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GLEANINGS

WORK STUDY IN AGRICULTURE*

The objective of work study is "to obtain the optimum use of the human and material resources available to an organization for the accomplishment of the work upon which it is engaged." In other words, the emphasis is on the optimum rather than the maximum, and with the available human and material resources for the accomplishment of a stated task. The consideration of the economic, technical and human factors is presumed in any problem of allocating scarce resources which have alternative uses for the attainment of some stated objective. These arise not only to improve efficiency expected from the application of work study, but also necessary to weigh the cost of the resources used in carrying out the study against the value of the economies or improvements which the study may bring about. This is the fundamental point, because it can be shown conclusively that any human activity may be improved by the application of work study if the investigation is done regardless of the resources and time devoted to it. The implementation of a farm work study entails a very careful pre-selection of the particular process or operation that is to be studied.

Setting the Sights

The area of pre-selection may be delineated by the objective set. If work study is to be applied to the problem of the small farm, the objective set may either be the improvement in terms of reducing cash cost or of drudgery, both physical and mental, or providing greater leisure time. The majority of farms employ one or at the most two men, and so the only direct saving in their labour cost would be reduction in overtime. But the lessening of drudgery, which produces mental stagnation and physical weariness, might well allow time and energy for the profitable expression of innate managerial and husbandry skills in farmer and farm worker. How often is the plea heard that the small farmer has neither time nor energy to think about his problems and devise improvements !

Work study is an aid and not a substitute for farm management, which is, itself, concerned with making decisions. And correct decisions are made on the basis of recorded facts rather than on opinions as to what the facts are thought to be. In a farm business the sources of factual information are notoriously scarce, but there is usually at least one record on every farm : the annual statement of accounts, together with the details of valuations and livestock numbers and acreages.

Thus the selection for work study may come from the analysis of the farm as a business. This analysis may show that the unsatisfactory profits are due to deficiencies in the output. The recommendations made to overcome this may suggest that the acreage of cash crops should be increased, the nature of the crops intensified, or the numbers and types of livestock increased, or changed—all these to be done with little or no increase in the costs already being incurred on labour and equipment. On the other hand, the unsatisfactory profits may be due

*With kind permission from: *Agriculture*, Vol. LXIV, No. 7, October 1957: Ian G. Reid: "Work Study in Agriculture."

to excessive expenditure. This may occur in respect of feeding stuffs, labour, power and machinery or several other items. In such cases, the particular item would be selected as the area for work study.

Rate of Work Performance

Selection of the work study field may be made through checking the deviation of any rate of performance on the farm from what is thought to be normal. For instance, the "norm" of labour performance may be that one man should look after 25 sows and their progeny when fattened to bacon weight, or one man should look after 40 cows when organized on a yard-and-parlour system. A check on the actual performance on the farm may show in which enterprise the performance deviates most widely from the expected rate. Such an enterprise would seem to present an obvious field upon which work study should be concentrated.

Major Farm Resource

Selection may be made because a particular resource forms a major part of the total expenditure on a farm and would, therefore, seem to present the most likely field where savings can easily be made. The major items of expenditure on farms vary according to the size and type of farming that is being pursued. For instance, on small dairy farms of under 100 acres, feeding stuffs bought often form a higher proportion of total expenditure than does labour. But in the case of larger farms the labour bill becomes the major single item of expenditure. Likewise selection may be made, not because the process uses a high proportion of a particular resource, but because a certain operation within that process is the major user of this particular resource.

Seasonal Peaks

Selection may be made because the particular process creates a seasonal peak. Such seasonal peaks may have a considerable influence on the final profit achieved on any particular farm because they involve not only the payment of over-time, but because they will also affect the quantity and quality of both the produce obtained and of the resources used. It may be difficult to concretely indicate in money terms the influence of timeliness in cultivation, but it is well known that cultivation put through at the right time influence yield significantly.

Random Observation

Selection may be made by random observation. This technique is mentioned rather to give the full picture than to be immediately practical. The random observation study is based on the idea that the proportion of total time spent in delay (or non-working in the wider sense) gives a good indication of the efficiency with which labour is being applied. To mitigate the expense of a continuous study, visits are paid at randomly selected times and a note made as to whether the operator or operators are working or not. Theoretically, the number of observations required to be taken is determined by a statistical formula and depends largely on the degree of accuracy required in the results. The greater the accuracy the very much greater the number of observations required. It would seem to be a refined technique useful more to research workers than to field officers at this stage.

High Profits through True Economy

In conclusion, it must be emphasised that work study is a tool to be used by management in achieving or approaching its aim of high profits through true economy. If, however, the aim of management is not to increase profits but to eliminate drudgery with its accompanying fatigue and boredom, or to save time in order to create more leisure, the application of work study is more appropriate. Just as it is necessary in discussing any economic problem to know the objective which the management has in mind, it is similarly essential before starting on any work study.

It should be realized that work study requires considerable resources of time and thought, both of which may be expensive. But to quote Edmund Burke, the eighteenth-century politician, "Expense and great expense may be an essential part of true economy. Economy is a distributive virtue and consists not in saving but in selection." It is necessary to see that the expense and great expense of the advisory officers' and farmers' time and energy devoted to work study are done with true economy by careful selection on the lines suggested.

