

SOME CHARACTERISTICS OF PROGRESSIVE FARMERS IN THE NETHERLANDS*

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ABSTRACT

This paper summarizes the findings of several investigations in the Netherlands of factors related to the adoption of improved farm practices and the general progressiveness of farmers.

In many respects, the socio-economic characteristics differentiating more and less progressive farmers are the same as in the United States. The education of the farmer and his membership in farm organizations and cooperatives were related to his progressiveness even when other factors were held constant. The farmer's general style of living was also so related.

It appears that the progressive farmer in the Netherlands not only quickly adopts modern farm practices, but that in many respects he is also a more "modern" type of individual. The hypothesis is stated that his frame of reference is better adapted to present circumstances than that of the less progressive farmer, whose frame of reference is more or less out of date, and that the backward farmer has feelings of inferiority, suspicion, and distrust which prevent him from adopting a more functional frame of reference.

Progress in agriculture depends to a large extent on the adoption of better farm practices by farmers. Experience indicates, however, when improved practices are developed by research stations or farmer innovators, that the new practices are not immediately adopted by all farmers. Considerable resistance often must be overcome before general adoption of an improved practice can take place. In order to decrease the time lag between the discovery and general adoption of new practices, there is need for a better understanding of farmer resistance. One way to gain this understanding is to compare the more progressive and the less progressive farmers as to socio-economic and psychological characteristics, and to search for the explanation of the differences.

Considerable research of this type

*The writer wishes to express his appreciation to James E. Montgomery for his help in preparing this paper.

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has been done in the United States.¹ The present paper summarizes the findings of several investigations of this kind carried out in the Netherlands, where the cultural pattern is very different. The studies have been done since 1952 by van den Ban, Germing, Kneppelhout, and Overeem, under the leadership of E. W. Hofstee.²

¹ Summaries of this research are given by C. P. Loomis and J. A. Beegle, *Rural Social Systems* (New York: Prentice-Hall, Inc., 1950), chap. 20; in a report of a subcommittee of the Rural Sociological Society, *Sociological Research on the Diffusion and Adoption of New Farm Practices*, RS-2, Dept. of Rural Sociology, University of Kentucky (Lexington, 1952); and by M. C. Wilson and Gladys Gallup, *Extension Teaching Methods and Other Factors That Influence Adoption of Agricultural and Home Economics Practices*, USDA Ext. Serv. Circ. 495 (Washington, D. C., 1955), pp. 22-26.

² A. W. van den Ban, "Who Are Influenced by the Agricultural Extension Service?" *Landbouwkundig Tijdschrift* (1953; in Dutch, with a summary in English), pp. 314-317; G. H. Germing, "Some Socio-Economic Aspects of Fruit Growing in Lienden (Betuwe)," (unpublished Master's thesis, Agricultural University of Wageningen, 1953; in Dutch); W. J. Kneppelhout, "Some

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DESIGN AND METHODOLOGY

These investigations and the present paper relate to—but do directly test—the general hypothesis that the frames of reference of farmers materially affect the extent to which they adopt improved farming practices or become “progressive.” The data do not go beyond indicating some of the correlates of “progressivism,” or the factors which differentiate progressive farmers from the less progressive ones, but they are suggestive of further hypotheses concerning farmers’ frames of reference.

In these Netherlands studies three measures of “progressivism” were used, in various combinations in the several studies: (1) Locally well-acquainted persons were asked to rate farmers on their farm managerial ability. These persons were instructed not to rate the quality of the farm but only the managing capacities of the farmer. Usually the rating for a given community was done by the county extension agent, but sometimes by prominent farmers or others. There appeared to be no differences which could be attributed to the occupation of the person who did the rating. (2) In most of the studies, a schedule was used to learn from the farmers how many modern practices they had adopted. The researchers considered as “modern” those practices advised by the Extension Service. A difficulty with this measure is that the number of farm practices which can be applied depends on the conditions peculiar to a given farm.

Aspects of Farm Management in Winterswijk” (unpublished Master’s thesis, Agricultural University of Wageningen, 1953; in Dutch); A. Overeem, “A Valuation of the Farmers in De Beemster” (unpublished Master’s thesis, Agricultural University of Wageningen, 1953; in Dutch); and A. W. van den Ban, *Enkele kenmerken en eigenschappen van de vooruitstrevende boeren I en II*, *Bulls.* No. 5 and 10, Dept. of Rural Sociology, Agricultural University of Wageningen (The Netherlands, 1956 and 1958, in Dutch).

