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DAIRY FARMING AS A BUSINESS.

A REVIEW OF THE FINANCIAL POSITION OF THIRTY-TWO DAIRY FARMS FOR THE YEAR ENDED 30TH JUNE, 1945.

By

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INTRODUCTION.

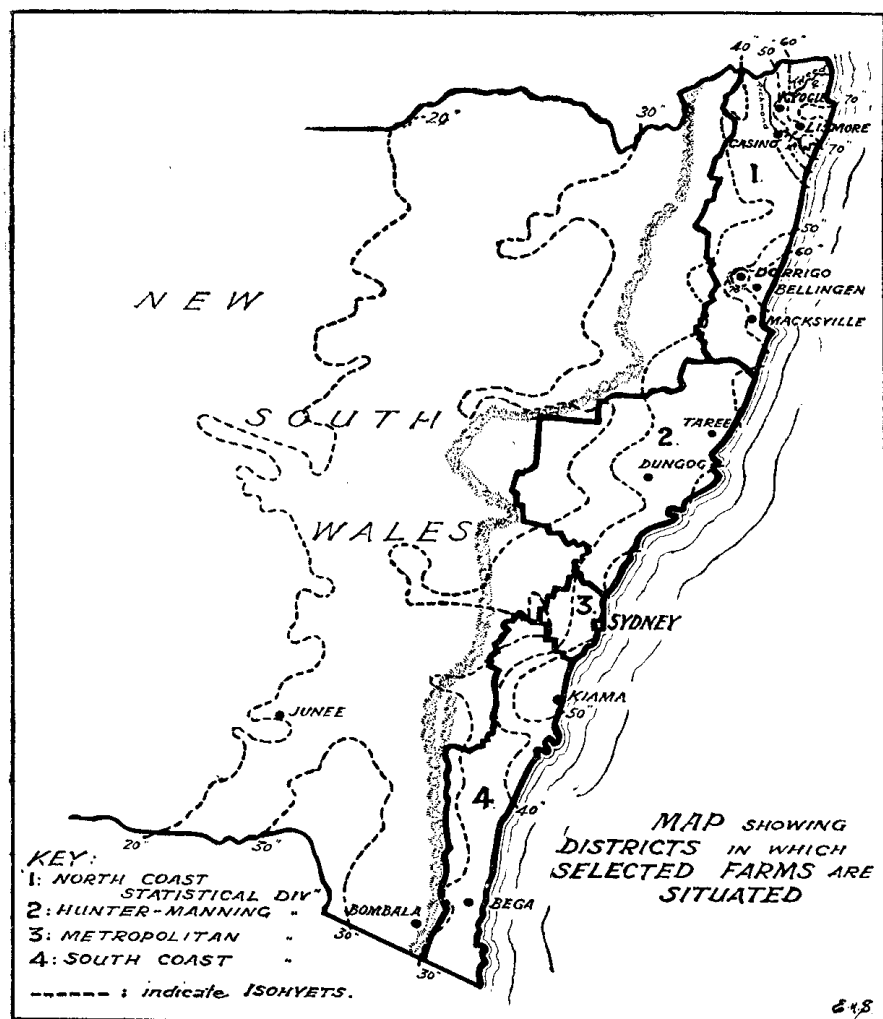
During the last three years, a number of farmers throughout New South Wales have made use of special books provided by the Department of Agriculture for the purpose of keeping financial and production records. These record books have been adapted to suit three types of districts, namely: dairying, wheat-sheep and fruit-vegetables. The first section of each book provides for a complete inventory of all farm assets and liabilities, and for the recording of all income and expenditure. At the end of any year, the farmer may determine his true financial position by means of a simplified analysis outlined in the record book. In the second section of each record book provision is made for the farmer to record details of all his crop, feeding, livestock and labour programmes. These can prove particularly useful to him in making comparisons from year to year. The Division of Marketing and Agricultural Economics has assisted certain farmers in selected areas in keeping these record books, by preparing an analysis of their accounts at the end of each financial year.

In this article an examination is made of the financial position of a number of dairy farms for the year ended 30th June, 1945. The several tables based on records kept for these farms will be discussed in turn. It must be emphasised at the outset that the farms discussed can by no means be taken as a representative sample for New South Wales. For example, many books received from farmers were so incomplete that a satisfactory analysis could not be achieved, and in general it is found that it is the more progressive farmer who keeps the best records. Therefore, while averages have been calculated for some tables, these must not be interpreted as average figures for the State as a whole.

Figures appearing in the various tables have been obtained from the records of thirty-two different dairy farms. It may be seen from Table I that the majority of these farms are situated in one or other of the main dairying districts of the Coastal Division. Therefore, a brief account is given of the dairy production, soils and climatic conditions of this Division.

TABLE I.
Situation of Selected Farms.

District.	No. of Farms.
Richmond and Tweed River Area	6
Dorrigo-Bellingen-Macksville	7
Taree-Wingham	10
Dungog	1
Kiama	1
Bega	5
Bombala	1
Junee	1



Dairy Production in New South Wales.

The Coastal Division is by far the most important dairying division in New South Wales. Almost 90 per cent. of the State's total milk production comes from the coast. Within the division the North Coast is the more important producing area. This is illustrated in Table II.

TABLE II.
Statistics Related to the Dairying Industry in the Coastal Division.

	Section of Coastal Division.				Totals for Coastal Division.
	North Coast.	Hunter and Manning.	Metro- politan (County of Cumber- land).	South Coast.	
Total Number of Registered Dairies—	No.	No.	No.	No.	No.
As on 31st March, 1944	8,314	4,854	568	2,327	16,063
" " 1945	8,189	4,896	544	2,326	15,955
" " 1946	7,911	4,663	474	2,189	15,237
Number of Cows in Milk—(Registered Dairies only)—	No.	No.	No.	No.	No.
As on 31st March, 1944	312,023	151,905	19,305	71,401	554,634
" " 1945	326,238	153,407	18,798	77,487	575,930
" " 1946	304,713	147,050	16,769	75,039	543,571
Total Butter Production—	ooo lb.	ooo lb.	ooo lb.	ooo lb.	ooo lb.
For year 1943-44	53,852	20,341	257	6,916	81,366
" 1944-45	48,306	13,118	189	5,863	67,477
" 1945-46	49,606	12,658	299	6,543	69,106
Total Number of Pigs—	No.	No.	No.	No.	No.
As on 31st March, 1944	205,417	73,367	27,671	28,078	334,533
" " 1945	198,793	57,840	30,013	26,262	312,908
" " 1946	177,446	42,699	26,642	23,544	270,331

Figures are also given in Table II for total numbers of pigs in the Coastal Division. Pigs are the most important sideline of dairy farmers on the coast.

In the 1939-40 season, milk production in New South Wales was estimated to be 314,700,000 gallons. This milk was distributed in the following manner:—

Production of butter	73.7%
Production of cheese	2.2%
Production of condensed milk, cream and ice cream	3.8%
Consumed as fresh milk	20.3%

With few exceptions the farms discussed in this article were devoted to the production of cream for the manufacture of butter.

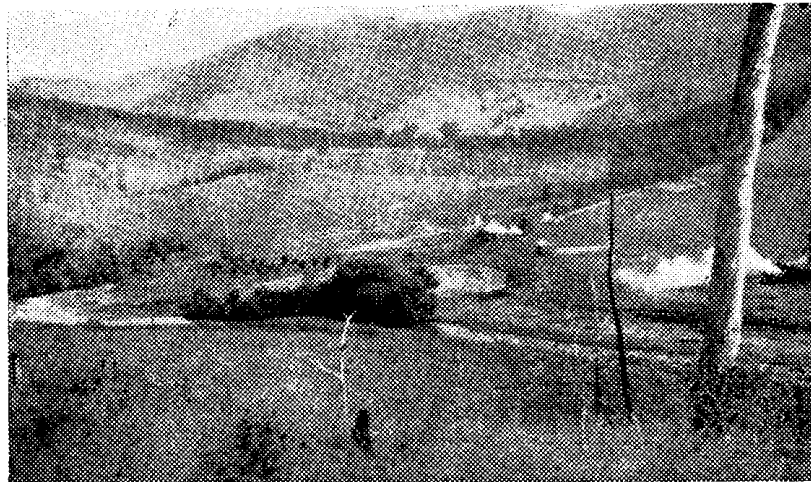
Over the thirteen-year period, 1927-1940, the estimated average production of commercial butter per cow in New South Wales was 165 lbs. per cow.

Soils of the Coastal Division.

The coastal division of New South Wales is characterised by a great diversity of soil types. No detailed classification of these is available. Generally speaking, the soils are of a more or less immature nature; that is, the process of leaching is not far advanced, in spite of heavy rainfall, and very often the demarcation of soil horizons is not very distinct. At scattered points, however, quite well developed podsoils do occur. Throughout the coast, in the vicinity of the rivers and particularly on the north and central portion, considerable areas of rich alluvium soils of

recent geological origin provide some of the most valuable agricultural and dairying land. Bordering the alluvial soils of the Richmond-Tweed districts, and also characterising the Dorrigo district, the predominant soil types are of tertiary-volcanic origin and mainly basaltic in nature. These red basaltic soils of the coast are well-known for their high phosphate-fixing capacity. Heavy applications of phosphatic fertilisers, preferably combined with lime, are needed on these soils in order to obtain maximum plant growth.