SOCIAL FACTORS AND ASIAN RURAL DEVELOPMENT*

The aim of rural development in Asia is to bring about purposive change. In considering the social implications of this change the influence of extension work which is usually the main feature in rural development in Asia goes much further than modifying a technique—it changes life itself.

It is of the utmost importance that any change proposed by an extension service should be for the better. The responsible officer should have good evidence that the change propagated (*e.g.*, a new seed variety) will give a higher yield not only on the demonstration plot but actually in the area, even in the village, where it is to be used. Only too often has attention to be drawn to this very important requirement. Better a year's delay to make a local test than a failure which will destroy confidence. The disappointment in the village will affect the whole future of the extension work in that area and make it extremely difficult to regain confidence. Moreover, it should not be forgotten that yield is not everything. When a crop is used both for food and for fodder, it is not a great help for a villager that the yield of grain will be higher if, at the same time, the stalks grow so hard that his cattle cannot eat them.

A change to a cash crop will affect a village much more deeply in most cases than a new variety of seed. However, the influence of the latter should not be under-estimated, particularly as in many cases additional changes are also introduced (manuring, planting in rows, more careful weeding, etc.). In many cases a change in seed variety is so easily accepted that it spreads without any special effort of the extension service, provided the variety is readily available at reasonable prices.

* With kind permission from: *Pacific Affairs*, Vol. XXX, No. 2, June 1957: J. D. N. Versluys: "Social Factors in Asian Rural Development."

Acceptance is, of course, much affected by the direct advantages a particular change offers. Measures for land improvement and especially for afforestation are, therefore, not very popular. We should also not forget the economic implications. Even if there is sufficient understanding of the need for these measures, and a sufficient degree of inner cohesion in a village to make feasible work which will usually need the collaboration of all, it is quite possible that purely economic difficulties will hamper such projects. It is wise to introduce first a new practice which will bring about a direct advantage without being too complicated or leading to too much change. Such a new practice will create confidence and pave the way for other measures.

The spread of these changes and their tempo are closely connected with the two aspects mentioned above. In general, the larger the spread, the less the influence of the change. This may sound contradictory but we should regard "change" particularly from the point of view of being a disturbing influence in the life of the community. The more people undergo the same kind of changes, the less their mutual relations will become different. If, on the other hand, only some members of the village community adopt a new agricultural practice which will bring higher yields and more purchasing power, then the balance of influences within the village is disturbed. In general it is better, therefore, if the extension service makes it a point to win over a whole village to adopt new techniques, though this is admittedly often very difficult in practice.

The tempo of change is also of the greatest importance for the social structure of the community. In many cases these changes do not occur suddenly; some must have crept in surreptitiously, like the influences of erosion in the Eastern islands of Indonesia. However, sudden changes which deeply affect the whole way of life of the community are willingly accepted, *e.g.*, the use of tractors by some tribes in New Guinea, whereas far less violent changes occurring over a long period of time are still not well absorbed, *e.g.*, the introduction of co-operation in India. This may be explained by the fact that the extent of change in mutual relationships was less by the introduction of the tractor than by the establishment of co-operatives.

At this point, it is useful to consider some of the resistances to new methods. Most human beings have a hidden or outspoken fear of change which threatens to disturb the normal pattern of the community or the habits of the individual. In a society where such changes often occur, the resistance will usually be less strong, but even in such dynamic societies where new things are welcomed as progress, there are certain sectors of the culture which are regarded as definite, eternal truths, such as religious beliefs and moral behaviour. Not every culture, however, is conditioned in the same way. But where technical gadgets have not developed much, cultures will, on the whole, be inimical to any change.

It is not always possible to be sure how deep the influence of a change will be, certainly not for the people to whom a particular new technique is demonstrated. They cannot regard it as just a new technique which is superior to what they practise themselves. They are not accustomed to analyse things, and even if the superiority of the new technique is demonstrated, they may feel suspicious. It is, therefore, important that demonstrations be done in the village itself using

the normal techniques of the village in order to make the demonstration as convincing as possible. Otherwise, the general feeling is likely to be that it is easy for the extension worker with all his gadgets, his fertilizer, etc., to get better yields, but for normal people it is quite different.

In many cultures agriculture and religion are so closely related that what may be regarded as a technical change of little consequence is not easily understood by the village community. Again, a different sort of resistance may be found in longstanding habits of nutrition.

The development officer must show understanding and patience if he wants to achieve ultimate success. It is of little use to ridicule habits which have a definite place in the value system of those with whom he has to deal. It is sometimes possible to find a satisfactory solution, such as introducing unfertilized eggs in a Hindu society which would not eat eggs for fear of destroying life. But in many cases the resistance will be formidable and the only solution will be to wait until education and other changes have prepared the ground. Sometimes one can use existing beliefs and traditions for the purpose of extension service. Often, however, no specific reason can be given why people do not follow better practices. A fair number of cases are found where the tradition is so strong and the desire for improvement so weak, that simple means of improvement are neglected unless strong leadership urges the people to utilize them.