(3) Farmers were asked whether they had been in personal contact with the county agent during the past year. In two studies, however, this information was not gathered by interviewing the farmers, but by interviewing the agent.

In general, it was found that each of the three measures identified the same group of farmers as more progressive. In future research it may be desirable to combine them into a single index, or to use only one.

This paper is based on five different studies. In four exploratory studies, a community which was convenient to the research worker was studied. Then twenty-one additional communities, considered to be more or less representative of the whole country, were studied. The 25 communities are probably somewhat more progressive than is the country as a whole, however. Very few communities near urban centers were chosen, and there is some reason to believe that the farmers in urbanized areas are less progressive than those in more rural districts.

In all, the five studies included 5,429 farmers in the 25 communities. Ratings were obtained for 5,138 farmers in 21 communities. Contact with the county agent was studied for 2,813 farmers in 24 communities. Field schedules were taken from 2,400 farmers chosen at random from 22 communities. Acceptance of improved practices was studied for 2,005 farmers in 18 communities. Thus, the data summarized in Table 1 are for varying numbers of farmers and varying numbers of communities.

Many of the data were obtained from a survey of social participation by farmers, made by E. Abma;³ this made it possible to work with more cases than would otherwise have been fea-

³ This research was the basis for Abma’s publication, *Farmers’ Attitudes Towards Cooperatives*, *Bull.* No. 4, Dept. of Rural Sociology, Agricultural University of Wageningen (The Netherlands, 1956).

sible. Additional information was obtained from the census reports of individual farmers, membership lists of farmers' organizations and cooperatives, and persons acquainted with farmers in the sample. In securing the ratings of farmers, the effort was to have all farmers in each community rated. However, the county agent or other raters could seldom rate everyone; in most communities, from 5 to 10 per cent of the farmers were excluded for lack of a rating. When more than 20 per cent of the farmers in a community could not be rated, the community was not included in the analysis. For various reasons, several other factors could not be studied in all communities. In several communities where there were too few part-time farmers, the comparison of these with full-time farmers was not made. Part-time farmers were excluded in all communities in making the comparisons on other variables; they are not included in the numbers of cases mentioned above, nor in Table 1, after the first line.

In the rating of farmers as to managerial ability, a five-position scale was used. Groups of farmers are compared on the basis of the arithmetic means of their rating scores.

ASSOCIATION OF SINGLE VARIABLES

As Table 1 indicates, part-time farmers did not appear so progressive as full-time farmers. In only one community were the part-time farmers rated higher, and in none of those for which data are available had they accepted more practices, on the average, than had full-time farmers. One reason is that the part-time farmers have smaller farms. However, the main reason appears to be that part-time farmers have neither the time nor the interest to give their undivided attention to farming and to the improved practices that are developed.

In this and many other respects, the findings are approximately the same as those for the United States. The progressive farmers are on the larger farms, are better educated, are members of farmers' organizations and cooperatives, and their families have a modern style of living. In general, they have a higher social status. In China⁴ as well as the United States and the Netherlands, there are indications that a modern style of living is correlated with modern farming; this may be the case all over the world.

In the Netherlands, the young farmers are more progressive than the older ones, a situation that does not always hold in the United States. On the other hand, in the United States the owners are more progressive than the tenants, which is not the case in the Netherlands. The latter difference may be due to the fact that the variation in social status between owners and tenants is much smaller in the Netherlands than in the United States.

The church is a very important factor in Dutch social life,⁵ but in these investigations it was not shown to be related to farm management. There is some basis for believing that Roman Catholic farmers have less contact with the county agent than other religious groups, in communities that are heterogeneous as to the religious affiliation of farmers. But, in completely Roman Catholic districts, the Extension Service seems to exert considerable influence. There, as a rule, one finds a more intensive cooperation between the clergy, the farmers' organizations, the agricultural schools, and the Extension Service than in other parts of the country.

⁴ Hsin-pao Yang, *Fact Finding with Rural People* (Rome: United Nations, FAO, 1955), p. 19.

⁵ See Ivan Gadourek, *A Dutch Community* (Leiden: Stenfert Kroese, 1956), p. 487.

