

TYPES OF FARMING IN THE UNITED STATES

By FOSTER F. ELLIOTT

CHAPTER I

INTRODUCTION¹

Types of farming are regional manifestations of the principle of economic specialization. They result from man's efforts to adjust himself and his resources to his environmental conditions. "Type of Farming," specifically, is a term descriptive of the kind of farming followed on a group of farms having a high degree of uniformity in the kind, relative amount, and proportion of the crops and livestock handled, and in the methods and practices followed in production. Types of farming are identified, therefore, by the form which the farm business takes with respect to size, productive factors used, lines of production carried on, and the general policy adopted in the conduct of the business. When a type of farming is fairly well concentrated in one area, so that it is the prevailing or dominant type in that area, usually associated with a set of reasonably homogeneous, natural, and economic conditions occurring throughout a definite geographic area, an area so characterized may be called a type of farming area.²

Anyone who has even casually observed farming must have been impressed with the way in which it changes in character from one part of the country to another. In some cases these changes are gradual while in others they are abrupt, representing a distinct break in the kind of agriculture followed. These variations in some cases may be accidental; in the main, however, they probably result from the efforts of farmers to adjust themselves to their physical and economic environment. The problem is never solved because the environment is constantly changing and because economic changes, new crop varieties, improved livestock strains, new cultural practices, new diseases, and pests are developing continually.

This tendency of farmers to adjust their organizations and practices to their environmental conditions is merely an attempt, on their part, to get a maximum utilization of the resources at their command. They are consciously or unconsciously seeking to economize on their resources by producing those commodities which will give them a maximum of return for the resources used. In doing so, they necessarily depend upon obtaining from others commodities and services which they themselves are at a comparative disadvantage in producing. The inevitable consequence of such a development is that farmers in different regions will follow different lines of production.

With the increased economic difficulties encountered in farming in recent years has come an appreciation, on the part of those interested in arriving at a solution of the agricultural problem, of the importance of more detailed information pertaining to the nature of the farming systems in different parts of the United States. Experience has demonstrated that farmers are not prone to accept broad generalizations with respect to assumed advantages to them of drastic changes in their production plans. Such broad generalizations are usually to be questioned, and if made should be based on a detailed knowledge of conditions and alternatives in local areas.

¹ Special acknowledgment is due Hilton E. Robison and Ben H. Puhols for assistance in constructing the type of farming map and tables, and to Gordon D. Livermore for drafting the maps and charts.

² Research in Farm Management, Scope and Method, Social Science Research Council, Bulletin No. 13, p. 28.

This study is designed to supply, in considerable detail, the background information essential to a more thorough understanding of the problem of agriculture in different parts of the United States. The study necessarily involves a great deal of descriptive analysis of farming systems and farming conditions. Studies similar to this have been made for individual States but the method of approach has differed somewhat. The census of agriculture of 1930, particularly the tabulations by type of farm, provides, in the main, the source of material for the analysis.

Brief résumé of type of farming studies in the United States.—The earlier type of farming studies in the United States had as their main objective the geographic regionalization of the agriculture of the country. Chief emphasis was placed upon the mapping of type of farming areas. The late Dr. W. J. Spillman, of the United States Department of Agriculture, was one of the first to use this method of approach. The early work of Dr. O. E. Baker,³ of the Department of Agriculture, also was developed somewhat along the same line. He, however, approached the problem more from the standpoint of the total and potential land supply, and its relation to population growth, changes in technique, and related factors. He divided the country into 12 major agricultural regions. Eight of these regions were in the Eastern United States (approximately east of longitude 103), and these were determined largely on the basis of the dominance of a certain crop or kind of farming resulting, in the main, from latitude and temperature conditions. The West he divided into four regions on the basis of the use of land for grazing or cropping as determined largely by altitude and rainfall.

Within the last five years increased attention has been given to this subject. A number of the State Agricultural Colleges and Experiment Stations have conducted type of farming studies, alone or in cooperation with the Bureau of Agricultural Economics, United States Department of Agriculture.⁴

In these studies, the mapping of type of farming areas has remained one of the major objectives. The emphasis, however, has been shifted somewhat to include an analysis of the internal organization of representative farms within the area mapped. This is in recognition of the fact that the agriculture within the areas as usually mapped is not sufficiently homogeneous to include only one type of farming. There are few, if any, areas in the United States of any appreciable size where this situation is found.

Attention has also been centered in the more recent studies, particularly by Dr. C. L. Holmes in his "Iowa Study," upon an analysis of the causal factors lying back of and responsible for the resulting types of farming. A thorough-going analysis such as this, of the forces and conditions shaping the agriculture in different areas should be one of the main objectives in a study of this kind. Out of such analyses should come a more thorough understanding of the agricultural problem and an indication of what is needed in its solution.