Moving south in the Tweed-Richmond area, between Lismore and Casino basaltic soils give place to soils derived from what are known as the Jurassic-Clarence series. The parent material here consists of shales and calcareous sandstone. In the Bellingen-Macksville area the predominant rock types consists of Early



Dairying Land on The Upper Macleay, North Coast of New South Wales.

Photo. by courtesy of *The Primary Producer.*

Paleozoic: phyllites, quartzites, slates and sandstones. Considerable areas of alluvium are found to the east of Taree but to the west the soils are derived from Permian and Carboniferous: shales, sandstones, limestones, and tuffs. In the vicinity of Bega the soils are mainly of granitic origin, but towards the coast parent rock types grade to Devonian shales and sandstones and Ordovician: slates, phyllites, schists and quartzites.

Climatic Conditions in the Coastal Division.

A comparatively high average rainfall and mild temperatures are associated with the Coastal Division of New South Wales. The North Coast lies on the fringe of the summer rainfall zone, and although rain usually falls in every month of the year, summer registrations tend to be the greater. In a general way annual rainfall is higher on the North than on the South Coast. The following table sets out recorded long-term averages of annual rainfall for the main districts introduced in this article:

TABLE III.
Average Annual Rainfall.

District.							Long-Term Average Ins.
Kyogle .. .. .	..	..	..	..	..	..	45.41
Casino .. .. .	..	..	..	..	..	..	43.16
Lismore .. .. .	..	..	..	..	..	..	52.37
Bellingen .. .. .	..	..	..	..	..	..	56.00
Dorrigo .. .. .	..	..	..	..	..	..	74.39
Macksville .. .. .	..	..	..	..	..	..	51.64
Taree .. .. .	..	..	..	..	..	..	45.73
Dungog .. .. .	..	..	..	..	..	..	37.15
Kiama .. .. .	..	..	..	..	..	..	46.61
Bega .. .. .	..	..	..	..	..	..	33.23
Junee .. .. .	..	..	..	..	..	..	20.69

Although a high average rainfall is associated with the coast this may be very misleading. From the point of view of the dairy farmer, the more important concept is reliability of rainfall in any particular period of the year. The majority of dairy herds on the coast depend entirely on *Paspalum dilatatum* and some improved pastures (mainly rye grass and clovers) together with supplementary green fodder crops. If pastures deteriorate as a result of dry conditions—and this is by no means a rare occurrence—then production inevitably falls. An examination of rainfall requirements to maintain adequate pasture growth shows that in the important producing period of the year, namely, spring and summer, reliability of rainfall may be very low. In the Macksville district it has been estimated that for not more than three years in every ten can it be expected that adequate rains to satisfy pasture needs will be received in any month from August to December.

Referring to Table IV it can be seen that the year 1944-45 was, if the term can be applied to coastal districts, a drought year. Almost throughout the whole Coastal Division rainfall during the four months September to January fell far short of average recordings. On the North Coast this condition continued in

TABLE IV.
(a) *Record of Monthly Rainfall for the year ended 30th June, 1945.*
(Points.)

	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Kyogle ...	426	227	230	129	359	242	544	639	186	415	374	1,217	4,988
Casino ...	282	295	114	79	184	263	247	564	102	420	279	1,377	4,206
Lismore ...	262	425	189	98	491	287	394	503	297	777	586	1,710	6,319
Bellingen ...	649	1,237	100	44	160	199	650	495	274	382	216	1,547	5,953
Dorrigo ...	630	1,766	171	51	298	348	554	788	308	512	461	3,335	9,262
Macksville ...	554	1,204	95	77	134	159	305	628	186	391	301	1,264	5,298
Taree ...	508	730	111	77	138	144	177	221	153	192	363	1,324	3,938
Dungog ...	268	345	143	16	43	71	358	445	121	229	220	928	3,187
Kiama ...	219	509	84	113	86	101	375	307	97	722	768	613	3,994
Bega ...	96	146	11	185	57	183	564	67	77	1,234	339	482	2,843
Bombala ...	60	121	29	338	76	169	401	239	134	379	170	257	2,333
Junee ...	97	58	14	206	40	59	69	108	8	29	94	481	1,263

(b) *Deviations of 1944-45 Monthly Rainfall from Long-Term Averages.*

(Points.)

	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Kyogle ...	-157	+ 89	+ 47	-124	+ 17	-308	- 81	+102	-399	- 48	+ 23	+ 972	+ 447
Casino ...	+ 38	+ 118	- 77	- 95	-179	-157	-301	+ 8	-480	+ 9	- 27	+1133	- 110
Lismore ...	+ 215	+ 193	- 44	-167	+114	-156	-221	-160	-445	+259	+118	+1376	+1082
Bellingen ...	+ 331	+1068	-149	-346	-245	-304	+ 11	-214	-462	-234	-236	+1171	+ 373
Dorrigo ...	+171	+1438	-156	-379	-176	-340	-371	-182	-611	-341	-128	+2818	+1723
Macksville ...	+236	+ 954	-205	-271	-195	-309	-257	+ 29	-622	-114	-101	+ 899	+ 134
Taree ...	- 50	+ 485	-158	-203	-168	-282	-283	-313	-352	-305	+ 9	+ 985	- 635
Dungog ...	- 53	+ 128	-126	-243	-218	-342	+ 30	+ 91	-276	-140	- 42	+ 660	- 531
Kiama ...	-257	+ 216	-205	-173	-201	-300	- 25	- 78	-387	+204	+328	+ 211	- 667
Bega ...	-135	- 56	-199	- 65	-159	-122	+203	-167	-294	+611	-159	+ 166	- 476
Bombala ...	-129	- 43	-152	+129	-127	- 96	+126	+ 35	- 87	+213	+ 15	+ 28	- 118
Junee ...	- 91	- 138	-157	+ 20	-118	- 94	- 71	- 35	-152	-138	- 75	+ 245	- 804

many districts up till May, 1945. In addition the breaking of the drought in June was accompanied by serious floods over the whole of the North Coast. This is the season for which figures are quoted in the accompanying charts.

THE FINANCIAL POSITION OF THE SELECTED FARMS.

In considering the financial position of the selected farms, discussion will be based mainly on Table IX. This table sets out the return for all labour and capital involved on thirty individual dairy farm units. The farms are numbered in the order of "Net Farm Income" and this system of numbering is maintained throughout all succeeding tables. Farm No. 31 (see Table XI) is considered entirely from the point of view of the landlord and Farm No. 32 (see Table XII) from that of the tenant. This is necessary because figures for these two farms as a whole were not available.

However, before discussing Table IX in detail, let us look at the size and organisation of the individual farms, and their pattern of receipts from the sale of farm produce, for the twelve months period ended 30th June, 1945.

Farm Size and Organisation.

The total area of the thirty-two farms was approximately 10,900 acres. It is seen from Table V that the individual farm areas varied from 40 acres up to 914 acres. Seventy-five per cent. of the farms were less than 400 acres in area and 53 per cent. less than 250 acres. Many of the farms had some area of uncleared or waste land. Figures are given in Table V for area of farms excluding such land, which, according to estimates supplied by farmers, would account for approximately 18 per cent. of the total area of thirty of the farms. Much of the uncleared area would have some grazing value, but it has been omitted in the calculation of apparent carrying capacity. The latter has been worked out on the basis of stock numbers as recorded on 1st July, 1944. Aggregates of thirty farms on that date showed stock carried to be equivalent to one cow to approximately 3 acres.

TABLE V.
Farm Size and Organisation.
 (Arranged in Order of Total Farm Area.)
 Figures for 32 Dairy Farms in New South Wales.

Farm No.	Total area of Farm.	Farm Area excluding uncleared and waste Land.	Apparent carrying capacity.	Area cultivated 1944-45.	Tractors.	Milking Machines No. of Units.
	Acres.	Acres.	Acres/Cow.	Acres.	No.	No.
5	914	704	5.5	6	...	6
31	892	842	3.0	10	...	4
26	834	734	4.0	20	...	4
3	686	586	6.0	15	1	3
25	589	352	4.0	50	...	3
19	512	n. a.	n. a.	n. a.	1	6
30	466	288	5.0	23	...	...
2	411	n. a.	n. a.	30	1	4
27	394	319	3.5	26	...	2
6	358	318	6.0	15	...	...
28	352	184	3.0	22	...	...
14	342	340	4.0	24	...	4
17	320	160	2.0	6	...	...
4	311	293	3.5	24	1	4
1	310	305	2.0	40	...	6
24	249	99	1.5	22	...	2
23	240	235	2.5	8	...	3
12	235	235	3.5	11	...	3
11	224	220	1.5	10	...	3
8	224	164	2.0	11	...	3
29	221	214	2.0	21	...	4
13	216	196	3.5	30	...	2
32	214	210	3.5	4 $\frac{1}{2}$	...	3
7	210	125	2.0	20	...	...
22	208	205	2.5	22	...	...
18	189	139	7.0	8	...	...
15	188	138	2.5	11	...	3
10	167	164	2.0	20	1	3
9	145	142	2.0	10	...	3
16	140	140	3.0	20	...	3
20	102	100	2.0	3 $\frac{1}{2}$	...	2
21	40	40	1.5	5	...	1

n. a. — Not available.

