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Some aspects of agricultural extension work in development countries

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Summary

This article discusses a number of the projects usually accorded a prominent place in the programmes drawn up by the various agricultural extension services for the development countries. I have attempted to discover why some projects are accepted and carried out, while others are deliberately rejected although some of them are even given a great deal of publicity. It would appear that the rejection of proposed improvements to local agricultural methods depends not only on technical and economic factors, but that motives of a social nature may also play a highly significant role.

1. Introduction

Examination of the projects offered by the agricultural extension services to the people of the various development countries reveals that their programmes have a great deal in common. This, however, is less remarkable than the fact that the same project is often accepted or rejected by the various populations concerned. In other words, the degree of willingness to accept innovation shows considerable uniformity in the development countries.

This relates solely to extension projects which lengthy, painstaking agricultural research has shown will be effective where traditional farming methods are employed and will yield a financial return to the farmer. The following question arises at this point: to what factors should we attribute these varying degrees of acceptance of extension projects which, in fact, show no appreciable difference with regard to their economic effect?

Prior to going into this question, however, I wish to point out that agricultural extension services in the development countries give special attention, even today, to the introduction of projects of a predominantly agricultural-technical nature, most of which concern one specific aspect of farming, *e.g.*, the cultivation of a certain crop. It should be added that in some countries more attention has been devoted in recent years to farm management and social projects, the latter mainly taking the form of

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youth clubs and women's clubs but, on the whole, activities of this sort are still in their infancy.

One of the consequences of restricting extension projects to the technical or technical-economic level is that the cause of the failure of any extension project is often sought in the technical-economic sector, social factors being investigated only very seldom. Numerous examples of this are furnished by the evaluation reports on the community development activities published periodically by the Indian Government. On analysing the form and substance of those evaluation studies, one cannot escape the impression that it is still a widely-held view in India that the local or regional social structure has only a slight bearing on the extent to which recommended agricultural improvements are adopted. This means that an evaluation study designed to measure the effect of a programme by employing the progress made towards attainment of a fixed goal as a yardstick is of very doubtful value.

Indeed, that approach was still current in the western world not so long ago, and one wonders whether the situation is not such that some extension service officers still doubt whether the socio-cultural setting is indeed decisive for technical and economic activities.

In this article I shall discuss a number of projects usually included in extension programmes for development countries, basing my approach on personal observation and experience. Projects accepted, as well as projects rejected, by rural populations will be considered. The principle technical, economic and social factors and backgrounds affecting the farmer's readiness to accept innovations recommended by agricultural extension services will be gone into. I shall only attempt an approximate indication of the situation; there is nothing to be gained by attempting greater precision by means of exact figures and data in view of the low reliability of statistic material in the majority of development countries.

2. Some conditions to be attached to extension projects in development countries

If extension projects in development countries are to have a reasonable chance of being accepted by the population, they usually have to fulfil the following conditions:

a. They should link up with the existing methods of cultivation, farm types and agricultural systems modelled along traditional lines.

A good illustration of this point is provided by the tremendous increase in the cultivation of perennial cash crops in many development countries. In the majority of these areas the innovation was grafted on the local system of shifting cultivation.

b. The introduction of an innovation must require little extra work.

Aversion to extra work is especially marked when it is recurrent, as is the case with green manure. If the exertion involved is not likely to be repeated, resistance is usually less, particularly if the work can be carried out collectively, as is possible in combating erosion, road building, constructing reservoirs, schools, *etc.*

c. The introduction of an innovation must require little or no extra capital investment.

This does not mean that the native farmer is averse to all capital investment as such. Indeed, many examples could be cited to show that fairly large sums of money are invested in native plantations and farms, although this is usually for short-term cash crops like tobacco, onions, vegetables, *etc.*

d. The population must not feel that violence is being done to their social and religious customs and habits.

The repeated, but onsuccessful, attempts to replace the traditional implement used by the Javanese for harvesting rice, the rice-cutter or "ani-ani", by the sickle, and the unwillingness of the Nigerian population to extend improvements to include the cultivation of the oil palm are both examples in point. The latter attempt foundered on a widespread belief that he who plants oil palms will die before the trees bear fruit.