TABLE 1. NUMBER OF COMMUNITIES WHERE FARMERS OF SPECIFIED CHARACTERISTICS WERE IDENTIFIED AS MORE PROGRESSIVE, LESS PROGRESSIVE, OR NO DIFFERENT FROM OTHER FARMERS, ON THREE MEASURES OF PROGRESSIVENESS

Characteristic or type of farmer	Measure of progressiveness											
	Rating by judges				Number practices accepted				Contact with county agent			
	More	Same	Less	All	More	Same	Less	All	More	Same	Less	All
Part-time farmers	1	1	12	**14	0	0	15	**15	.....	.....	.....	.....
Those with large farms.....	18	1	2	**21	18	0	0	**18	15	0	6	21
Those with arable farms.....	5	1	0	6	3	0	0	3	4	0	1	5
Young farmers	13	1	0	14	8	0	2	10	13	1	2	**16
Tenants	5	0	2	7	2	0	1	3	.....	.....	.....	.....
Those with vocational agriculture training.....	20	0	1	**21	19	0	2	**21	21	0	3	**24
Those who attended agricultural schools ¹	8	0	2	10	6	0	3	9	6	1	5	12
Those with good general education ²	7	0	3	10	9	0	0	**9	11	0	2	**13
Those born outside the community.....	12	0	5	17	8	1	3	17	.....	.....	.....	.....
Members of farmers' organizations.....	18	0	1	**19	16	0	0	**16	20	0	0	**20
Members of extension clubs.....	11	1	0	**12	9	0	0	**9	10	0	0	**10
Members of a dairy cattle herd book association.....	13	0	0	**13	15	0	3 ⁰	**15	8	1	1	**10
Members or patrons of cooperatives ⁴	37	0	6	**43	32	0	2	**34	34	2	3	**44
Formal leaders	19	0	2	**21	19	0	0	**19	19	1	3	**23
Leaders in church or local government..	11	0	3	14	12	0	0	**12	14	0	1	**15
Those whose wives belong to Associated Country Women	8	0	2	10	8	0	0	**8	8	1	0	**9
Those with a modern style of living ⁵	11	0	0	**11	10	0	0	**10	13	0	0	**13
Members of Christian Reformed Church.....	4	3	4	11	1	1	4	6	5	0	4	9
Members of Dutch Reformed Church....	5	3	4	12	2	3	4	9	3	1	9	13
Members of Roman Catholic Church....	3	0	3	6	3	0	0	3	0	1	6	*7
Members of liberal Protestant churches.....	2	0	3	5	0	0	2	2	.....	.....	.....	.....
Those not members of a church.....	3	0	2	5	.....	.....	.....	.....	6	1	2	9

*Difference significant at the 5-per-cent level, according to the sign test.

**Difference significant at the 1-per-cent level, according to the sign test.

¹ Compared with those who attended only agricultural courses. In The Netherlands, vocational training in agriculture is given in evening courses and in agricultural schools; the latter way is considered better, but it is more time consuming. Vocational training in agriculture is not given in the high schools.

² In high schools or in courses in general education.

³ Cattle breeding was not one of the practices studied.

⁴ Different types, such as buying and selling cooperatives, cooperative dairies, and cooperative sugar factories were studied. In most communities, more than one cooperative was studied, and members of each one were compared with nonmembers. Thus, many communities are counted two or more times here.

⁵ A scale was used to measure style of living. The scale was made up of factors somewhat similar to those of the Sewell Socioeconomic Status Scale, but the weights were subjectively determined. Social participation and education, which are among the components of the Sewell scale, are not in the present scale.

INTERRELATION OF VARIABLES AND EFFECT OF HOLDING CERTAIN FACTORS CONSTANT

One of the difficulties in attempting to explain these factors and relationships is that there is an interrelationship between farm size and farmers' education, their membership in farmers' organizations and cooperatives, and their style of living. Also, there is an interrelationship between the age of the farmer and all of these factors, except farm size.

