials he would require. However, allocation of resources by central authorities in response to individual appeals was impracticable and District War Agricultural Committees were set up in each State in an endeavour to decentralise the task.

Decentralisation of Agricultural Planning.

Forty-eight District War Agricultural Committees were set up in this State under the administration of the Department of Agriculture. The chairman of each committee was an officer of the Department or a Pastures Protection Board Stock Inspector, and local Members of the Legislative Assembly and the District National Service Officer or his representative were, ex-officio, members. Other committee-men were representatives of producer, urban and employee interests in the district and all field officers of the Department of Agriculture or other Departments in the area. Under the D.W.A.C. were 1,100 local War Agricultural Committees and 400 Special Purpose and Industry Committees, which reported to their respective district committees. These bodies acted in a purely advisory capacity and they were mainly concerned with the allocation of manpower, scarce materials and other equipment. In New South Wales they were responsible for advice to the controlling authorities on the best distribution of manpower, agricultural machinery and spare parts, transport, liquid fuel,

rubber, fencing materials, fertilisers and other agricultural aids, and further, planned and attempted to ensure the best use of these within their districts; they arranged accommodation for labour and publicised and assisted in efforts to achieve district production quotas; in some instances they were connected with the formation of co-operative societies under the New South Wales Government's Farm Mechanisation Scheme, and special purpose sub-committees controlled District Commonwealth Lend Lease Pool Committees.

Production.

Table 6 and figure 3 show the wartime production trends for the main cereal crops in New South Wales, as a percentage of the average for the years 1935-39.

Table No. 6—Grain Production: New South Wales.

(Expressed as percentages of 1935-1939 average.)

Year ended 31st March.	Wheat.	Maize.	Oats.	Barley.	Rice.	Rye.
1935-39 average.	100	100	100	100	100	100
1940 ...	143	93	166	239	81	209
1941 ...	45	132	47	90	98	86
1942 ...	90	103	99	155	96	147
1943 ...	96	92	176	114	135	7
1944 ...	88	91	169	118	176	8
1945 ...	31	79	42	62	74	5

Production of wheat in Australia was restricted after the 1941-42 season under the Wheat Stabilisation Scheme. Stocks in the early stages of the war were considered to be ample and restriction was intended not only to stabilize the industry but also to ensure that factors of production in scarce supply were not diverted from more pressing needs. Restriction was achieved by means of a licensing scheme and at no time after the implementation of the scheme did wheat acreage in New South Wales equal the area licensed.

Table No. 7—Wheat for Grain: New South Wales.

Area Sown as Percentage of Area Licensed.

Year.				%
1941-42	...	...	...	95
1942-43	...	...	...	83
1943-44	...	...	...	73
1944-45	...	...	...	71
1945-46	...	...	...	83

As stocks declined and demand increased, efforts were made to step up production in the 1944-45 season but the intervention of drought greatly reduced the anticipated harvest and the yield was only 31 per cent. of the 1935-39 average.

Maize production remained fairly stable throughout the war period, variations being mainly of a seasonal nature and no attempt was made to stimulate production until 1945-46 when increased goals were set in an endeavour to provide a substitute for other grains in short supply.

Production of oats generally showed an increase over the 1935-39 average except when adverse seasonal conditions intervened. The use of this grain for stock feed and the shortages of other types of grain led to increased acreages being planted.

Barley production also showed a general increase over the 1935-39 average but the crop in 1945 was greatly reduced by drought conditions. Despite increased production, supplies were not equal to demand, principally owing to the use of this grain for feeding purposes.

Production of rice was greatly expanded after the outbreak of hostilities with Japan and supplies for civilian consumption were completely diverted to Service use and for relief purposes in the Pacific Islands. Shortage of water for irrigation purposes severely reduced production in the 1944-45 season.

Table 8 gives comparative figures for hay production during the war years.

Table No. 8—Hay Production: New South Wales

(Expressed as percentages of 1935-39 average.)

Year ended 31st March.	Wheat	Oats.	Lucerne.
	%	%	%
1935-39 average	100	100	100
1940	96	116	74
1941	70	44	96
1942	81	72	66
1943	97	113	91
1944	64	83	88
1945	47	22	57

Wartime demand for dairy products was particularly heavy but at the same time severe production difficulties, particularly manpower and materials shortages and bad seasonal conditions, prevented increased production. Special efforts, including payment of subsidies, were made to overcome these problems and farmers were encouraged to increase wholemilk production in the off-season by means of a fodder conservation and feeding policy. The trend of production is shown in Table No. 9 and figure 4.