However, there was considerable variation between farms, some showing as high a carrying capacity as a cow to 1½ acres, others as low as a cow to 6 or 7 acres.

The area of land cultivated on individual farms during the year (1944-45) also varied considerably. The average was approximately 20 acres. Cultivation carried out was mainly in connection with the growing of such crops as maize, potatoes, sorghum, millet, lucerne and oats.

Very little reliance could be placed on figures received in connection with pasture improvement, as the different types and age of such pastures often were not specified. Rye grass and clover is a very popular type of improved pasture in coastal districts and most farms quoted would have had at least 20 and some up to 100 acres of such pasture. The bulk of the grazing land, of course, consists of *Paspalum dilatatum* with some white clover. Much of this pasture has greatly deteriorated with age, accompanied by a lack of renovation.

Only five of the thirty-two farms were equipped with a tractor. Most farmers relied on horses, or in a few cases on hired machinery, for their cultivation practices. The farms were much more

highly mechanised as regards the actual dairy. Only seven farms were without a milking machine; a 3 or 4 unit plant was the general rule.

Livestock Carried on Farms.

Table VI sets out the number of horses, cattle, pigs, sheep and poultry carried on each farm on 1st July, 1944.

Twenty-two of the thirty-two farms had two or three draught horses. No farm had more than six or less than one. In addition most farmers kept one to three light horses for use as cart or saddle horses. On the average dairy farm the tractor will not completely replace the horse. Even where tractors are found the horse is still required for special work.

The average number of milking cows on the thirty-two farms was fifty-six, and in addition there was an average of fifteen heifers over twelve months. The greatest number of cows on an individual farm was 124; the smallest herd was thirteen; seventeen farms had herds of between thirty and sixty cows. No farm had less than one bull or more than four.

TABLE VI. (a)

Inventory of Livestock as at 1st July, 1944.

(Arranged in Order of Total Farm Area).

Figures for 32 dairy farms in New South Wales.

Farm No.	Horses.		Dairy Cattle.				Pigs.		Poultry.
	Draught.	Other.	Cows.	Bulls.	Heifers over 1 year.	Other.	Sows and Boars.	Other.	
	No.	No.	No.	No.	No.	No.	No.	No.	No.
5*	4	5	85	4	12	15	3	25	31
31*	6	7	124	2	20	20	7	...	24
26*	3	3	65	2	30	11	...	...	...
3	1	3	75	1	10	12	6	40	...
25	5	3	53	2	5	40	3	17	...
19	2	3	82	2	21	14	1	8	70
30	4	2	29	2	12	8	...	...	40
2	3	2	80	2	22	...	13	30	...
27	3	1	52	2	20	24	3	9	35
6	3	2	42	1	7	...	3	8	...
28	2	1	38	2	15	...	3	...	12
14*	3	3	34	1	4	9	2	...	20
17	2	2	49	2	18	19	5	15	35
4	3	3	80	4	20	20	9	10	40
1	5	2	120	2	10	17	10	60	15
24	3	1	35	1	11	20	4	37	30
23	2	4	67	1	12	7	6	32	40
12	3	3	50	2	6	8	3	21	35
11	3	3	115	4	16	4	8	79	...
8	4	1	55	2	23	16	...	...	40
29	6	...	58	2	36	...	...	34	60
13	2	1	25	1	24	7	4	9	10
32	3	2	35	3	9	13	3	32	30
7	2	2	40	2	16	6	4	14	27
22	5	1	49	1	11	18	30	228	40
18	3	...	13	1	4	...	2	3	...
15	3	1	33	2	15	4	6	42	...
10	3	3	60	1	30	...	12	78	...
9	3	1	58	2	16	...	5	25	20
16	5	3	30	1	8	...	5	68	45
20	2	1	32	1	11	...	6	28	40
21	2	1	21	1	...	...	3	5	20
Total ...	103	70	1,784	59	474	312	169	957	759
Average	3	2	56	2	15	10	5	30	23

* See Table VI (b).

Three farmers recorded beef cattle in their inventory of live-stock. Only one recorded sheep. The total numbers of beef cattle and sheep are set out in the following table:—

TABLE VI (b).
Beef Cattle and Sheep as at 1st July, 1944.

Farm No.	Beef Cattle.	Sheep.
5	21	...
31	160	...
26	93	...
14	...	102

Capital Invested in Farms.

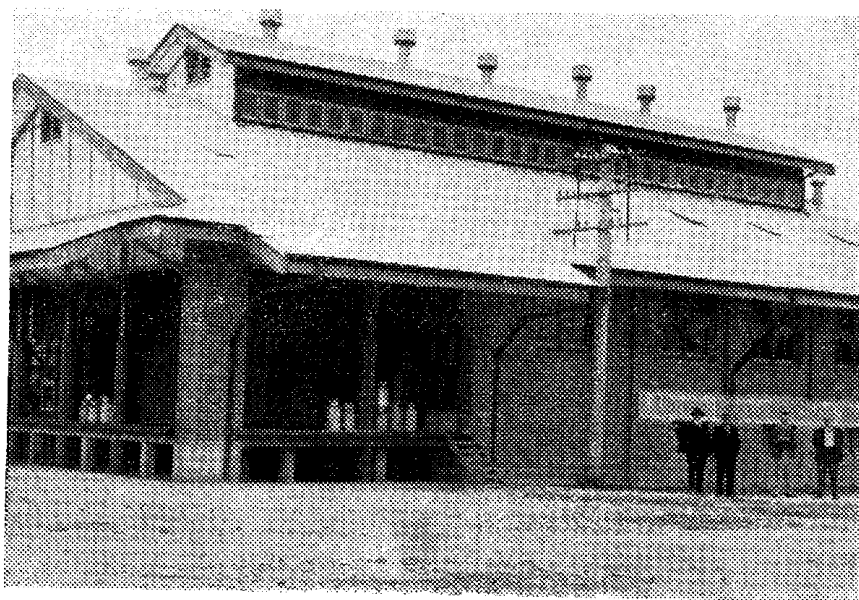
Farms one to thirty are arranged in Table VII in the order of total capital invested on 1st July, 1944. "Total Capital Invested" includes improved value of land, plus total value of all livestock and machinery. The figures given can only be taken as approximate, because values for improvements, machinery and livestock are largely farmers' valuations, which vary somewhat from farm to farm and from district to district. In addition, improved value

TABLE VII.
Capital Invested.
(Figures for 30 Dairy Farms.)
(Arranged in order of Total Capital Invested at 1st July, 1944.)

Farm No.	Total Capital Invested at 1st July, 1944.	Improved Value of Land at 1st July, 1944.	Total Area of Farm.	Improved Value per acre.	Capital Invested per acre at 1st July, 1944.	Value of fixed improvements excluding clearing at 1st July, 1944.	Total Value of Machinery at 1st July, 1944.	Total Value of Live-stock at 1st July, 1944.
	£	£	Acres.	£/acre.	£/acre.	£	£	£
1	16,591	14,180	310	45.7	53.5	4,539	729	1,047
11	11,296	9,210	224	41.1	50.4	5,694	571	1,517
4	10,244	7,351	311	23.6	33.0	2,664	1,037	1,375
2	9,072	7,030	411	17.1	22.1	2,476	920	962
19	8,621	6,410	512	12.5	16.8	1,642	971	711
3	8,520	6,300	686	9.2	12.4	1,520	978	1,021
5	7,917	5,970	914	6.5	8.7	1,744	518	1,408
26	7,837	5,430	834	6.5	9.4	2,768	831	1,342
29	6,940	5,380	221	24.3	31.4	2,466	702	797
23	6,371	4,500	240	18.7	26.5	1,610	702	1,098
22	6,271	4,070	208	19.7	30.1	1,980	675	1,268
10	5,878	3,320	167	19.9	35.2	1,107	1,065	1,134
9	5,830	4,310	145	29.7	40.2	3,017	471	750
8	5,019	3,570	224	15.9	22.4	2,197	703	700
6	4,981	4,460	358	12.5	13.9	946	79	440
27	4,810	3,900	394	9.9	12.2	1,757	231	697
17	4,108	3,200	320	10.0	12.8	1,475	191	651
25	4,090	2,950	589	5.0	6.9	937	448	540
20	3,827	2,920	102	28.6	37.5	940	292	557
15	3,667	2,630	188	14.0	19.5	687	594	344
7	3,633	2,580	210	12.3	17.3	1,162	132	745
13	3,618	2,590	216	12.0	16.7	671	278	614
30	3,507	2,630	566	5.6	7.5	1,130	210	1,049
14	3,460	2,320	342	6.8	10.1	646	468	387
16	3,435	2,010	140	14.4	24.5	1,108	516	636
12	3,318	2,210	235	9.4	14.1	794	386	667
28	3,140	2,280	352	6.5	8.9	993	272	464
24	3,026	1,980	490	4.0	6.2	597	446	506
18	1,936	1,300	189	7.4	10.2	513	111	192
21	1,619	1,180	40	29.5	40.0	701	113	325
Total ...	172,582	128,261	10,038	...	...	50,481	15,640	23,944
Average	5,753	4,275	335	15.7	20.3	1,683	521	798

includes the "unseen" value of the land, which is difficult to estimate accurately. However, "Total Capital Invested" on the different farms varied between the wide limits of over £16,000 on Farm 1 down to less than £2,000 on Farm 21. On twenty-four farms total capital invested did not exceed £8,000; on 50 per cent. of farms it was less than £5,000, and on 40 per cent. less than £4,000.

