INCOMES OF DAIRY FARMERS ON THE FAR SOUTH COAST

by

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In 1953-54 an Australian-wide cost-of-production survey of the butterfat section of the dairying industry was conducted by the Bureau of Agricultural Economics in co-operation with State Departments of Agriculture and industry organisations. A report and an analysis of some of the material relating to the farms surveyed in New South Wales was presented in an earlier issue of this journal.[1] The purpose of this note is to present information regarding incomes obtained from 29 dairy farmers interviewed in the South Coast region.

The South Coast region, being confined to butterfat producing areas, was defined for the purposes of the survey to consist of the Shires of Eurobodalla, Mumbulla and Imlay. That is, it covered the area generally referred to as the Far South Coast of New South Wales. The three shires contain some 680 dairy farms and over five per cent of all dairy cattle (in registered dairies) in New South Wales. The information obtained from the survey farmers related to the three-year period which ended on June 30, 1953. During this period the dairy factories in these three shires produced approximately 8 per cent of all butter made in factories in this State and over 36 per cent of all cheese.

An attempt is made below to compare the survey farmers in this region with those in other districts and to show the differences in resources, management techniques, etc., between farmers in different income groups on the Far South Coast. A similar attempt was made for the Richmond-Tweed Region earlier.[2]

Far South Coast Compared with other Dairying Districts

How do the survey farms on the Far South Coast compare with those of other butter and cheese producing areas in New South Wales? The average survey farmer on the Far South Coast had a larger annual production than did farmers in any of the other five regions (10,165 lb. of butter or its equivalent as against the State average of 7,866 lb.), and a larger area at his disposal (406 acres). On the other hand average production per acre (25 lb.) was lower than in any other region. This was probably the result of the large proportion of hilly and poor quality land in the region. River basins along the Far South Coast are generally smaller than those of the mid and North Coasts of New South Wales. Most of the dairy farms in the region are situated in these river basins.

[1] See "The Cost Structure and Management Problems of the Dairy Industry in New South Wales" and Fred H. G. Gruen, "Incomes of Dairy Farmers in the Richmond-Tweed Region", this *Review*, Vol. 23, No. 3 (September, 1955).

[2] Gruen, *op. cit.*

In addition to having smaller areas of alluvial lowlands many of the soils of the South Coast are relatively poor having developed on granites and silurian sediments and pastures are not as luxuriant or extensive as on the basalt-derived soils common on the North Coast.

Thus, because of the relatively poor land resources available to them, dairy farmers on the Far South Coast have more need to develop improved pastures for successful dairy production. Unlike the North Coast with its difficult tropical conditions, the South Coast is far more suited climatically to the introduction of traditional soft grasses and clovers for pasture improvement. The region experiences rain of both summer and winter incidence so that a more even seasonal distribution of moisture occurs in the average year than is the case in the more monsoonal areas to the north. This factor, coupled with cooler spring and summer temperatures, permits the more successful development of improved pastures and allows a longer growing season. The result of these factors is that survey farmers on the Far South Coast appeared to be more "pasture improvement conscious" than dairy farmers in the northern districts. In the three years covered by the survey the average area sown to pastures per farm on the South Coast was 26.7 acres, compared with less than half that figure for the Clarence region, which was second in this respect.

According to the different economic criteria the South Coast survey farmers were, on the average, considerably more successful than survey farmers in the other regions. Average farm income was highest in the South Coast region (£1,447 as compared with £1,280 for the next best region—Inland). Similarly average family income, return to management and rate of return to capital (7.1 per cent compared with 6.85 per cent for the Big Scrub) were the highest for the South Coast group of survey farmers.

The percentage of farmers with no debts was very high (48 per cent—exceeded only by the Big Scrub, with 50 per cent of debt-free farmers) and debts as a percentage of capital were lower than in any other region.

Capital expenditure by the South Coast farmers was considerably higher than that of other coastal survey farmers. Reflecting the greater attention paid to pasture improvement, a particularly large proportion of total expenditure was used to buy tractors and other farm machinery.

Another contrast between the South Coast and other dairying districts was provided by the lower proportion of farms rejected as being unrepresentative or otherwise unsuitable for inclusion in the sample. In the South Coast region thirteen farms had to be rejected before twenty-nine eligible farms were obtained. In the other coastal regions 215 farms had to be rejected before 187 eligible farms were found.[8] The most important groups of farms excluded were:

1. Farms which had changed either owner or operator in the last three years. Probably a large proportion of these was operated by non-family share farmers.

[8] This difference is statistically significant at the 1 per cent level.

2. Farms where sidelines (apart from pigs) accounted for more than 25 per cent of gross income in 1952-53.
3. Farms where records and costs could not be separated from those of another farm (i.e., where a farmer owns more than one farm).
4. Farms with less than fifteen cows in 1952-53.

These four groups accounted for twelve out of the thirteen rejections in the South Coast region and some 70 per cent of all other coastal rejects. It seems reasonable to infer that the dairy industry on the Far South Coast differs from the industry in other coastal sections in having:

1. a less rapid turnover of farms,
2. more specialisation in dairying and fewer sidelines,
3. less multiple ownership of farms.

On the other hand, the survey farmers on the South Coast contained a much higher proportion of share farmers than the remaining coastal regions[4] and it is share farmers who are probably mainly responsible for the large turnover of farms.[5] It seems likely, therefore, that share farmers in the South Coast region remain longer on one farm than in the other regions.

