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SOME MEASURES OF TRENDS IN LAND USE ON NEW SOUTH WALES WHEAT FARMS *

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1. SUMMARY

Perhaps the most important change that occurred in the wheat growing districts of New South Wales during the decade 1950 to 1960 was the widespread adoption of a more diversified system of farming, a system in which the emphasis shifted somewhat from the growing of cash crops—particularly wheat—towards stock raising. Associated with the shift was a very great expansion of the area devoted to sown pastures and fodder crops.

The primary purpose of this study is to investigate the nature of the changes in land use that have occurred recently in the wheat growing areas of New South Wales. The period 1949-50 to 1959-60 is studied in detail and particular attention is given to inter-regional differences. Having described these changes an attempt is made to explain the underlying causes. The basic data used are those available in the *Statistical Register of New South Wales* relating to acreages of various crops planted and livestock numbers in the Statistical Divisions. The proportion of the total arable area in each Division given over to the various alternative uses (wheat grain, other cash crops, and pasture and fodder crops) is taken

* This article is based on a study initiated at the University of Sydney in 1959. The help given by Mr. R. M. Parish, at whose suggestion the investigation was carried out, is gratefully acknowledged. However, the author bears the sole responsibility for the interpretation of all factual material and for the conclusions.

as the measure of the importance of that particular land use. As statistics relating to the amount of arable area are no longer collected several estimates of the total amount of arable land in the various regions of the wheat belt were built up from the available statistics; it is felt that the best of such measures gives a reliable indication of the trends in land use.

During the relatively short period of this study the proportion of arable land under wheat first declined by 50 per cent with a corresponding increase in the proportion of arable land devoted to pasture and fodder crops; but since 1956-57 the trend away from wheat has reversed and wheat production has regained some of its former importance whilst the proportion of arable land devoted to the production of pasture and fodder crops has fallen quite sharply. Livestock numbers, however, remain at levels much higher than those of a decade earlier and this seems to be evidence of a better balance between the wheat and sheep enterprises. During this period marked changes occurred in wool/wheat price relationships and it is suggested that this factor exercised the major influence on land use.

It has been found that there were similar trends in the use of arable land in all regions of the wheat belt. It should be noted, however, that in the northern region there was a large increase in the arable area during the decade whilst in the other regions the area of arable land remained fairly constant. Wheat production accounts for a greater proportion of the arable land in the northern region than in the southern region of the wheat belt. There is no special reason for attributing this difference in the importance of wheat growing and sheep production in the various regions to factors other than those subsumed in terms of the principle of comparative advantage.

2. INTRODUCTION

An enquiry such as this into an important change in land utilization should be of some interest in itself, as well as enlarging our understanding of how farm input and output respond to changing price relationships. There have been several published investigations of the trends in land use in wheat areas of New South Wales.¹ The various hypotheses put forward by these writers are considered and, in the light of more recent data and a slightly different approach, an evaluation made of their worth.

In order to set the stage for further discussion it is necessary to give some consideration to the economic relationships between wool and wheat production and alternative farm enterprises. This is followed by a brief survey of trends in stock numbers and acreages from 1920-21 to 1949-50 which supplies an historical background which will be most useful. Some of the post-war trends have their beginnings in this period or at least some

¹ For example:

L. W. McLennan, "Land Use and Changes in Wheat Acreage in N.S.W.", *Quarterly Review of Agricultural Economics*, Vol. X, No. 3 (July, 1957), pp. 135-141.

_____, "Movements in Wheat Acreage in Australia", *Quarterly Review of Agricultural Economics*, Vol. IX, No. 1 (January, 1956), pp. 22-30.

Ross Parish, "Recent Trends in Land Use on South Western Wheat Farms", *this Review*, Vol 20, No. 1 (March, 1952), pp. 7-52.

of the causal factors originated then. The delineation of the important changes in arable land use which have occurred in the New South Wales wheat belt then follows. In the light of this knowledge the various hypotheses are evaluated.

Economic Significance of Wheat-Sheep Relationships

Most wheat production in New South Wales is not on specialized small grain farms, but on mixed wheat-sheep farms where, due to the favourable climatic conditions, the producer has several profitable alternative land uses.² There are several principles which must be borne in mind by the producer when deciding the proportion of his resources which should be allocated to these alternatives.

The first is that there is a certain degree of supplementarity between wheat and sheep production, particularly with respect to the labour input.³ Because of the different seasonal demand pattern for the two enterprises one utilizes the slack labour period of the other, *e.g.*, the main demand for labour in the sheep enterprise occurs during the slack labour period for the wheat enterprise between planting and harvest. This supplementarity exists only for some factors of production, and only for certain defined limits in the use of these factors. Production of sheep should thus be extended at least until this enterprise becomes "competitive" with the wheat enterprise. The degree to which one enterprise should be expanded at the expense of the other (in the competitive phase) depends on the relevant prices of the two products and the nature of the production-possibility curve.

With the increase in improved pasture in the last decade there has emerged the possibility of a complementary relationship between livestock (improved pasture) and cash crops.⁴ The cropping of pasture leys once or twice each five or six years has a beneficial effect on pasture production and enables the re-establishment of a better balanced clover-grass pasture.⁵ Also, due to the fertility build up and other beneficial soil effects during the ley, the production and quality of cereals is boosted.⁶ This complementary relationship is important in considering the possible lower limit to a reduction in wheat areas, and the effect of this reduction on wheat yields.

² Between 1947-48 and 1955-56 the percentage of all farms growing wheat, but not carrying any sheep, fell from 10 per cent to 5 per cent. This period also saw a drop from 13 per cent to 3 per cent in the number of farms growing more than 50 acres of wheat, which had also less than 100 sheep.

³ Two enterprises are in a supplementary relationship when, with no change in resources, an increase in one product is possible with neither a gain nor a sacrifice in the other.

⁴ A complementary relationship exists when an increase in the output of one product results in an increase in the output of another. In other words a shift of resources from one crop to another may increase the output of both.

⁵ W. M. Willoughby, "Some Factors Affecting Grass-Clover Relationships", *Australian Journal of Agricultural Research*, Vol. 5, No. 2 (1954), p. 179.

⁶ J. D. McFarlane, "Efficient Use of Superphosphate in the Pasture Programme", this *Review*, Vol. 28, No. 4 (December, 1960), pp. 230-231.

Between these two extremes there is the wide range of production possibilities where wheat and sheep are directly competitive in their demands for resources. Similar relationships, complementary, supplementary and competitive, may exist between all the production alternatives (wool, fat lambs, beef, wheat, cash crops, etc.). Because of the usually wide competitive range of the various production-possibility curves it is to be expected that there will be shifts in the production of the various alternatives as dictated by changes in their relative price ratios (or profitabilities). The significance of the various economic relationships outlined above should be borne in mind when considering the motivating factors behind the various trends presently discussed.⁷

It is desirable in an inquiry such as this into changes in farm organization to have a measure of farmers' intentions so that the various hypotheses concerning the motivating forces may be related to these intentions. The action of several factors, in particular adverse rainfall conditions during the normal sowing period (causing restrictions on the time available for seed-bed preparation), can result in the planted acreages as recorded being less than those which the producer had intended to plant. Although acreages planted, and stock numbers, may not be the only, nor perhaps the best, measure of land use they are the only continuous source of data available and so they have been used in this study. This material relating to Statistical Divisions in New South Wales is processed by the Bureau of Census and Statistics from the Agricultural and Pastoral forms filled in annually by the occupiers of all rural holdings of more than one acre.

3. HISTORICAL PERSPECTIVE—TRENDS 1921 TO 1950

Fig. 1 is a graphical representation of the totals for New South Wales of the year to year acreages planted to wheat for grain, acreages of hay and fodder crops, sheep and cattle numbers, and the area of sown pastures.⁸ When considering acreages and stock numbers in any one year the sheep and cattle numbers and pasture acreages should be contrasted with the wheat and fodder acreages for the following year. This is because of the time period for which the statistics are collected. For example the 1959-60 figures, as published, relate to stock numbers and pasture acreages as at

⁷ For a detailed discussion of the various economic relationships between alternate production possibilities, see Earl O. Heady, *Economics of Agricultural Production and Resource Use* (Englewood Cliffs, N.J.: Prentice-Hall Inc. 1957), Chapters 2 to 8, especially Chapter 8.

⁸ Graphs showing the acreages and stock numbers in each Statistical Division are presented in Appendix I, together with a detailed explanation of the terms used.

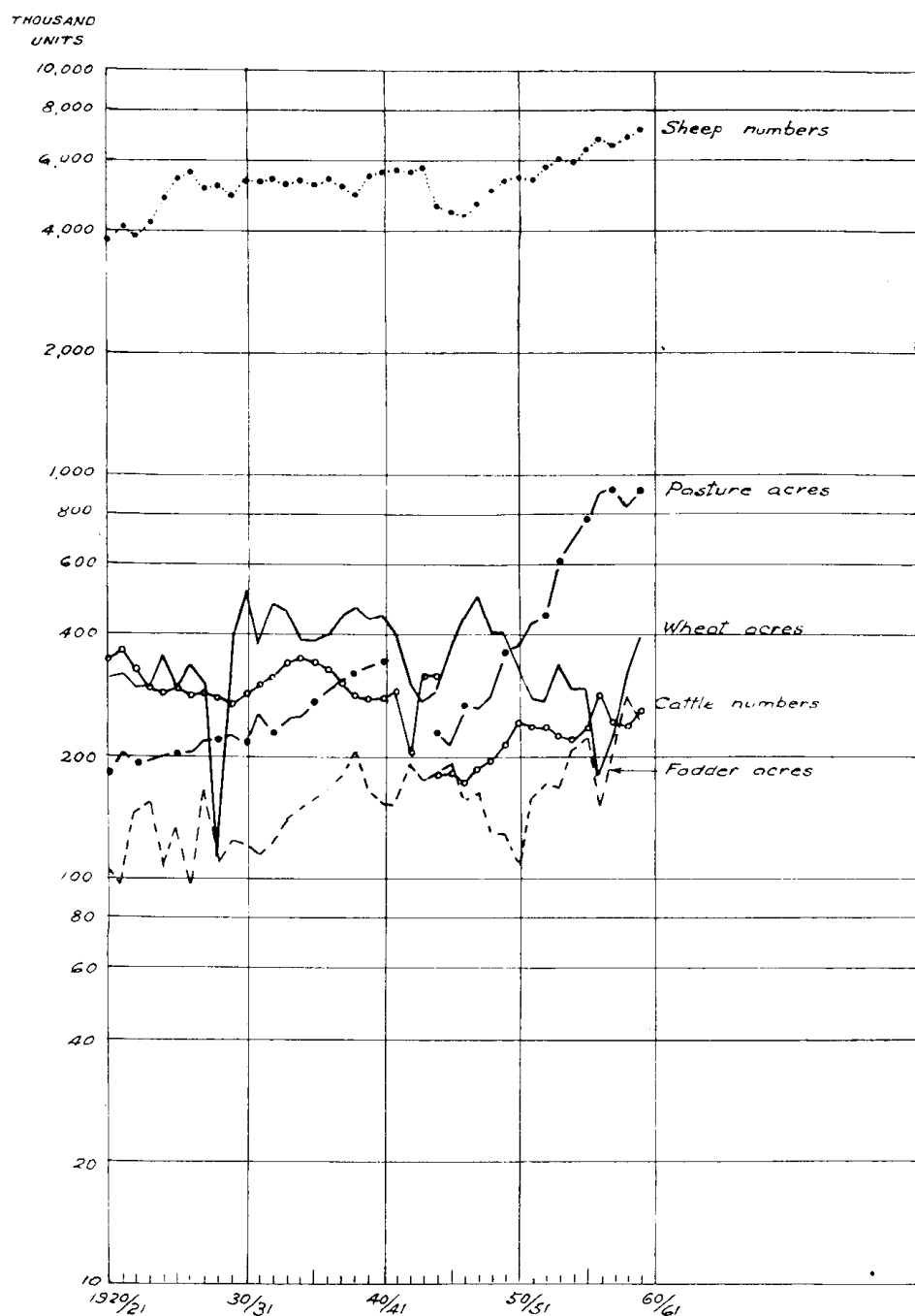


Fig. 1. Movements in Some Land Use Statistics, NEW SOUTH WALES, 1920-21 to 1959-60. Since 1944-45 Beef Cattle Only are Included in the "Cattle Numbers". No Pasture Figures were Collected 1941-42 to 1943-44.

March 31, 1960⁹ whilst the acreage figures for the various crops are those planted during the 1959-60 season. Even for short-fallow areas preparations for most of these crops, and certainly for wheat, would have had to be made in the first half of 1959. Thus, these acreage figures should be contrasted with the stock numbers and pasture areas of the previous season, 1958-59, when one is considering land use in any one year.

Yearly figures and not moving averages have been used so that short trends may be evident and to allow for consideration to be given to the effect of unfavourable seasonal conditions and other factors which may be held to affect producers' intentions.¹⁰

Fig. 2 is a graphical representation of a wool, wheat prices ratio. The prices used are published by the Bureau of Census and Statistics Sydney.¹¹

It is intended here to consider only briefly this period 1921 to 1950, with particular reference to any factors which may have affected the 1949-50 to 1959-60 period. The importance of the international market and the need for government intervention because of low prices was per-

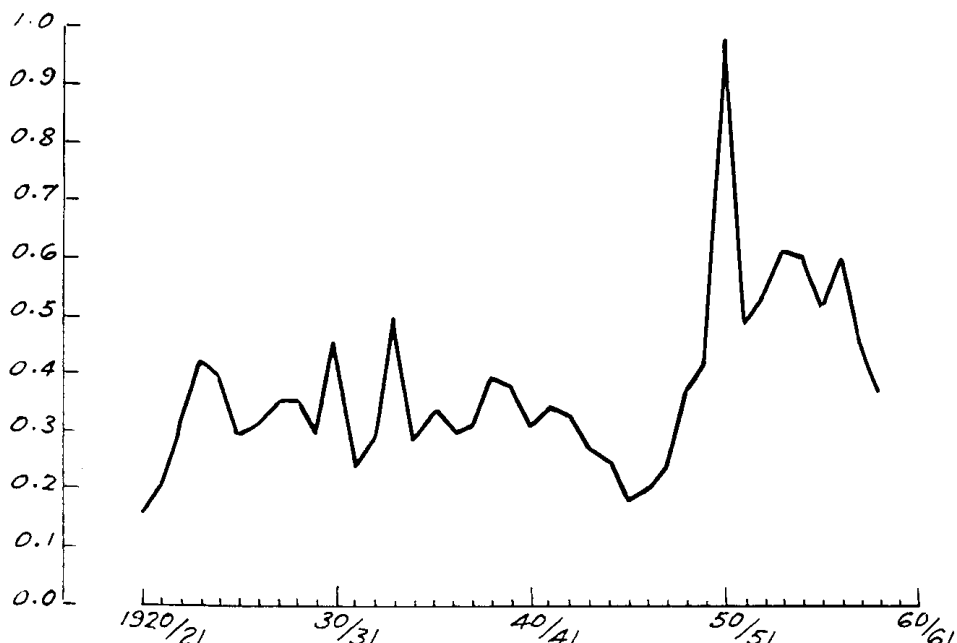


Fig. 2. Ratio of Wool Price to Wheat Price in the Same Year, 1921 to 1960.

⁹ Prior to 1932 the figures were collected as at June 30.

¹⁰ Information concerning rainfall, lack or excess (particularly at planting time), was obtained from J. C. Foley, "Droughts in Australia, Review of Records from Earliest Years of Settlement to 1955", *Bureau of Meteorology Bulletin*, No. 43 (1957).

¹¹ The weighted average price (per lb., greasy equivalent) for the season of wool sold at Sydney Auctions, constant standard basis. From 1938-39 all the wool sold in New South Wales is included.

The estimated return (per bushel) to producer at the country siding (less cost of bags). Both prices are considered in pence.

haps the predominating feature of the industry during the period up to World War II. Just prior to and during the early stages of the great depression there was a big expansion of the crop areas in the southern parts of the State, due partly to Government policy which was aimed at increasing our export trade in wheat. Thus in the early 1930's wheat acreages in the southern and central plains regions were at a high level and much "marginal" land was being utilized. In 1930-31 the State wheat acreage reached the level of 5,134,960 acres which has not since been reached. Australia increased her share of the world wheat trade, but because of the low prices, returns to farmers were not good. However, despite the poor returns, wheat acreages declined only slightly, due probably to the stimulus of government policy aimed at increasing wheat production and the so called "peasant response" of increased production in times of depression. The result of this was that the economic and social plight of wheat farmers by the mid-1930's was great. Indebtedness ran high—due mainly to the inflated land values of the late 1920's and the subsequent poor returns.

During World War II production controls and scarcities generally led to a reduction in wheat acreages and favoured the less intensive pastoral industry. Initially price conditions also favoured wool production. From about 1942 price conditions turned in favour of wheat and as soon as acreage restrictions were lifted there was a marked increase in plantings. An added factor making for increased plantings was the desire of returned servicemen for quick cash crops. Wheat acreages increased to a peak in 1947-48 and thence began to decline sharply.

In Appendix II are presented tables showing the area under various grain, hay and green fodder crops for the Statistical Divisions and the State as a whole. These tables studied in association with the graphs in Appendix I help in understanding some of the changes in land use. Although hay and fodder crop acreages declined from 1939 to 1950 this does not indicate a change in stock carrying capacity so much as a decline in the use of horses and hence less need for wheaten and oaten hay. Actually with increasing oat plantings up to 1946 stock raising became more important. However, from 1946 to 1949 wheat production increased and stock numbers, hard hit by the 1944 drought, were not rapidly built up.¹²

Thus we entered the 1950's with wheat production on a downward trend from the 1946-48 peak, but still at fairly high levels. Sheep numbers were well below the 1939-42 level, when prices, and conditions generally, favoured wool production. This later period also saw an increase in the social and political standing of the farming community—indebtedness was particularly low, due to the run of good prices and seasons,¹³ and producers had organized themselves into quite strong representative bodies.

¹² It should be remembered that stock numbers take several years to respond to price movements, or to build up following severe droughts, due to the longer production period compared with wheat.