The word "traditional" has two connotations, one indicating only "habitual" and the other "customary", without further questioning the merits of the custom. One might call this "passive traditional." Once the advantages of other behaviour or new features are shown and have been accepted, theoretically at least as better or more useful, one may hope for a gradual change, because there is no really active kind of traditional behaviour, which consciously prefers the traditional to a more modern way of life. It may be a very active resistance, often appealing to the highest values in the community. In cases where no actual reason for resistance can be mentioned there is scope for further encouragement, but it will always be necessary to investigate carefully whether there is indeed no reason, except merely conservatism or lethargy.

It is commonly found that little headway is made with any project for development when groups within the village feel hostile. Another, more directly visible, antagonism may exist between the rich and the poor. The rich naturally tend to accept new methods because they can afford to take a risk ; a poor man cannot afford to take any risk. Any effort to introduce technical change may suffer from this antagonism : either the rich will be against it because they fear that the poor may get extra advantages which would endanger the established position of the well-to-do villagers, or the poor shy away as they believe that the proposed measures are only for the "haves". The risk factor is in this case, perhaps, more important.

A real problem may be provided by the landless labourers who feel that their condition does not improve much, though the crop yield is higher. This will increase the social distance between the "haves" and the "have-nots", unless the wage system (as in various parts of Indonesia) is traditionally a certain fraction

of the yield. Although one may argue that increase in village income will somehow also help the landless labourers as the wage level increases, this argument does not always seem convincing in view of the very strong army of rural under-employed and unemployed.

The third obvious group antagonism, that of the generations or age-groups, may also provide problems if not carefully handled. It is possible to extend agricultural education to the younger generation, provided it is done carefully and without antagonizing the older generation.

Agricultural extension, though planned to be of universal advantage to the whole community, is in actual practice mostly directed to the individual cultivator. This is quite natural when the land is privately cultivated as is the case practically everywhere in Asia. Though the extension service will wish to address the village as a whole, in actual fact the demonstration will take place on the land of a certain individual whose connection with the official concerned tends to become specially intimate. Or, a special technique propagated in a meeting may be put into practice by certain individuals only. This may lead to new social differentiation. In such cases, extension work may lead to further disintegration of the community, and it may be necessary to initiate other work which directly serves the whole community, *e.g.*, improvement in flood control or irrigation, or (if the community is ripe for it) reforestation.

In some parts of Asia the relationship between individual and community may be even more complex. Where the process of individualization has not progressed very far, it is extremely difficult to change traditional methods, as people are not accustomed to making any individual decisions. It is the tribe or the clan as such, or rather their traditional representatives, who take the decisions. These are not always the official heads or chiefs, and it may not always be easy to know who should be approached if a certain new technique is proposed. Again, this does not mean that the agricultural extension officer should be an accomplished social anthropologist but it certainly implies that he should have the opportunity in his academic career to become acquainted with this kind of problem, so as to understand and recognize the difficulties.

Even where the individualization process has gone further, it cannot be assumed that the individual farmer will take the decision. In this context Lewis has noted a matter of great importance, namely, the positive role which can be played by faction leaders. In a community without specific groups the number of leaders will usually be smaller than in one of the same size where there exist definite groups. Therefore, more persons will have the qualities of leadership, or at least will act as leaders. Their quarrels with other factions have certainly taught them to act. This may mean a positive contribution if something new is to be introduced in the village, provided the importance of the issue is so great that the group dissensions can be temporarily set aside.

The existence of competing groups may also be used in a direct way by the extension officer. He may point out that it is "modern" (a concept which in many cultures has a strong appeal) to use such or such a method and so start a competition in a village where factions would prevent an all-village approach.

This can be extended to individuals who like to be called "progressive". On the other hand, care should be taken not to overdo this. Sometimes individual pride may lead to buying useless implements just to show off, or a well-to-do villager will buy a tractor and proudly show it to every visitor without really being able to use it.

All these problems are very real. The optimism prevalent during the first years of the general movement of rural development in various Asian countries has somewhat subsided as the tremendous practical difficulties became more and more known. However, it is not necessary to believe that these difficulties are unsurmountable. A substantial number of important changes for the better have taken place. However, it has been found that significant changes in most cases could only occur when there was a certain unity in the village. Therefore, either the natural organization of a village, as in the form of a council (mostly unofficial and informal) of village elders or influential villagers, or, more probably, a specially created association, will be needed to achieve the best results. There must be some common ground where the various groups in the village can meet. It may be the influence of the headman or sometimes even of an outsider which may bring about purposive change, but the most enduring results seem to be possible only when a formal or informal group gets together. This is the underlying thought in the emphasis laid on the rural development societies in Ceylon, or on co-operatives which may play a similar role.

It is not very important for this purpose that the society is a co-operative in the full sense of the term, or an association of a different kind, provided it is managed by the villagers themselves. If such a society exists and really works, it would mean that some of the major problems have already been solved, or will be solved more easily. A co-operative should be more than an organization for economic improvement. It makes it possible to overcome the too glaring differences between village factions; it helps to mitigate the differences between the rich and poor farmers; it gives an outlet to individual initiative but bends it to common purposes; it stands for the acceptance of new possibilities. The influence of the small village co-operative is usually more social than economic.