FIG. 3. *GRAIN PRODUCTION N.S.W.*
 FOR YEARS ENDING 31.3.40 TO 31.3.45
 EXPRESSED AS PERCENTAGE OF 1935-39 AVERAGE
 FOR EACH PRODUCT.

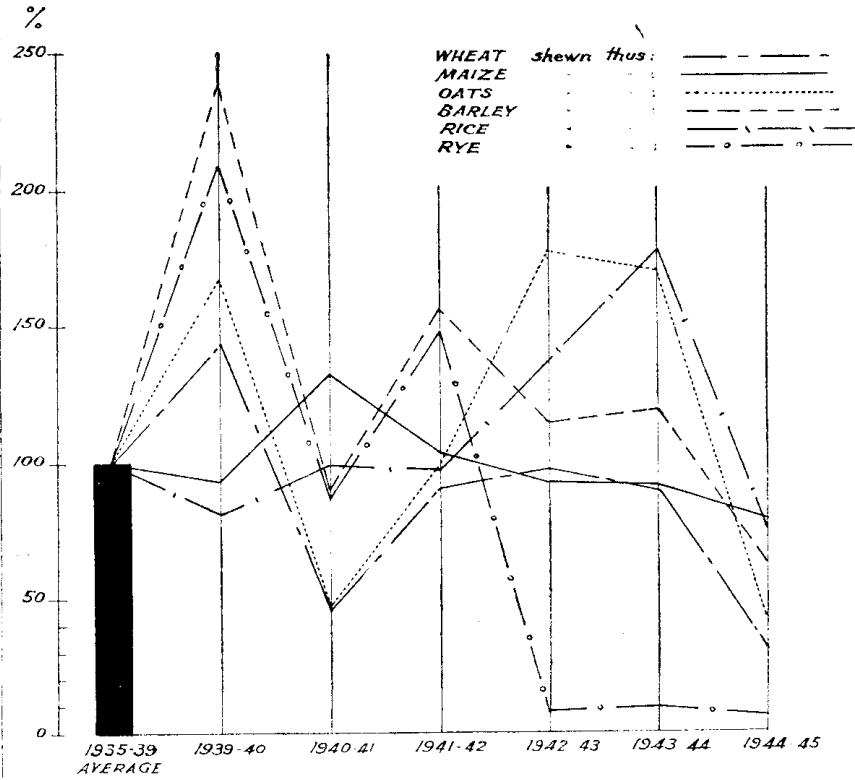


Fig 4 *DAIRY PRODUCTION N.S.W.*
 FOR YEARS ENDING 31.3.40 TO 31.3.45
 EXPRESSED AS PERCENTAGE OF 1935-39 AVER
 FOR EACH PRODUCT

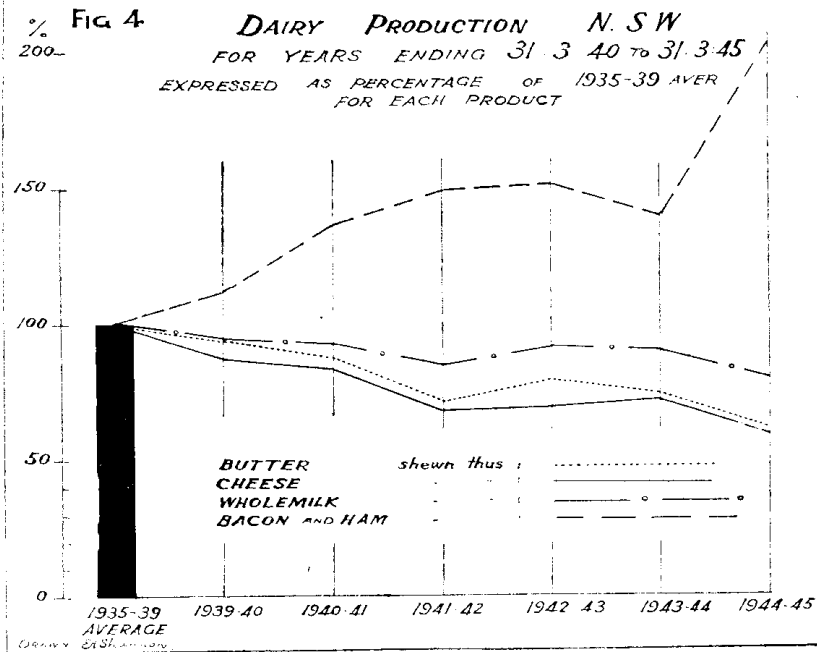


Table No. 9—*Dairy Products: New South Wales.*

(Expressed as percentages of 1935-39 average.)