Three-way tables and the matching of frequency distributions were used as means of holding one variable constant while examining the relationship of others. Kneppelhout worked with three-way tables for one community where more than a thousand farmers were ranked by the county agent. From the summary of his results that follows, it can be observed that the education of the farmers was found to be the most important factor in relation to their progressiveness:

<u>Factors studied together</u>	<u>Important factors</u>
Education, membership in farmers' organizations, and membership in cooperatives	Education
Size of farm, education, and membership in farmers' organizations	Education and membership in farmers' organizations
Age, education, and membership in farmers' organizations	Education and membership in farmers' organizations

In the study of 21 communities, analysis with three-way tables could not be employed because in several communities there were only about 100 farmers in the sample. Moreover, observations made in the various communities could not be added because of certain variations in the evaluation of the farmers. Not all county agents gave the same rank to farmers whose level of farming was quite similar;

and the number of farm practices that could be adopted was affected by local conditions as well as by personal characteristics of the farmers. For these reasons, reliance had to be placed upon the matching of frequency distributions.⁶

In the first five communities studied in this way, size of farm was found to be no longer related to progressiveness, when education and membership in farmers' organizations were held constant. Membership in farmers' organizations was still related, when size of farm, education, and membership in buying and selling cooperatives were kept constant. Education and membership in buying and selling cooperatives were also related when other factors were controlled. In these communities, a scale to measure style of living was not employed.

At a later stage of this research in 12 other communities, the style of living was also held constant. Then almost none of the factors had any significant influence on the progressiveness of the farmers, with the important exception of the style of living itself. But this factor had a significant influence only on the application of modern practices and contact with the county agent; it was not significantly related to the ratings of farmers. These results suggest that not one factor separately but a combination of factors make the difference between a modern and a backward farmer. Hofstee described the modern farmer—in contrast to the backward one—as follows:

A modern farmer is a man who thinks differently, feels differently, has another position towards life, and desires something else from that life He is not

⁶ See F. Stuart Chapin, *Experimental Designs in Sociological Research* (revised; New York: Harper & Bros., 1955), chap. 3; and R. König, *Beobachtung und Experiment in der Sozialforschung* (Köln, Verlag für Politik und Wirtschaft, 1956), pp. 171-259.

a man who has learned modern farming by accident or vocational training, but he is a modern man.⁷

TENTATIVE CONCLUSIONS AND ADDITIONAL HYPOTHESES

From the foregoing, it is obvious that, when one wishes to understand why some Netherlands farmers are more progressive than others, he must study the causes which underlie the inter-relationship of size of farm, education, membership in farmers' organizations and cooperatives, age, and a modern way of farming. It seems tenable to say that there is a difference in the frame of reference of the farmers, a difference which transcends all these factors.⁸ The *frame of reference* of a group can be defined as the culture or subculture of this group, when seen from the point of view of the way in which this culture influences how one acquires, interprets, assimilates, and reacts to certain experiences.⁹ A person's frame of reference can be thought of as the images he has of the world in which he is living. To these images he relates all his experiences. So frame of reference is only a short notation for a very complex and not yet completely understood aspect of culture.

The frame of reference of the backward farmers seems to be not completely in harmony with the real world

of our time. Parts of it are still adapted to the world of 50 or 100 years ago. These farmers see society as mainly static and not as a dynamic organism which requires continuous adaptation. They are little interested in what is happening off their own farm and outside their own village, or in the influence that the larger society has on their life. Thus, because they cannot understand the changes in society, these changes seem threatening to them and the difficulties of adapting their frame of reference to the changing society increase.

Up to now, why some groups of farmers have been more able to adapt their frame of reference to the circumstances of the present time than other groups has remained unexplained. That young farmers have had a better opportunity than older ones to develop a modern frame of reference is not difficult to understand. The younger farmer has reached maturity in a more dynamic period. That education is an important way of changing a frame of reference is also well known. It is difficult to understand, however, why size of farm has such a high correlation with progressiveness of farming. In this connection, it is important to note that the economic and social position of small farmers in The Netherlands has declined a good deal relative to the position of the laborer. Fifty years ago nearly every laborer in the villages hoped to be a small farmer at some time, but now some small farmers prefer to be laborers. Some small farmers feel declassed. They have little self-confidence and seem to nourish some feelings of inferiority, suspicion, and distrust toward the leaders of society. In part, these feelings may be due to the fact that small farmers have never played an important role in the management of society in the community council, the churches, or the farmers' organizations. In addition, small farmers, because of their lack of money,

⁷ *Sociologische Aspecten van de Landbouwworlichting*, Bull. No. 1, Dept. of Rural Sociology, Agricultural University of Wageningen (The Netherlands, 1953, in Dutch), p. 25.

⁸ As far as the author knows, the concept *frame of reference* was first used in this context by A. J. Wichers, *De beoefening van de bloemisterij en groenteteelt in Beesd*, Bull. No. 3, Dept. of Rural Sociology, Agricultural University of Wageningen (The Netherlands, 1956). Also, cf. Theodore M. Newcomb, *Social Psychology* (New York: The Dryden Press, 1950), esp. chaps. 6 and 7.