The improved value of land formed the most important item of total capital invested. Taking the thirty farms together, total improved value was equal to approximately 75 per cent. of the figure for total capital invested. On individual farms the ratio varied from 90 per cent. (Farm 6) down to 57 per cent. (Farm 10). Fixed improvements other than clearing amounted to from 70 per cent. (Farm 9) down to 21 per cent. (Farm 6) of the figures for improved value of land; for all farms the average was equal to 40 per cent.



The Butter Factory at Wauchope (Hunter-Manning Division), which is operated by The Upper Hastings Co-operative Dairy Society Ltd.

Photo. by courtesy of *The Primary Producer*.

On most farms, value of livestock exceeded value of machinery. Only in the case of Farm 10 did either of these items exceed the value of fixed improvements. On over 50 per cent. of farms, the value of the fixed improvements was greater than that of machinery and livestock taken together. Values of the three items—fixed improvements, machinery and livestock—were found to decrease fairly consistently with decreasing total capital invested.

Table VII also shows figures for improved value of land per acre, as well as capital invested per acre. Value of land varied from £4 per acre (Farm 24) to £46 per acre (Farm 1). However, twenty-three of the thirty farms were valued at less than £20 per acre and eleven at less than £10 per acre. Capital invested was equal to £6 an acre on Farm 24 (490 acres), and £53 an acre on Farm 1 (310 acres). There was apparently a slight tendency

for "low net income" farms to be both farms of large area and farms with low capital invested per acre. In this connection the "low net income" Farms 24, 25, 26, 27, 28 and 30 should be compared with the "high net income" Farms 1 to 6. All of these are comparatively large farms, each exceeding 300 acres. It is to be noted also that the "high net income" Farms 1, 2 and 5 supported share-farmers, as well as an owner-operator, while this was only the case with Farm 26 of the first group. If more information were available on this point, it might well be found that farm size in relation to available capital and labour is an important determinant of efficiency in the dairying industry of New South Wales.

Receipts from Sale of Farm Products.

The actual total receipts for the thirty-two farms during 1944-45 are set out in Table VIII in the order of total money received,

TABLE VIII.

Receipts from Sale of Farm Produce for 32 Dairy Farms in New South Wales.

(Arranged in order of total money received during year ended 30th June, 1945).

Farm No.	Total Money received 1-7-44 to 30-6-45 (excl. money borrowed).	Sale of Cream or Milk.		Sale of Pigs.		Sale of Cattle and Horses.		Receipts from sale of other Farm Produce.	
		Value.	Per cent. of Total Money Received.	Value.	Per cent. of Total Money Received.	Value.	Per cent. of Total Money Received.	Value.	Per cent. of Total Money Received.
1	£ 3,107	£ 2,413	77.7	£ 339	10.9	£ 15	0.5	(H) 269	8.7
22	2,365	605	25.6	1,718	72.6	...	...	(PE) 17	0.7
31	2,034	1,576	77.5	152	7.5	175	8.6	...	...
2	2,005	1,467	73.2	407	20.3	84	4.2	...	...
5	1,892	1,540	81.4	202	10.7	149	7.9	...	...
11	1,805	1,023	56.7	509	28.2	315	17.5	(P) 17	0.9
10	1,715	652	38.0	821	47.9	154	9.0	(H) 87	5.1
3	1,711	1,160	67.8	300	17.5	85	5.0	(G) 165	9.6
16*	1,571	1,162	74.0	362	23.0	47	3.0	...	...
4	1,356	886	65.3	334	24.6	42	3.1	(P) 70	5.2
9	1,109	875	78.9	205	18.5	2	0.2	(P) 40	3.6
8	1,264	1,123	88.8	22	1.7	113	8.9	...	...
23	1,136	753	66.3	277	24.4	90	7.9	(G) 11	1.0
29	1,086	806	74.2	135	12.4	113	10.4	(P) 15	1.4
26	1,051	571	54.3	37	3.5	434	41.3	...	...
19	1,033	949	91.9	71	6.9	...	...	...	...
32	1,026	559	54.5	219	21.2	203	19.8	...	...
25	952	711	74.7	51	5.4	190	20.0	...	...
13	917	616	67.2	177	19.3	77	8.4	(P) 28	3.1
6	907	408	45.0	65	7.2	73	8.0	(P) 324 (SK) 22	38.1
17	889	548	61.6	225	25.3	112	12.6	...	...
27	867	338	39.0	112	12.9	...	...	(P) 369	42.6
15*	812	604	74.4	103	12.7	53	6.5	(FV) 137	16.9
30*	791	773	97.7	...	...	19	2.4	...	...
24	772	343	44.4	98	12.7	55	7.1	(P) 137 (G) 42 (V) 83	31.9
12	764	667	87.3	89	11.6	106	13.9	...	...
20	760	339	44.6	295	38.8	65	8.6	...	...
14	739	521	70.5	29	3.9	32	4.3	(SW) 148	20.0
7	727	599	82.4	88	12.1	35	4.8	...	...
18	471	74	15.7	60	12.7	20	4.2	(FV) 260	55.2
28	433	227	52.4	...	...	104	24.0	(T) 102	23.6
21	433	264	61.0	62	14.3	28	6.5	(P) 40 (V) 17	13.2
Total ...	38,500	25,152	...	7,564	...	2,990	...	2,400	...
Average	1,203	786	65	236	17	93	9	75	9

(H) = Hay or Chaff; (PE) = Poultry or Eggs; (P) = Potatoes; (G) Grain or Seed; (SK) = Skins; (F) = Fruit; (V) = Vegetables; (T) = Timber; (SW) = Sheep and Wool.

* On these farms return from sale of milk exceeded return from sale of cream.

excluding any money borrowed. Total receipts varied from £3,100 (Farm 1) down to £430 (Farm 21). On seventeen farms receipts exceeded £1,000 and only three farmers received less than £700. Total receipts have been classified according to the source of income, viz., milk or cream, pigs, sale of stock, sale of other produce. On the average, 65 per cent. of total receipts came from cream or milk; eighteen of the thirty farms (i.e., 60 per cent.) received more than 65 per cent. from this source and included in these eighteen farms were eight of the eleven farms (i.e., 73 per cent.) with a net farm income above the average for the same thirty farms. This suggests that there was a tendency for those dairy farms which actually specialised on milk and cream production to return a higher net farm income.

Pig raising is largely complementary to butter production on dairy farms in New South Wales. As was to be expected, this enterprise did not materially affect farm efficiency. In fact 82 per cent. of the receipts of all farms came from these two sources, and only nine of the farms 1 to 30 failed to exceed this proportion. Of these nine only one had a "net farm income" below the average of the thirty farms. Thus, in this sample, farms which concentrated on milk or cream, together with the complementary work of pig raising, tended to return the highest "net farm incomes." On the average, sidelines other than pigs tended to reduce farm profit.

Return for Labour and Capital.

Table IX has been prepared in order to illustrate the actual return for all labour employed, and all capital invested, on each of thirty individual dairy farms. Each farm is considered entirely as a business unit.

The actual income of the farm operator is given in column 8 under the heading "Operator's Earnings." This figure is arrived at after allowing award rates for all labour employed other than the operator, and after deducting 5 per cent. on the value of average total capital invested on the farm during the year.

In column 11 the actual percentage return on average total farm capital during the financial year ended 30th June, 1945, is given for each farm. Here all labour, including that of the farm operator, has been allowed for at the ruling award rates. In addition an extra £26 has been deducted in each case as a payment to the operator for acting as the manager of the farm business.

To obtain the figures for "True Net Income" (Column 2), gross "receipts" and gross "payments" have been corrected for any changes in the values of assets and liabilities during the year. There was a difference of £2,500 between the largest and smallest "true net incomes." Four farms exceeded a "true net income" of £1,000 and eleven exceeded the average of £680.

All rent payments are given in column 3. No rent was paid on sixteen farms and only seven paid more than £20. These figures mainly represent rent for adjoining paddocks or dry runs.