A new kind of leadership is needed when a co-operative or some other village society is set up, to break through existing group borders. Such a society usually works along the lines of Western democratic principles, having an elected board, taking votes, etc. There are also technical matters like minutes and book-keeping, which require literate persons. In such cases leadership may slip from the traditional leaders to the educated younger people, and this may be useful. However, there may also emerge a close co-operation between the (illiterate) traditional leader (usually one of the well-to-do villagers) and the younger generation, one becoming the president, the other the secretary of the society. But sharp antagonism may also result. Here again it will be useful for the extension officer to be careful when he approaches the village through such a society. However, the fact that a co-operative is selective and does not admit everybody is basically an asset rather than a liability to a co-operative.

One of the most important aims of successful extension work is to create a spirit of self-reliance which may take longer time to achieve and will require

much more thoughtfulness and understanding than spoon-feeding and paternalism, but will be the only method of achieving lasting results.

PEASANT FARMING IN EUROPE*

The characteristic feature of European agrarian structure is the prevalence of small peasant farms. Peasant farming is still the basis of the agrarian structure in most European countries and its importance in the economy has grown over the past half century. The present position of peasant farming is considered in the light of the new experience, and in relation to the changes that have taken place since World War II.

Western Europe

In Western Europe,¹ the growth in the importance of peasant farming has been associated with a decline in man-power, more efficient and more intensive farming in fairly large farms and higher standard of rural living. Change has been evolutionary, aided, but not determined, by Government policy. The most important change, as compared with the inter-war period, is that the farmers are better off as a result of higher prices and greater efficiency. Real incomes in agriculture have risen considerably. The second important change is the extent of power mechanisation. Today, the scale of farming in most Western European countries does not present any obstacle to extension of power mechanisation.

Chiefly as a result of mechanisation and increased use of fertilisers there has been considerable increase in efficiency, as measured by labour and land productivity. The big improvements in labour productivity are confined to the countries where levels of productivity were already high before the war. In Denmark output per male worker in agriculture in 1952 increased by 50 per cent over the pre-war level, in the Netherlands by 40 per cent and in West Germany and Switzerland by 25 per cent while in France it rose only by 19 per cent. The only country which has greatly improved its level of productivity relatively to that of other countries is Sweden. In 1950, production per man-hour was 65 per cent above the low level of 1930-31 and so far as labour efficiency is concerned Sweden now ranks with West Germany. As a result of mechanisation and expansion of employment in industry the rural exodus has accelerated.

These changes in incomes, methods, man-power and efficiency have taken place without any major reform of the agrarian structure. Only in Finland there has been a considerable redistribution of land as a result of Government policy but it is on voluntary basis. Large farms over 50 hectares nowhere exceed one quarter of the agricultural land area. Small farms in the size groups 2 to 10 hectares took up 15 per cent in Denmark, 16 in France, 28 in West Germany, 30 in Sweden (arable area), 33 in Belgium, 40 in Switzerland and Finland and 50 in Norway. In all West European countries there has been a general centripetal

* With kind permission from : *International Labour Review*, Vol. LXXVI, No. 5, November, 1957: Doreen Warriner : "Changes in European Peasant Farming."

1. "Western Europe" excludes the United Kingdom and "Southern Europe", i. e., Spain, Portugal, Italy. "Eastern Europe" excludes the Soviet Union, but includes Yugoslavia.

movement into the medium size groups of 10 to 50 hectares, while the proportions of land taken by large and small farms have declined. Measured by numbers employed, all farms have grown smaller.

The long term trend is towards more family farming, because the decline in man-power chiefly affects farm labourers and thus increases the proportion of family labour to hired labour. The latter now represents only a small proportion of the total farm population in all West European countries, and the majority of farms are worked by the family. This is in fact the most important evolutionary change in the socio-economic structure. The social structure is more equal and family labour is more efficient because it is aided by machinery.

A further evolutionary change is that farm sizes are no longer so well adjusted to social and economic conditions as they were in the inter-war years : a proportion of the smaller farms, which accounted for a third or more of the agricultural area, are becoming uneconomic. The small farms over-invest in machinery and so cannot share in the upward movement of farm incomes. The larger farms can substitute machinery for hired labour and become family farms on the same area and with higher *per capita* income.

Investigations carried out in Germany, Sweden and Switzerland show that some proportion of the smaller farms of the size-group 2 to 10 hectares can no longer provide the family with sufficient income. The minimum size for a family farm is rising. Changes in minimum sizes always occur when methods of farming change and living standards rise. The existence of lower level of productivity on small farms does not in itself constitute a serious problem provided the smaller farms are regrouped into large units as they are given up. The long-term decline in the numbers of small farms has been a slow process. There is, however, evidence to suggest that small farms are falling vacant rather more rapidly in Germany and Sweden.

Various remedies are recommended for the improvement of the small farms, including more state assistance in the form of special subsidies for small farms, co-operative farming, regional industrialisation to aid depressed farming areas, and state assistance to combine small units. These policies may be useful to varying degrees in different local conditions. However, the agrarian structure cannot be remedied by any single measure, such as compulsory combination of units or by revolutionary reorganisation. The problem emerges because standards of living are rising and because family in general is becoming more efficient. It is a symptom of economic progress and not of retrogression, and policy should, therefore, aim at aiding evolutionary change.

An interesting example of this approach is found in the Swedish policy of state assistance to aid small farms to combine into larger units, as they fall vacant. It forms part of a much wider programme of increasing productivity in agriculture evolved in 1942. State aid was made conditional on improvement in farming methods and management. One of the most successful policies was the encouragement of mechanisation through grants to machine stations, financial support being conditional on their undertaking to provide machine service to small and medium-sized farmers. Since 1945 mechanisation has advanced very rapidly and has been the chief cause of the very rapid increase in labour productivity.