¹³ In the Sheep Industry Survey of the 1952-53 financial year, 109 wheat-sheep farms were surveyed in New South Wales, of these the indebtedness on an average capital investment of almost £40,000 was only £2,120. *The Australian Sheep Industry Survey 1954, New South Wales*, Bureau of Agricultural Economics, Canberra, 1957, p. 42.

4. TRENDS IN LAND USE—1949-50 TO 1959-60

From a consideration of the raw data for the State as shown in Fig. 1 there are several marked changes evident.

- (i) Wheat acreages declined to very low levels in 1956-57 and have since returned to almost the same level as in 1949-50.
- (ii) Sheep numbers have increased greatly and continuously.
- (iii) Beef cattle numbers showed some fluctuation, reaching new levels in 1956-57 then declined but now again seem to be increasing.
- (iv) Hay and fodder crops (including oats for grain) have shown a great recovery from pre-1949-50 levels.
- (v) Pasture acreage increased greatly in 1956-57, levelled off, and has since declined slightly.

As would be expected the amalgamation into State totals conceals some inter-regional differences. The most obvious and commonly noted difference is that in the South Western Slope and Riverina Divisions there was a declining trend in wheat production, whilst in the North Central Plain Division there was an apparent trend in the opposite direction.¹⁴ Certain other regional differences will be discussed later.

Some Questions of Measurement

Investigators in the past have generally taken the statistical acreage and stock figures *per se* and drawn conclusions from them.¹⁵ A far better measure of the relative importance of wheat production would be obtained by relating wheat acreage to the total area suitable for wheat production in each region. Wheat acreage figures would give an indication of the relative importance of wheat production only if the total arable area remained constant; that is, if there was no new ground being developed or all newly cleared ground were not arable, and losses of arable area due to erosion, etc., were small.¹⁶

In the North Western Slope and North Central Plain there has been an increase in the "all crops" area of some 80 per cent from 1949-50 to 1959-60 and 150 per cent since the mid-1930's.¹⁷ In the South Western Slope and Riverina Divisions since 1935 there has actually been a decline in all crop acres of some 25 per cent.

It is most likely that any "new" land would be cropped with cereals for an initial period at least. There are both agronomic and economic reasons for this. Some of the heavier textured soils require several years cropping

¹⁴ L. W. McLennan, *op. cit.*, (1957), p. 138.

¹⁵ For example, McLennan, *Ibid.*

¹⁶ Arable is used in a rather narrow sense in the following discussion. It is applied to land on which it is possible to grow crops, i.e., capable of a full seed-bed preparation.

¹⁷ "All crops" acreage as presented by the Bureau of Census and Statistics include all grain, hay, vegetable crops, orchards, etc., including double cropping, but does not include the area under sown pastures.

before their physical condition allows successful planting of the small pasture seeds; regrowth of natural vegetation on newly cleared areas is controlled by the repeated workings; the intensive use of the land for cash crops would give some quick returns to the costly clearing operations; pasture establishment is costly and it is unlikely that it would be undertaken while the soil is in a poor physical condition or there is the likelihood of excessive regrowth of timber. From the above considerations it can be seen that we cannot accept the hypothesis that arable areas have remained static over the whole State and thus simple wheat acreage figures are not a useful measure of the relative importance of wheat production.

Before going on to develop a measure of the arable area in each region two more points must be considered: that of fallow acres and the location of the important wheat growing areas of the State. The first is that of fallow acres. As fallowing is an important part of the wheat production process in some areas, the amount of fallow land should not be neglected when considering land use. The practice of fallowing supposedly increases the yield of the following year's crop, *ceteris paribus*, because of an increase in soil moisture status; reduced competition from weeds; and a greater supply of plant nutrients in an available form. It should be noted, however, that for a crop sown on long fallowed land the "growing season" is actually two seasons, or, in other words, the land input is effectively doubled. In the following argument fallow areas have been included with wheat acreages to give the total area of wheat production.¹⁸

Fallow acreages were not collected for the years 1950-51, 1951-52, 1953-54, 1954-55 and 1956-57. For these years estimates have been derived based on the assumption that the proportion of fallow in one year to wheat the following year showed a constant trend between known values. For example, in the North Western Slope Division for the years 1952-53, 1955-56 fallow acres as a proportion of wheat the following year was 20 per cent and 25 per cent. It is assumed that for the intervening two years it was 22 per cent and 23 per cent respectively.

To contrast with the present position a base period was subjected to the same detailed investigation as the present period. The base period chosen was the average for the years 1934-35 to 1938-39. This period was chosen because of (i) its remoteness from the present day (and from the war and post-war shortages); (ii) it was typical of the period 1925 to 1940 as regards cattle and sheep numbers and crop acreage and (iii) it also coincides with the hump of the development wave in the southern regions—the then great wheat areas.

In the following discussion only the major wheat producing Divisions will be considered. From Table 1 it can be seen that the Slopes and Plains Divisions are the most important wheatgrowing areas in New South Wales. These Divisions will be grouped and considered as three regions, viz., (i) Northern Region, comprising the North Western Slope and North Central Plain Statistical Divisions; (ii) Central Region, made up of the Central Western Slope and Central Plain Division; and (iii) Southern Region,

¹⁸ Some oats and barley will be grown on fallow land. In neglecting this and adding all the fallow area to the wheat acreages the total area of wheat production would tend to be overstated.

TABLE 1
Percentage of Total State Wheat Acreage in each Statistical Division, N.S.W.

Year	Total Coastal	Tableland			Western Slope			North Central Plain	Central Plain	Riverina	Western
		Northern	Central	Southern	North	Central	South				
1939-40 ..	0.1	0.3	5	0.1	13	23	23	7	6	22	0.2
1944-45 ..	0.1	0.4	5	0.1	14	23	23	7	5	22	0.1
1948-49 ..	0.2	0.4	6	0.1	14	21	23	8	4	23	0.1
1949-50 ..	0.1	0.4	6	0.1	14	22	23	8	4	22	0.1
1952-53 ..	0.2	0.6	5	0.1	19	24	16	11	6	17	0.1
1953-54 ..	0.2	0.5	5	0.1	16	22	19	10	6	21	0.1
1955-56 ..	0.2	0.4	4	0.1	18	24	16	12	7	18	0.2
1956-57 ..	0.2	0.5	3	0.1	21	20	13	14	8	18	0.2
1957-58 ..	0.2	0.3	4	0.1	20	23	15	14	7	16	0.2
1958-59 ..	0.2	0.5	5	0.1	18	24	17	12	7	16	0.1
1959-60 ..	0.2	0.4	5	0.1	16	22	18	12	8	19	0.1

Source: Compiled from Bureau of Census and Statistics, Statistical Register of New South Wales.

which comprises the South Western Slope and Riverina Statistical Divisions. Table 1 shows that during the period 1949-50 to 1959-60 the proportion of the total State wheat acreage in the Northern Region increased from 20 per cent to 28 per cent, that in the Southern Region it decreased from 45 per cent to 37 per cent, whilst in the Central Region it remained constant at about 28 per cent. These three Regions group in a similar manner if classified according to environment. The Northern Region being a summer rainfall—warmer area; the Southern Region being a winter rainfall—more temperate area; and the Central Region being transitional between the two extremes.¹⁹

5. MEASURES OF ARABLE AREA

In this section several measures of the relative importance of various uses of arable land are described and discussed. It is desired to express the area sown to any crop (or group of crops) as a percentage of the total area of cropland. (By cropland is meant land on which a full seed-bed preparation is possible.) However, no official estimates of the total area of cropland are available. Determining the area of cropland by adding together the areas devoted to the various individual crops, and fallow is complicated by two circumstances.

(1) Large areas of cropable land are given over to improved pastures. However, the available data do not distinguish between pastures sown on cropland and those sown (by broadcasting, aerial sowing, etc.) on non-arable land.

(2) From time to time large areas of land “disappear” from the collected statistics—presumably being allowed to revert to natural grasses and weeds for a time. It is because of the existence of these circumstances that it has been thought desirable to devise several measures of the arable area. The measures used are:

I. TOTAL AREA DEVOTED TO CROPS PLUS AREA OF FALLOW

The “all crops” statistics include crops other than those which compete with wheat with respect to growing season; however, in the areas under consideration, the acreage devoted to these crops is comparatively small and can safely be neglected. The major defect of this measure, for our purposes, is the complete exclusion of land under sown grasses or pastures. An appreciable fraction of the wheatbelt’s cropland is sown to pasture, and, moreover, the fraction varies widely from region to region. Hence inter-regional and intertemporal comparisons based on this measure could be seriously misleading.

II. TOTAL AREA DEVOTED TO CROPS, FALLOW AND PASTURE

This total probably corresponds closely to our notion of arable area in the Northern Region where pasture acreages are comparatively low due to establishment difficulties. Thus the assumption that crops could be grown on all the pasture areas is realistic in this Region—except perhaps in the

¹⁹ Although the Central Plain extends a long way northward (see Fig. 3) the greatest proportion of cropping is carried out along the south-eastern edge. Also, most of the wheat production in the Central Tablelands Division is adjacent to the Central Western Slope “border” or in similar-type country.

The Statistical Divisions do not exactly define the “wheat-sheep” areas. However, the grouping suggested above is a fairly close working approximation.

last year or so now that aerial methods of sowing are more common. This assumption is not realistic in the Southern Region, particularly in recent years when pasture acreages have been very high.

Both measures I and II are misleading since their use implies that in some years substantial reductions occurred in the area of available cropland. Wheat, fallow, all crops and pasture acreages for the three Regions are shown in Tables 2 and 3. It can be seen, for example, that the area of available cropland (measure II) in the Southern Region fell by about one million acres, or 20 per cent, from 1946-47 to 1959-60. Land may "disappear" from the collected statistics for several reasons. Firstly, due to physical deterioration—soil erosion or previous use of sub-marginal land—cropland may be rendered useless agriculturally. Such land would not appear as crops, pasture or fallow. In some years adverse weather conditions restrict plantings resulting in some areas on which it was intended to plant wheat remaining uncropped (but possibly partly prepared) and such land might not be included as sown pasture or long-fallow acreage. The wet year of 1956 is a good example of such a situation. A more important explanation of this sharp decline is that most of such land was being rested following the exploitative rotations of 1945-48 and was presumably providing fodder for livestock in the form of volunteer grass and weed growth—particularly skeleton weed in the Southern Region. Some of it probably constituted rough fallow: it is not an uncommon practice for some areas to be rested for one or several years, but not sown down to pasture.

III. TOTAL AREA DEVOTED TO CROPS, FALLOW AND PASTURE IN BASE YEAR 1946-47

To overcome the problem of idle land in the Southern and Central Regions this third measure of arable land is considered. While there was a marked expansion of cropland in the Northern Region after say 1940 (due to improved mechanization and greater knowledge of the capabilities and the methods of working of the heavy soils found in the Region) it would seem that there has been comparatively little expansion of the total arable area in the Southern and Central Regions since the late 1930's. Table 3 shows that the figures for crops plus pasture in 1946-47 were approximately the same as in 1935-39. It is assumed, therefore, that there has been no net expansion or depletion of the total arable area in these two Regions since the peak year of 1946-47.

These three measures of arable area are used as the basis for three series showing the proportion of arable land under various uses. For the purpose of comparison the crops have been divided into the following basic categories:—

- (i) Wheat for grain plus fallow.
- (ii) Other cash grains less oats.²⁰
- (iii) Hay and fodder crops plus oats for grain.

²⁰ Oats grain nowadays is grown mainly for stock feed, in the form of fodder reserves. The Sheep Industry Survey, 1954, indicated that oats grain made up only 2 per cent of the cereal returns on the 120 New South Wales properties in the survey receiving returns from cereals. Wheat accounted for 88 per cent of the cereal returns. *op. cit.*, pp. 39-40.

Tables showing the area under the particular crops in each Division are given in Appendix II.

TABLE 2

Fallow and Pasture Acreages, Wheatgrowing Regions, N.S.W., 1945 to 1960
(‘000 acres)

Year	Fallow			Pasture		
	Northern Region	Central Region	Southern Region	Northern Region	Central Region	Southern Region
1944-45	121*	566*	1213*	n.a.	n.a.	n.a.
1945-46	130*	671*	1503*	n.a.	n.a.	n.a.
1946-47	167*	751*	1595*	18	53	595
1947-48	152*	529*	1309*	10	58	616
1948-49	151*	542*	1264*	22	74	738
1949-50	131	486	1100	40	132	1048
1950-51	119*	383*	858*	26	126	1146
1951-52	140*	428*	676*	28	174	1412
1952-53	142	447	1085	52	253	1614
1953-54	145*	419*	776*	130	384	2303
1954-55	164*	416*	713*	198	474	2676
1955-56	122	328	671	242	591	3017
1956-57	158*	319*	478*	422	727	3585
1957-58	253	457	670	435	821	3680
1958-59	213	505	880	310	758	3648
1959-60	228	492	817	306	726	3508

* Author's estimates based on the proportion of Fallow to Wheat.

n.a.—not available.

Source: Compiled from Bureau of Census and Statistics, *Statistical Register of New South Wales*.

TABLE 3

Statistics Relating to Fallow, Crop and Pasture Acreage, Wheatgrowing Regions, N.S.W.
(‘000 acres)

Year	Northern Region			Central Region			Southern Region		
	Wheat + Fallow	All Crops + Fallow	All Crops + Fallow + Pasture	Wheat + Fallow	All Crops + Fallow	All Crops + Fallow + Pasture	Wheat + Fallow	All Crops + Fallow	All Crops + Fallow + Pasture
Average 1935-39	793	958	1024	2048	2268	2347	3913	4623	4880
1944-45	709	1002	..	1384	1760	..	2459	3158	..
1945-46	833	1110	..	1752	2129	..	3198	4014	..
1946-47	914	1188	1206	2030	2329	2382	3691	4322	4917
1947-48	1127	1362	1372	1964	2316	2374	3537	4123	4839
1948-49	1037	1234	1256	1555	1782	1856	3085	3584	4332
1949-50	1017	1231	1271	1528	1759	1891	2862	3394	4442
1950-51	863	1087	1113	1230	1387	1513	2373	2824	3937
1951-52	842	1160	1188	1161	1461	1632	1785	2439	3851
1952-53	966	1350	1422	1259	1648	1901	1969	2569	4210
1953-54	1015	1390	1520	1332	1691	2075	2124	2618	4927
1954-55	979	1470	1668	1285	1782	2256	1767	2463	5133
1955-56	1008	1534	1776	1204	1701	2292	1674	2420	5437
1956-57	780	1320	1742	814	1141	2036	1021	1354	4939
1957-58	1015	1683	2118	1131	1669	2490	1370	2024	5704
1958-59	1180	1951	2261	1479	2245	3003	1936	2845	6493
1959-60	1308	2100	2406	1673	2333	3059	2261	2959	6467

Source: Computed from Bureau of Census and Statistics, *Statistical Register of New South Wales*.

Series I uses all crops—plus—fallow each year as a measure of arable area, Series II, all crops—plus—fallow—plus—pasture each year, and Series III the base year estimates. In Series II, pastures are included with hay and fodder crops and oats as “fodder”. In Series III “fodder” is a residual category—including pasture and “idle” land up to the value of the total arable area estimate.

Because of the importance of pasture as a use of arable land, Series I gives a poor measure of the relative importance of the individual uses in the overall pattern of land use. Series II is a much more useful measure; e.g. in showing the fluctuations in wheat plantings. With Series I when land is transferred from crop to pasture and *vice versa* both numerator and denominator of the measure move in the same direction, which has the effect of concealing the true magnitude of the change. With Series II, as pastures are included in the denominator, the change in pastures compensates the change in all crops and so movements will be more obvious. So long as there is not a sudden increase in pastures on non-arable land, Series II should then indicate trends fairly well.

The importance of the overestimate of arable area resulting from the inclusion of all pastures as arable depends on the type of, and relative importance of, the pastures. The low proportion of pastures to all crops and the difficulties associated with pasture establishment in the Northern Region, suggests that the overstatement of arable area resulting from the inclusion of pastures is not important in this Region. Also idle land is not of such importance in this Region because of the more favourable climatic and soil fertility conditions. Thus for the developing Northern Region Series II is considered to give a good measure of the relative importance of the various uses of arable land. One of the drawbacks with Series II as regards the Southern and Central Regions is the inclusion of an unknown fraction of non-arable pasture areas. Such land undoubtedly forms an increasing part of the total for the Southern Region in recent years. For this reason Series II tends to underestimate, progressively, the relative importance of wheat and other cash crops in the Southern as compared with the Northern Region. The other main limitation of Series II is the exclusion of “resting” or “idle” land from the estimate of arable area. Such land was of some magnitude in the early fifties and the understatement of arable areas resulting from its exclusion means that in Series II the relative importance of wheat in these two Regions is greatly overstated around 1950-51.

In Series III an attempt is made to overcome these weaknesses by relating the areas of the various crops to an estimate of the total area of arable land. This estimate may or may not be a good one. It is known that some marginal land has been removed from the arable classification since 1946-47, but due to clearing, etc., some land has been made arable. The idle or resting land has all been grouped as “fodder”. Although conditions favoured a shift from wheat production to wool production, land so released would not immediately be sown down to pastures because of the expense, uncertainty and state of knowledge regarding pasture improvement. Such land would, however, be providing fodder for livestock in the form of volunteer pasture and weed growth; thus it should be included as fodder. It is possible that in 1946-47 the crops, fallow and pasture total included

some non-arable land. This possible overestimate of the total cropable area would mean that the relative importance of wheat was understated, i.e., the decline in wheat accentuated, in the Southern Region. In as much as there has been any expansion of the total arable area in the Southern Region this Series III will tend to overstate the relative importance of wheat. However, it is considered that there has been little net expansion of arable area in this Region.

It is felt that the above three measures showing the relative importance of the various uses of arable land give a more correct indication of the shifts that have occurred in the New South Wales wheat areas than does a consideration of crop figures alone. No matter what assumptions are made about the amount of arable area it can be seen from Table 4 that there was a general decline in the relative importance of wheat production from 1949-50 to 1956-57 and an increase in the use of arable land for "fodder" production; since 1956-57 the trend has reversed. The interesting point is that the Northern Region also showed a great decrease in the relative importance of wheat-growing even though wheat acreage figures alone did not reflect this. The trends in land use have thus been similar, not dissimilar, in the northern and southern areas of the "wheat-belt", even though widely different agronomic conditions prevailed.