Thirteen farms had no interest debt; only seven paid more than £20; and only four paid more than £50. The highest figure was £67 on Farm 4.

TABLE IX.

Return for Labour and Capital.

Figures for 30 Dairy Farms in New South Wales—Year ended 30th June, 1945.

(Arranged in Order of Net Farm Incomes).

1	2	3	4	5	6	7	8	9	10	11	12
Farm No.	True Net Income.	Rent Paid.	Interest Paid on Debts.	Share Farmer and Unpaid Family Labour at Award Rates.	Net Farm Income (if free of debt).	Interest on Av. Total Farm Capital at 5 % (plus Rent).	Operator's Earnings.	Managerial Return.	Farm Capital Earnings.	% Farm Capital Earnings to Average Total Farm Capital.	Order of % Farm Cap. Earnings to Av. Total Farm Capital.
	£	£	£	£	£	£	£	£	£	£	Farm No.
1	2,629	70	...	1,050	1,649	905	744	432	1,241	7.4	3
2	1,458	71	19	312	1,236	536	721	409	827	8.9	2
3	1,317	...	...	87	1,230	426	804	492	892	10.5	1
4	917	5	67	...	989	465	524	212	646	7.1	4
5	1,258	4	...	582	680	399	281	...	338	4.0	10
6	684	...	11	19	676	252	424	112	338	6.7	6
7	755	...	18	182	591	184	407	95	253	6.8	5
8	874	...	41	329	586	234	352	40	248	5.3	7
9	520	...	24	8	536	306	289	...	224	3.9	12
10	561	78	...	117	522	362	160	...	106	1.9	17
11	902	32	...	418	516	592	(-76)	...	185	1.7	18
12	678	...	...	170	508	171	337	25	170	5.0	8
13	652	26	18	190	506	215	291	...	142	3.6	14
14	501	...	...	...	501	180	321	19	163	4.7	9
15	458	...	9	...	467	184	309	...	129	3.5	15
16	507	...	...	45	462	168	294	...	124	3.7	13
17	583	...	13	140	456	206	258	...	118	2.7	16
18	378	...	38	...	416	96	320	8	78	4.0	11
19	704	2	12	314	404	433	(-29)	...	64	0.7	20
20	398	...	16	24	390	189	201	...	52	1.4	21
21	364	23	...	...	387	103	284	...	26	1.6	19
22	849	19	...	483	385	329	56	...	28	0.5	22
23	504	13	...	157	360	325	35	...	9	0.1	23
24	327	...	3	...	330	150	180	...	(-8)	(-0.3)	24
25	322	...	...	...	322	205	117	...	(-16)	(-0.4)	25
26	611	63	...	356	318	450	(-132)	...	(-83)	(-1.1)	26
27	150	...	55	172	33	242	(-209)	...	(-305)	(-6.3)	28
28	249	4	52	274	31	158	(-127)	...	(-311)	(-9.9)	29
29	102	...	61	153	10	344	(-334)	...	(-328)	(-4.7)	27
30	252	...	14	286	(-20)	177	(-198)	...	(-358)	(-10.1)	30
Total ...	20,464	410	471	5,868	15,477	8,986	6,604	1,844	4,992	63	...
Average	682	14	16	196	516	299.5	220	61.5	166	3	...

Share-farmers were engaged on seven of the thirty farms, viz.: Farms 1, 2, 3, 5, 12, 22 and 26. With the exception of Farms 1 and 5 the owners also worked on the farms. In the case of Farms 1 and 5 the share-farmer has been considered as the operator. Column 5 sets out the value of all labour excluding the farm operator and hired labour. That is, the figures include share-farmer's labour and unpaid family labour, all calculated at award rates. On seven farms there was no labour engaged other than the farm operator. Apart from the eight farms with share-farmers, the value of unpaid family labour was less than £100 on eleven farms, less than £200 on sixteen farms and less than £300 on eighteen farms. Only on three farms did it exceed £300.

The farms are arranged and numbered in Table IX in the order of "Net Farm Income." "Net Farm Incomes," shown in column 6, assume that the farms are all free of debt. That is, "Net Farm Income" equals "True Net Income" minus the value of unpaid and share-farmer labour, excluding the farm operator, plus any rent or interest paid on debts during this particular year.

"Net Farm Incomes" showed considerable variation between farms. For Farm 1 the figure was £1,640 whilst Farm 30 failed to return any net farm income. The distribution of Net Farm Incomes is set out in Table X.

TABLE X.
Distribution of Net Farm Incomes of Thirty Dairy Farms during the Year 1944-45.

Income Range.						No. of Farms.
Less than £50	..	..	..	..	..	4
£300-£349	..	..	..	..	..	3
£350-£399	..	..	..	..	..	4
£400-£449	..	..	..	..	..	2
£450-£499	..	..	..	..	..	3
£500-£549	..	..	..	..	..	6
£550-£599	..	..	..	..	..	2
£600-£649	..	..	..	..	..	0
£650-£699	..	..	..	..	..	2
£950-£999	..	..	..	..	..	1
£1200-£1249	..	..	..	..	..	2
£1650-£1699	..	..	..	..	..	1

Table X shows that twenty of the thirty farms returned a net farm income of between £300 and £600, with six farms in the £500-£550 group. The average for the thirty farms was £516. Perhaps these figures are a pointer to the range within which fell the New South Wales modal farm, but there is certainly little justification for using the average figure for any general purpose. In fact, it is fairly safe to assume that the average of these thirty farms is somewhat higher than the State average.

Whatever may have been the average "net farm income" for New South Wales during the selected year, a more important point is illustrated by these figures. This is the very great range of efficiency and prosperity which exists within this sample, and which must likewise be expected throughout the dairying industry of New South Wales. In view of the current interest in the question of determining an adequate price to dairy farmers for their products, it is perhaps appropriate to draw attention to the fact that average production cost is of little significance for this purpose. It is the range of production costs that is significant. Can any practical price level be visualised which would be a payable price for all dairy farmers, including the least efficient?

An important question, at least from the economic point of view, for future price policy is: What action can be taken in relation to that group of farmers which will still remain in a marginal or sub-marginal position, irrespective of what practicable price level is established? However, judgments on such a question can obviously not be attempted in a factual study of the present nature.

It was seen in Table I that the selected farms were drawn from several districts. In Table XI the farms have been grouped to show the average "net farm incomes" on a district basis.

TABLE XI.
Average Net Farm Incomes Returned from the Main Districts.

Districts and Farm Numbers.	Number of Farms.	Average "Net Farm Income."
Richmond-Tweed. Farms— 10, 11, 17, 20, 21, 23.	6	438.5
Dorriggo-Bellinghen-Macksville. Farms— 4, 6, 9, 13, 24, 27, 29.	7	440.0
Taree-Wingham. Farms— 3, 5, 7, 8, 12, 18, 22, 28.	8	553.4
Bega-Bombala. Farms— 1, 2, 14, 19, 25, 26.	6	736.8
Other Districts. Farms— 15, 16, 30.	3	303.0

The actual averages given in Table XI are of little significance for comparative purposes. For example the Bega-Bombala average is very high because it includes the two farms which returned the greatest net farm incomes. Dorriggo-Bellinghen-Macksville on the other hand included two of the smallest net farm incomes. Furthermore, the nature of the season differed from one district to another.

Returning to Table IX, "Operator's Earnings" in column 8 have been calculated by subtracting from the "Net Farm Incomes" the corresponding values given in column 7. These values are equal to 5 per cent. of the average of total capital recorded on the two dates: 1st July, 1944, and 30th June, 1945. While some degree of error is to be expected in these values they can be taken as approximately correct, and serve to illustrate the varying ability of farms to meet the interest debt on capital involved in the farm business, while at the same time providing a fair return to the operator for his labour. In twenty-nine cases £312 has been taken as a reasonable charge on the farm for the operator's labour during the year. With Farm 11, as the operator did not work full time on the farm, a *pro rata* figure of £273 has been allowed.

What was the capacity of the farms to meet this "fair return" to the operator? Ten farms returned a surplus over and above the amount stated. This surplus, termed "Managerial Return," varied from £492 on Farm 3 to £8 on Farm 18. Of the remaining farms, eight returned operator's earnings greater than £200 but less than £312; five farms returned up to £200; while seven failed to show any operator's earnings. In such cases, and where operator's earnings were small, the operator during the year was utilising for his personal expenses either interest due to capital invested, or part of the allowance made in the analysis for unpaid family labour.

Column II of Table IX shows the percentage return on average total farm capital. The actual farm capital earnings were derived by subtracting from the figures for "net farm income" any rent paid, together with what was considered a "fair" wage for the



This Scene, taken in the Dapto District, is typical of dairying country on the South Coast.

Photo. by Reg. Meaker.

operator, viz., £312, and an allowance of £26 for management. Percentage farm capital earnings to average total farm capital would give the true financial position of farms at the end of the year, provided farm capital could be correctly and uniformly valued for all farms. However, some degree of error would be present in the figures obtained from these farms.

