

MEASUREMENT OF LAND RESOURCE ON DAIRY FARMS

Farm area is commonly used in the analysis of farm survey data and on many other occasions where a measure of land is required. This wide usage may be attributed to the ready availability of data rather than the accuracy of area as a measure of the farm land resource, especially when it is not fairly homogeneous. The problem of evaluating an area of land comprised of various types is generally recognized.

A solution is sometimes sought by setting out, in tabular form, the areas of the types which occur in the total. While this approach provides an accurate description, it does not allow a ready comparison of land resource between farms.

Holmes (1961), in a recent study of aspects of the dairying industry in New South Wales, has made use of indices based on estimates of the relative productivity of various land types in the establishment of the potential for dairying of each farm.

In some current enquiries into the nature of the present situation of dairy farmers and their farms in parts of Queensland, the writers concluded that a single quantitative measure of land resource would enable more meaningful interpretation of the data.

A system of weights was considered as a solution. The weight applicable to a particular quality or type of land in a particular use would be an index of productivity relative to a standard quality or type used in a particular way. For each farm, the summation of areas of each quality of land in each use, suitably weighted, would give a quantity termed "equivalent area".

Two such "equivalent area" measures seem useful. An estimation using weights corresponding to the present usage of the various portions of the farm land—termed "present equivalent farm area"—is relevant in describing the present situation of farms and in comparisons of the land resource with inputs of other physical factors and with output. "Potential equivalent farm area", incorporating weights corresponding to the use for which the various portions could reasonably be developed, provides a measure of available land resource.

The magnitude of the weights is the key to the application of the principle. The market prices of land of various qualities and in various stages of development, where these can be determined, will provide the most appropriate set of weights. Where market prices cannot be obtained it may be necessary to arbitrarily allot weights. The writers consider that, provided it is done with due regard to technical and economic considerations, use of the method is justifiable.

Use is being made of such a system of weights in the determination of functional relationships between physical inputs of resources and dairy output in current enquiries of Queensland dairy farmers.

REFERENCE

- HOLMES, J. F. (1961).—The changing distribution of dairying in coastal New South Wales. Paper presented to meeting of Institute of Australian Geographers, Brisbane, May, 1961.

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