3. Discussion of a number of extension projects included in agricultural extension programmes for development countries

The following projects feature on most of these agricultural extension programmes:

1. The introduction of highly productive and/or high-quality varieties of food crops;
2. The introduction of new methods of cultivation, particularly with regard to food crops;
3. The use of fertilizers;
4. The use of green manure;
5. Measures to combat erosion;
6. Measures against pests and diseases.

3.1. The introduction of highly productive and/or high-quality varieties of food crops

Startling results have been obtained in a number of development countries (India, Indonesia, the Philippines) by the introduction of new varieties of food crops (rice, maize, millet, soybeans, groundnuts, cassava, *etc.*) superior to the original native varieties both in yield and quality [1, 2]. The superior plant varieties are usually selected by Agricultural Research Stations in collaboration with the agricultural extension services. They are distributed by seed farms (government institutions run by the agricultural extension services) and by seed growers (usually successful farmers) who first propagate the "A"-certificate stock seed received from the seed farms on their own land [3, 4], an operation which generally takes place under the supervision of the agricultural extension service. The "B"-certificate stock seed thus obtained by the seed growers is then distributed for sale to the farmers.

The system of seed farms and seed growers is indispensable in view of the fact that the average farmer is either unable to unwilling to take the trouble to keep high-quality seed free of impurities. For some food crops, such as rice, it is even advisable to fix the production capacity of seed farms and seed growers at a level permitting all farmers to be supplied with new seed every three or four years.

As mentioned above, the introduction of new varieties is often highly successful, provided a regular supply of new, selected seed is assured [5]. This is especially the case with food crops, although successes have also been booked with annual cash crops like cotton, groundnuts, sugar cane and tobacco. On reflection, it is not surprising that this should be one of the projects to meet with a fairly prompt success

1 United Nations, Community development and economic development. Part I, 1960, p. 27—28.
2 Report of the team for the study of community projects and national extension services. Committee on plan projects. Vol. III, Part I, December 1957, p. 248.
3 F.A.O. Report to the government of Indonesia on the development of agricultural services and projects. Rome, January 1956. Report No. 444, p. 15—18.
4 F.A.O. Report to the government of Indonesia on rice improvement. Rome, 1958. Report No. 874, p. 11.
5 Evaluation Report on working of community projects and N.E.S. blocks. Government of India, April 1956. p. 38—39.

since the replacement of old varieties by new ones requires little alteration to traditional agricultural methods and patterns. Moreover, it does not as a rule involve extra work, so that no inroads are made on that highly valued benefit known as leisure. Finally, the purchase of new seed once in every three or four years does not tax the farmer's financial resources to any great extent since only small quantities of seed are involved.

To put it briefly, the introduction of new varieties of food crops will not, as a rule, greatly affect the prevailing social habits and customs. Even if only for this reason, such extension projects are attractive to the people for whom they are intended, who accept them without much difficulty. There are, of course, exceptions to this rule, a striking example of which was the introduction of hybrid maize among Spanish-American farmers in New Mexico [1].

3.2. The introduction of improved agricultural methods with special reference to annual food crops and to rice in particular

New agricultural methods often consist of a number of simple agricultural operations which do not usually deviate from the old patterns. In the cultivation of rice, for instance, innovations include planting in rows and the use of simple weeding-implements to lighten the work of weeding, and spacing the plants at greater intervals in order to economise on seed (Japanese planting method; improved method of cultivation).

The phenomenon we are dealing with here is that some, non-fundamental, change takes place in the prevailing, traditional method of cultivation. For the social-religious habits and customs that are interwoven with the centuries-old system of wet-rice cultivation are not encroached upon to any appreciable extent, while there are economic advantages in the fact that the improved method of cultivation cuts down on both the seed and the labour required often yielding a more abundant crop. It is therefore understandable that improved methods of cultivation have become very popular in a number of development countries. New methods have now been adopted in vast rice-growing areas in India, Thailand and Indonesia.

3.3. The use of fertilizers [2]

For many years now agricultural extension services have made increasing efforts to stimulate the use of fertilizers in various development countries. Those efforts are understandable in the light of the striking results obtained, both now and in the past, by the use of fertilizers in western countries.

The systematic advocacy of the use of fertilizers in development countries is generally based on years of experiment and research, the results of which show the economic gains that fertilizers may be expected to extract from various types of soil and from a diversity of crops. In other words, campaigns conducted for fertilizers are based on highly accurate figures.