The order of return to capital tended to follow the order of net farm incomes, particularly in the case of the high and low net farm income classes. That is, capital invested did not show any marked relationship to the size of net farm incomes. For instance, interest owing to capital was as high on Farm 26 as on Farm 3.

Nine farms returned more than 5 per cent. on capital invested. Eighteen showed a positive return but less than 5 per cent. Seven farms failed to produce any capital earnings. These tended to be over capitalised in relation to their "net farm incomes."

Farms Worked Wholly or Partly by Share-farmers.

Eight farms have been analysed to show net payments to share-farmers engaged, together with the returns for labour and capital of the actual owners of the same farms. These results are summarised in Table XII. With the exception of Farm 31 these farms also appear in Table IX. Both tables are set out in a similar manner.

The net payments to share-farmers are given in column 2. These vary from £975 on Farm 1 down to £237 on Farm 26.

With the exception of Farm 7 and Farm 11, the owners of the farms also worked full time on portion of the farm. Six farms returned a positive value for operator's earnings. Of these, four

TABLE XII.

Return for Labour (if any) and Capital of 8 Dairy Farm Landlords where Sharefarmers were Employed during 1944-45.

(Arranged in Order of Landlord's Net Farm Income for Year ended 30th June, 1945.)

1	2	3	4	5	6	7	8	9	10	11	12
Farm No.	Net Payments to Share-farmers.	True Net Income.	Rent Paid.	Interest paid on Debts.	Unpaid Family Labour at Award Rates.	Net Farm Income (if free of debt).	Interest at 5 per cent. on Average Total Farm Capital (plus Rent).	Owner's Earnings from Farm.	Managerial Return to Owner.	Farm Capital Earnings.	Per cent. Farm Capital Earnings to Average Total Farm Capital.
1	£ 975	£ 1,619	£ 70	£ ..	£ ..	£ 1,689	£ 898	£ 991	£ 679	£ 1,281	% 7.7
31	899	1,096	..	22	..	1,118	387	731	419	780	10.1
2	546	916	71	19	..	1,006	534	472	160	597	6.5
5	371	762	..	..	..	762	368	394	82	424	5.1
22	852	482	..	19	..	501	308	193	..	163	2.7
7	336	423	..	18	..	441	180	261	*	441	12.2
11	410	492	32	..	87	437	592	(-155)	..	106	1.0
26	237	290	63	..	..	353	449	(-96)	..	(-48)	(-0.6)

* Owner not working on farm.

returned more than a "fair" wage to the operator for his labour (viz., £312). Farms 1 and 31 were particularly efficient. In the case of Farm 7, as the owner was not working on the farm, the figure of £261 shown in column 9 was actually additional return to capital over and above the 5 per cent. rate. Two farms failed to return a sufficiently high "net farm income" to cover 5 per cent. on capital invested by the owner. Allowing £338 to the owner-operator, Farm 26 did not show a positive value for Farm Capital Earnings.

Tenant Farms.

Four of the farms in Table IX were rented by tenant farmers. These, together with an additional tenant farm (No. 32), are arranged in Table XIII to show the actual return for the labour and capital invested by the tenant.

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TABLE XIII.

Return for Labour and Capital of Tenant Farmers on 5 New South Wales Dairy Farms.

(Arranged in Order of Tenant's Net Farm Income for Year ended 30th June, 1945.)

1	2	3	4	5	6	7	8	9	10	11	12
Farm No.	Net Payment to Share-farmers.	True Net Income.	Rent Paid.	Interest Paid on Debts.	Unpaid Family Labour at Award Rates.	Tenant's Net Farm Income (if free of debt).	Interest at 5 per cent. on Tenant's Average Total Farm Capital (plus rent).	Tenant's Earnings from Farm.	Managerial Return to Tenant.	Tenant's Farm Capital Earnings.	Per cent. Tenant Farmer's Capital Earnings to Tenant's Average Total Farm Capital.
3	£ 700	£ 486	£ 174	£ ...	£ ...	£ 660	£ 283	£ 377	£ *	£ 486	% 22.2
32	...	504	120	3	4	623	219	404	92	175	9.0
17	...	526	148	13	140	547	175	352	40	61	6.5
15	...	230	130	9	...	369	180	215	...	(-99)	(-10.0)
24	...	273	72	3	...	348	134	224	...	(-62)	(-0.6)

*Tenant not working on farm.

On Farm 3 the actual working of the farm was carried out by a share-farmer. This farm was exceptionally efficient, returning £700 to the share-farmer and 22 per cent. on capital invested by the tenant. Farms 32 and 17 gave positive managerial returns to the tenant operators, and more than 5 per cent. Farm Capital Earnings. Two farms failed to return any farm capital earnings after £338 had been allowed for tenant's labour.

Capital and Debt Structure of Farms.

In Table VII it was seen how capital invested on Farms 1 to 30 was distributed amongst the main groups of assets. In Table XIV the farms are again arranged in the order of total capital invested on 1st July, 1944, this time to show the pattern of liabilities on that date.

Total liabilities on the thirty farms amounted to £12,133. Nine farms were completely free of debt, while twelve had liabilities equal to or exceeding £500. Bank overdrafts and private mortgages were the largest items, accounting for 62 per cent. and 23 per cent. respectively of total liabilities. Amounts shown under "Other Money Owed," refer to farmers' debts to machinery firms, produce firms, etc. There was a slight tendency with these thirty farms for those with the lower net farm incomes to have the higher liabilities.

The actual net worth of the thirty farms varied between the same limits as total capital invested on 1st July, 1944. That is from £1,620 to £16,590. Net worth was less than £6,000 on twenty farms, less than £4,000 on fifteen farms, and nine farms had a net worth of between £3,000 and £4,000. There was a

small increase for the year in the net worth of all farms taken together. On eleven farms the net worth decreased, and of these the low net income farms showed the greater decrease.

TABLE XIV.

Capital and Debt Structure for 30 Dairy Farms.

(Arranged in Order of Total Capital Invested at 1st July, 1944.)

Farm No.	Total Capital Invested 1st July, 1944.	Liabilities as at 1st July, 1944.					Net Worth 1st July, 1944.	Net Worth 30th June, 1945.	Change in Net Worth During Year.	
		Total Liabilities.	Bank Over-draft.	To Crown on Land or Fodder.	Private Mortgage.	Other Money Owed.			Value.	Per Cent. Change.
	£	£	£	£	£	£	£	£	£	%
1	16,591	...	...	...	...	...	16,591	16,812	+221	+1.3
11	11,296	...	...	...	...	...	11,296	11,094	-202	-1.8
4	10,244	1,485	1,443	...	...	42	8,759	9,637	+878	+1.0
2	9,072	438	338	100	...	...	8,634	9,125	+491	+5.9
19	8,621	210	200	...	...	10	8,411	8,495	+84	+1.0
3	8,520	...	...	...	...	...	8,520	8,521	+1	Nil.
5	7,917	...	...	...	...	...	7,917	7,865	-52	-0.7
26	7,837	...	...	...	...	...	7,837	7,663	-174	-2.2
29	6,940	1,326	986	...	340	...	5,614	5,780	+166	+2.9
23	6,371	...	...	...	...	...	6,371	6,129	-242	-3.8
22	6,271	...	...	...	...	...	6,271	6,130	-141	-2.2
10	5,878	...	...	...	...	...	5,878	5,497	-381	-6.5
9	5,830	600	...	...	600	...	5,230	5,427	+197	+3.8
8	5,019	337	...	337	...	...	4,682	4,678	-4	-0.1
6	4,981	500	500	...	...	...	4,481	4,645	+164	+3.6
27	4,810	1,115	955	15	145	...	3,695	3,823	+128	+3.5
17	4,108	207	...	...	200	7	3,901	4,028	+127	+3.2
25	4,090	500	...	...	500	...	3,590	3,891	+301	+8.4
20	3,827	550	...	...	550	...	3,277	3,233	-44	-1.3
15	3,667	547	63	...	...	484	3,120	3,221	+101	+3.2
7	3,633	690	240	...	450	...	2,943	3,662	+719	+24.4
13	3,618	284	284	...	...	...	3,334	3,592	+258	+7.7
30	3,507	794	650	60	...	84	2,713	2,728	+15	+0.5
14	3,460	146	...	138	...	8	3,314	3,535	+221	+6.6
16	3,435	151	...	...	...	151	3,284	3,111	-173	-5.3
12	3,318	6	...	6	...	...	3,312	3,513	+201	+6.0
28	3,140	1,397	1,086	311	...	...	1,743	1,797	+54	+3.7
24	3,026	50	...	...	...	50	2,976	2,941	-35	-1.2
18	1,936	800	800	...	...	...	1,136	1,165	+29	+2.5
21	1,619	...	...	...	...	...	1,619	1,606	-13	-0.8
Total	175,642	12,133	7,545	967	2,785	836	162,619	165,536	+2,917	.....
Average	5,855	404	252	32	93	28	5,421	5,518	+97	+1.9

Analysis of Farm Costs.