Year ended 31st March.	Butter.	Cheese.	Wholemilk.	Bacon and Ham.
1935-39 average ...	96	96	96	96
1940 ...	100	100	100	100
1941 ...	94	87	94	112
1942 ...	87	83	92	130
1943 ...	71	67	84	148
1944 ...	79	68	91	151
1945 ...	74	71	89	139
1945 ...	61	58	79	202

Until the outbreak of war with Japan, vegetable production was adequate, but after that time Service and other demands rendered increased production imperative and, as with dairying, special efforts were made to overcome difficulties faced by the industry. Complete figures for vegetable production are not available but Tables 10 and 11 and figures 5 and 6 illustrate the increase in the area under vegetables and the increase in potato production after the 1941-42 seasons.

Table No. 10—*Area under Vegetables: New South Wales.*

(Expressed as percentages of 1942 area.)

Year ended 31st March.	%	Year ended 31st March.	%
1942 ...	100	1944 ...	143
1943 ...	100	1945 ...	164

Table No. 11—*Potato Production: New South Wales.*

(Expressed as percentages of 1935-39 average.)

Year ended 31st March.	%	Year ended 31st March.	%
1935-39 average ...	100	1943 ...	121
1940 ...	76	1944 ...	125
1941 ...	94	1945 ...	151
1942 ...	63		

Service and other demands for dried vine fruits greatly increased during the war years. Apart from a decline in production in the 1944-45 season, due to drought conditions, efforts to increase output were successful.