When measured against the total agricultural area in need of fertilization, however, the use of fertilizers is still relatively insignificant in practically all development

1 EDWARD H. SPICER : Human problems in technological change. 1952. p. 35—39.

2 F.A.O. Preliminary Report of the survey of the fertilizer economy of the Asia and Far East region. Rome, July 1960.

countries [1, 2, 3]. Where they are used in any quantity, they are applied almost exclusively to short-term cash crops like tobacco, onions, vegetables, *etc.* and to plantation crops. The interest shown in fertilizers for food crops is usually a great deal less [4], while its use for perennial native crops is equally insignificant.

Various reasons can be given for the modest use of fertilizers in native agricultural methods. Perusal of the annual reports published by the Ministries of Agriculture in the development countries often reveals one or more of the following reasons:

a. Poor irrigation facilities mean considerable risk of a poor harvest, for which reason the application of fertilizers is unwarranted.

It is forgotten, however, that fertilizers are used just as scantily in many areas with well-functioning irrigation systems, where there is little chance of risk to the harvest.

b. There are insufficient local credit facilities, so that in view of the financial capacity of the farmer, it is difficult for him to purchase fertilizers.

But, as a rule, no mention is made of the fact that the purchase of fertilizers also remains far below expectations in those areas where agricultural credit banks, fertilizer plants and agricultural extension services extend very attractive credit facilities. [5] Furthermore, the figure remains low in spite of the fact that small quantities of fertilizer [6, 7], which require only a limited expenditure, are usually sufficient to meet individual requirements.

c. The farmer had not been informed of the fertilizer demonstrations organized in his district by the agricultural extension service.

One may seriously doubt whether this constitutes a legitimate argument. It is difficult to image that the activities of any government service carried out within the precincts of the village would not form a topic of conversation in the village.

Some of the more convincing reasons for low fertilizer use sometimes encountered in official reports are the following:

d. Practically all farms in the densely populated regions of the development countries are of infinitesimal size and the majority of them are self-supporting. On farms of this sort, where 70 % to 90 % of the gross profit is absorbed by the farm itself, there is no margin for the purchase of fertilizer or, to put it in more general terms, for any sort of investment in the form of floating capital.

e. Share cropping and tenant farming are common in the densely-populated regions.

A characteristic of the former is that the owner leases the farming rights to the share cropper in return for part of the gross yield. The situation in many densely populated rice-growing areas is one whereby the share cropper is obliged to hand over one half to two thirds of the main crop, *viz.* rice, to the landowner. This rule also holds good for any extra yield which the share cropper might obtain through the

1 G. B. MASEFIELD: Agricultural change in Uganda, 1945—1960. Food research institute studies. Vol. III, May 1962. No. 2, p. 98.
2 United Nations, Community development and economic development. Part I, 1960, p. 25—27.
3 See footnote 2 on previous page, p. 42, 52 and 58.
4 Far Eastern Survey, American institute of Pacific relations. August 1960. Vol. XXIX, No. 8, p. 117.
5 Annual Report of the ministry of agriculture of the northern region of Nigeria 1957/58, p. 9—10. Government Printer, Kaduna.
6 F.A.O. Report to the government of Indonesia on the development of agricultural services and projects. Rome, January 1956. Report No. 444, p. 15.
7 F.A.O. Preliminary Report of the survey of the fertilizer economy of the Asia and Far East region. Rome, July 1960. p. 41.

use of fertilizers, while he is also obliged to bear the burden of the cost and extra work involved. The owner thus receives the lion's share of the extra yield without having to do anything in return. So it goes without saying that under such a system the share croppers cannot be expected to display much enthusiasm for fertilizers. If the agricultural extension services are to achieve any success with fertilizers in these areas, the governments concerned will first have to amend the existing share-cropping and tenant-farming regulations, not only in regard to harvest rights and lease values, but as regards security of tenure for both categories as well.