A series of tables has been prepared to compare the importance of the various individual farm costs, and of various groups of farm costs, on the selected farms. In each of these tables, Farms 1 to 30 are arranged in the order of "Total Farm Costs," including interest on capital, calculated at the rate of 5 per cent. on the average total farm capital for the year 1944-45.

A summary of the farm costs is set out in Table XV. Total farm costs varied from £2,960 (Farm 1) down to £570 (Farm 21) with eighteen farms between £1,000 and £2,000. There was a tendency for the high net income farms to also have the higher total farm costs. "Total Fixed Costs" in which have been included rates, rent, depreciation and operator's labour, appear to be fairly constant but only because of the fixed value given to the far most important item: operator's labour. "Total Variable Costs," which for the majority of farms was the largest group of costs, showed considerable variation.

TABLE XV.
Summary of Farm Costs. (For 30 Dairy Farms).
 (Arranged in order of Total Farm Costs).

Farm Number.	Total Farm Costs. *	Interest on Average Total Farm Capital at 5 per cent.		Total Value of Fixed Costs.		Total Value of Variable Costs.		Total Fixed and Variable Costs.	
		Value.	Percentage of Total Cost.	Value.	Percentage of Total Cost.	Value.	Percentage of Total Cost.	Value.	Percentage of Total Cost.
	£	£	per cent.	£	per cent.	£	per cent.	£	per cent.
1	2,956	835	28.3	662	22.2	1,459	49.4	2,121	71.7
22	2,668	310	11.6	482	18.1	1,876	70.3	2,358	88.4
5	2,063	395	19.2	418	20.2	1,250	60.6	1,668	80.8
4	1,937	326	26.8	555	28.4	876	44.8	1,431	73.2
11	1,899	560	29.5	454	23.9	885	46.6	1,339	70.5
10	1,792	285	15.9	559	31.1	949	53.0	1,508	84.1
29	1,787	344	19.2	474	26.4	969	54.4	1,443	80.8
2	1,761	465	26.5	615	34.9	681	38.6	1,296	73.5
16	1,643	168	10.4	413	25.6	1,036	64.0	1,449	89.6
26	1,617	387	23.6	567	34.5	689	41.9	1,256	76.4
19	1,582	431	27.3	513	32.5	638	40.2	1,151	72.7
3	1,544	426	27.6	481	31.2	637	41.2	1,118	72.4
27	1,520	188	12.4	397	26.1	935	61.5	1,332	87.6
23	1,404	312	22.3	474	33.7	618	44.0	1,092	77.7
30	1,397	177	12.7	424	30.3	796	57.0	1,220	87.3
8	1,335	250	18.7	449	33.5	636	47.8	1,085	81.3
25	1,303	205	15.8	405	31.0	693	53.2	1,098	84.2
13	1,209	189	15.7	423	34.9	597	59.4	1,020	84.3
9	1,181	289	24.5	418	35.4	474	40.1	892	75.5
17	1,139	206	18.1	401	35.3	532	46.6	933	81.9
28	1,009	142	14.0	398	39.5	469	46.5	867	86.0
6	974	252	26.0	386	39.7	336	34.3	722	74.0
20	950	189	20.1	407	42.8	354	37.1	761	79.9
24	938	150	16.0	397	42.3	391	41.7	788	84.0
12	938	171	18.3	402	42.9	365	38.8	767	81.7
7	878	184	21.0	385	43.9	309	35.1	694	79.0
15	847	184	22.0	410	48.7	253	29.3	663	78.0
14	793	179	22.6	407	51.3	207	26.1	614	77.4
18	639	96	15.0	363	56.9	180	28.1	543	85.0
21	574	80	14.0	401	69.9	93	16.1	494	86.0
Total	42,297	8,575		13,540		20,183		33,423	
Average	1,410	286	20	451	36	673	45	1,114	80

*Including interest at 5 per cent. on Average Total Farm Capital.

In Table XVI the individual fixed costs have been separated out both for value and as percentages of total cost. In Tables XVII and XVIII the same has been done for variable costs.

Each farm could be followed through the four tables and each item of cost compared with other farms. Take for example Farm 22, which had a low net farm income but very high total costs, interest on capital and fixed costs for this farm were below the average for the thirty farms, but variable costs far exceeded the average. Among the variable costs total value of labour (excluding the operator) and costs of feed and cartage all exceeded the average for the thirty farms. Feed costs were particularly high. Had the season been more favourable, feed costs on several of the farms would have been lower. In such a year, previous fodder conservation programmes would have returned dividends to the farmer.

On the average, labour was the most important individual item of cost. For the thirty farms, operator's labour accounted for 28 per cent. of total cost, while the cost of all labour employed on

TABLE XVI.
*Individual Fixed Costs of 30 Dairy Farms during year ended
 30th June, 1945.*
 (Arranged in order of Total Farm Costs).

Farm No.	Value of Individual Fixed Costs.					Individual Fixed Costs as Percentage of Total Farm Cost.				
	Rent.	Rates.	Depreciation.		Operator's Labour.	Rent.	Rates.	Depreciation.		Operator's Labour.
			Improve-ments.	Machin-ery.				Improve-ments.	Machin-ery.	
1	£ 70	£ 101	£ 112	£ 41	£ 338	% 2.4	% 3.4	% 3.8	% 1.4	% 11.3
22	19	6	60	59	338	0.7	0.2	2.3	2.2	12.7
5	3	13	38	26	338	0.1	0.6	1.8	1.3	16.4
4	5	15	97	100	338	0.3	0.8	5.0	5.1	17.3
11	32	37	65	47	273	1.7	1.9	3.4	2.5	14.4
10	78	13	34	96	338	4.3	0.7	1.9	5.3	18.9
29	...	22	61	53	338	...	1.2	3.4	2.9	19.9
2	71	29	71	106	338	4.0	1.6	4.0	6.0	19.3
16	...	...	36	39	338	...	...	2.2	2.4	21.0
26	63	16	79	71	338	3.8	1.0	4.8	4.3	20.6
19	...	32	46	97	338	...	2.0	2.9	6.1	21.5
3	...	19	42	82	338	...	1.2	2.7	5.3	31.2
27	...	7	39	13	338	...	0.5	2.6	0.8	22.5
23	13	16	50	57	338	0.9	1.1	3.5	4.0	24.2
30	...	31	36	19	338	...	2.2	2.6	1.3	24.2
8	...	6	39	66	338	...	0.4	2.9	4.9	25.3
25	...	7	28	32	338	...	0.5	2.1	2.4	26.0
13	26	13	27	19	338	2.1	1.1	2.2	1.5	28.0
9	...	...	43	37	338	...	...	3.6	3.1	28.7
17	...	12	33	18	338	...	1.1	2.9	1.6	29.7
28	9	2	25	24	338	0.9	0.2	2.5	2.4	33.5
6	...	24	17	7	338	...	2.5	1.7	0.7	34.8
20	...	19	28	22	338	...	1.9	2.8	2.2	35.9
24	...	5	18	36	338	...	0.5	1.9	3.8	36.1
12	...	6	19	39	338	...	0.6	2.0	4.2	36.1
7	...	5	31	11	338	...	0.6	3.5	1.2	38.6
15	...	15	19	38	338	...	1.8	2.2	4.5	40.2
14	...	10	19	40	338	...	1.3	2.4	5.0	42.6
18	...	3	10	12	338	...	0.5	1.6	1.8	53.0
21	23	7	22	11	338	3.9	1.2	3.7	1.9	59.2
Total	412	491	1,244	1,318	10,075					
Average	13.7	16.4	41.5	43.9	335.8	0.8	1.1	2.8	3.1	28.1

farms was equivalent to 48 per cent. Costs of labour, excluding that of the farm operator, varied markedly, but tended to be smaller on farms with lower total costs. However, the increasing importance of operator's labour as a proportion of total costs towards lower cost farms resulted in the total labour cost of farms being comparatively constant. (For twenty-two farms it was between 40 and 60 per cent. of total cost—see Table XVIII.) There was apparently no close relationship between labour cost and net farm incomes.

CONCLUSION.

In this article different aspects of the financial position of thirty dairy farms in New South Wales for the year ended 30th June, 1945, have been studied. The number of farms taken was comparatively small. It must be repeated that they are by no means claimed to be a representative sample for New South Wales from which to interpret average figures for the State as a whole. Rather the tables have been discussed in a very general manner so as to illustrate with actual examples the system of analysis adopted. Farmers, especially those whose figures have been included, will

be able to use the tables in order to compare results from their own farms with those from these other farms in New South Wales.

Yet even these few farms illustrate very clearly the great variation in efficiency which exists in the dairying industry of this State. Some indication is given also of the large number of variables which must come up for consideration in any attempt to arrive at actual causes for productive efficiency or inefficiency

TABLE XVII.

Individual Variable Costs of 30 Dairy Farms During Year ended 30th June, 1945.

(Arranged in Order of total Farm Costs).