This contrasts with McLennan's statement of 1957 that the increased pastures and sheep numbers, and the decreased wheat acreage indicated a changing pattern of land use in the southern regions whilst in the north "it seems that no particular form of land use has grown at the expense of another."²¹

The essential difference which seems to exist between the various parts of the wheat belt is that wheat acreage occupies a greater absolute importance in the use of arable area in the Northern Region than in the Southern Region. This can be explained on the grounds that the Northern Region has a comparative advantage in wheat production compared with the Southern Region. Also the development in arable area as discussed earlier has some effect.

The Northern Region is agronomically more suited to the specialized production of cash crops than is the Southern Region: the general fertility levels are higher and environmental conditions more favourable to the production of high quality grain. The average yield per acre for the years 1946-47 to 1958-59 for the Northern Region was 17.5 bushels per acre compared with 15.0 bushels per acre in the Southern Region. These yields refer to planted acres and do not take account of acres under fallow. In the Southern Region fallowing is an important practice, there being each year an area about equivalent to four-fifths of the planted acreage; in the Northern Region, however, fallow areas are equivalent to only about one-third of planted areas. Thus the yield of wheat per acre of wheat—plus—fallow favours the Northern Region even more than does the yield per planted acre. Another factor contributing to this comparative advantage is that costs of production are lower in the Northern Region in so much as the higher soil fertility level results in the need for less fertilizer.²²

²¹ McLennan, *op. cit.* (1957), p. 138.

²² The average amount of superphosphate used on crops during the period 1952 to 1956 was 17.3 cwt. per thousand acres in the Northern Region and 448.9 cwt. per thousand acres in the Southern Region.

TABLE 4

Various Measures of the Relative Importance of the

Year	Wheat				
	Series I*	Series II†	Series III‡	Series I§	
NORTHERN					
Average 1934-35 to 1938-39	83.9	78.5	..	14.3	
1946-47	76.9	75.8	..	21.7	
1949-50	82.6	80.0	..	16.1	
1950-51	79.4	77.5	..	19.5	
1951-52	72.6	70.9	..	24.8	
1952-53	71.6	67.9	..	26.1	
1953-54	73.0	66.8	..	25.5	
1954-55	66.6	58.7	..	31.6	
1955-56	65.7	56.8	..	31.0	
1956-57	59.1	44.8	..	35.4	
1957-58	60.3	47.9	..	35.1	
1958-59	60.5	52.2	..	34.5	
1959-60	62.3	54.4	..	33.2	
CENTRAL					
Average 1934-35 to 1938-39	85.4	82.3	75.9	14.3	
1946-47	87.2	85.2	85.2	12.3	
1949-50	86.8	80.8	64.1	12.8	
1950-51	88.7	81.3	51.6	11.3	
1951-52	79.5	71.1	48.7	20.0	
1952-53	76.4	66.2	52.9	22.9	
1953-54	78.8	64.2	55.9	20.6	
1954-55	72.1	57.0	53.9	27.0	
1955-56	71.1	52.5	50.5	27.9	
1956-57	71.3	40.0	34.2	26.6	
1957-58	67.8	45.4	47.5	30.8	
1958-59	65.4	48.9	62.1	33.2	
1959-60	71.7	54.7	70.2	26.8	
SOUTHERN					
Average 1934-35 to 1938-39	82.0	77.7	77.9	16.1	
1946-47	85.4	75.1	75.1	14.2	
1949-50	84.3	64.4	58.2	13.3	
1950-51	84.0	59.7	48.3	14.7	
1951-52	73.2	46.4	36.3	24.5	
1952-53	76.6	46.8	40.0	20.7	
1953-54	81.1	43.1	43.2	19.3	
1954-55	71.7	34.4	35.9	25.9	
1955-56	69.2	30.8	34.0	28.4	
1956-57	75.4	20.7	20.8	24.6	
1957-58	67.7	24.0	27.9	29.4	
1958-59	68.0	29.8	39.4	28.7	
1959-60	76.4	35.0	46.0	20.6	

* Wheat plus Fallow/All crops plus Fallow.

† Wheat plus Fallow/All Crops plus Fallow plus Pasture.

‡ Wheat plus Fallow/Arable Area in 1946-47.

§ Hay and Fodder plus Oats Grain/All Crops plus Fallow.

|| Hay and Fodder plus Oats plus Pasture/All Crop plus Fallow and Pasture.

Uses of Arable Land (Expressed as a Percentage)

“ Fodder ”		Other Cash Grains		
Series II	Series III¶	Series I**	Series II††	Series III‡‡
REGION				
20.0	..	1.57	1.46	..
22.9	..	0.84	0.83	..
18.7	..	0.49	0.47	..
21.3	..	0.55	0.54	..
26.6	..	0.86	0.84	..
29.8	..	0.67	0.63	..
31.8	..	1.01	0.92	..
39.7	..	1.43	1.26	..
40.4	..	2.54	2.20	..
51.0	..	4.92	3.73	..
48.4	..	4.10	3.26	..
43.5	..	3.69	3.19	..
41.7	..	3.52	3.08	..
REGION				
17.4	23.9 (12.7)	0.19	0.18	0.17
13.8	13.8 (12.0)	0.30	0.29	0.29
18.9	35.8 (9.4)	0.11	0.11	0.08
18.7	48.3 (6.6)	0.14	0.13	0.08
28.6	51.2 (12.3)	0.14	0.12	0.08
33.1	46.9 (15.8)	0.24	0.21	0.17
35.3	43.9 (14.6)	0.30	0.24	0.21
42.4	45.7 (20.2)	0.51	0.40	0.38
46.5	49.1 (19.9)	0.53	0.39	0.38
50.6	64.9 (12.8)	1.84	1.03	0.88
53.6	51.5 (21.6)	1.38	0.92	0.97
50.0	36.8 (31.3)	1.20	0.90	1.13
43.9	29.0 (25.9)	0.82	0.62	0.80
REGION				
20.4	20.8 (15.3)	0.30	0.28	0.29
24.5	24.5 (12.4)	0.51	0.45	0.45
33.7	41.6 (9.2)	0.29	0.23	0.20
39.3	51.5 (8.5)	0.28	0.20	0.16
52.2	63.5 (12.2)	0.45	0.29	0.22
51.6	59.7 (10.8)	0.54	0.33	0.28
57.0	56.3 (10.3)	0.92	0.49	0.49
64.6	63.6 (13.0)	1.06	0.51	0.53
68.1	65.3 (14.0)	1.45	0.64	0.71
79.3	78.7 (6.8)	1.85	0.51	0.51
74.9	71.1 (12.1)	2.37	0.84	0.98
68.8	59.2 (16.6)	2.42	0.06	1.40
63.7	52.4 (12.4)	2.74	1.25	1.65

¶ The unbracketed figures represent the residual category based on the assumption that all the arable area not under cash grain crops is used for “fodder” production. The proportion of arable area, 1946-47 base, under hay and fodder-plus-oats grain (i.e. excluding pastures) is shown in brackets. The difference between the two represents pastures on arable land, and arable area which has disappeared from the statistics.

** Other Cash Crops. All Crops plus Fallow.

†† Other Cash Crops. All Crops plus Fallow plus Pasture.

‡‡ Other Cash Crops. Arable Area in 1946-47

As regards livestock production, the Northern Region is at a comparative disadvantage: the low productivity of natural pastures in the winter restricts the "safe" carrying capacity to low levels, while improved pastures are more readily established in the Southern Region and the winter feed problem is not as acute.

Because of the comparative advantage in wheat production and the comparative disadvantage in livestock production it is to be expected that under any given price relationships there would be a greater proportion of arable land under wheat or other cash crops in the Northern Region than in the Southern Region. There is no reason for assuming, however, that this situation should cause a differing trend in land use following changes in the relative product prices.

6. THE CAUSAL FACTORS

No single factor can be conclusively shown to be sufficient to account for the reduction in the relative importance of wheat production which took place between 1949-50 and 1956-57. In fact those who have investigated the problem seem all to have been impressed by the multiplicity of the factors operating. The most important factors which have been suggested include the following²³:—

- (i) Economic conditions favoured stock raising: favourable product prices; high farm incomes; increased costs and shortages associated with farming.
- (ii) Soil fertility decline together with an increase in skeleton weed and wild oats.
- (iii) Seasonal conditions—favouring the establishment of pastures.
- (iv) Myxomatosis—"favouring grazing".²⁴

The raw data relating to wheat acreages tend to confirm the importance of agronomic factors. These factors—declining fertility, skeleton weed, availability of subterranean clover as a pasture species were operative in the southern part of the State where wheat acreages declined and not operative in the north, where wheat acreage was actually increasing. The measures presented in this study indicate that actually similar trends occurred in both areas. Thus these agronomic factors cannot be considered as sufficient reason for the declining trend in wheat production up to 1956-57.

Seasonal conditions during the late 1940's and early 1950's were generally good. The succession of more than usually wet years, particularly in the south, restricted wheat sowings but proved particularly favourable for the establishment of pastures. The importance of myxomatosis in the eradication of rabbits is indisputable. Whether the decline in rabbit numbers

²³ F. C. Butler, "Agriculture in Southern New South Wales, 1830-1958". *The Agricultural Gazette of New South Wales*, Vol. 70, Part 6 (June, 1959), p. 291.

McLennan, *op. cit.* (1957, pp. 136-7.

Parish, *op. cit.*, pp. 45-41.

²⁴ McLennan, *loc. cit.*

favoured grazing more than it did cash crop production is not as obvious as it seems. The availability of feed production on other than arable land may have actually favoured wheat production.

The effect of shortages of materials and equipment in the period since 1949-50 was probably not very great; fencing material was perhaps the most important single item. What relative effect these shortages had on wheat and stock production is difficult to assess. Little factual information is available concerning the differing costs of production for wheat and wool: the allocation of joint costs poses a considerable problem. Wheat production is certainly more intensive, but the greater use of fodder crops and pastures on arable land for the stock enterprises would increase the intensity of these enterprises. Thus it would be difficult to say if these cost problems favoured one or the other.

In specific years and in particular areas the factors discussed above facilitated, to varying degrees, the movement away from cash crop production. However, these factors are not very helpful in explaining the causes for the swing back to wheat production after 1956-57 or the fact that similar trends occurred in the northern and southern areas of the wheat-belt.

This study shows that even though widely different conditions of rainfall, temperature, weed infestation, pasture availability, soil fertility, historical development, etc., prevail, there have been broadly similar trends in the use of arable land throughout the New South Wales wheat-belt. This similarity in land use together with the outcome of the above discussion seem to suggest that the changes in land use evident on wheat-sheep farms in New South Wales were mainly responses to changes in the relative product prices, i.e., the prevailing economic conditions constitute the underlying factor motivating farmers' production decisions in the aggregate. That farmers are aware of, and take account of, the economic environment has been brought out in the results of previous studies.²⁵ The changing economic conditions (and seasonal conditions) are the only factors discussed which apply to the whole area for the whole period. The wool/wheat prices ratio, together with barley and sorghum price ratios are shown in Table 5.

Not all of the facets of the changes in land use have been considered in detail; for example non-arable land is treated only implicitly; changes in the type and numbers of livestock have not been closely investigated. However, it is considered that the measures outlined above give a better indication than the raw data of trends in the relative importance of wheat production during the 1950's and that the hypothesis put forward regarding the underlying cause for the changes in land use is plausible.

²⁵ D. B. Williams, R. M. Parish and A. G. Bollen, "Attitudes and Expectations of Wheatgrowers in New South Wales", this *Review*, Vol. 21, No. 1 (March, 1953), pp. 11-14.

Parish, *op. cit.*

TABLE 5

*Prices Ratios for some Alternative Products, Wheat-Sheep Areas N.S.W.
1945-1959**

Year	Wool Wheat	Malting Barley Wheat	Sorghum Wheat
1944-45	0.25	0.90	0.63
1945-46	0.18	0.71	0.64
1946-47	0.20	0.44	0.39
1947-48	0.24	0.58	0.47
1948-49	0.37	0.66	0.56
1949-50	0.42	0.58	0.72
1950-51	0.98	0.78	0.01
1951-52	0.48	0.99	0.92
1952-53	0.52	1.18	0.82
1953-54	0.61	1.08	0.90
1954-55	0.60	1.21	0.81
1955-56	0.51	1.21	0.81
1956-57	0.60	1.01	0.74
1957-58	0.46	1.02	0.89
1958-59	0.37	1.21	0.85

* The crop prices used are the net returns to the grower as estimated by the Bureau of Census and Statistics, Sydney.

The wool price is the weighted average for the season.

APPENDIX I

Movements in Some Land Use Statistics by Divisions, New South Wales, 1920-21 to 1958-59

As mentioned in the text, crop acreages refer to the crop which was grown during the season shown whilst the pasture acreages and stock numbers are those as at the end of the period. Because preparations for the following crop are usually well under way before the statistics are collected the stock and pasture figures should be looked at in association with the crop areas shown for the following season if a comparison is made between crop acreages and livestock numbers.

The boundaries of Statistical Divisions were changed substantially in 1923, the Western Slopes and Plains Divisions being most affected. This change would have no effect, as far as the last decade is concerned.

In 1955-56, the list of holdings used in the collection of agricultural and pastoral statistics in New South Wales was reconciled with lists of rateable land of one acre or more recorded by country shires for rating purposes. Previously, areas of less than ten acres were excluded. After

elimination of rateable lands not used for agricultural and pastoral purposes, this reconciliation led to the addition of 4,784 land holdings totalling 3,131,462 acres, to the annual collection. Most of these holdings were used for grazing and were lightly stocked and their inclusion should have little real effect, as far as this investigation is concerned, except to give an exaggerated increase to the 1955-56 figures.

There are four broad sources of errors, in measurement of economic statistics: (i) sources of a conceptual nature; (ii) sources of voluntary misrepresentation; (iii) sources of inadvertent misrepresentation; and (iv) incompleteness of available data. These four classes are, of course, not mutually exclusive.²⁰

All four of these groups could be exemplified concerning the data used in this study. However, having no alternative sources and no way of "correcting" the data, it has been assumed that it is a correct representation.

There are, however, several points which should be taken into consideration when interpreting the following graphs:

Pastures: From 1920-21 to 1930-31 the figure collected referred to the "area sown with grasses". From 1931-32 to 1940-41 to the "total area sown with grasses", and from 1946-47 to the "area under sown grasses and clovers (excluding native grasses but including paspalum)". From 1941-42 to 1944-45 pasture acreages were not collected.

Fodder: This includes all the hay and green food areas and the acreage of oats for grain. The acreages for each Division since 1930-31 are also shown in Appendix II. These acreages and those for wheat refer to planted acreages.

Cattle: Prior to 1944-45 beef cattle figures were not available separately so figures for total cattle were used until that year. After 1944-45 only beef cattle numbers are used. Except for the Coastal Divisions the inclusion of dairy cattle makes little difference. Up to 1930-31 stock figures were collected as at June 30 and from then onwards as at March 31.

Sheep: Sheep numbers as at March 31 are not a good measure of the carrying capacity over the year in breeding areas as the lamb flock is usually sold by this time. However, the figures should be useful in indicating trends over a period of years—unless there is also a pronounced shift from dry sheep to breeding sheep.

Irrigation: Figures for Hay Irrigation Area and Murrumbidgee Irrigation Area have been deducted from the totals for the Riverina Division. This was done because of the different substitution possibilities on irrigation farms compared with non-irrigation farms.

²⁰ Marc Nerlove, *The Dynamics of Supply: Estimation of Farmers' Response to Price* (Baltimore: John Hopkins Press, 1958), p. 87. For a complete description of the possible errors, etc., see his Chapters IV and Appendix, pp. 87-121.

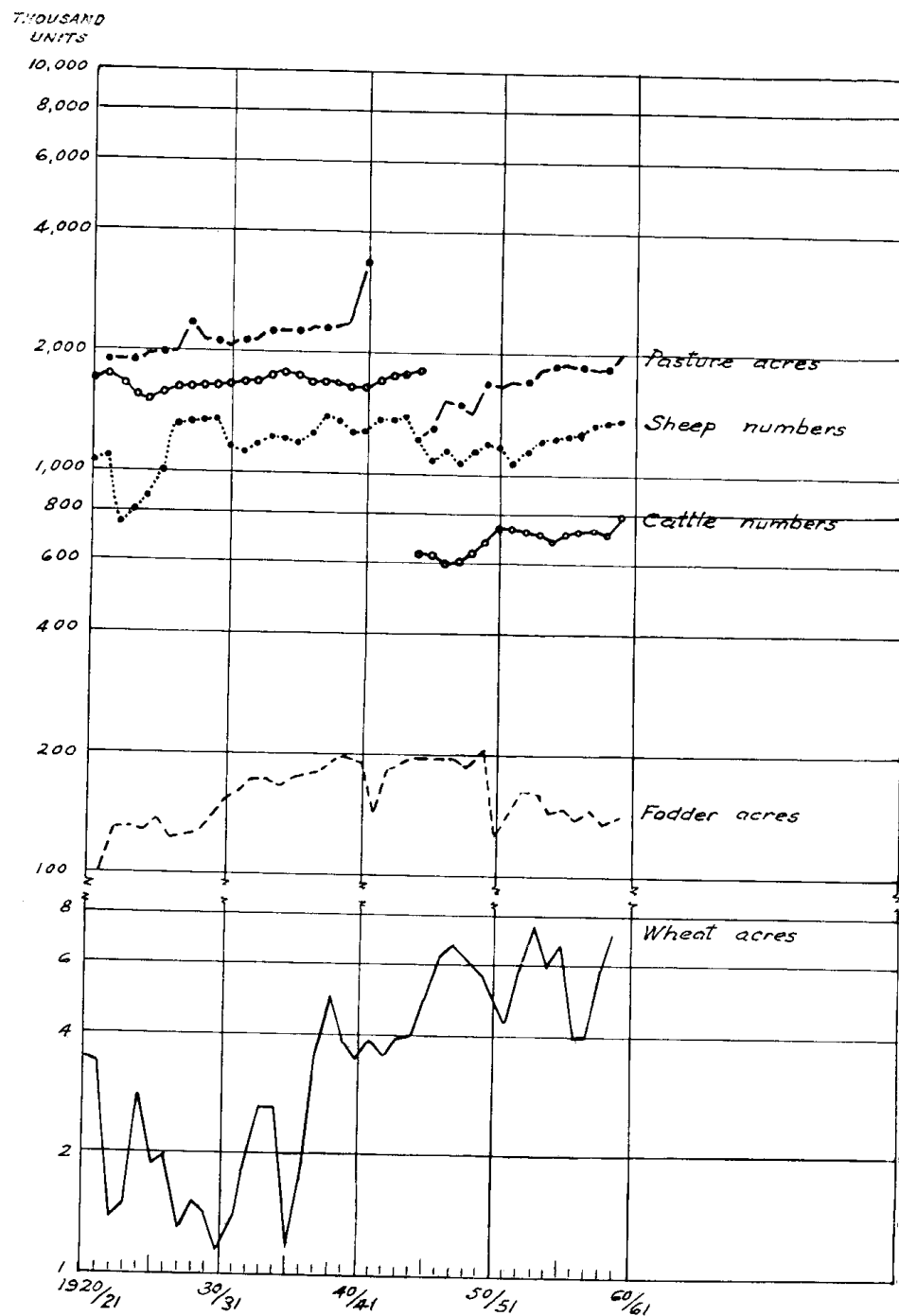


Fig. 4. Movements in Some Land Use Statistics, TOTAL COASTAL Statistical Division, N.S.W. 1920-21 to 1959-60. Since 1944-45 Beef Cattle Only are Included in the "Cattle Numbers". No Pasture Figures Were Collected 1941-42 to 1943-44.