Thirdly, I would direct attention to a number of social factors very seldom mentioned in the literature in spite of what I believe to be their great significance for the fertilizer question.

f. Although rice forms the staple diet, other starch crops such as maize, sweet potatoes and cassava are often eaten as well in the densely populated rice-growing areas. The remarkable thing is that a higher paddy production has the immediate effect of raising the rice consumption in the farmer's own household. So the fact of the yield being higher for any reason does not usually affect the quantity made available for sale. This being so, it may be assumed that a relatively high percentage of any increase resulting from the use of fertilizer will be consumed in the same way.

g. Farmers in development areas often display a striking inability to build up reserves, even after particularly successful harvests. In view of this mentality, amounting to an almost total lack of interest in saving, one poor harvest after a series of good harvests is enough to land the farmer in financial difficulty if he had been obliged to buy fertilizer under any sort of credit terms.

h. The strong feeling of kinship and family responsibility still very much in evidence in the rural districts of development countries can mean that a considerable part of the extra harvest of food crops does not benefit the nuclear family. It is too often forgotten that the situation once described by J. H. BOEKE is still largely unchanged in rural areas: "The limited needs of the individual in an Eastern society, together with his total absorption into the community, keep economic activities subordinate to those of a social nature. Moreover, the individual's needs as determined by his social environment are usually social in character".

3.4. The use of green manure

A series of experiments with green manure have been carried out in a number of development countries. Years of experiment instituted by research stations and agricultural extension services have produced irrefutable proof that many agricultural areas, paddy fields as well as dry-soil areas, show a favourable to highly favourable reaction to this type of fertilization. At first a great deal was expected of its introduction into native agricultural methods. Those expectations were based on the following considerations:

a. Green manure demands little or nothing in the way of financial sacrifice;

b. Although it requires extra work, the population and especially that of densely-populated areas with their substantial labour reserves, will be able to contend with it without difficulty.

This theory, which at first glance is very plausible, and the many favourable results obtained from field tests encouraged the agricultural extension services to spare neither trouble nor expense in advocating the use of green manure. Numerous demonstration fields were planted year after year, suitable manures were grown for seed distribution free of charge, campaigns were conducted to increase its cultivation for seed, *etc.*

In comparison with the trouble and expense involved, the results achieved up till now can only be described as lamentable [1, 2]. The areas in development countries where green-manure crops are in any way intensively cultivated, such as the island of Bali, are few and far between.

A number of reasons have been advanced to account for the disappointing results. As is often the case, special emphasis is placed on technical aspects. The following are among the reasons frequently cited.

1. The crop rotation in many areas is such that there is neither time nor space for the addition of green manure.

This factor can indeed be a decisive one, but no mention is made of the fact that in many areas where neither the crops nor the crop rotation is likely to form a hindrance to the addition of green manure, the use of this fertilizer is equally slight.

2. Some of the most suitable green manures possess the characteristic of forming only a small amount of seed and are sensitive to certain types of pests. For this reason it is often difficult to obtain seed in any quantity.

But there are good reasons for seeking the cause also elsewhere. Reference should first be made to a number of factors referred to in the section on fertilizers, including the frequent occurrence of share cropping, the increased amount consumed by the family after a good harvest and the strong ties with the community. All three factors tend to reduce any profit which might result from the use of green manure.

In addition, there is yet another important factor: this type of fertilizer demands a considerable amount of extra labour. Its cultivation involves a great deal of extra work, such as the special production of seed to be sown between or after the main crop, cutting the plants and, finally, working the foliage into the soil.

Unfortunately, the number of working hours involved in the process described above has never, to the best of my knowledge, been accurately calculated. In view of the above considerations, however, and of the many set-backs experienced in the cultivation of green-manure seed, it can scarcely be doubted that the extra work entailed must be quite considerable.

Another element to be taken into account is the value placed on leisure in practically all development countries. These people's genuine and deeply-felt need for leisure should not be underestimated. GALLETTI *et al.* [3] make the following reference to this phenomenon:

"The family's labour could be more fully mobilized but only at the cost of sacrificing leisure and enjoyment which the farmers and their families rate more highly than the possible increase in their income".

The farmer, quite rightly, weighs the extra labour attendant on the use of green manure against the advantages which this system of fertilization holds for him. His economic attitude will be an important factor here as well. The Western view that

1 Evaluation Report on working of community projects and N.E.S. blocks. Government of India. April 1956. p. 37—38.

2 Report of the team for the study of community projects and national extension service. Committee on plan projects, New Delhi, November 1957. Vol. II, p. 118—122.