For small farms under 10 hectares the aim is to assist the combination of units falling vacant with other small farms. The success of the Swedish policy in increasing labour productivity in agriculture suggests that the positive approach to the problem of the low-level of productivity on the small farm is to aim at increasing it, within the framework of a policy for raising the productivity of family farms in general, and without attempting to force regrouping and, when regrouping is undertaken to use the opportunity to improve the field lay-out of the village. Since the policy was inaugurated, the number of farms between 2 and 5 hectares has declined by 11 per cent and those between 5 and 10 hectares by 5 per cent.

The present tendency to emphasise small farm area as the main cause of low labour productivity in agriculture tends to obscure the effects of other factors that make for low productivity in family farming. Fragmentation, poor education and lack of co-operative organization are all important influences on the general level of efficiency. Where several factors combine to keep labour productivity low—poor land, small farm sizes, lack of education and remote situation—then a special policy is certainly needed to tackle poverty. Pockets of under-development do exist even in countries where the general rate of increase in *per capita* output in agriculture is very high, e.g., in the marginal farm districts of the U.K. and in the mountain cantons of Switzerland. The German official report recommends, as a remedy to this, the regional industrialisation policies or the division of state forests among peasant farmers under co-operative management. Perhaps the most significant change is the introduction of a more realistic social policy for agriculture which recognised the need for increasing the efficiency of family farming and giving special aid to the weakest sections of the farming community. Seen in the perspective of the general rise in land and labour productivity in recent years, the problem of the smaller farms is not a grave “defect of the agrarian structure.”

Southern Europe

In Southern Europe, no general evolutionary changes resembling those occurring in Western Europe can be discerned. Agricultural population continue to increase in Spain and Portugal, while in Italy there has been a decline since 1930. In the former countries, the agrarian structure appears to be rigid, the *latifundia* maintaining their position while small farms, chiefly in intensive cultivation, presumably continue to multiply. There has been no agrarian reform. Agricultural production remains below the pre-war level and the standard of living of the peasants has fallen.

In Italy, there has probably been a considerable increase in peasant ownership in the northern regions. A more active policy to aid small farmers, regulation of share-cropping contracts, provision of security to tenants, and consolidation of fragmented holdings are the chief needs at present. The land reform measures enacted in Italy in 1950 and 1951 concerned with the overpopulated Southern and Central regions, affecting the agrarian structure to an extent that can be described as revolutionary though the process is slow, cautious and expensive.

The method of group settlement in Italy has succeeded well in combining the advantages of large-scale machine cultivation with intensive and specialised

production. An extent of 526,282 hectares of land which was assigned by the end of 1955, was distributed among 99,379 families of whom nearly 60 per cent received farms averaging 6 to 8 hectares and the rest a "quota" of 2 or 3 hectares holding of citrus or vineyard. The settlers enjoy a much higher standard of living and economic security but they have not become independent farmers. Recipients of land must be members of a co-operative society and must agree to the terms of a contract which oblige them to follow a compulsory rotation and to cultivate as prescribed by the bureaucratic management. Technically, the results are good: crop yields have doubled and livestock production increased. However, not much has been done in the direction of industrialisation and the problem of the great surplus of labour remains.

Eastern Europe

In Eastern Europe, more peasant farming has meant more peasants, smaller farms, extensive farming and low living standard. Change has been in the main revolutionary. There would appear to have been no improvement in the efficiency of agricultural production as a result of the recent drastic structural reforms, but the policy of industrialisation has succeeded in absorbing much surplus labour into industrial employment. The need was not, as in Western Europe, to aid an already operating evolutionary process of adjustment to larger family farm units, but to lift the whole structure out of stagnation by absorbing surplus labour into employment outside agriculture. Unfortunately, the absence of agricultural statistics makes it impossible to study the effect of these changes on the peasants in quantitative terms. Although the seasonal labour surplus is absorbed, there is no improvement in farming, for the holdings of these workers are less well cultivated than others; factories cannot count on steady employment or build up a skilled labour force. But the peasant standard of living is certainly higher as a result. The tendency to cling to the farm holding even if it is small and unproductive has doubtless been accentuated by frequent changes in agrarian policy in recent years.

Except for some improvement in off-farm earnings, no generalisation about rural standards of living in Eastern Europe as a whole is possible. Upto 1948 or 1949 there was a rise in real incomes per head for the poorest sections of the farm population which benefited from the land reforms. The inevitable result of the reforms was that a greater part of total agricultural production was consumed on farms instead of going to the towns or the export market. In the years immediately after the World War II, real incomes in agriculture rose relatively to incomes in other occupations as a result of the shortage of food. The general policy for agriculture has been the reverse of that followed in West European countries, since it aims at preventing investment in peasant farms.

The peasant economy is much weaker in spite of the reforms, than it was in the inter-war years, because it is starved of capital, and because farms are smaller. After the reforms the greater part of the agricultural land in all Eastern European countries except Czechoslovakia was held in farms under 10 hectares in size. The number of hired labourers on peasant farms must now be very small, and family farming must now be the predominant element in the structure, as in Western Europe; but it has not achieved greater efficiency, nor is there a trend towards larger peasant farms.