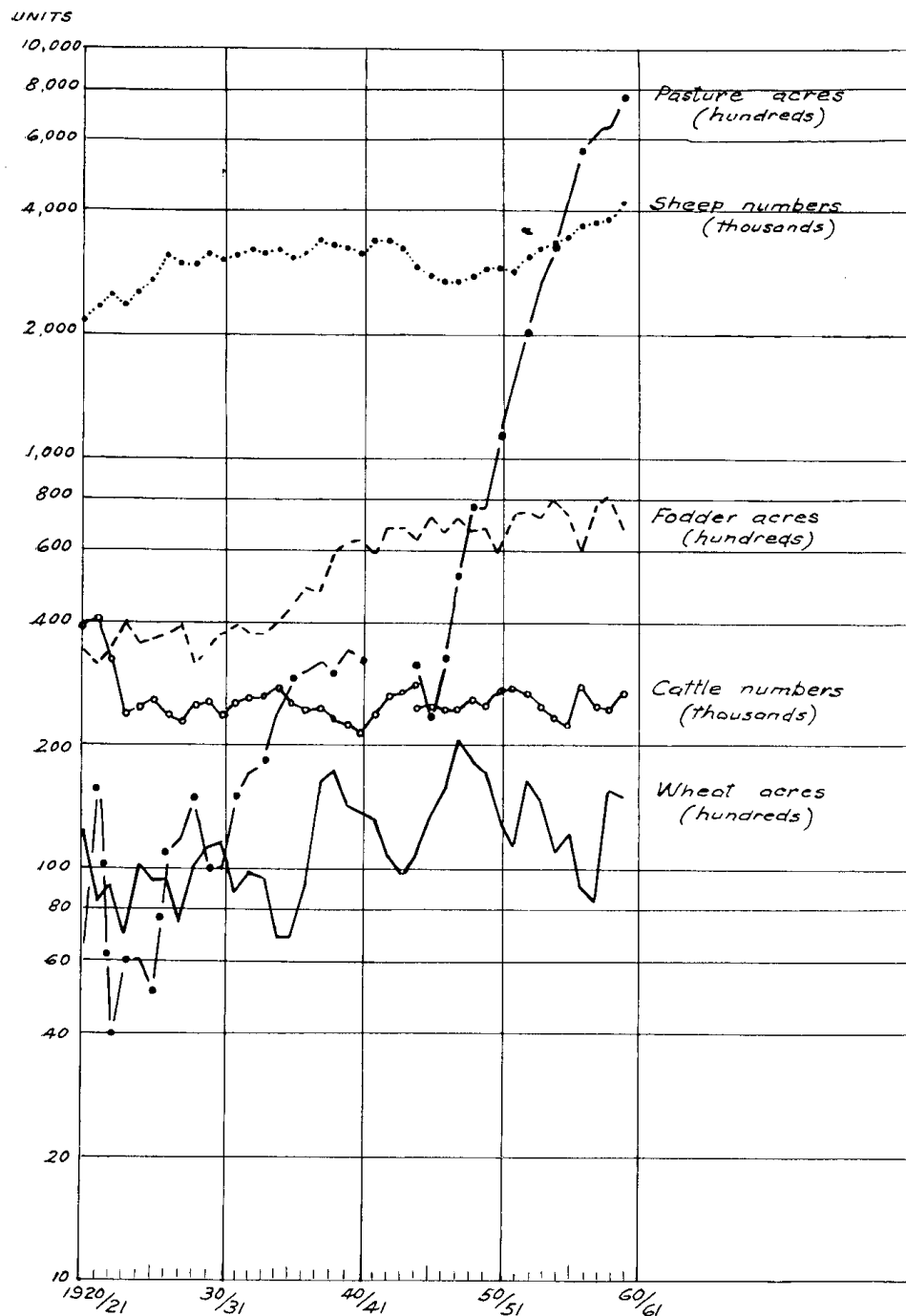


Fig. 5. Movements in Some Land Use Statistics, NORTHERN TABLELAND Statistical Division, N.S.W. 1920-21 to 1959-60. Since 1944-45 Beef Cattle Only are Included in the "Cattle Numbers". No Pasture Figures Were Collected 1941-42 to 1943-44.

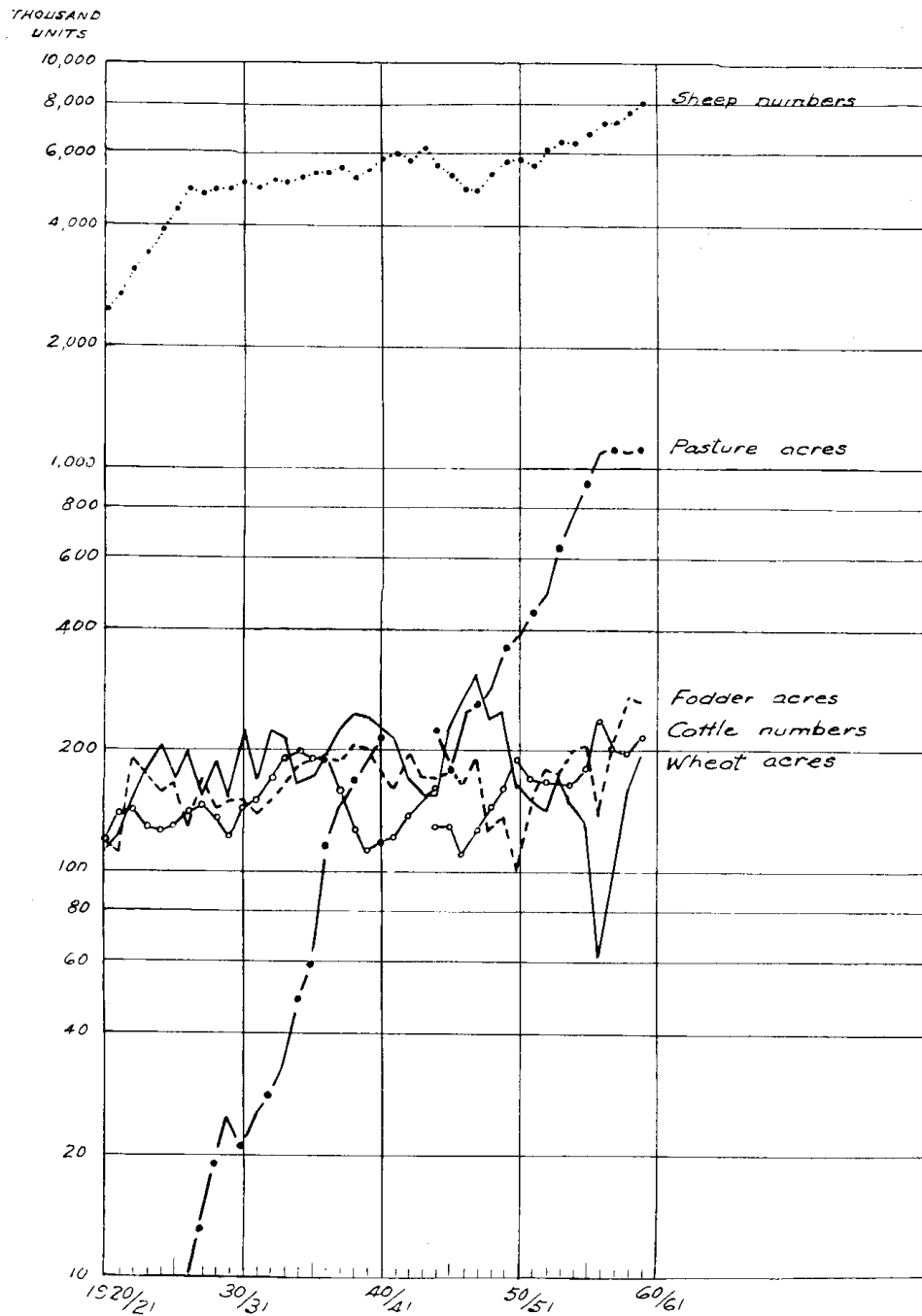


Fig. 6. Movements in Some Land Use Statistics CENTRAL TABLELAND Statistical Division, N.S.W. 1920-21 to 1959-60. Since 1944-45 Beef Cattle Only are Included in the "Cattle Numbers". No Pasture Figures Were Collected 1941-42 to 1943-44.

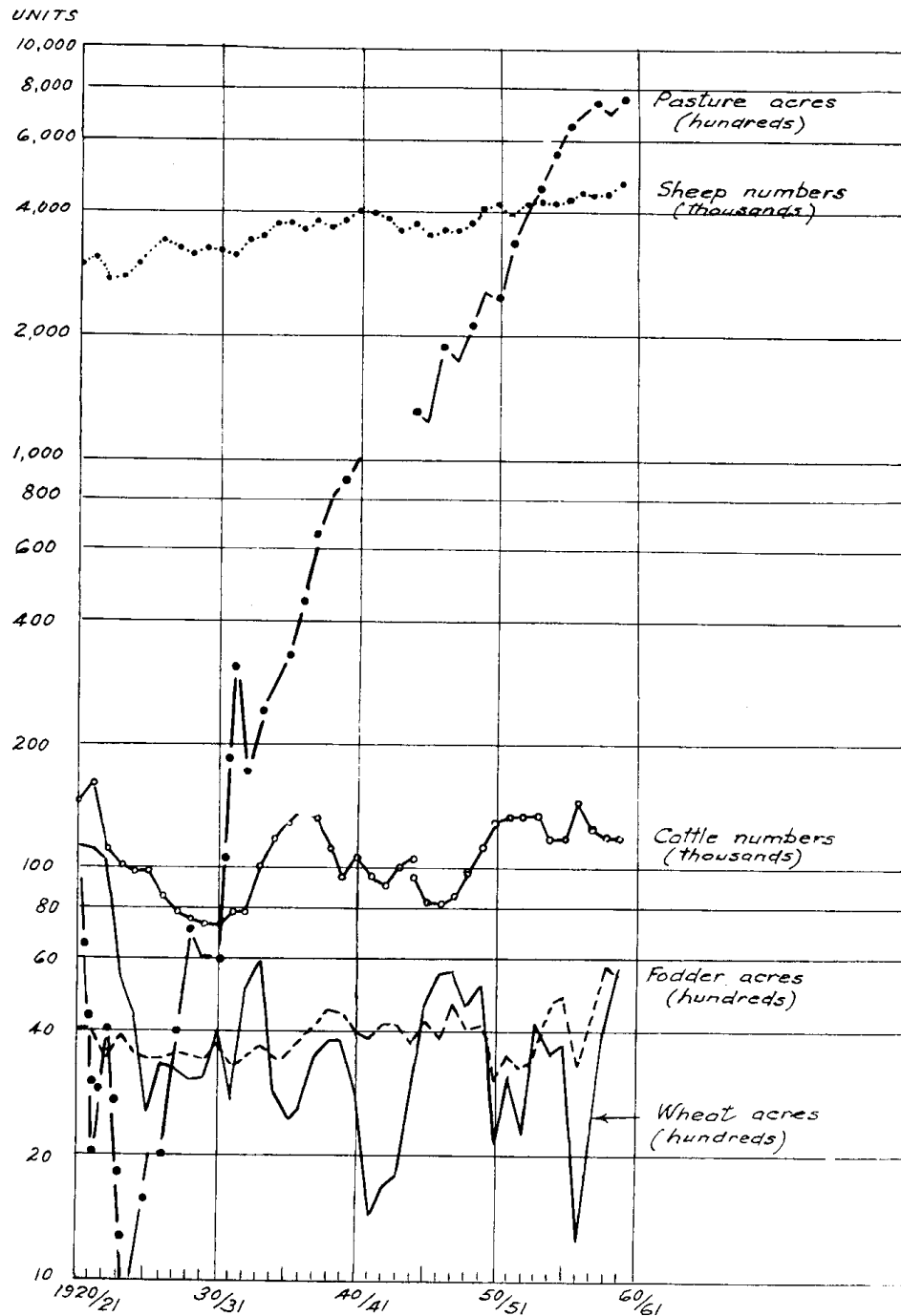


Fig. 7. Movements in Some Land Use Statistics SOUTHERN TABLELAND Statistical Division, N.S.W. 1920-21 to 1959-60. Since 1944-45 Beef Cattle Only are Included in the "Cattle Numbers". No Pasture Figures Were Collected 1941-42 to 1943-44.

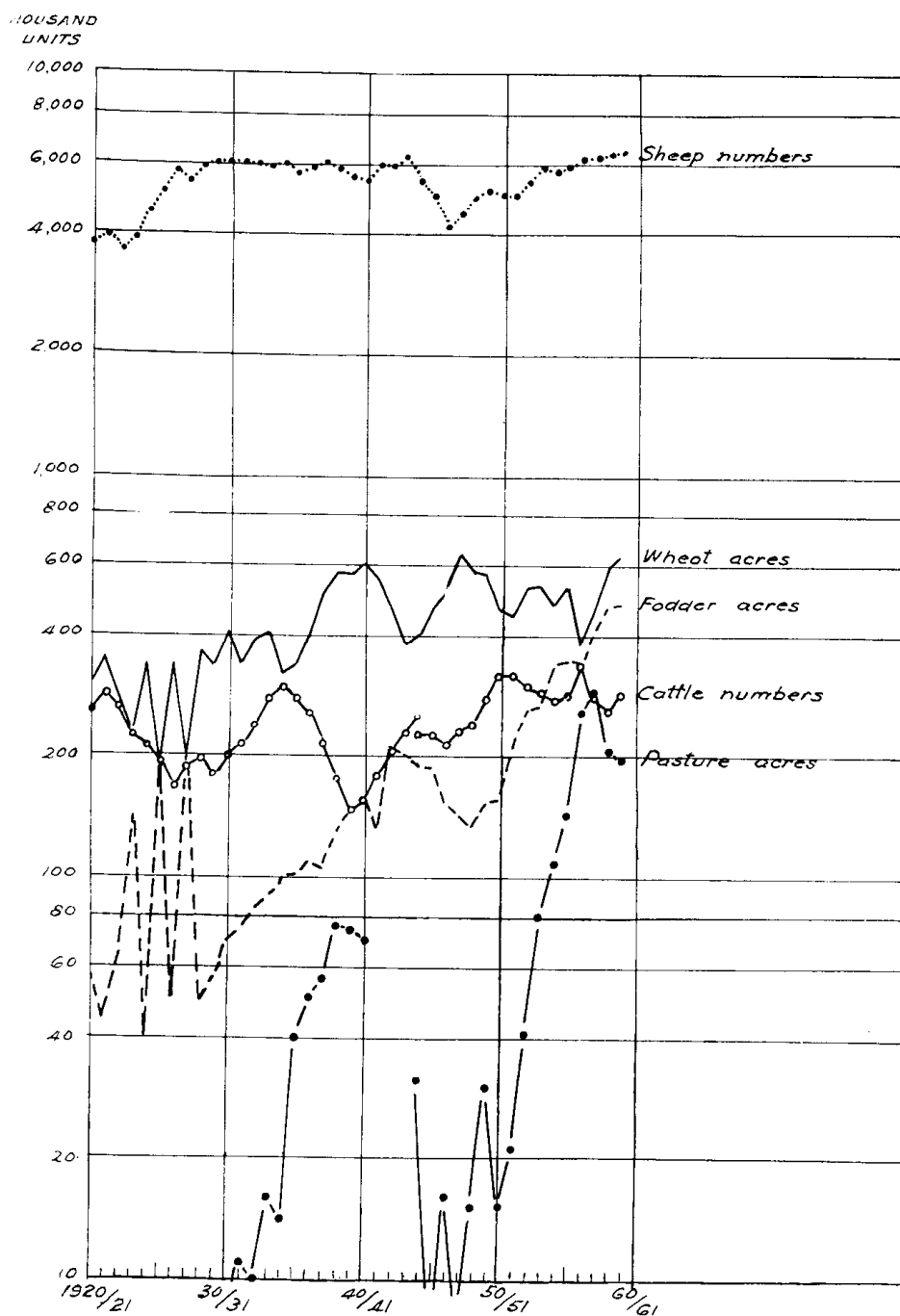


Fig. 8. Movements in Some Land Use Statistics NORTH-WESTERN SLOPE Statistical Division N.S.W. 1920-21 to 1959-60. Since 1944-45 Beef Cattle Only are Included in the "Cattle Numbers". No Pasture Figures Were Collected 1941-42 to 1943-44.