⁹ E. W. Hofstee, *Inleiding tot de Sociale Wetenschappen* (Dept. of Rural Sociology, Agricultural University of Wageningen, 1955; mimeo.), p. 66 (in Dutch).

have often had to live quite soberly, which has made it difficult for them to have experiences in the larger society and to participate in urban life. Wider social participation of this kind is usually correlated with modern farming.

These feelings and conditions may also be related to failure to join farmers' organizations and cooperatives. A member of these organizations and cooperatives must trust that the board of the organization will handle his own interests better than he himself would be able to do. Such an attitude is often difficult for a farmer with feelings of personal inferiority, and of suspicion and distrust of the leaders of society. Usually he does not think that he will be able to influence the acts of the leaders of an organization.

Whenever a social change occurs, self-confident persons who trust the leaders of society will ask themselves how they can adapt to the change in order to get the greatest gain from it. Persons with the attitudes of many small farmers and of nonmembers of farmers' organizations and cooperatives will not act in this way, but instead will ask how they can defend themselves against the change. Thus, they find it very difficult to assimilate the changes of society into a modern frame of reference.

A basis for this theory can be found in the research of Cottam and Mangus in Ohio.¹⁰ They found that families with a low level of living and those with a low social participation score were often dissatisfied with their social environment and also that farmers with a low level of living often have a low social participation score.

This theory can explain why size of farm is not correlated with modern farming when certain other factors are held constant. It is not the size of the

farm *per se* which is important in this relationship, but the farmer's way of thinking. This way of thinking is not necessarily related to the size of the farm, especially in the Netherlands where a serious shortage of land often makes it impossible for a capable small farmer to increase the size of his farm. Instead, it is more often related to membership in farmers' organizations and cooperatives, because everybody is free to be or not to be a member of these organizations. It is also correlated with the education of the farmer, partly because the farmer was free to take vocational training in agriculture or his parents were free to let him do so, partly because this training has changed the frame of reference of the farmer.

Formal leaders naturally do not have marked feelings of inferiority, nor are they suspicious or distrusting of leaders of society. This may account for the fact that they are always quite clearly progressive farmers. For the United States, the hypothesis was stated that: "Leaders in secular organizations are among the first to accept innovations in farm matters while leaders in organizations and institutions of social sanction (church, government, etc.) do not accept such innovations before non-leaders."¹¹ Such a hypothesis could not be supported in the present theory, because there is reason to believe that leaders of church and government do not have so pronounced feelings of inferiority and are not so suspicious of leaders of society as non-leaders. Although this hypothesis must be rejected for The Netherlands (see Table 1), it may be noted that leaders in church and government are less progressive than other formal leaders, according to the rating of the farmers. This can not be related to, or explained by, this theory.

¹⁰ H. R. Cottam and A. R. Mangus, "Standard of Living: An Empirical Test of a Definition," *Rural Sociology*, VII: 4 (Dec., 1942), pp. 395-403.

¹¹ *Sociological Research on the Diffusion and Adoption of New Farm Practices*, op. cit., p. 5.

A high score on style of living usually seems to be a rather good indication that the farmer has a modern frame of reference. In the construction of a style-of-living scale, attention was paid to those questions which were thought to indicate a modern frame of reference. Besides, there is reason to believe that a low score is correlated with a low socio-economic status,¹² and it seems probable that lower-class people more often have feelings of inferiority and suspicion than people of other classes. Thus, the style-of-living score has a significant correlation with the progressiveness of farmers when other factors are kept constant.

¹² See Loomis and Beegle, *op. cit.*, p. 358; and A. K. Constandse, "De Sociale Hierarchie in Kamerik," *Mens en Maatschappij*, XXIX, 1954, pp. 293 and 342 (in Dutch).

Since the above interpretations can only be suggested and the available data do not make it possible to test their validity, the following may be stated as hypotheses for further research:

1. There is a difference in the frame of reference of the more progressive and the less progressive farmers. The frame of reference of the progressive farmers is fairly well adapted to the present-day world, but that of the more backward farmers is in some respects still adapted to the circumstances of several decades ago.
2. More of the less progressive farmers than of the more progressive ones have feelings of inferiority, and of suspicion and distrust toward the leaders of their society.