Since 1949 collectivisation has been the aim of agricultural policy, with the complete elimination of peasant farming as its ultimate goal. Co-operative farming, classified into four types and graded according to the method of income distribution among the members, was chosen as the form of organization. But in the conditions in which co-operative farming was introduced in Eastern Europe it is impossible to distinguish between the merits of co-operative farming as a form of organisation or tenure and the process of collectivisation. This process involves not merely the combination of farms for mechanisation but the whole policy for agriculture in general. To make the process work it was essential to depress peasant incomes and prevent investment on peasant farms.

The rate of collectivisation has varied in different countries, though the methods used have been everywhere the same. There is now a dual agrarian structure composed of the socialised sector, including the state farms and co-operative farms, and the private sector, including individual peasant farmers, predominantly small. Only in Bulgaria, peasant farming had been almost completely collectivised by 1956, with 75 per cent of the cultivated land under co-operative farms. In other East European countries, peasant farming still takes up the greater part of agricultural land area and in some as in Yugoslavia it has recently regained lost ground.

It is not possible to assess the effect of the collectivisation on agricultural production in Eastern Europe as a whole because of non-availability of comparable statistics for these countries. It appears that agricultural production in Poland, Hungary and Yugoslavia during 1950-54 did not recover to the pre-war level, as the first post-war plans envisaged; war damage, territorial changes and the lack of public funds for investment in agriculture combined with bad harvests owing to natural causes and lack of incentives to cultivate, put the targets of agricultural production out of reach. The more immediate problem is to get away from the one-sided emphasis on tractor cultivation and to find means of improving livestock production, still far below the pre-war level. Here the problem of incentives in socialised farming has proved insoluble.

Thus it appears that co-operative farming, as practised in Eastern Europe, has not proved to be a way of raising the efficiency of agricultural production or the rural standard of living, because it has not in reality been co-operative. Land productivity is no higher. Labour productivity seems unlikely to have risen. It cannot also be argued that the movement of labour into industry necessarily involved a regressive policy for peasant agriculture, for, surplus labour would certainly have left the land even if farm incomes had risen. Collectivisation was not necessitated by the expansion of industry. Forcing the pace of agricultural organisation has increased the cost of industrialisation and delayed a rise in the urban living standard by many years. If the economic results are taken into account, they suggest that it is time to abandon the belief that giving the peasants a hard time will improve the efficiency of agricultural production.

To sum up, in recent years the evolutionary and revolutionary tendencies have worked more strongly. The contrast in levels of productivity and living standards between Eastern and Western Europe remain; they are, indeed, in all probability much greater than they were in the inter-war years. Even though

peasant interests can be served by revolution when the agrarian structure is highly unequal, evolutionary change is the best way of raising farm productivity. Swedish example shows how much can be done by building up from what exists, without compulsion. Peasant farming does not necessarily mean small un-mechanised units, incapable of advance; it can and should mean prosperous family farming. One way of achieving that result is through co-operative use of machinery. But the form is less important than the content. Eastern Europe, like Western Europe needs to invest more in its peasant farmers. In the European experience there are many well proved ways of strengthening the farm family, without destroying the invaluable asset which peasant ownership represents at its best.

RURAL DEVELOPMENT PROGRAMME*

Status of the National Rural Development Programme

The basic beliefs implicit in Rural Development Programme are that (1) rural areas of low income result from restricted opportunity, limited resources and inadequate education rather than from any innate lack in the people themselves; (2) the programme should help the people achieve the objectives to which they themselves aspire; (3) the accent should be on youth, since many problems can best be solved between generations. The programme which is now a year and a half old, is put through in 46 pilot or demonstration counties and 8 trade areas in 24 states of the U.S.A. The three characteristic features of the programme are: (1) this is not just another government "aid" programme; but it stands on local initiative; (2) equal emphasis on agricultural and non-agricultural opportunities and (3) its pilot or experimental aspect.

The rural development programme helps farm families on small farms to adjust operations to modern-day trends by (i) putting new emphasis in joint planning through agricultural and non-agricultural agencies; (ii) giving technical assistance to low-income farm areas to help plan and carry forward economic development projects; (iii) helping more families make use of the successful farm and home unit approach to extension; (iv) liberalising credit for small farmers and by urging a new look at both general and vocational educational needs in rural areas.

Of the 24 states participating in the programme, at least 20 have formed committees to provide state-wide direction. In all cases, non-agricultural agencies working in the state are represented. This planning forum provides an opportunity for real co-operation. The Department of Agriculture has initiated a programme to supply state and pilot county leaders with continuing information on all phases of their development work.

Some of the money allocated by the Federal Extension Service to the states under authority of the amended Smith-Lever Act will be used to pay the salaries of special associate county agents and extension specialists. The special associate county agents will work full-time in the pilot counties. The extension specialists, working out of the state office, will provide continuing technical advice in the management of individual programmes.

* With kind permission from: *Journal of Farm Economics*, Vol. XXXIX, No. 2, May, 1957: Papers by Don Paarlberg and Charles E. Bishop and Discussions by Raymond J. Penn and W. B. Back: "Information Needed for Rural Development Programmes."