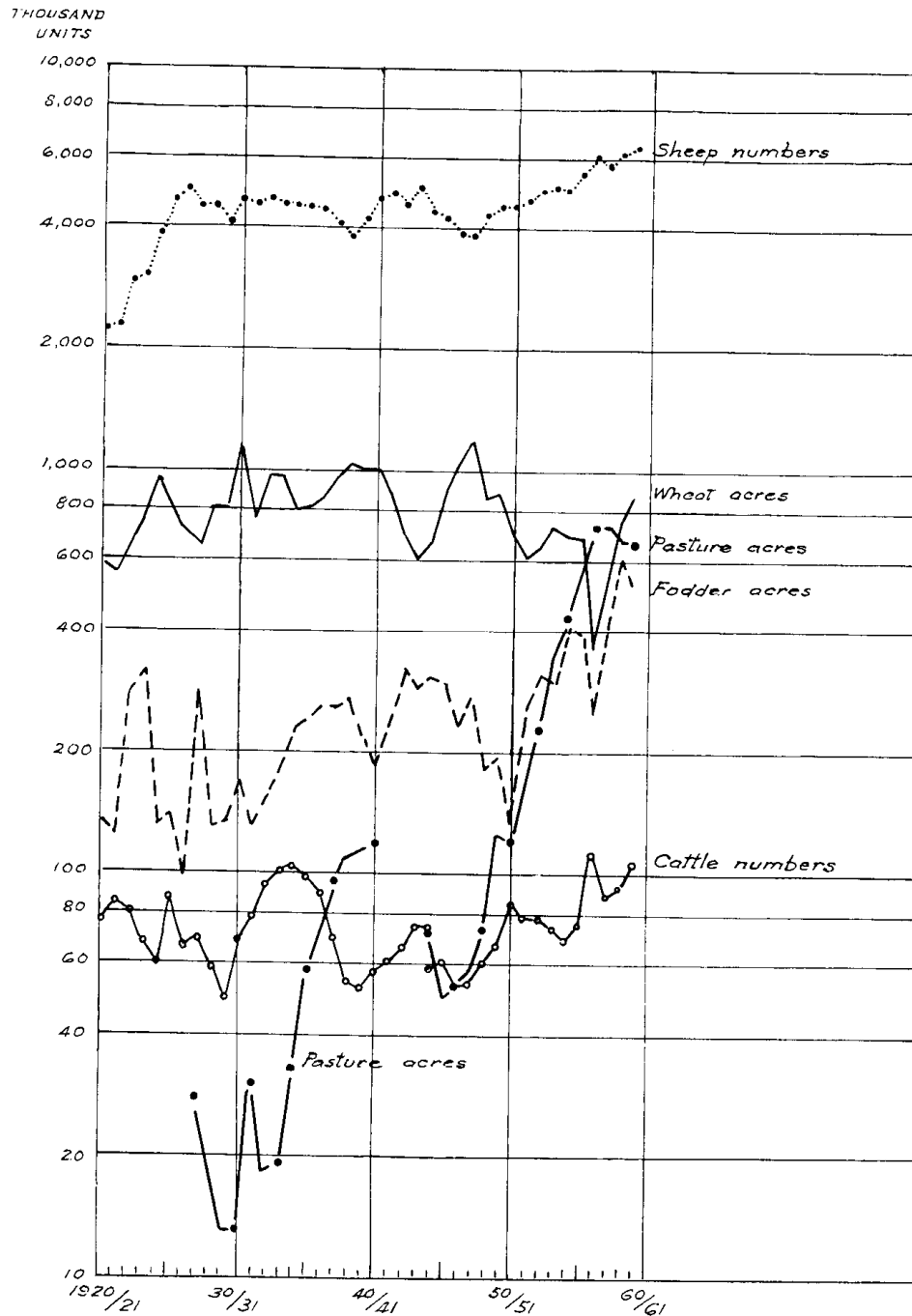


Fig. 9. Movements in Some Land Use Statistics CENTRAL WESTERN SLOPE Statistical Division N.S.W. 1920-21 to 1959-60. Since 1944-45 Beef Cattle Only are Included in the "Cattle Numbers". No Pasture Figures Were Collected 1941-42 to 1943-44.

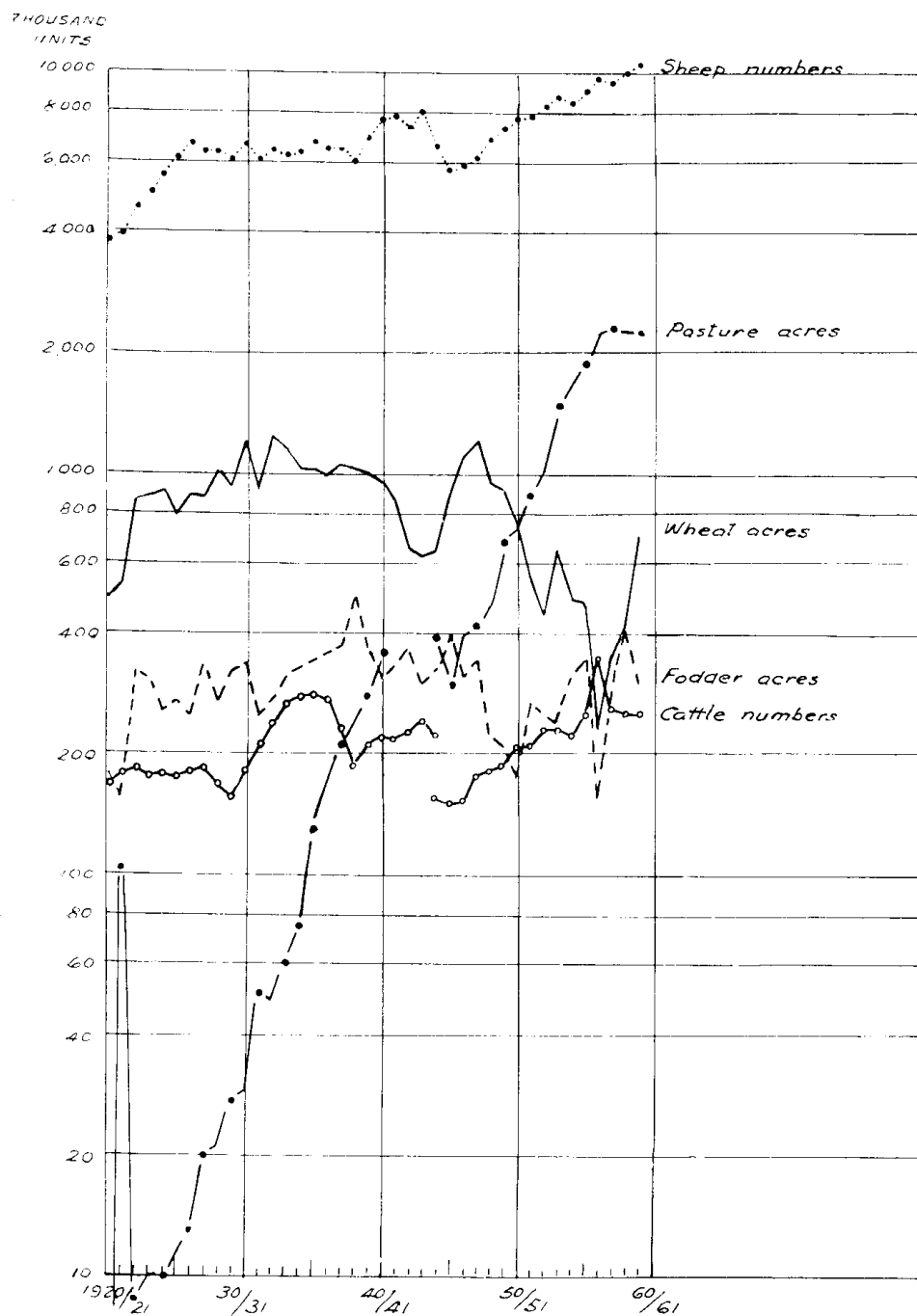


Fig. 10. Movements in Some Land Use Statistics SOUTH-WESTERN SLOPE Statistical Division N.S.W. 1920-21 to 1959-60. Since 1944-45 Beef Cattle Only are Included in the "Cattle Numbers". No Pasture Figures Were Collected 1941-42 to 1943-44.

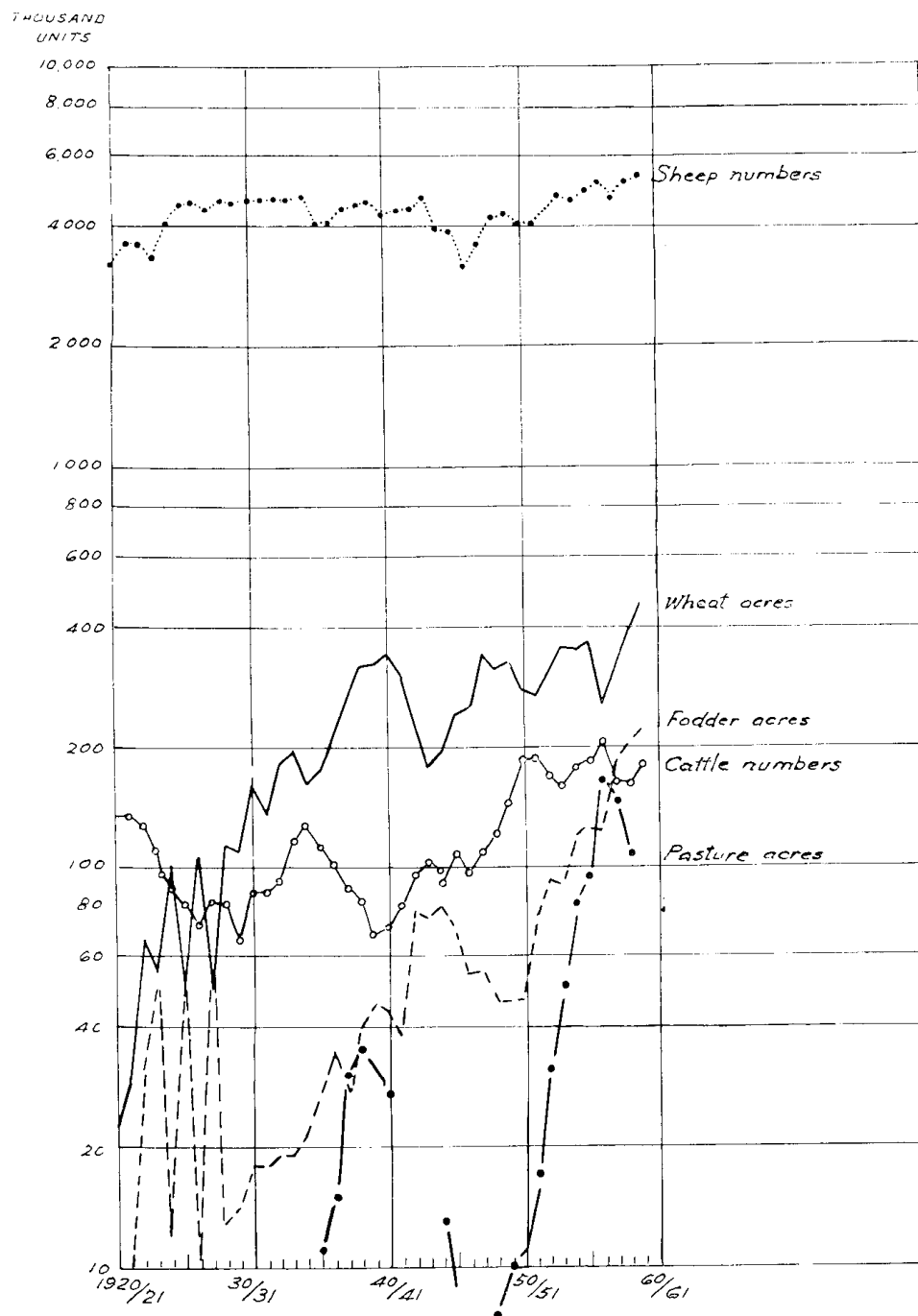


Fig. 11. Movements in Some Land Use Statistics NORTH CENTRAL PLAIN Statistical Division N.S.W. 1920-21 to 1959-60. Since 1944-45 Beef Cattle Only are Included in the "Cattle Numbers". No Pasture Figures Were Collected 1941-42 to 1943-44.

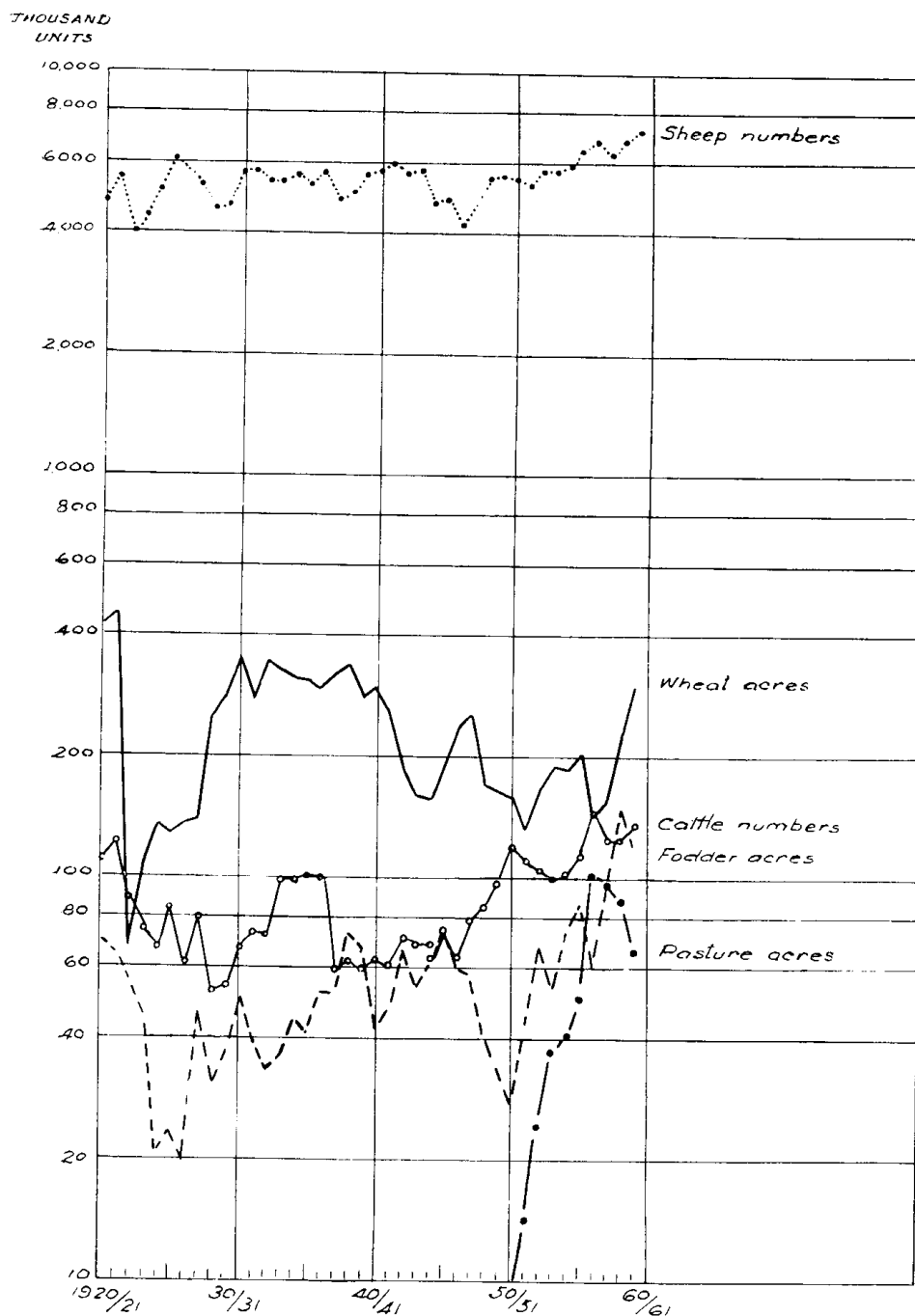


Fig. 12. Movements in Some Land Use Statistics CENTRAL PLAIN Statistical Division N.S.W. 1920-21 to 1959-60. Since 1944-45 Beef Cattle Only are Included in the "Cattle Numbers". No Pasture Figures Were Collected 1941-42 to 1943-44.