For the most part the mapping of the type of farming areas in the foregoing studies has been based on similarity in crop and livestock enterprises. The relative importance of these enterprises has been determined by relating the acreage and production for each crop for a particular county, or other geographic unit, to the total land area, or total acreage in farms or total crop land plus pasture, or some other combination for the same unit. Having the various enterprises

³ Baker, O. E. Graphic summary of American agriculture, Miscellaneous publication 105, United States Department of Agriculture, p. 4, fig. 1.

⁴ See Iowa Experiment Station Bulletin 256, Massachusetts Experiment Station Bulletin 244, U. S. D. A. Technical Bulletin 102, Oklahoma Experiment Station Bulletin 181, South Dakota Experiment Station Bulletin 238, Kansas Experiment Station Bulletin 251, Nebraska Experiment Station Bulletin 244, Indiana Experiment Station Bulletin 342, Texas Experiment Station Bulletin 427, Michigan Experiment Station Bulletin 206, Minnesota Experiment Station Bulletin 257.

within each county or township reduced to comparable units or coefficients, the next step was to group the counties or townships which had about the same kind, quantity, and proportion of the different crops and livestock. This was usually accomplished by means of bar charts, each bar representing the relative importance of each county or township. Thus, the counties or townships which appeared to be alike in the *major* portion of their enterprises were thrown together.

This grouping gave the first approximation of the type of farming areas. By means of charts and graphs the areas as thus outlined were then checked against soil and climatological maps to determine how close was the similarity between them. When, as frequently happened, the soil type cut across county lines the type of farming area was made to follow the soil type, usually rather than the political boundary.

In the earlier studies already referred to, no attempt was made to go beyond this point, even though they failed to indicate combinations of enterprises found in the area other than the particular combination which was dominant as shown by the county or township totals. In the more recent studies, an attempt was made to take care of these *off types* by an analysis of the internal organization of farming systems followed in representative townships scattered in different parts of the same area.

Limitation of foregoing studies and method of approach used in this study.—The failure to portray, adequately, the dispersion of farming systems within the same area is a legitimate criticism which can be leveled against this method of approach. It may be very misleading, to assume that counties have the same type of farming because they show a high degree of similarity in their enterprise combinations based upon township or county totals. Significant variations within counties may be, and frequently are, completely smoothed out in the totalling process. In States having a high degree of uniformity in their physical conditions, such as found in most of the Corn Belt States, this method works fairly satisfactorily. In areas like the New England States, however, it is impossible to get much precision in the classification when this approach is used, as has been shown so clearly by Prof. I. G. Davis, of Connecticut.

Likewise, the determination of relative importance of different enterprises on an area basis does not adequately take into consideration the varying degrees of intensity in production of different enterprises. A common denominator is needed to which all the different enterprises may be reduced and which will measure more adequately the relative importance of each.

Professor Davis encountered the problem in Connecticut, and devised a method for reducing acres of the different crops, numbers of the various classes of livestock, days of outside labor, cords of wood cut, etc., to a productive man-work-unit basis by using a series of conversion factors representing average labor inputs per acre, per head of livestock, etc. Thus, total man-work-units became his measure of size of business; the man-work-units per enterprise, the percentage which these were of the total, and any other significant factors of the business became the measure of type.⁵

This method of approach undoubtedly is superior to the ordinary area approach used in the earlier studies. It, however, is open to certain theoretical objections, and is somewhat laborious and complicated in its application. Equally, or even more, satisfactory results may be obtained by using gross income as a measure of type. It is much more direct and easy to use and probably is no more expensive; though no single measure of type has yet been devised which is completely satisfactory. The use of gross income is probably the best measure that has yet been used, yet it is subject to fluctuations from year to year, and also must be

⁵ See Research in Farm Management, Social Science Research Council, Bulletin No. 13, Pages 39-49.

used with caution when determining the relative importance of enterprises produced under varying degree of intensity.

In this study, income is the primary basis used, both in classifying the farm by type and for mapping type of farming areas. The method of approach used in this study is diametrically opposed to those used in former studies, with the exception of the Connecticut study by Professor Davis. In the earlier studies the approach was from the general to the specific, whereas in this study the approach is from the specific to the general. Instead of using unclassified county-group totals, every farm in the United States was first classified by type and the type area was built up from the individual farm. Thus in this method of approach it is possible to show the dominant number of farms of a given type in an area, and at the same time show the relative importance of other types in the same area. Obviously, the number of areas so designated would be determined by the degree of precision desired by the classifier.

Attention will now be directed to the way in which this method has worked out in actual application. To introduce the discussion, it will be desirable to present in detail the method used in the 1930 Census of Agriculture in classifying the individual farms by type, inasmuch as this classification provides, in the main, the material for the present study.