Many state extension services plan to increase their farm and home development work in rural development programme counties. This is part of a comprehensive plan to help families on small farms raise their farming efficiency when they want to continue farming and have good potential for making a success of it. Through more intensive farm and home planning, and technical assistance in soil conservation and liberalised credit, able farm families will have an opportunity to move into efficient, commercial farming.

In rural development programme areas, the pattern of credit will be adjusted to fit local needs. The Farmers Home Administration now has broader lending authority.

A co-ordinated campaign has been started to develop job opportunities for low-income farm people in rural areas. People who wish to make the transition from low earnings to comparatively higher earnings are given help. Employment offices have taken steps to provide better job information for farm people. In this whole field of off-the-farm job development, the most effective co-ordinated approach is yet to be evolved.

An essential part of the programme relates to research, surveys and other information-gathering projects. Many counties have started development programmes with an organised survey of their resources, needs and the desires of people who live there. The state experiment stations are associated with this programme. Some of the preliminary surveys are comprehensive, giving a detailed picture of farm living, industry, land tenure, transportation and communications, and health and education facilities.

The major obstacles to this programme are: (1) Farm people with low-income, especially the older ones are likely to be somewhat apathetic about this programme. There is both individual and group interest in improving economic conditions in rural areas of low-income farmers. The problem is one of motivation. (2) Farm people are not well organised. (3) Widely-held belief called 'agricultural fundamentalism' looks askance at any movement of people out of agriculture. The challenge is how to help people weigh the known merits of rural living in the light of a wide range of opportunities. (4) In some areas, employers of rural labour will be satisfied with the *status quo*. There will be some people who will not be happy with a programme that might reduce the supply or raise the returns to rural labour. (5) In some industrial areas, established labour groups will not be enthusiastic about the entry of these rural people into the urban labour force. (6) Education is obviously one of the solutions to the problem. But in many cases, those local areas that have greatest needs for more education are least able to afford it. Federal aid to education is a thorny and controversial matter. (7) 24% of the rural farm population in the generalised problem areas is non-white. To the degree that any problem is affected by race problems, it is thereby complicated. (8) It will be difficult but desirable to avoid designating a particular group as "low income" people. Particularly, it will be difficult (but desirable) to avoid splitting the extension service into two—one part to handle the needs of commercial farmers and the other part meeting the needs of low income farmers. (9) It will be difficult, but highly important, to keep various agencies in step, working on a co-ordinated programme. (10) It is difficult to find qualified personnel for the implementation of the programme.

Approaches to the Rural Development Programme

The purpose of the rural development programme is to help "families in small farms with limited resources to attain greater opportunities in an expanding economy." The general nature of the problems against which the rural development programme is directed and the appropriateness of alternative methods in carrying out the programme are discussed below.

Implicit in the rural development programme is the basic assumption that the current low incomes of farm families are the result of inefficiency in resource use. Broadly, there are three major sources of economic inefficiency in resource use: (i) lack of knowledge of resource returns in alternative uses; (ii) institutional barriers to resource mobility and (iii) a high rate of substitution by farm people of monetary for non-monetary returns from resource uses. Two of them stem from imperfections in the operation of the market economy while the third involves the choice of goals in resource use.

Three approaches to rural development problem are likely to be used: (1) providing local people with descriptive information concerning current incomes and resource control; (2) farm management analyses describing income possibilities for various farm situations and (3) broad over-all approach to economic development.

As regards the first approach, certain phases of the programme are locally oriented. The very essence of the programme lies in the fact that geographical pockets exist in which human resources are underdeveloped and that some action is desirable on the part of the public to provide the development of these resources. It seems more reasonable to believe that local people are aware of their low incomes but lack information concerning ways of increasing their incomes.

There are obvious dangers in a locally oriented approach to rural development. The knowledge of local people is likely to be very restricted in terms of possible solutions of the problem, especially those measures involving the transfer of resources outside the local vicinity. The best opportunities for increasing the incomes of families in some areas may involve a transfer of labour from these areas. A locally oriented approach to the problem, however, is likely to place emphasis on local self-sufficiency and to lose sight of the broader market opportunities.

The second approach to rural development involves description of the effects of within farm changes in resource use on income possibilities. The individual economic unit analysis applied in the farm and home development programme relies this approach. The rural development programme, however, is not a farm management programme. In the programme there seems to be no intention that farm firms should be analysed solely as going concerns subject to the quantities of resources currently on the farms. This approach is generally used on the assumption that the family may continue farming. However, a transfer of labour to non-farm employment will be necessary to attain most efficient use of labour from low productive farms.

Another major weakness of the farm management approach is that it usually abstracts from aggregative effects of changes in production. These and certain other weaknesses of the farm management approach force us to consider a broader approach to economic development.

In evaluating opportunities for large numbers of low income families within agriculture, information on future supply and demand conditions for agricultural products is needed. We have reasonable confidence in our knowledge in regard to the demand for farm products. But very little is known about the supply of farm products. The uncertainty in regard to supply stems from the inability to predict technological change and to determine its effects. The same general conclusion seems appropriate with respect to the total economy. Technological changes are likely to increase the necessity for additional technical training of labour if the income potential of persons living in low-income areas is to be realized.