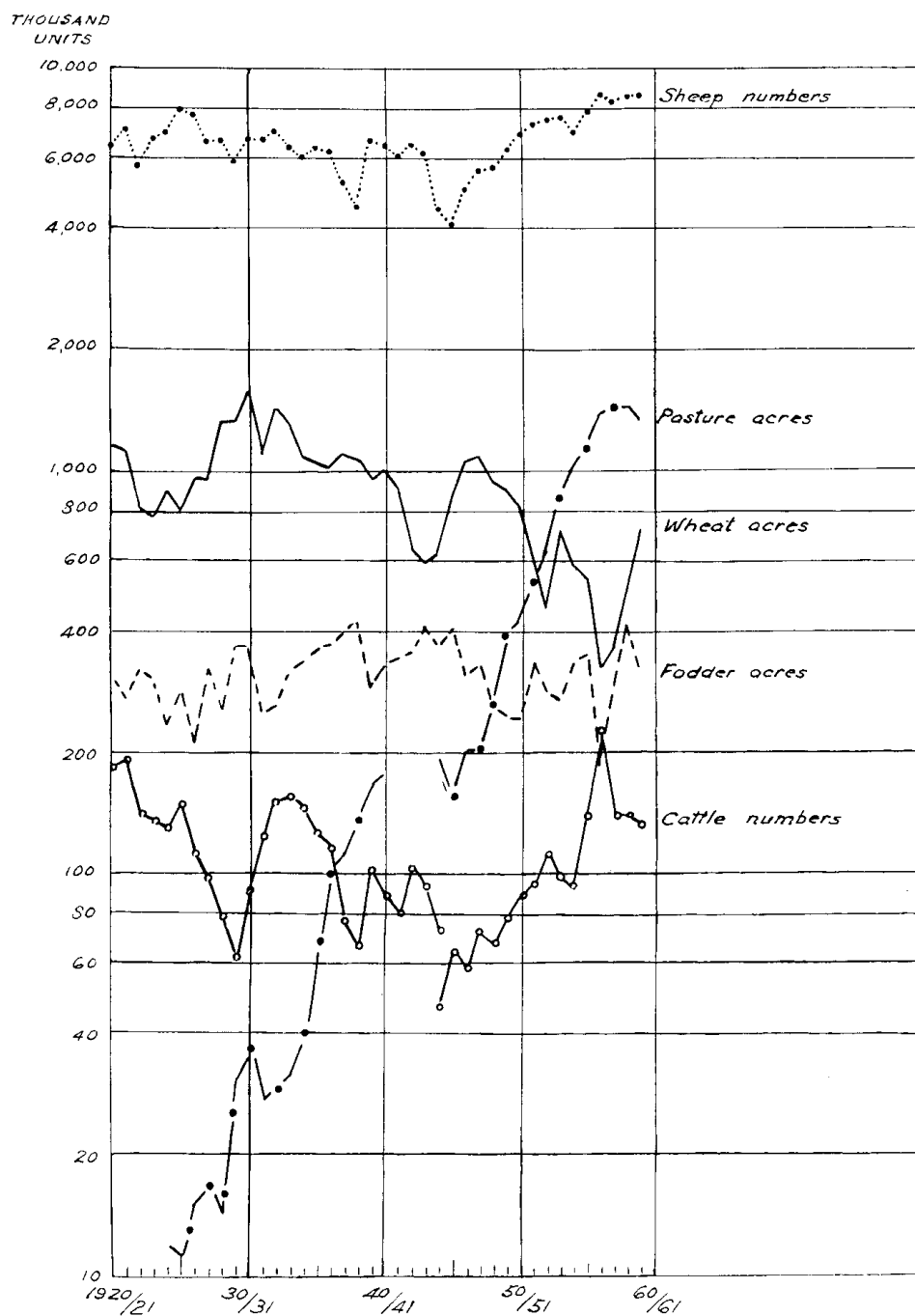


Fig. 13. Movements in Some Land Use Statistics RIVERINA Statistical Division N.S.W. 1920-21 to 1959-60. Since 1944-45 Beef Cattle Only are Included in the "Cattle Numbers". No Pasture Figures Were Collected 1941-42 to 1943-44.

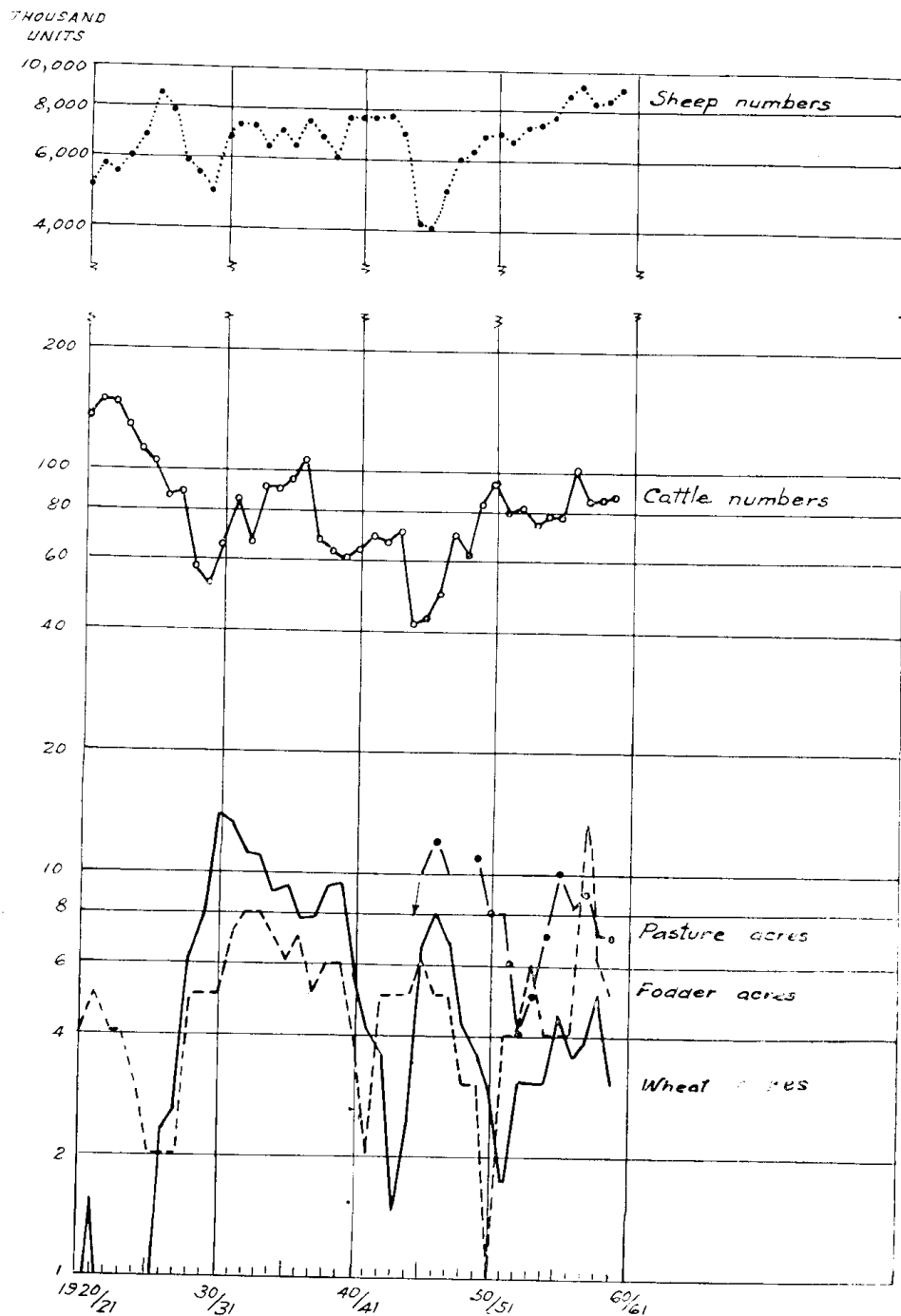


Fig. 14. Movements in Some Land Use Statistics TOTAL WESTERN Statistical Division N.S.W. 1920-21 to 1959-60. Since 1944-45 Beef Cattle Only are Included in the "Cattle Numbers". No Pasture Figures Were Collected 1941-42 to 1943-44.

APPENDIX II
Crop Areas, by Statistical Divisions, New South Wales, 1930-31 to 1959-60
TABLE 6
Coastal Divisions
('00 acres)

Year	Hay and Fodder Crops										Grains Other than Wheat					
	Wheat		Maize		Barley		Oats		Rye		Lucerne		Other	Maize		Broom Millet
	Hay	Green Food	Green Food	Hay	Hay	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food		Milting	Other	
1930-31	13	11	239	3	42	433	96	433	a	11	160	192	299	a	1	11
1931-32	10	10	322	2	38	422	80	422	1	12	156	216	342	a	a	9
1932-33	12	14	238	2	34	426	104	426	1	18	169	227	367	a	1	15
1933-34	13	13	305	2	29	394	97	394	1	24	228	190	410	a	1	14
1934-35	14	11	303	1	24	370	87	370	1	30	213	210	395	a	2	9
1935-36	9	19	322	1	20	394	65	394	1	27	192	227	466	a	1	7
1936-37	6	18	325	1	21	416	56	416	1	26	195	244	450	a	a	11
1937-38	10	17	311	2	24	467	86	467	1	36	201	227	404	a	1	10
1938-39	16	32	371	1	29	485	100	485	2	37	182	251	407	a	1	12
1939-40	14	43	421	1	30	560	92	560	3	43	139	265	354	a	a	13
1940-41	10	28	359	1	27	520	83	520	2	45	206	210	396	a	a	15
1941-42	7	3	292	1	*	530	79	530	*	*	144	262	*	*	*	*
1942-43	21	51	326	5	46	605	138	605	*	*	235	203	155	1	3	3
1943-44	18	40	283	2	28	603	158	603	1	41	231	177	300	1	18	7
1944-45	27	78	292	2	41	548	127	548	1	57	178	230	345	2	2	10
1945-46	42	73	277	3	32	548	121	548	1	47	174	236	358	1	1	14
1946-47	22	44	291	1	20	589	108	589	a	33	187	226	397	1	2	13
1947-48	17	43	254	1	18	591	97	591	1	38	263	198	408	2	2	14
1948-49	18	34	234	1	18	562	75	562	1	39	237	221	368	1	1	14
1949-50	15	32	210	1	18	502	71	502	a	30	207	224	361	a	2	10
1950-51	12	26	154	a	12	393	33	393	a	30	127	165	280	a	2	11
1951-52	7	30	177	1	16	462	49	462	a	40	108	204	283	1	2	15
1952-53	11	26	218	2	16	476	85	476	1	38	170	187	360	2	2	13
1953-54	10	24	189	1	14	470	64	470	a	48	184	211	344	2	3	10
1954-55	7	22	154	a	11	457	68	457	1	50	223	198	357	a	2	3
1955-56	7	28	154	a	12	424	55	424	a	36	168	176	372	1	2	10
1956-57	4	19	134	a	13	397	42	397	1	42	125	168	390	1	2	3
1957-58	5	26	152	a	13	403	61	403	a	35	202	188	336	a	1	10
1958-59	5	19	135	1	6	422	64	422	a	16	237	229	155	3	1	5
1959-60	3	17	107	a	5	429	47	429	a	14	230	234	254	1	2	6

a less than 50 acres.

* not available.

Source: Bureau of Census and Statistics, *Statistical Register of New South Wales*

TABLE 7
Northern Tableland Division
('00 acres)

Year	Hay and Fodder Crops										Grains Other than Wheat									
	Wheat		Maize	Barley		Oats		Rye		Lucerne		Other	Maize	Barley		Oats	Rye	Sorghum	Broom Millet	
	Hay	Green Food	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food			Malting	Other					
1930-31	26	4	10	1	4	201	42	a	2	18	35	2	171	4	2	31	1	*	a	
1931-32	17	9	15	1	3	187	52	a	2	32	30	5	196	a	1	32	2	*	a	
1932-33	18	8	11	1	5	188	46	1	2	27	31	6	217	4	3	41	4	*	a	
1933-34	18	8	12	1	4	182	47	1	2	24	37	5	203	a	2	38	3	*	a	
1934-35	21	17	10	a	1	202	40	a	3	27	33	5	191	a	a	42	1	*	a	
1935-36	17	7	15	a	2	216	49	a	6	18	42	6	189	1	a	51	2	*	a	
1936-37	22	27	20	1	2	205	81	a	4	29	36	6	201	1	a	49	4	*	a	
1937-38	20	5	14	a	1	209	74	a	4	30	38	5	253	1	1	71	5	*	a	
1938-39	30	8	10	2	2	235	89	1	6	37	48	9	273	3	3	103	6	*	a	
1939-40	14	18	16	a	4	200	169	1	1	26	59	11	280	1	6	100	3	*	a	
1940-41	11	22	12	1	3	224	157	2	7	57	47	2	349	a	4	68	8	*	a	
1941-42	12	2	17	*	*	188	157	*	*	57	79	*	287	*	*	71	*	*	*	
1942-43	21	18	14	3	8	202	168	*	*	56	79	9	222	1	*	91	a	*	a	
1943-44	16	17	11	1	7	198	180	a	*	58	72	17	243	1	1	87	1	*	a	
1944-45	25	26	9	1	6	171	171	*	5	46	66	22	257	1	1	78	1	9	a	
1945-46	22	22	10	a	6	188	196	a	6	40	65	34	271	1	a	127	a	6	a	
1946-47	17	22	9	1	3	155	199	1	4	51	52	20	350	2	a	125	1	20	a	
1947-48	12	14	9	1	4	140	214	a	7	55	63	20	262	2	2	168	1	15	a	
1948-49	8	18	6	a	4	117	249	a	9	37	59	24	211	3	2	134	3	3	a	
1949-50	10	16	8	a	4	119	269	a	13	42	70	24	170	1	1	102	3	4	a	
1950-51	7	12	3	a	2	79	273	a	12	33	41	21	120	a	1	87	1	4	a	
1951-52	14	29	5	a	4	84	337	a	10	33	43	49	143	1	a	119	2	3	a	
1952-53	9	19	10	1	3	115	292	a	9	37	44	56	126	1	a	147	a	3	a	
1953-54	8	22	8	1	4	81	355	a	9	44	45	43	121	2	2	90	a	2	a	
1954-55	13	12	4	a	7	93	368	a	5	69	60	32	93	3	1	142	1	2	a	
1955-56	6	17	4	1	6	72	288	a	10	66	67	42	93	7	2	154	a	4	a	
1956-57	2	17	3	a	7	42	252	a	6	44	80	37	89	4	1	98	a	8	5	
1957-58	20	23	6	2	8	51	349	a	4	45	91	59	88	3	2	84	a	3	3	
1958-59	9	15	3	1	3	72	326	a	5	79	89	37	83	4	1	165	a	11	a	
1959-60	4	21	2	a	3	34	292	a	2	60	112	20	99	6	2	121	1	9	a	

a less than 50 acres.

* not available.

Source: Bureau of Census and Statistics, Statistical Register of New South Wales.

TABLE 8
Central Tableland Division
(‘00 acres)

Year	Hay and Fodder Crops										Grains Other than Wheat									
	Wheat		Maize		Barley		Oats		Rye		Lucerne		Other	Maize	Barley		Oats	Rye	Sorghum	Broom Millet
	Hay	Green Food	Green Food	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food								
1930-31	387	6	7	3	366	23	1	1	1	283	324	5	36	1	1	87	3	*	a	
1931-32	178	13	15	4	328	33	1	1	1	259	427	11	39	7	7	87	4	*	a	
1932-33	183	17	20	2	337	38	1	1	3	258	494	7	47	1	1	112	5	*	a	
1933-34	223	24	15	3	340	46	2	2	5	286	566	12	50	2	4	98	5	*	a	
1934-35	172	24	14	3	468	46	2	2	2	329	597	8	52	2	7	132	5	*	a	
1935-36	147	35	17	5	406	84	2	5	5	276	719	16	46	2	4	160	9	*	a	
1936-37	161	27	22	6	344	159	1	4	4	260	740	17	40	2	8	119	6	*	a	
1937-38	226	30	21	7	427	192	1	5	5	201	584	14	39	2	6	138	4	*	a	
1938-39	338	49	23	8	550	154	1	3	3	201	413	18	34	2	5	264	10	*	a	
1939-40	207	36	23	16	627	186	3	1	1	204	303	23	28	3	18	344	11	*	a	
1940-41	338	43	17	10	440	256	2	3	3	216	219	32	34	3	14	158	11	*	1	
1941-42	222	23	2	*	477	209	*	*	*	132	240	*	2	*	*	279	*	*	*	
1942-43	195	53	14	12	533	340	*	*	*	146	286	17	27	3	7	355	a	*	a	
1943-44	125	50	14	1	354	334	2	6	6	137	341	31	24	2	6	299	1	*	a	
1944-45	186	67	13	9	355	279	1	3	3	102	256	54	13	5	8	345	a	*	a	
1945-46	217	52	13	7	427	226	a	2	2	121	208	30	17	5	5	474	1	a	a	
1946-47	151	54	16	7	287	195	1	2	2	136	191	57	22	3	2	519	1	8	a	
1947-48	175	47	11	1	366	234	a	3	3	214	235	26	19	3	4	586	1	4	a	
1948-49	88	57	10	1	168	248	a	5	5	149	219	20	15	2	2	269	1	a	a	
1949-50	69	40	7	a	172	281	a	1	1	154	279	27	16	3	1	321	2	1	a	
1950-51	21	42	8	a	89	257	a	2	2	114	249	18	13	1	1	181	a	1	a	
1951-52	54	58	8	a	156	341	a	4	4	128	238	24	18	a	3	469	1	1	a	
1952-53	41	44	10	3	212	393	a	3	3	167	217	50	26	2	4	627	1	3	a	
1953-54	72	37	12	11	156	396	1	6	6	235	292	33	22	4	7	462	1	3	a	
1954-55	57	45	10	8	137	445	1	8	8	349	292	50	21	4	7	584	1	4	a	
1955-56	29	29	6	6	116	332	a	6	6	366	347	27	21	5	10	782	2	5	a	
1956-57	8	23	5	a	55	234	a	9	9	253	412	20	20	2	4	311	3	3	47	
1957-58	139	52	6	a	150	423	a	4	4	305	398	54	18	5	7	594	4	5	52	
1958-59	34	34	6	1	147	386	a	5	5	395	736	31	46	8	8	952	1	6	59	
1959-60	23	38	4	a	60	478	a	3	3	279	1,170	50	22	14	5	451	1	5	a	

a less than 50 acres.

* not available.