Farm Characteristics Grouped by Incomes

The twenty-nine survey farmers were ranked in order of labour return per adult worker and divided into six groups, the first five consisting of five farms each, and the last group of four farms. Table I gives some farm characteristics for each of the groups.

An examination of Table I shows that the farmers in the higher income groups differ from those in the lower income groups in various ways. As might be expected farmers in the high income groups tend to have larger farms as measured in terms of acreage or cow numbers or total production per farm. However, there is no discernible difference in the average size of the labour force per farm. High income farms also tend to have higher production per cow than the farms in the lower income groups, and a larger area under sown pastures.

These general trends support the information which has been obtained from similar surveys of the dairying industry in New South Wales and in other States in the past. However, the table indicates that none of the measures listed above such as acreage, production or cow numbers are very closely related to incomes.

In other words, no single measure seems to be closely related to net returns per labour unit—with possibly one exception which will be discussed below.

[4] This difference was statistically significant at the 1 per cent level.
[5] *Ibid.*, pp. 184-186.

TABLE I

Farm Characteristics Grouped According to Incomes

Group	Number of Farms.	Average Annual Labour Return per Male Unit.	Average Area of Land Used for Dairying.	Value of Land (per Acre).*	Average Value of Land + Improvement per Farm.*	Average Adult Male Labour Units per Farm.	Average Number of Milking Cows.	Average Production per Cow.	Average Annual Production per Farm.	Average Area under Sown Pastures.	Number of Farmers with Improved Pastures.	Average Product per Adult Male Equivalent.	Number of Share-farmers.
		£	Acres.	£	£			lb. c.b.†	lb. c.b.†	Acres.‡		lb. c.b.†	
I ...	5	1,124	352	32·3	11,400	1·8	70	220	15,416	69·6	5	8,517	4§
II ...	5	883	321	30·5	9,798	1·5	58	208	11,984	73·8	5	7,989	3
III ...	5	615	380	34·1	12,960	2·1	65	192	12,384	33·5	5	5,787	3
IV ...	5	442	292	33·5	9,768	1·7	55	181	9,931	38·0	3	5,983	1§
V ...	5	340	221	36·1	7,955	1·8	38	194	7,309	24·5	4	4,083	1
VI ...	4	73	137	52·3	7,135	1·6	32	182	5,772	72·8	4	3,653	1

* Farmer's valuation. † lb. commercial butter. ‡ Average for those farmers having improved pastures. § Does not include cash tenant.

For the first three income groups declines in production per cow parallel declines in incomes; but there is no consistent relationship for the next three groups. This may be ascribed partly to the fact that two farmers in Group IV milked only once a day which reduced their production per cow considerably.[6] (However this allowed them to milk more cows and partly to offset the fall in income.) For the twenty-nine survey farmers as a whole the relation between incomes and production per cow was small (r^2 = .063 for the linear correlation analysis).

Changes in the number of milking cows per farm parallel income changes except for Groups II and III and a similar relationship holds between average annual production per farm and incomes. The lower income per man for the larger farms of Group III (i.e., as compared with farms in Group II) seems to be mainly due to the larger labour force on these farms which reduces productivity per man (shown in the second-last column of Table I) below the level of the Group II farmers.

Pasture improvement is regarded as one important method of increasing efficiency and income in this region. Table I lends support to this view. It will be seen that the area under sown pastures tends to decline as income declines. Group VI is a conspicuous exception in this respect. This is probably the result of the inclusion of two farms in this group which seem to be conducted more or less on a "hobby" basis almost irrespective of financial returns. In the case of both these farms expenditure on machinery and farm improvements generally was in excess of earnings and decidedly excessive when the size of the farms and their maximum productive potential are considered.

TABLE II

Average Incomes of Farmers Following Different Practices

Practice.	Number of Farmers Following Practice.	Average Incomes of Farmers.	
		Following Practice.	Not Following Practice.
		£	£
Controlled Rotational Grazing ...	16	624	564
Harrowing and mowing of surplus pasture	21	637	491
Feeding Concentrates as a normal practice	10	501	see next line.
Feeding concentrates in periods of feed shortage	8	532	728*

* Not feeding concentrates at all (10 farmers—no information on concentrate feeding was available for one farmer).

[6] Milking once a day became popular with some farmers in the area during the war and post-war years of severe shortages. It seems to be gradually declining in importance.

As in previous surveys it was found that there was a strong correlation between production per man and net incomes per man ($r^2 = .782$). However, not enough is known about the factors conducive to high labour productivity. This is a field where more research seems definitely needed.

In the discussion of the survey farmers in the Richmond-Tweed region the incomes of farmers adopting certain practices were compared with the incomes of those farmers who have not adopted these practices.[7] It was pointed out that great care needs to be exercised in drawing conclusions from such cross-sectional studies.

A similar comparison has been made for the 29 survey farmers. The figures are given in Table II. These figures have not been subjected to statistical tests, and differences in average incomes are of doubtful statistical significance. However, the results obtained closely parallel those for the survey farmers in the Richmond-Tweed region. Incomes of farmers practising controlled rotational grazing, harrowing and mowing of surplus pasture tended to be higher than the incomes of farmers not using these practices—both in the Far South Coast and in the various sub-regions of the Richmond-Tweed. On the other hand, concentrate feeding was associated with lower average incomes in both regions. However, as pointed out in the earlier study, it does not necessarily follow that those survey farmers who fed concentrates would have obtained higher average incomes if they had ceased doing this.

[7] *Ibid.*, pp. 196-203.