

## **A NOTE ON RESOURCES AND OUTPUT STUDIES ON DAIRY FARMS**

Extension workers are confronted continuously with problems that fall within a wide range of disciplines. Extension in most dairying regions of Queensland requires constant consideration of aspects of agronomy, dairy husbandry and rural sociology as a minimum. In some regions the field of disciplines may be very much wider.

The problem of the extension worker would seem rather more acute in regions having considerable variation of natural resources, especially the quantity and quality of the land resource, and also in those regions where wide ranges in production methods and opportunities for enterprise diversification are possible.

In these circumstances, there is a need for a comprehensive and up-to-date assessment of the real nature of the currently prevailing situation on the farms of the area. Such an appraisal of the farms, their current production patterns and their opportunities, on the one hand, and of the farmers, their present attitudes and expectations, on the other hand, should lead to that understanding of farms and farmers that is the essence of extension and, thereby, permit extension plans and activity to be fitted more effectively into the true farming picture.

### **Need for Resource and Output Data**

Objectively derived and quantitative data on the prevailing situations on dairy farms are relatively scarce. The information available, in any case, seems inadequate in view of the current crises facing the industry and inadequate also for the sufficiency of understanding that seems necessary for extension servicing such an industry.

These deficiencies and inadequacies would seem to result from the sources and mode of derivation of the existing material. On the one hand, it arises from special surveys that mainly have sought production cost data (e.g. Anon. 1953) and, on the other hand, from sundry reports and views, often independently derived, from district extension personnel, most of whom are organized and function as subject specialists.

Valuable material for extension use is available about some dairying regions. The understanding of farmers and their farms on parts of the New South Wales North Coast, for instance, would have been much advanced by the enquiries and reports of Fallding (1958), Gruen and Waring (1958) and others interested in the regions (Anon. 1955). More recently, Jarrett and Penny (1960) have contributed to dairy extension in the Lower Murray region of South Australia.

The bases of effective farm advisory work or extension are sympathy and understanding of both the farmers and their farms. A reasonable base for programme building in extension demands the fullest possible understanding, therefore, of the current farm situation.

In this regard, two considerations would seem to be of importance:—

- (1) An understanding of present resource use and production processes.
- (2) An appreciation of potential and possible alternative use of resources.

A knowledge of these two features of farms, their present and potential organization, is necessary so that:—

- (1) A better level of understanding in the interests of more effective extension is acquired.
- (2) A clearer and more precise definition of problems requiring research attention is acquired.
- (3) A base for more detailed economic and management studies is formed.

It seems reasonable to expect that the main benefits to extension would accrue in the long run as a result of such new technical and economic material that may be expected to become available, subsequently, rather than the immediate value of the assessment of the current farm situation, important as this may be.

### **Method of Enquiry and its Advantages**

The farms involved need to be objectively selected, and a visit made to each with a suitable schedule forming the basis of the enquiry. The group for study may be those supplying a particular market (e.g. the milk zone dairymen of Moreton district), those using a particular production method (e.g. irrigation farms), or those in a defined geographical region.

In any case, it seems that no restrictions should be placed on farms having dairy output levels below an arbitrarily fixed standard, nor on farms wherein dairy output comprises a relatively small proportion of total output, in the selection of a representative sample of farms. Some rejections may subsequently be considered necessary where it is found that the dairy enterprise is not primarily intended for commercial production, e.g. herds maintained to provide for on-farm consumption with any excess marketed. In view of the desirability of developing other avenues of production, wherever this can profitably be done on dairy farms, it seems most essential that the situation of the sideline dairy farmer be examined. These farms have been specifically excluded in many previous surveys.

Other surveys (Anon. 1953) have generally adopted such selection procedures because of the specialized nature of the particular investigation. The current intention is to obtain the best appreciation of dairy farming in a given situation.

In enquiries having these and similar objectives, main attention may be devoted to an assessment of the physical resources available on each farm with estimations of their quantity and, where appropriate, their quality, and to technical aspects of the production process rather than to many details of financial circumstances. Some general and easily acquired financial estimates and the value of products are needed so that physical data may be placed in correct perspective.

It would seem that this approach whereby a reconnaissance in detail is made of resources and their employment, with partial disregard of the income and cost factors, is a quite useful first approach when objectively acquired information is relatively scarce. At the same time, the ultimate objective is undoubtedly the determination of economic optima for farms in various situations.

A reconnaissance of this type has considerable advantages, in the present circumstances—not the least of which are the relative speed of accomplishing the review, the fact that the information can be acquired by a single interview with the farmer, and that there is little need for recourse to many written farm records.

The data yielded would appear to be immediately useful in extension insofar as there are available:—

- (1) An analysis and description of the primary resources available.
- (2) An analysis of the quantities of those resources in current use.
- (3) An appreciation of the production processes.
- (4) Where possible, quantitative data relating resources in current use and output.

#### **Nature of the Data Required**

The data sought from dairymen should include appreciations of:—

- (1) The land resource.
- (2) The farm labour resource.
- (3) The other secondary resources available, including livestock and main plant and machinery items.
- (4) The general financial position.
- (5) The production methods currently practised.
- (6) The physical output.

(1) *Land Resource*.—A quantitative appraisal of the land resource is needed for each sample farm. The appreciation of this resource should include a classification into land quality classes where possible and appropriate and also an appreciation of the extent of development of each quality class and the current patterns of quality class use.

The nature and conditions of tenure would require some consideration, since it is reasonable to expect that these may, at times, exert an influence on production methods and development plans. Generally, however, it is a factor that can be ignored in this type of survey should differences be found between farms or even in respect of portions of the one farm. Thus the resource may generally be examined with partial disregard of the owner's or occupier's equity.

(2) *Farm Labour Resource*.—Size measurements of the regular labour resource are readily available and can be quantified, if desired, by the use of appropriate weights for age and sex classes. In addition, the frequency of off-farm work and the selling and purchasing of labour services modifies the measurement. The age, farming experience and the degree of effectiveness of the resource are of interest and importance and, at least to some extent, are measurable.

An appreciation of this resource involves special consideration for extension, since a sympathetic understanding of the farmers themselves is widely accepted and recognized as an essential prerequisite to effective extension.

(3) *Secondary Resources*.—Quantitative estimates of such resources as livestock, plant and machinery and other farm facilities are readily obtainable and present no great difficulty to farmer and interviewer in their enumeration.

This group of resources is intermediate between the primary resources of land and labour and the farm output and is capable of adjustment, in many cases, even in the short period. The adjustment may involve either the method of use or their variation in quantity. In either case, the appreciation of these resources is reflected principally in the assessment of the current production methods.

Some of these resources, also, have obviously little impact on either the production method or the farm output (e.g. a welding plant or a post-hole digger), while others are common to all farms (e.g. milk shed equipment) and consequently can be disregarded.

(4) *General Financial Position*.—While financial matters are partly disregarded in the type of survey envisaged, it is possible to gain a reasonable appreciation of the extent to which financial limitations are affecting development plans and farm operations.

(5) *Current Production Methods*.—An appreciation of the production methods is necessarily expressed, where possible, quantitatively. Many variations are found between farms, even those possessing similar basic resources, and assessment presents problems both technical and economic. Nevertheless, such appreciations of production methods are essential for efficient extension.

(6) *Physical Output*.—Finally, the physical output data may be collected for each farm with the formulation of the functional relationship between resources in use and output being of value.

The development of such relationships in physical terms for particular aspects of the production process is a useful first step in the building of knowledge and the better understanding that is required to meet the current crises of the industry and the changing requirements of farm advisory services.

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