Farm No.	Upkeep and Repairs.		Total Farm Labour excluding Operator.*	Seed.	Fertilizer.	Feed.	Cartage.	Fuel.	Miscellaneous Livestock Expenses.	Miscellaneous Crop Expenses.	Insurance.	General Expenses.
	Im-provements.	Mach-inery.										
	£	£	£	£	£	£	£	£	£	£	£	£
1	41	17	1,123	8	...	119	42	31	15	33	7	22
22	20	5	955	12	14	648	148	30	17	...	13	14
5	9	2	1,037	24	...	58	46	31	25	...	4	9
4	2	68	240	118	175	7	44	135	45	35	7	...
11	27	45	538	12	...	169	...	42	...	24	7	21
10	48	46	350	...	...	411	38	40	...	...	...	16
29	68	42	538	36	47	100	43	23	...	...	14	39
2	31	35	312	18	24	116	48	51	2	3	19	22
16	41	75	69	...	22	566	71	96	51	28	...	17
26	4	25	356	33	39	118	11	57	28	...	4	14
19	10	37	314	26	15	...	38	120	6	26	11	35
3	13	73	153	11	...	210	18	117	3	6	5	28
27	83	7	472	8	124	107	50	32	...	44	...	8
23	1	20	325	14	3	141	9	55	9	5	15	21
30	4	22	386	24	12	157	112	17	19	2	4	37
8	64	38	359	13	33	59	9	29	1	3	9	19
25	2	38	270	31	15	247	3	19	4	44	10	10
13	...	44	260	51	39	87	20	...	39	20	...	10
9	4	30	260	14	47	74	18	16	...	8	3	...
17	2	42	267	...	...	134	27	25	18	...	2	11
28	10	6	274	27	55	70	11	...	5	...	4	7
6	13	2	82	76	33	15	41	14	6	13	...	41
20	22	53	24	5	6	153	6	61	10	1	4	9
24	6	38	122	33	21	73	35	23	1	8	2	26
12	37	6	180	16	32	7	29	17	3	...	2	18
7	7	10	207	15	33	14	1	...	...	...	4	14
15	13	29	...	8	6	73	41	41	...	5	9	24
14	3	43	39	7	...	38	17	34	6	4	...	16
18	1	...	24	3	23	80	3	5	8	17	1	...
21	13	15	2	2	4	53	1	1	...	...	1	1
Total ...	599	913	9,538	644	822	4,104	982	1,189	321	329	161	509
Average	19.9	30.4	317.9	21.5	27.4	136.8	32.7	39.6	10.7	11.0	5.4	17.0

*Hired labour, share-farmer and unpaid family labour at award rates.

on any individual farm unit. The figures warrant further detailed examination on this question of causes of inefficiency, but this could only be attempted satisfactorily if the sample were enlarged and improved by the inclusion of both additional farms and the results for additional years.

Already a number of variables have suggested themselves as likely to show fairly general inter-relationships and pointers to farm efficiency. Size of farms in relation to labour and capital involved, degree of specialisation, productivity of stock, and the farmers' varying capacities to manage a farm business, are all factors which suggest themselves as needing further investigation.

One important preliminary suggestion is the varying managerial capacities of dairy farmers. Success usually appears to accompany the established farmer who makes it his business to separate out the most profitable enterprise, and devote his labour and capital to it. Do many farmers in New South Wales really ask themselves these questions: "How many cows in my herd are unprofitable?" "How much capital have I 'tied up' in machinery and stock which does not, and will not ever, return a satisfactory rate of interest?"

TABLE XVIII.

*Individual Variable Costs as Percentage of Total Farm Costs
Including Interest on Capital at 5 Per cent.*

Figures for 30 Dairy Farms during Year ending 30th June, 1945.
(Arranged in Order of Total Farm Costs).

Farm No.	Upkeep and Repairs.		Total Farm Labour excluding Farm Operator.*	Seed.	Fertilizer.	Feed.	Cartage.	Fuel.	Miscellaneous Livestock Expenses.	Miscellaneous Crop Expenses.	Insurance.	General Expenses.	Total Labour Cost (including Farm Operator).	
	Improvements.	Machinery.											Value.	% of Total Farm Cost
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
1	1.4	0.6	37.9	0.3	...	4.0	1.4	1.0	0.5	1.1	0.2	0.7	1,461	49.2
22	0.8	0.2	35.8	0.4	0.5	24.3	5.6	1.1	0.6	...	0.5	0.5	1,293	48.5
5	0.4	0.1	50.4	1.2	...	2.8	2.2	1.5	1.2	...	0.2	0.4	1,375	66.8
4	0.1	3.5	12.3	6.0	8.9	0.4	2.2	6.9	2.3	1.8	0.4	...	578	29.6
11	1.4	2.4	27.3	0.6	...	8.9	...	2.2	...	1.3	0.4	1.1	811	41.7
10	2.7	2.6	19.5	...	...	23.0	2.1	2.2	...	...	...	0.9	688	38.4
29	3.3	2.9	30.2	2.0	2.6	5.6	2.4	1.3	...	...	0.8	3.3	876	49.1
2	1.7	2.0	17.8	1.0	1.4	6.6	2.7	2.9	0.1	0.2	1.0	1.2	650	37.1
16	2.5	4.6	4.2	...	1.4	35.1	4.4	6.0	3.1	1.7	...	1.0	407	25.2
26	0.2	1.5	21.7	2.0	2.4	7.2	0.6	3.5	1.7	...	0.2	0.9	694	42.3
19	0.6	2.3	19.9	1.6	0.9	...	2.4	7.6	0.4	1.6	0.7	2.2	652	41.4
3	0.8	4.7	5.6	9.9	...	13.6	1.2	7.6	0.2	0.4	0.3	1.8	491	41.1
27	5.5	0.5	31.1	0.5	8.2	7.0	3.3	2.1	...	2.9	...	0.5	810	53.3
23	0.1	1.4	23.2	1.0	0.2	10.1	0.6	3.9	0.6	0.4	1.0	1.5	663	47.4
30	0.3	1.6	27.7	1.7	0.9	11.3	8.0	1.2	1.3	0.1	0.3	2.6	724	51.9
8	4.8	2.8	27.0	1.0	2.5	4.4	0.7	2.2	0.1	0.2	0.7	1.4	697	52.3
25	0.1	2.9	20.7	2.8	1.1	19.0	0.2	1.4	0.3	3.3	0.7	0.7	608	46.7
13	...	3.6	21.6	4.2	3.2	7.2	1.7	2.2	3.2	1.7	...	0.8	598	49.6
9	0.3	2.5	22.1	1.2	4.0	6.3	1.5	1.3	...	0.7	0.2	...	598	50.8
17	0.1	3.7	23.4	...	...	11.8	2.4	2.2	1.6	...	0.1	1.0	605	53.1
28	1.0	0.6	27.1	2.7	5.5	6.9	1.1	...	0.5	...	0.4	0.7	612	60.6
6	1.3	0.2	8.4	7.8	3.4	1.5	4.2	1.4	0.6	1.3	...	4.2	420	43.2
20	2.2	5.6	2.4	0.5	0.6	16.2	0.6	6.6	1.0	0.1	0.4	0.9	362	38.3
24	0.7	4.1	12.9	3.5	2.2	7.8	3.7	2.5	0.1	...	0.2	2.8	460	49.0
12	4.0	0.6	19.2	1.7	3.4	0.7	3.1	1.8	0.3	...	0.2	1.9	518	55.3
7	0.8	1.1	23.6	1.7	3.8	1.6	0.1	...	...	...	0.4	1.6	545	62.2
15	1.4	3.2	...	0.9	0.7	8.6	4.8	4.8	...	0.6	1.0	2.8	338	40.2
14	0.4	5.4	4.9	0.9	...	4.8	2.2	4.3	0.7	0.5	...	2.0	377	47.5
18	0.1	...	3.7	0.5	3.6	12.6	0.8	0.8	1.2	2.7	0.1	...	362	50.7
21	2.2	2.5	0.3	0.3	0.7	9.3	0.2	0.2	...	...	0.2	0.2	340	59.5
Average	1.4	2.3	19.4	1.9	2.1	9.3	2.2	2.8	0.7	0.8	0.4	1.3	653.8	47.6

*Hired labour, share-farmer and unpaid family labour at award rates.

"In growing this crop do I receive sufficient return to cover my labour and capital involved?" "Am I sacrificing a more payable enterprise for the one now occupying my time?"

It is, of course, not overlooked that dairy farmers, like most farmers, are subject to a very large degree of risk. However, the farmer's capacity to plan against risks is most variable. For example, one farmer knows better than another just where and when to cut his losses; one farmer realises that adverse seasons

have a habit of recurring and makes definite plans for the future—the other forgets. Undoubtedly, many farmers need assistance to enable them to handle effectively the business aspects of their calling. In many cases, however, much could be achieved by the farmers seriously trying to answer for themselves the question: “How can I best help myself?” But the fact cannot be avoided that dairy farming, whatever other aspects it has, is a business also, and must be approached in that light.

Acknowledgment.

This opportunity is taken to express appreciation of the valuable assistance given by Departmental Field Officers in this project; without their help it would have been impossible for members of the staff to maintain such close personal contact with co-operating farmers.