This brings us to another major obstacle that must be overcome in rural development planning. Little is known about the demand for labour in non-farm employment, especially the way it is likely to change in future. More information is needed concerning the effects of local industrial development on the level and distribution of income to and within agriculture as well as on economics of scale in industrial firms. If local industrial development becomes an end in itself, it may lead to shattered hopes and perpetuate inefficient resource use.

There is also the preference problem. Concern over conflicts of preferences must come from the fact that the national income is decreased by cultural impediments to resource transfers. The preference problem can be solved by two types of action. Conflicts in the case of given preferences can be reconciled by regulation or arbitration. For example, low-income areas could be zoned and the people moved from these areas; or the people could be drafted for work in employment generating higher income. These programmes are less likely to be used.

Over the long run, however, preferences of individuals need not be taken as given. Conflicts of preferences can be removed by changing the preferences of individuals. This can be accomplished through education and submitting people to new experiences. However, alteration of the values of people is a slow process and quick results should not be expected. Furthermore, the forces leading to alteration in values are not likely to stem from the small local areas in which the rural development programme is conducted. The forces must come from a larger area where the need for a "better" educational programme is recognized and identified with majority opinion.

In conclusion, the rural development programme is different from most other public programmes in that the educational agencies are expected to accept a major role in the development and implementation of the programme. It is essentially a programme of economic development with attention focussed on a particular segment of the population. Economists must provide guidance to the economic phases of the rural development programme.

Discussion

The ideas behind the rural development programme need some analysis. Firstly, the improvement of the situation of low-income families is to be found outside agriculture. It has, for obvious reasons, gained slower acceptance as a functional part of the programmes of agencies for rural development. Secondly, the price system by itself cannot be relied upon to produce adjustments necessary in sound rural economic development. Thirdly, the will of the groups of people is one of the primary forces for and perhaps even a major guide to economic development. If economists are to play their full role in this process they will have to add to their 'economic analysis' an understanding of how economic decisions actually are made by groups. In short, it suggests that it should be the endeavour to develop more of the concepts suggested by the term 'Political Economy'.

There are a number of potential pitfalls in the specific rural development programme. The 'low-income' approach prevents activities in many regions where substantial progress might result from small effort. It is a mistake to let rural development become identified as a low-income programme. Emphasis cannot even be limited to "rural" areas since the programme once underway must also include urban people. The solutions to problems of a low-income community seldom lie entirely within the community. While it is necessary that a community should make full use of its resources, it is not safe to accept that a new industry or new employment is automatically a good thing for any community. Although emphasis has been on education and planning as the chief resource to be employed in rural development, the action side of the programme has not received adequate attention. The basic programme of agricultural extension since its beginning in 1914 has been fortified in the last few years with a much expanded programme called "Farm and Home Development." This has given rise to major organisational problems of determining the responsibilities of the farm and home development agents and their relationship to the extension programme. With the identical activity in a major part of the rural development programme, there is almost hopeless confusion in too many places. Rural development programmes in many states are an entirely new approach. There is danger that the resources of the programme will be used primarily on farm and home development and the important new concepts of rural development will not be used. This is only one of the reasons for keeping the two separate in our thinking, if not in their operations.

Specific suggestions offered to improve the programme include (1) intensification of efforts to re-orient the vocational agriculture programme toward "training rural youth" rather than "training boys to farm"; (2) expansion of employment services to furnish information to low-income people about employment opportunities; (3) rural development groups would be the ideal vehicle to determine many needed public works in local communities; and (4) use of a part of the soil bank fund to carry out plans of rural development which cannot be handled through local resources and which involve community or group action.

The approaches in the rural development programme have been criticised on three major counts: (1) a local rather than national orientation, (2) an over-

emphasis on agriculture and a consequent under-emphasis on non-agricultural development and (3) an unrealistic pre-supposition to the programme that sufficient knowledge exists for local planning and development. The first two limitations are derived as implications of the equilibrium conditions of micro-static economic theory. The third criticism is based on a judgement regarding the state of our economic knowledge of the low-income problem. These are important limitations to current approaches in rural development. In general, an insufficient use has been made of this micro-static theory in past economic studies. However, it is possible to misuse this theory in handling problems in economic dynamics or problems not entirely economic in character. The error in reasoning is that it may explain adequately existing inefficiencies in resource use within low-income areas. However, the variables associated with inefficiency within higher income areas are not necessarily the appropriate variables to use in explaining inefficiency in low-income areas. There is need for a dynamic theory of economic development which would contain variables usually excluded in conventional explanations of economic inefficiency. This may be used as a frame of reference in research on the low-income problems, or as a guide for planning rural development programmes.

The problems of limited knowledge, attitudes and values are inter-related. The attitudes and values in low-income areas may limit the actual effort put forth in a local rural development programme. This problem is not due primarily to leisure motive. The major source of the lack of strong incentives to increase income arises from accustomed standards of the low-income farmer. Values of the people are poverty oriented and their levels of living never have varied enough to greatly influence this orientation.

The solution to the low-income problem is not entirely one of transferring resources out of agriculture. Rather, the major problem is to transfer the excess labour resources out of the area. Also, the major knowledge problem of people in areas of low-income is limited perceptions of reality and combined with this, is an image of reality skewed by the major beliefs and values of their culture. Increased public support of education may be the most feasible way to get the job done in low-income areas.