Source: Bureau of Census and Statistics, *Statistical Register of New South Wales*

TABLE 9
Southern Tableland Division
('00 acres)

Year	Hay and Fodder Crops										Grains Other than Wheat								
	Wheat		Maize	Barley		Oats		Rye		Lucerne		Other	Maize	Barley		Oats	Rye	Sorghum	Broom Millet
	Hay	Green Food	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food			Maling	Other				
1930-31	13	1	1	a	a	121	19	2	a	79	126	2	2	a	a	14	a	a	a
1931-32	8	2	1	1	1	92	4	1	1	64	131	8	3	a	a	18	a	a	a
1932-33	7	2	1	1	1	99	7	1	3	99	97	3	3	a	a	19	1	a	a
1933-34	10	2	1	1	1	108	5	1	a	155	53	9	9	1	a	21	1	a	a
1934-35	5	1	1	1	1	93	5	1	1	146	70	9	2	a	a	11	1	a	a
1935-36	2	1	1	1	1	83	12	a	a	108	123	9	9	a	a	12	1	a	a
1936-37	3	a	1	2	2	85	13	a	a	90	166	5	5	a	a	11	1	a	a
1937-38	4	a	1	2	2	115	14	a	4	121	127	2	2	a	a	21	1	a	a
1938-39	10	2	1	1	1	136	27	1	1	67	178	2	2	a	a	24	1	a	a
1939-40	10	2	1	1	1	134	25	1	8	63	163	a	1	a	a	28	2	a	a
1940-41	14	2	2	1	2	117	24	a	2	104	112	1	1	a	a	23	a	a	a
1941-42	2	a	15	*	*	112	29	*	*	64	142	*	*	*	*	20	*	*	*
1942-43	10	2	1	3	6	150	30	a	*	85	109	a	3	1	a	23	a	a	a
1943-44	11	3	1	1	1	112	19	a	a	78	158	a	a	1	a	23	a	*	a
1944-45	15	4	1	1	3	112	26	a	a	65	103	9	9	1	a	16	a	a	a
1945-46	19	7	1	1	1	145	34	a	2	62	96	4	4	a	a	37	a	a	a
1946-47	18	4	1	1	4	125	52	a	3	71	61	4	4	a	a	40	a	a	a
1947-48	12	9	2	1	3	133	53	a	2	91	93	12	6	a	a	54	1	a	a
1948-49	4	4	1	1	3	79	73	a	4	63	131	6	9	1	a	32	a	a	a
1949-50	4	6	1	a	2	65	74	1	1	97	106	9	9	a	a	37	a	a	a
1950-51	4	8	a	a	3	27	46	a	1	57	130	3	3	a	a	22	1	a	a
1951-52	6	5	a	1	1	66	51	a	1	67	106	7	7	1	a	25	a	a	a
1952-53	7	4	1	1	1	65	58	1	1	80	59	4	4	a	a	36	a	a	a
1953-54	6	5	1	a	a	79	61	a	2	94	57	16	16	1	a	46	a	a	a
1954-55	7	4	2	a	3	74	95	a	3	111	78	15	15	a	a	70	a	a	a
1955-56	8	4	1	1	1	87	78	a	a	134	72	11	11	a	a	88	a	a	a
1956-57	2	2	1	a	a	28	70	a	2	99	74	5	5	1	a	44	a	a	a
1957-58	6	5	1	a	1	66	71	a	a	127	65	29	29	1	a	66	a	a	a
1958-59	6	3	a	1	1	76	124	a	1	138	90	16	16	1	a	107	a	a	a
1959-60	3	4	1	a	1	37	129	a	1	139	119	15	15	1	a	102	a	a	a

Source: Bureau of Census and Statistics, Statistical Register of New South Wales.

* not available.

a less than 50 acres.

TABLE 10
North Western Slope Division
('00 acres)

Year	Hay and Fodder Crops										Grains Other than Wheat										
	Wheat		Maize	Barley		Oats		Rye		Lucerne		Other	Maize	Barley		Oats	Rye	Sorghum	Broom Millet		
	Hay	Green Food	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food										
1930-31	248	39	5	2	4	41	18	41	1	a	143	151	7	60	13	6	30	2	*	3	
1931-32	161	59	21	a	5	62	19	62	a	2	143	217	5	78	13	5	39	2	*	2	
1932-33	136	146	27	a	5	56	19	56	1	1	166	233	12	84	9	4	27	2	*	6	
1933-34	176	77	9	1	4	32	32	32	a	1	218	271	10	94	12	5	44	4	*	6	
1934-35	130	100	10	1	5	47	33	47	1	2	232	367	14	101	11	6	59	3	*	5	
1935-36	118	135	34	1	5	61	38	61	a	1	156	389	19	107	15	4	50	2	*	4	
1936-37	174	95	47	1	5	95	30	95	a	1	175	401	21	86	15	6	53	2	*	12	
1937-38	192	72	20	1	9	109	35	109	a	3	164	386	13	98	8	12	64	3	*	9	
1938-39	280	93	18	4	8	147	54	147	a	1	183	364	31	85	13	26	110	4	*	5	
1939-40	144	179	30	5	26	269	49	269	a	8	147	456	15	67	29	17	141	10	*	6	
1940-41	201	199	16	1	43	365	50	365	1	1	211	353	65	158	12	8	64	2	*	8	
1941-42	206	82	22	*	*	271	47	271	*	*	166	297	*	191	*	a	117	*	*	*	
1942-43	234	231	15	4	35	547	69	547	*	*	155	579	34	91	8	10	229	6	*	1	
1943-44	138	269	23	a	22	45	573	45	573	a	7	120	551	92	124	22	13	180	2	*	4
1944-45	290	141	12	2	31	543	65	543	a	8	112	389	44	75	21	19	229	3	64	2	
1945-46	315	166	9	1	32	445	77	445	a	2	105	364	37	35	33	16	330	1	39	3	
1946-47	207	74	11	3	13	319	87	319	a	3	128	221	90	118	39	14	373	1	306	3	
1947-48	268	89	9	1	9	270	50	270	a	a	163	225	33	37	31	14	296	4	150	2	
1948-49	156	141	15	a	15	406	32	406	a	8	124	230	20	18	28	9	177	3	26	1	
1949-50	87	140	3	2	14	574	27	574	a	7	144	317	24	13	15	6	180	2	16	1	
1950-51	46	107	4	a	14	643	21	643	a	6	131	351	20	12	10	2	206	2	26	a	
1951-52	129	231	6	2	14	887	33	887	a	16	110	339	36	11	18	7	360	2	44	a	
1952-53	122	142	9	a	19	1,038	67	1,038	1	16	148	368	33	9	39	5	621	2	19	1	
1953-54	148	169	12	1	26	1,216	38	1,216	a	19	183	463	67	7	42	14	320	3	36	a	
1954-55	167	339	5	1	41	1,312	31	1,312	a	12	335	541	112	16	47	15	453	3	84	a	
1955-56	78	198	4	1	40	1,162	32	1,162	a	11	350	907	86	26	83	16	540	9	155	4	
1956-57	34	155	12	a	27	1,157	21	1,157	a	13	226	1,145	129	49	99	18	382	11	223	70	
1957-58	264	375	10	3	57	1,337	36	1,337	a	8	213	1,080	228	31	112	17	460	8	298	61	
1958-59	100	299	2	1	47	1,109	41	1,109	a	4	377	1,864	75	31	146	40	788	10	268	40	
1959-60	63	386	2	1	46	1,310	13	1,310	1	17	249	2,210	210	18	147	21	272	5	336	1	

a less than 50 acres.

* not available.

Source: Bureau of Census and Statistics, Statistical Register of New South Wales

TABLE 11
Central Western Slope Division
(’00 acres)

Year	Hay and Fodder Crops										Grains Other than Wheat									
	Wheat		Maize		Barley		Oats		Rye		Lucerne		Other	Maize	Barley		Oats	Rye	Sorghum	Broom Millet
	Hay	Green Food	Green Food	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food								
1930-31	1,048	19	a	a	a	110	11	1	a	a	100	280	1	7	9	3	127	9	*	a
1931-32	585	35	2	2	1	86	20	a	a	a	134	299	1	6	4	4	105	2	*	a
1932-33	595	23	5	1	1	112	32	a	a	a	144	438	4	5	8	5	161	4	*	a
1933-34	639	28	4	3	1	157	51	a	a	2	125	626	6	6	7	7	215	7	*	a
1934-35	614	35	3	6	2	280	60	a	a	1	161	767	4	7	8	7	331	5	*	a
1935-36	451	171	5	8	1	177	144	1	a	a	107	1,016	10	6	13	5	311	11	*	a
1936-37	702	34	4	4	1	198	133	1	6	a	114	1,055	2	3	11	7	335	10	*	a
1937-38	841	49	2	5	2	164	337	a	2	a	91	773	4	3	19	4	296	10	*	a
1938-39	1,060	52	2	1	1	293	234	1	1	a	91	358	12	2	15	6	587	15	*	a
1939-40	581	20	5	5	2	313	173	a	1	a	83	229	3	3	35	15	730	25	*	a
1940-41	574	82	3	11	2	181	333	2	2	a	139	144	23	8	17	20	335	13	*	a
1941-42	693	39	3	*	*	174	475	*	*	a	85	313	*	5	*	*	521	*	*	a
1942-43	640	111	6	20	4	295	729	*	*	a	75	465	5	4	10	11	890	a	*	a
1943-44	418	234	4	16	1	140	820	a	3	a	62	453	37	2	24	10	668	a	*	a
1944-45	639	63	1	10	1	186	592	a	1	a	66	288	70	3	39	17	1,122	a	2	a
1945-46	716	65	1	8	a	198	339	a	1	a	66	307	21	a	44	11	1,214	a	a	a
1946-47	485	52	2	2	a	159	175	a	10	a	85	206	46	5	38	7	1,045	a	20	a
1947-48	626	51	1	5	1	179	286	a	a	a	129	295	15	3	34	3	1,166	a	3	a
1948-49	324	60	5	4	a	62	323	a	1	a	103	290	10	1	31	5	586	a	1	a
1949-50	250	45	1	5	a	53	444	a	4	a	100	367	11	1	21	3	635	1	1	a
1950-51	96	66	1	3	a	23	365	a	7	a	76	239	14	2	7	1	405	1	2	a
1951-52	227	73	1	6	a	53	645	a	9	a	99	334	23	2	13	4	1,045	a	2	a
1952-53	216	53	3	4	a	93	616	a	15	a	148	304	30	6	16	8	1,614	3	1	a
1953-54	334	95	3	8	a	97	795	a	10	a	209	454	37	3	26	10	910	1	5	a
1954-55	382	127	8	22	1	68	907	a	9	a	432	768	46	1	44	12	1,308	4	6	a
1955-56	181	47	4	7	1	70	513	1	13	a	439	885	23	3	44	20	1,697	5	12	a
1956-57	66	37	3	5	a	27	320	1	13	a	316	1,013	37	3	41	41	618	4	22	a
1957-58	464	87	1	12	1	87	538	a	10	a	412	918	66	2	41	14	1,576	15	23	a
1958-59	233	63	1	9	1	97	520	a	5	a	586	2,187	42	1	80	15	2,214	8	11	a
1959-60	180	79	a	26	1	34	657	a	1	a	304	3,025	40	2	61	17	744	8	3	a

a less than 50 acres,

* not available,

Source: Bureau of Census and Statistics, Statistical Register of New South Wales.

TABLE 12
South Western Slope Division
('00 acres)

Year	Hay and Fodder Crops										Grains Other than Wheat									
	Wheat		Maize	Barley		Oats		Rye		Lucerne		Other	Maize	Barley		Oats	Rye	Sorghum	Broom Millet	
	Hay	Green Food	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food									
1930-31	1,320	31	6	2	5	878	34	1	1	121	271	9	34	24	13	655	9	*	8	
1931-32	717	17	5	1	6	679	40	1	1	143	316	15	51	11	3	530	2	*	6	
1932-33	786	8	8	2	4	771	30	2	3	140	353	20	47	12	9	539	5	*	10	
1933-34	894	40	7	1	6	828	64	1	2	137	390	22	46	17	13	664	11	*	12	
1934-35	712	25	7	1	6	1,043	57	3	3	169	468	25	40	16	10	689	12	*	11	
1935-36	625	26	5	12	5	967	104	3	12	124	587	21	37	16	11	886	23	*	5	
1936-37	758	23	5	1	3	1,057	127	1	5	176	643	30	37	16	12	682	16	*	11	
1937-38	880	16	16	1	3	952	263	3	9	130	544	22	37	11	9	791	15	*	10	
1938-39	1,490	22	16	3	10	1,317	248	2	3	106	481	26	28	17	14	1,199	39	*	12	
1939-40	609	14	7	4	8	961	102	2	9	167	354	57	45	36	16	1,358	40	*	16	
1940-41	970	36	7	3	10	623	214	4	5	113	259	24	43	35	17	811	23	*	13	
1941-42	1,007	49	17	*	*	780	264	*	*	64	236	*	22	*	*	871	*	*	*	
1942-43	706	65	7	8	23	973	408	*	*	103	253	8	29	15	20	1,132	a	*	5	
1943-44	504	40	10	3	11	696	299	1	5	88	268	33	27	29	21	1,000	a	*	10	
1944-45	590	41	15	3	13	585	185	1	3	56	167	66	15	52	25	1,435	a	a	14	
1945-46	975	33	4	2	12	778	154	1	8	74	133	36	18	52	21	1,679	a	1	18	
1946-47	701	36	6	1	6	454	73	1	6	77	121	43	22	60	16	1,539	2	8	15	
1947-48	660	31	3	3	6	571	180	1	5	125	135	24	19	40	13	1,635	a	2	17	
1948-49	378	37	4	3	6	267	200	1	8	87	165	11	16	31	9	1,031	1	a	17	
1949-50	309	29	3	1	3	255	202	1	5	117	138	20	12	17	8	979	2	a	17	
1950-51	207	26	2	a	4	162	185	a	2	107	127	18	15	6	4	896	1	a	11	
1951-52	274	31	3	a	3	276	253	2	4	122	132	24	20	4	5	1,544	5	a	15	
1952-53	174	31	1	a	3	242	194	2	6	131	80	46	22	8	7	1,581	3	3	18	
1953-54	315	32	6	a	7	228	229	2	2	156	90	25	30	21	12	1,279	40	2	11	
1954-55	556	49	4	1	5	220	406	2	5	216	73	34	32	27	15	1,509	7	1	10	
1955-56	200	26	4	1	7	211	249	2	6	250	109	32	26	33	21	2,279	6	1	15	
1956-57	57	11	a	a	4	69	119	a	7	171	108	32	21	23	18	927	6	6	19	
1957-58	494	28	2	1	5	245	220	2	1	153	131	53	25	43	25	1,536	3	6	15	
1958-59	238	30	2	1	6	260	271	a	5	266	301	39	21	67	29	2,589	6	a	9	
1959-60	223	44	1	1	13	142	378	1	6	203	418	45	20	79	64	1,444	5	a	8	

Source: Bureau of Census and Statistics, Statistical Register of New South Wales

* not available.

a less than 50 acres.

TABLE 13
North Central Plain Division
('00 acres)

Year	Hay and Fodder Crops										Grains Other than Wheat									
	Wheat		Maize	Barley		Oats		Rye		Lucerne		Other								
	Hay	Green Food	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food									
1930-31	117	5	a	a	a	a	4	3	1	1	15	23	1	a	2	a	12	1	a	*
1931-32	83	11	a	a	a	a	7	4	a	a	14	29	a	a	1	a	27	a	a	*
1932-33	79	15	a	a	a	a	10	6	a	a	16	42	a	a	1	a	17	a	a	*
1933-34	96	6	a	a	a	a	12	2	1	1	19	37	a	a	1	a	20	a	a	*
1934-35	66	10	a	a	a	a	11	2	a	2	25	61	1	a	2	a	28	a	a	*
1935-36	66	39	2	a	a	a	7	2	a	2	19	87	2	a	3	a	36	1	a	*
1936-37	120	15	1	a	a	a	13	13	a	a	10	143	1	a	2	a	30	2	a	*
1937-38	122	24	2	a	a	a	15	25	a	a	8	47	a	a	4	a	29	1	a	*
1938-39	174	17	3	1	1	1	21	39	a	a	16	51	2	a	3	a	62	1	a	*
1939-40	122	25	a	a	a	a	41	41	a	a	11	67	2	a	2	a	132	2	a	*
1940-41	137	72	2	a	a	a	27	72	a	8	16	40	13	a	7	a	41	1	a	*
1941-42	138	22	1	1	*	*	19	73	*	*	19	26	*	a	1	a	68	2	a	*
1942-43	158	62	3	1	1	1	29	188	*	*	27	161	12	a	4	a	122	4	a	*
1943-44	81	112	5	a	a	a	16	226	a	a	13	164	24	a	1	a	88	1	a	*
1944-45	203	33	2	a	a	a	33	212	a	1	12	128	28	a	1	a	136	1	a	*
1945-46	189	39	1	a	a	a	34	85	a	a	7	72	15	a	1	a	246	1	a	7
1946-47	119	19	1	1	1	3	44	51	a	a	11	42	56	a	6	a	185	1	a	122
1947-48	175	24	a	a	a	a	32	46	a	a	18	66	22	a	2	a	166	a	a	55
1948-49	104	46	2	a	a	3	20	76	a	a	12	72	16	a	1	a	96	a	a	7
1949-50	50	53	2	a	a	9	14	113	a	a	15	90	20	a	3	a	97	a	a	5
1950-51	31	31	4	a	a	2	13	125	a	a	14	125	10	a	1	a	97	a	a	7
1951-52	68	78	1	1	1	13	12	184	a	1	9	160	9	a	4	a	182	a	a	16
1952-53	87	48	a	1	1	9	29	248	a	1	27	159	22	a	1	a	314	a	a	7
1953-54	96	37	5	a	a	10	28	280	a	a	29	205	26	a	1	a	174	a	a	8
1954-55	101	70	2	a	a	22	23	414	a	2	75	298	50	a	3	a	230	2	a	11
1955-56	55	54	1	1	1	14	17	335	a	2	62	423	51	a	2	a	331	4	a	32
1956-57	27	72	2	a	a	18	10	296	a	4	59	553	69	a	6	a	223	8	a	61
1957-58	198	169	4	a	a	43	48	364	a	4	67	446	122	a	2	a	365	4	a	85
1958-59	97	103	a	a	2	21	34	315	a	2	64	764	74	a	3	a	548	4	a	67
1959-60	53	138	a	a	a	44	9	417	a	5	50	1,078	197	a	4	a	203	2	a	108

Source: Bureau of Census and Statistics, Statistical Register of New South Wales.

* not available.

a less than 50 acres.