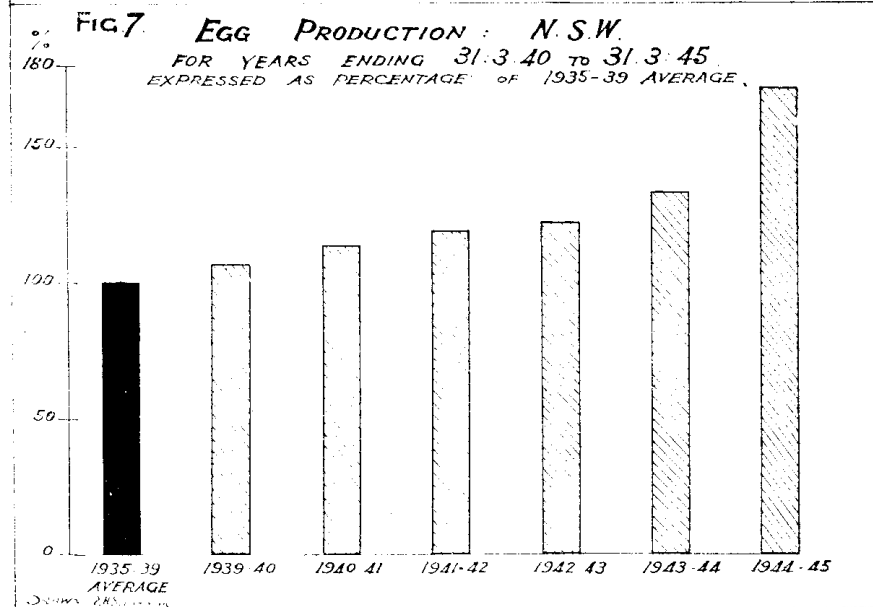
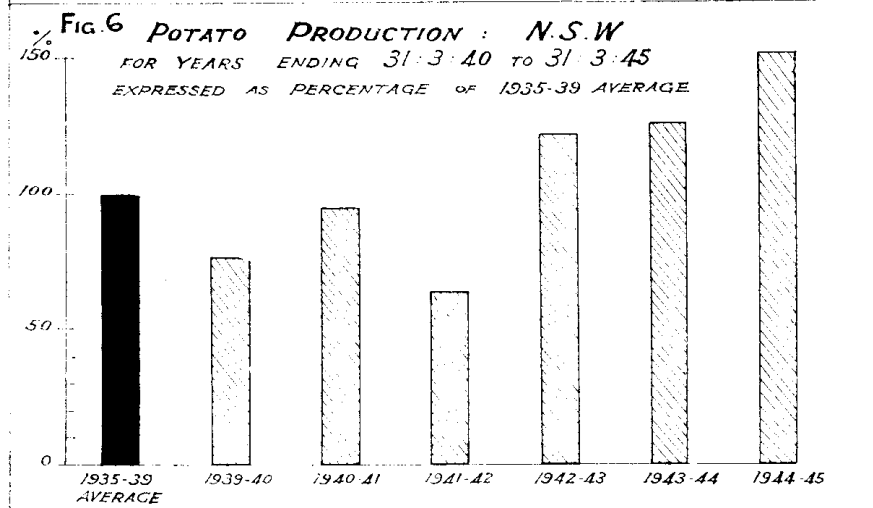
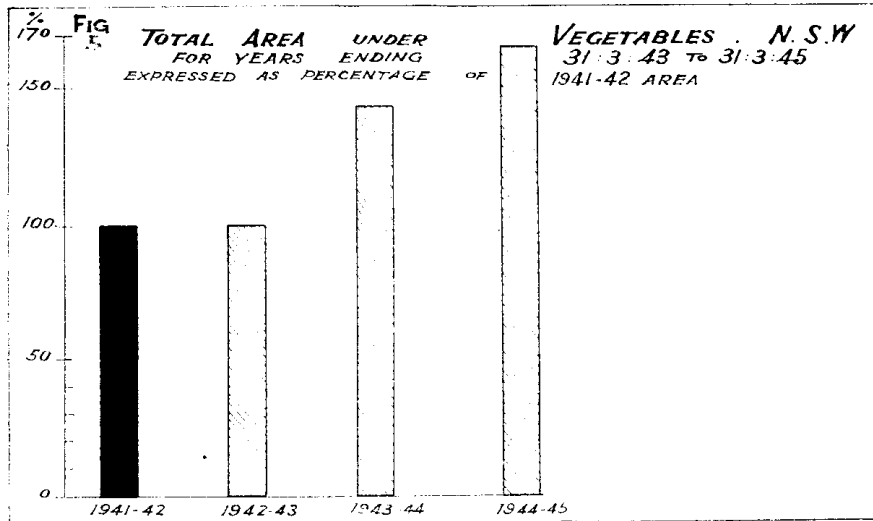


Table No. 12—*Dried Vine Fruits Production: New South Wales.*
(Expressed as percentages of the 1935-39 average.)

Year ended 31st March.	Lexias.	Sultanas.	Currants.
	%	%	%
1935-39 average	100	100	100
1940	123	139	142
1941	134	142	107
1942	133	170	135
1943	125	159	133
1944	158	161	145
1945	150	101	104

Citrus fruits production remained fairly stable during the years under review and only in the 1939-40 and 1942-43 seasons did it fall appreciably under the average for the years 1935-39. The percentage to that average for these two seasons was 83 per cent. and 72 per cent., respectively.

Egg output was greatly expanded under the stimulus of war-time demand and here again special endeavours were made to assist producers faced with difficult supply problems. Table 13 and figure 7 indicate the relative increase in production in each of the war years.

Table No. 13—*Egg Production: New South Wales.*
(Expressed as percentages of 1935-39 average.)

Year ended 31st March.	%	Year ended 31st March.	%
1935-39 average	100	1943	122
1940	100	1944	133
1941	113	1945	171
1942	119		

EGG MARKETING BOARD.

THE ANNUAL REPORT FOR SEASON 1944-45.

In a recent issue of *The Poultry Farmer*, the official organ of the Egg Marketing Board of New South Wales, the Board published its seventeenth Annual Report covering operation to the 30th June, 1945. Space does not permit of the report being published in full in this "Review," but a selection has been made of various items which are considered likely to be of interest to our readers.

The Annual Report states, inter alia, that the year's operations continued under National Security (Egg Industry) Regulations, but, while no definite ruling has yet been made, operations under these Regulations are expected to terminate at the end of the present pool, viz., 30th June, 1946. (During the last few years, the Board has acted merely as an agent for the Commonwealth Egg Controller.)