3 R. GALLETTI, K. D. S. BALDWIN, I. O. DINA: Nigerian cocoa farmers. Oxford University Press, 1956, p. 295.

financial transactions are primarily aimed at adding to one's property is still foreign to the tropical farmer, even though he may be engaged in trading and commercial activities. In general, the situation is still such that a reasonable existence is regarded as the object of commercial activities. The farmer works until he has acquired sufficient to meet the needs determined by his social environment which, as a rule, attaches greater value to social than to material needs.

All this implies that the farmer in the development countries will in fact have to acquire a different mentality if he is to spend what is patently a considerable amount of extra time and trouble for a comparatively limited economic gain, irrespective of the fact whether he and his family possess the extra labour potential required.

It should not be concluded from the above, however, that the farmer is never under any circumstances prepared to work harder than usual. His interest, for instance in the cultivation of annual and perennial cash crops proves that such an assumption would be incorrect. Some annual cash crops, such as tobacco, sugar cane, cotton, onions and vegetables, even require a great deal of extra work. The farmer is prepared to go to a considerable amount of trouble with these crops because they yield him what he regards as a spectacular profit for which, as a rule, he does not have long to wait. Factors such as share cropping, greater family consumption and family ties have little or no effect in this context. Should one wish to draw any definite conclusion at this point, it might be stated that the farmer in development countries and his family are prepared to work harder, or even much harder, provided the extra effort will result in a good profit within a relatively short period.

3.5. Measures to combat erosion

If the agricultural extension services have not had very encouraging results from their fertilization projects, they have been more successful with their anti-erosion campaigns. It is a well-known fact that immense areas in the development countries have been denuded of their soil to such an extent that they are now of practically no agricultural value whatsoever. This refers particularly to regions where agriculture on dry soils (so-called "tegalans") or shifting cultivation is practised. As might be expected, erosion occurs most frequently in those regions where heavy rainfall and erodible soil types are found in combination with a hilly topography.

With reference to shifting cultivation as an agricultural system, it may be stated that in many places controlled shifting cultivation was originally only a successful adjustment to the socio-economic circumstances of the community concerned. Changes occurred when a growing population made it necessary to accelerate the process of rotation, leading to more intensive cultivation of the space available for agriculture. The more rapid crop rotation which did not allow the soil sufficient time for regeneration, caused a speedy loss of soil fertility. In addition, perennial cash crops have now made their appearance in many areas where shifting cultivation was practised, with the result that lands formerly used for growing food crops are no longer available for this purpose.

In some countries, particularly those which were formerly colonies, the authorities were aware as early as the middle of the 19th century of the danger of unrestricted soil damage in areas where land was cultivated on slopes. They attempted to arrest erosion, or at least to minimize it, by introducing a number of regulations whereby the clearance of wooded areas in hilly regions was made subject of certain conditions. Yet, many years before the colonial governments began to take an active interest in the question of erosion, the people of some areas had been aware of the danger

of the soil being washed away. There is abundant evidence that they took what were sometimes radical measures to prevent erosion long before any sort of government action was contemplated.

One of the oldest and most effective measures of soil retention consists in the use of terraces, a technique whereby the original declivity is flattened off to the point where practically no more soil can be washed away. It will be apparent that if mechanical means are lacking, the work of building terraces involves a tremendous amount of labour. Although the latter may be available in densely-populated areas, this is by no means the case where the population density is lower.

There are many other means of preventing erosion which require less effort, *e.g.* soil conservation by means of stone walls built vertically along the slopes, hedges or strips of green manure and certain trees or fodder crops planted along the bottom verge of the fields, strip cropping or contour farming, perennial plants planted along the sides of gullies to prevent them from subsiding, *etc.*

Even in the relative sense, *i.e.* viewed within the framework of the total erodible area, the advocacy of preventive measures has met with encouraging results. One then wonders how to account for the fact that this campaign has had such an obvious effect in spite of the amount of extra work imposed. From my own experience and observation, I would say that emphasis should be placed on the following points:

a. Once the erosion process is properly under way, soil fertility will often decrease rapidly within a comparatively short time. This means that the depletion of the soil and its consequent loss of productivity will take place before the very eyes of the population, so to speak. In such instances the population will undoubtedly be more inclined to take preventive measures than the population of an area where the process of soil degeneration is spread over a longer period, as is the case, for instance, in irrigated rice-growing districts.