TABLE 14
Central Plain Division
(‘00 acres)

Year	Hay and Fodder Crops										Grains Other than Wheat								
	Wheat		Maize	Barley		Oats		Rye		Lucerne		Other	Maize	Barley		Oats	Rye	Sorghum	Broom Millet
	Hay	Green Food	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food			Malting	Other				
1930-31	392	6	a	a	a	42	1	a	a	a	8	5	1	a	a	55	a	*	a
1931-32	269	4	a	a	a	62	2	a	a	a	3	11	a	a	a	51	a	*	a
1932-33	182	4	a	a	a	63	6	a	a	a	7	7	a	a	a	61	a	*	a
1933-34	172	18	a	a	a	69	4	a	a	1	4	11	2	a	a	75	1	*	a
1934-35	228	1	a	a	a	104	a	a	a	a	8	35	2	a	a	84	a	*	a
1935-36	140	25	a	a	a	81	18	a	a	a	3	32	1	a	a	109	1	*	a
1936-37	207	6	a	a	a	118	8	a	a	1	15	33	5	a	a	115	2	*	a
1937-38	195	1	a	a	a	88	72	a	a	a	9	14	1	1	a	128	a	*	a
1938-39	309	12	a	a	1	141	31	a	a	a	18	29	a	1	a	188	10	*	a
1939-40	242	7	a	a	a	191	15	1	a	a	19	10	2	a	3	169	5	*	a
1940-41	108	15	a	a	3	125	62	2	1	a	7	9	2	a	3	86	9	*	a
1941-42	150	8	a	a	*	103	78	*	*	a	2	12	*	a	*	106	a	*	a
1942-43	198	20	a	a	2	129	73	*	*	a	8	18	1	a	1	219	a	*	a
1943-44	136	12	a	a	1	99	65	a	a	a	10	11	8	a	1	177	a	*	a
1944-45	155	8	a	a	2	90	40	a	a	a	6	14	7	a	3	280	a	*	a
1945-46	229	11	a	a	1	10	36	a	a	a	7	7	1	a	2	332	a	*	a
1946-47	161	5	a	a	1	88	18	a	a	a	6	5	10	a	3	296	a	6	a
1947-48	224	8	a	a	1	113	19	a	a	a	4	8	4	a	2	294	a	*	a
1948-49	119	6	2	a	1	43	32	a	a	a	4	7	2	a	a	190	a	*	a
1949-50	62	7	3	a	2	22	26	a	a	a	3	14	4	a	1	185	a	*	a
1950-51	36	8	3	a	a	12	33	a	a	a	2	13	2	a	a	155	a	*	a
1951-52	47	2	a	a	1	17	57	a	a	a	3	11	1	a	a	259	a	*	a
1952-53	80	5	a	a	a	47	59	a	a	2	4	16	5	a	a	458	1	*	a
1953-54	90	12	a	a	1	24	98	a	a	1	6	18	3	a	2	281	a	4	a
1954-55	88	20	a	a	1	21	133	a	a	2	17	31	3	a	10	417	a	5	a
1955-56	87	4	a	a	a	34	72	a	a	9	17	67	8	a	1	563	a	1	a
1956-57	36	4	a	a	a	32	63	a	a	3	33	72	11	a	6	333	1	3	a
1957-58	78	5	a	a	1	18	122	3	a	6	42	86	12	a	10	580	2	9	a
1958-59	91	9	a	a	a	31	100	a	a	3	54	275	14	a	16	919	2	14	a
1959-60	56	8	a	a	4	15	206	a	a	1	48	359	27	a	30	445	3	7	a

Source: Bureau of Census and Statistics, Statistical Register of New South Wales

* not available.

a less than 50 acres.

TABLE 15
Riverina Division
('00 acres)

Year	Hay and Fodder Crops										Grains Other than Wheat									
	Wheat		Maize		Barley		Oats		Rye		Lucerne		Other	Maize	Barley		Oats	Rye	Sorghum	Broom Millet
	Hay	Green Food	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food	Malting			Other					
1930-31	1,617	59	1	2	3	936	84	a	1	19	126	20	1	20	16	739	8	*	a	
1931-32	868	39	1	1	8	676	105	1	1	14	131	18	a	13	18	624	7	*	a	
1932-33	892	9	1	1	1	770	103	1	2	22	143	17	a	12	8	656	3	*	a	
1933-34	995	90	1	1	3	918	138	a	1	23	166	22	a	10	17	851	10	*	a	
1934-35	747	36	2	7	8	1,160	90	1	5	29	205	28	3	8	10	985	19	*	a	
1935-36	664	38	1	2	5	1,243	150	a	3	24	256	24	1	24	19	1,170	10	*	a	
1936-37	775	34	a	1	4	1,301	227	a	10	34	284	55	a	19	20	954	21	*	a	
1937-38	985	61	a	1	7	1,021	476	1	10	19	203	116	a	27	17	1,005	12	*	a	
1938-39	1,882	71	a	8	10	1,263	368	9	15	25	172	74	a	18	15	1,448	18	*	a	
1939-40	667	15	a	1	5	872	70	2	7	37	95	60	1	31	24	1,041	22	*	a	
1940-41	1,179	70	1	1	8	608	291	3	14	20	130	185	2	38	24	780	15	*	a	
1941-42	1,024	38	a	*	*	903	280	*	*	25	96	*	1	*	*	1,020	a	*	*	
1942-43	682	48	1	5	21	987	345	1	*	25	180	15	1	16	31	1,217	1	*	a	
1943-44	527	57	3	2	14	689	287	1	19	23	172	93	a	21	42	1,202	1	*	a	
1944-45	653	41	1	3	10	621	207	3	9	24	116	193	a	52	29	1,778	a	1	1	
1945-46	1,160	29	1	1	6	811	116	1	10	40	117	74	a	43	36	1,696	a	2	2	
1946-47	749	32	a	a	5	461	102	a	17	42	123	65	1	38	28	1,435	a	22	1	
1947-48	601	23	a	1	8	579	160	a	12	39	141	32	a	34	35	1,696	1	12	a	
1948-49	404	31	3	a	14	340	364	a	11	23	137	50	a	41	19	1,245	2	5	a	
1949-50	365	30	3	1	12	331	222	1	6	41	178	60	a	33	11	1,187	2	7	a	
1950-51	325	20	4	8	8	285	248	1	6	34	192	41	a	32	11	1,261	2	2	a	
1951-52	381	23	2	3	7	370	323	1	6	46	151	79	a	27	17	1,924	4	3	a	
1952-53	197	21	1	a	2	311	195	1	20	45	91	84	a	46	17	1,853	3	13	1	
1953-54	375	16	a	a	4	330	237	4	12	67	83	84	1	97	48	1,460	4	5	a	
1954-55	465	52	2	2	15	268	361	a	18	94	108	98	a	105	43	1,824	4	11	a	
1955-56	186	16	1	2	6	319	135	5	10	100	108	5	a	155	72	2,545	7	18	a	
1956-57	91	10	1	a	2	133	83	4	9	60	120	62	4	93	56	1,239	a	1	a	
1957-58	422	41	a	3	6	298	177	4	5	92	122	48	a	194	138	1,864	4	12	a	
1958-59	208	26	a	3	10	346	213	a	9	112	221	51	4	322	180	2,949	7	30	a	
1959-60	216	27	a	3	11	195	393	a	3	105	278	112	3	381	203	1,839	8	35	a	

a less than 50 acres.

* not available.

Source: Bureau of Census and Statistics, Statistical Register of New South Wales.

TABLE 16
Total Western Division
('00 acres)

Year	Hay and Fodder Crops										Grains Other than Wheat								
	Wheat		Maize	Barley		Oats		Rye		Lucerne		Other	Maize	Barley		Oats	Rye	Sorghum	Broom Millet
	Hay	Green Food	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food			Malting	Other				
1930-31	28	a	a	a	a	17	27	a	a	5	1	a	a	a	2	a	*	a	a
1931-32	26	1	a	a	a	5	28	a	a	2	6	11	a	a	1	a	*	a	a
1932-33	15	a	a	a	a	9	9	a	a	5	9	11	a	a	5	a	*	a	a
1933-34	7	a	a	a	a	12	11	a	a	12	12	6	a	a	9	a	*	a	a
1934-35	6	a	a	a	a	9	11	a	a	7	12	6	a	a	8	a	*	a	a
1935-36	6	a	a	a	a	6	7	a	5	8	13	3	a	a	8	a	*	a	a
1936-37	9	4	a	a	a	15	8	a	4	7	14	a	a	a	4	a	*	a	a
1937-38	9	a	a	a	a	12	8	a	a	1	12	2	a	a	4	a	*	a	a
1938-39	5	1	a	a	a	21	a	a	1	1	12	a	a	a	5	a	*	a	a
1939-40	21	a	a	a	a	5	a	a	3	2	6	a	a	a	1	a	*	a	a
1940-41	7	1	a	a	a	8	18	a	a	1	2	1	a	a	1	a	*	a	a
1941-42	2	a	a	a	a	17	2	a	*	1	1	2	a	a	4	a	*	a	a
1942-43	10	1	a	a	a	15	2	a	*	2	2	2	a	a	17	a	*	a	a
1943-44	6	3	a	a	a	17	10	a	a	1	1	1	1	a	5	a	*	a	a
1944-45	8	1	a	a	a	24	1	a	a	1	1	3	a	a	8	a	*	a	a
1945-46	16	a	a	a	a	19	9	a	a	1	1	8	a	a	12	a	a	a	a
1946-47	6	3	a	a	a	15	1	a	a	2	2	5	a	a	7	a	1	a	a
1947-48	14	a	a	a	a	14	1	a	a	3	3	1	a	a	11	a	1	a	a
1948-49	3	a	a	a	a	6	8	a	a	2	3	1	a	a	9	a	a	a	a
1949-50	2	a	a	a	a	4	7	a	a	3	3	2	a	a	9	a	a	a	a
1950-51	3	a	a	a	a	1	3	a	a	2	2	3	a	a	3	a	a	a	a
1951-52	a	a	a	a	a	18	2	a	1	2	3	2	a	a	10	a	a	a	a
1952-53	2	1	a	a	a	11	1	a	a	2	1	6	a	a	12	a	a	a	a
1953-54	3	a	a	a	a	19	4	a	1	17	2	4	a	a	10	a	2	a	a
1954-55	3	4	a	a	a	4	3	a	a	1	5	8	a	a	9	a	a	a	a
1955-56	9	2	a	a	a	9	3	a	a	2	3	3	a	a	14	a	a	a	a
1956-57	a	a	a	a	a	3	3	a	a	2	4	13	a	a	9	3	15	a	a
1957-58	a	a	a	a	a	2	10	a	a	1	3	106	a	a	9	a	a	a	a
1958-59	a	a	a	a	a	4	12	a	a	1	3	3	a	a	28	a	a	a	a
1959-60	1	a	a	a	a	3	5	a	a	2	11	6	a	a	16	a	a	a	a

Source: Bureau of Census and Statistics, Statistical Register of New South Wales

a less than 50 acres.

* not available.

TABLE 17
Total New South Wales
('000 acres)

Year	Hay and Fodder Crops										Grains Other than Wheat										
	Wheat		Maize		Barley		Oats		Rye		Lucerne		Other	Maize	Barley		Oats	Rye	Sorghum	Broom Millet	
	Hay	Green Food	Green Food	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food	Hay	Green Food			Malting	Other					
1930-31	521	18	27	69	1	6	279	279	1	1	2	95	153	35	105	7	4	177	3	*	2
1931-32	292	20	38	77	1	7	222	222	1	1	2	96	181	41	106	4	4	152	2	*	2
1932-33	291	25	41	78	1	6	248	78	1	1	3	105	207	45	113	5	3	164	2	*	3
1933-34	324	31	36	82	1	6	275	82	1	1	4	123	236	57	117	5	5	204	4	*	3
1934-35	271	26	35	72	1	6	349	72	1	1	5	135	283	50	116	5	5	237	5	*	4
1935-36	225	50	40	102	1	5	329	102	1	1	6	103	349	58	120	7	5	280	6	*	2
1936-37	294	28	43	128	1	5	342	128	a	6	6	110	376	59	116	6	6	236	6	*	3
1937-38	348	28	39	204	1	6	312	204	1	7	7	97	295	58	125	6	5	255	5	*	3
1938-39	559	36	44	184	2	8	413	184	2	7	93	235	59	122	7	7	399	10	*	3	
1939-40	264	36	50	161	1	10	349	161	1	8	90	200	53	116	14	10	405	12	*	4	
1940-41	355	57	42	231	1	13	248	231	2	9	109	152	76	142	11	9	237	8	*	4	
1941-42	346	27	47	238	1	*	290	238	*	*	76	170	*	117	*	*	304	*	*	*	
1942-43	287	66	39	343	5	19	352	343	*	*	92	233	25	104	6	9	431	1	*	1	
1943-44	198	84	36	341	1	12	252	341	1	9	82	237	64	103	10	10	374	1	*	2	
1944-45	279	50	34	280	1	14	238	280	1	9	67	176	84	94	18	11	544	1	8	3	
1945-46	390	50	32	290	1	12	290	219	a	8	70	161	62	92	19	10	617	a	6	4	
1946-47	264	35	34	177	1	7	198	177	a	7	80	125	79	110	19	8	558	1	52	3	
1947-48	278	34	29	205	1	6	228	205	a	8	110	146	60	87	15	8	609	1	25	3	
1948-49	161	44	28	254	1	7	121	254	a	9	84	153	53	78	14	5	378	1	5	3	
1949-50	122	40	24	271	1	70	113	271	a	7	92	178	56	73	9	3	375	1	4	3	
1950-51	79	35	18	257	a	5	75	257	a	6	70	163	43	53	6	2	332	1	5	2	
1951-52	121	56	20	354	1	7	113	354	a	9	73	172	53	54	7	4	597	1	7	3	
1952-53	95	39	26	357	a	7	128	357	a	11	96	153	70	61	12	5	730	2	5	3	
1953-54	146	45	24	413	a	10	114	413	1	11	122	192	68	59	21	10	507	1	7	2	
1954-55	185	74	19	490	1	14	101	490	a	12	192	245	81	50	26	10	657	2	13	1	
1955-56	84	42	18	359	1	10	102	359	1	10	195	316	71	56	37	17	902	3	24	3	
1956-57	33	35	16	299	a	8	46	299	1	11	143	375	81	53	31	14	421	4	34	4	
1957-58	209	81	18	401	1	15	106	401	1	8	165	354	115	57	45	23	715	4	46	3	
1958-59	102	60	15	380	1	11	119	380	a	5	231	676	99	52	48	14	1,130	4	42	2	
1959-60	82	76	12	469	1	17	59	469	a	5	167	901	98	52	79	39	567	3	51	2	

a less than 500 acres.

Source: Bureau of Census and Statistics, Statistical Register of New South Wales.

Source: Bureau of Census and Statistics, Statistical Register of New South Wales.

* not available.

a less than 500 acres.

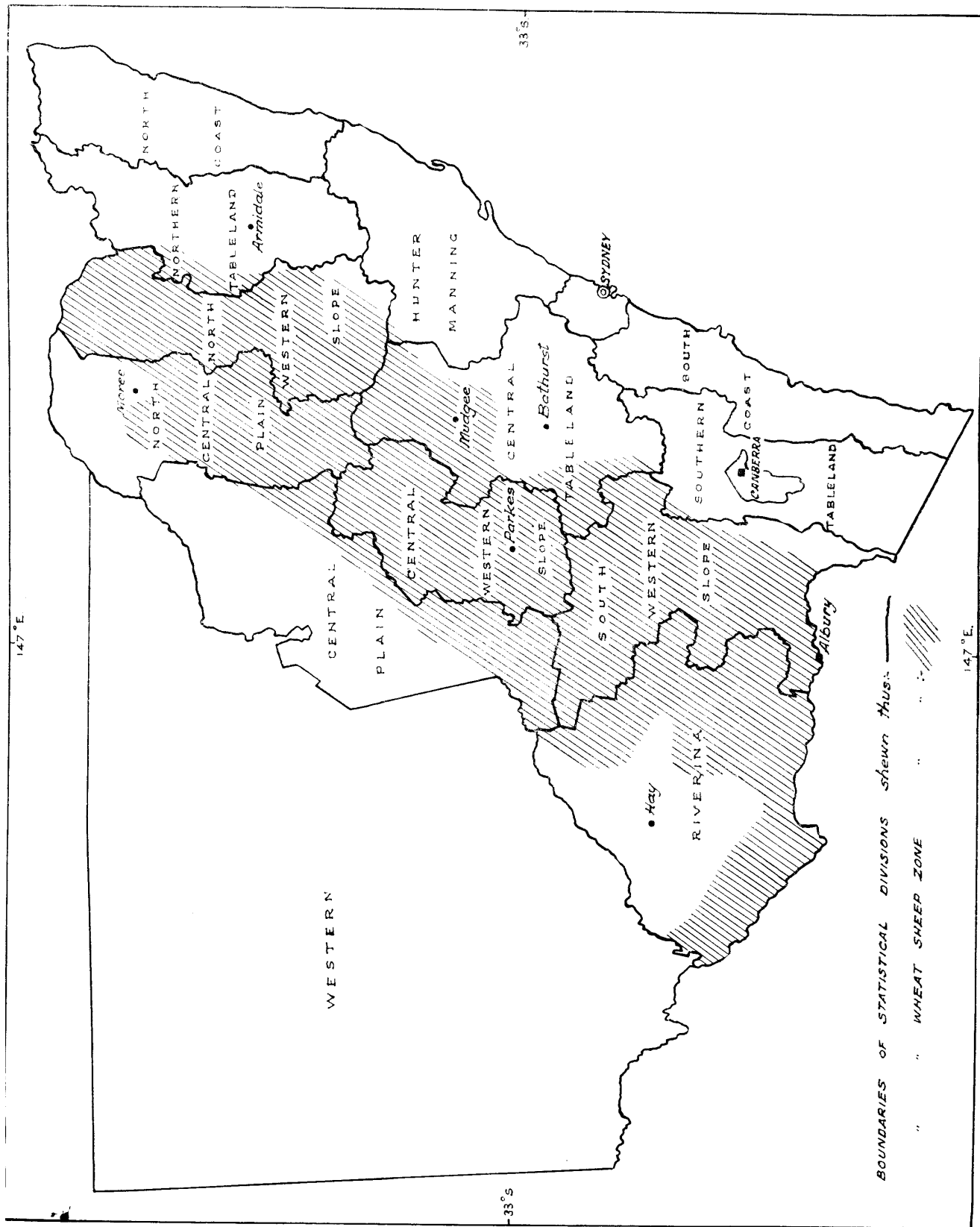


Fig. 3. Map of New South Wales showing Statistical Divisions and the Wheat-Sheep Zone