b. The problems inherent in shifting cultivation as an agricultural system affect the entire community, and are not primarily a matter of concern for the individual only. It follows, therefore, that erosion is a matter affecting the well-being of the community as a whole and that, consequently, it is easier to organize a collective effort to arrest the process. In communities of this description where communal ties are still close, the question of producing the extra effort required will undoubtedly prove less difficult than in areas where the process of individualization has reached an advanced stage. Moreover, the inhabitants of some regions have long been familiar with methods of combating erosion; they accepted the need for special action long ago and have since incorporated it in their general cultural pattern.

c. A highly important factor in this context is the fact that even though such collective labour is in some cases very heavy indeed, it is usually required only once, or at least at long intervals. On the whole, this is accepted more readily by a population holding specific views on work and attaching value to its leisure than a more recurrent need for extra work, even though the latter may be proportionately less demanding, as is the case with green manure. An aversion to regular, organized work was already evident at the time when Western companies began operations; they often experienced considerable difficulty in recruiting sufficient local labour.

3.6. The fight against diseases and pests

Combating or preventing diseases and pests is one of the principal points in all agricultural extension projects in development countries. This is by no means surprising

in view of the fact that some are virulent enough to cause enormous agricultural losses.

In the fight against a disease, it is usual for the Research Stations and the agricultural extension services to work in close collaboration. This implies, *e.g.* that the agricultural extension services carry out regular surveys and draw up reports on the nature and extent of many types of diseases and pests which they submit to the Research Stations. As a rule, the latter then make a closer study of the disease in question and attempt to find the most effective means of checking it. After field tests have been carried out to determine the value of a given insecticide or pesticide, the extension services are informed of the results and advised on the best means of incorporating it into the native agricultural system.

One is justified in asserting that the campaigns conducted in various development countries have met with an encouraging amount of success. Nevertheless, there are certain factors which can exercise considerable influence on the success of such campaigns, among which are the following:

1. The price of pesticides, insecticides and equipment per field or production unit should be kept to a minimum if they are not to be made available free of charge by the governments concerned. The low income of the average farmer allows no margin for heavy expenses of this sort [1].

2. Insecticides and pesticides should be simple to use and, more particularly, should not require much work.

The second point is of particular importance since the use of insecticides, for instance, and of spraying techniques, usually imposes a great deal of extra work if the area concerned is in any way extensive. For that reason the fight against pests and diseases is concentrated to some extent on developing resistant plant varieties and on biological counter measures. So the solution is not sought in mechanical or chemical methods; instead, some natural parasites of the organisms responsible for the various diseases should be found. By transferring those parasites the scientist sets in motion a biological process of counter action which nature itself, as it were, will continue. Neither the introduction of resistant varieties nor the use of biological methods entail much extra cost or labour for the population. In sparsely populated regions, in particular, these two methods are usually the only feasible ones.

3. The agricultural extension services keep their use of insecticides or other materials containing poisonous elements to a minimum. They can be highly dangerous in the hands of what is often an illiterate rural population. Where the use of poisonous substances is unavoidable, special large-scale preventive measures should be taken.

4. The local population's inadequate organizational capacity often acts as a curb to large-scale action. Some pests and diseases, *e.g.* those to which rice is prone, sometimes occur spontaneously throughout extensive adjoining areas. It is then essential to act quickly, to organize effective counter measures on all fronts. Action of this sort, which must get under way quickly, requires considerable organizational and executive ability. In most instances, the agricultural extension services will have to assume this task.

[1] Evaluation Report on working of community projects and N.E.S. blocks. Government of India. April 1956. p. 39—40.

5. The stiffest resistance to measures designed to combat a disease is often found to stem from religious beliefs. Many authorities could be cited to show that religious motives often form obstacles which are particularly difficult to overcome. Those religions which prohibit the destruction of any living creature are a case in point. The resultant situation often requires a great deal of psychological insight and endless patience on the part of the extension service staff.

4. Further considerations

I would emphasize the fact that this article makes no claim to be exhaustive. It is merely an indication of the fact that non-acceptance of what appear to be sound agricultural improvements is not solely attributable to technical and economic factors, as some Western agricultural experts are inclined to believe. In the development countries the social background generally plays a vital part in the acceptance or rejection of projected innovations. It is essential that the agricultural expert possesses a thorough knowledge of the specific social and cultural situation. Only then will he perhaps be able to avoid those sharp disappointments which may even become a personal aversion on the part of the population.