

Chapter III

CREDIT OPERATIONS

162. The foregoing chapters have concentrated on the provision of a satisfactory environment for and on the role of credit in the agricultural development process. Attention is now drawn to the ways in which credit programmes can be implemented in a manner which is consistent with the philosophy of development on which this study is based. Thus the issues discussed in this chapter include: criteria applicable to the lending decision, i.e., to whom? for what? how much? ; questions of security and loan supervision; questions of disbursement (cash or kind) and repayment; procedures in case of delinquency (delayed payment) and default.

PROFIT TO THE BORROWER AS A BASIC CONDITION FOR CREDIT PROGRAMMES

163. Development strategies may aim at raising the gross national product, at improving the distribution of income, or at reducing underemployment; but whatever the purposes of agricultural development policies, the government must have a clear idea of the role normally to be assigned to agricultural credit. This role must be defined at two levels: *First*, it can be defined at the level of the credit-dispensing agency, where loans are regarded as part of a whole set of measures by which development policy is put into effect. *Second*, it can be defined at the level of the credit user, who must not be allowed to regard credit as a disguised income to which he is automatically entitled, but must be enabled to realize that credit is a

means put at his disposal so that he can raise his production capacity. In other words, the social effect of a loan lies not in its disbursement, but in the result to be achieved with its help.

164. The first thing to do before launching any credit programme is therefore to carry out a number of preliminary studies. These studies would have the following purposes:

(a) To localize the area and sector of intervention on the basis of a number of objective criteria. If, for example, a certain crop is to be developed in certain district, one would have to find out whether local physical conditions are suitable, whether existing farms are of appropriate size and whether the land tenure system places any limits on investment; and, with respect to the market, what outlets there are at remunerative prices, to what extent distance from consumption centres may make marketing difficult, whether roads and storage facilities are adequate, and what processing industries exist.

(b) To investigate in some detail whether local farmers are likely to be receptive to the introduction of new techniques, with particular reference to their mental attitude, their stage of development and their openness to progress, and to the ability of credit users to put funds to productive use, with the help, of course, of extension services.

(c) To discover what form of credit is most suitable in the context in which it is to be deployed. There may be a choice, for instance, between:

- credit in kind (if it is thought that the state of development is so low as to rule out the disbursement of cash funds, lest the latter be used for purposes other than those intended);
- credit paid out directly to suppliers (if this is feasible), leaving the farmer free to choose his suppliers;
- credit in cash (if it is thought that the beneficiary is capable of making good use of funds placed at his disposal. Even then, however, a system of supervision may be necessary to make sure that the funds are used in accordance with the finance plan).

165. To the extent that credit can be used as a means of progressive education for rural people, it effectively helps to promote higher output and thus becomes a factor in the increase of farm incomes.

166. Obviously, a farmer who cannot afford the cost of exploiting his land rationally, by applying fertilizers and pesticides, cannot expect high returns. Credit has no place in subsistence farming. A credit programme presupposes that the client farmers are, or can be, partly or fully integrated into the money economy.

167. The programme can be formulated in static or in dynamic terms. In the first case, the aim is to give farmers the means for covering their normal working expenses and financing current production. Credit then simply bridges the time gap between present expenditure and future receipts. On the basis of past and prospective farm accounts, usually prepared for representative farms of various types rather than individually for each farm, it is possible to work out average figures for costs, yields, output, gross and net income, and thus to estimate the profitability of any given crop. In such programmes the assumption must be that, market conditions remaining unchanged, farmers are eligible for credit only if their farm yields them a profit.

168. In a dynamic programme, credit has to play an additional part. It must stimulate development. This can be achieved either by seasonal loans to farmers who previously took up none, in which case productivity can be raised; or else by investment credits which make room for optimal development of farm enterprises. In the latter case, seasonal credits in their turn will have to be higher, so as to cover the additional working expenses generated by the new investment.

169. In both cases, the additional receipts obtained thanks to credit should not merely cover the farmer's additional expenses, but should leave him with a substantially improved net income. The farmer must be able to clearly see that something is left over after he has paid all his expenses, and that this surplus is larger than that he used to receive before taking up credit. Generally speaking it is precisely the hope of higher profit which, in a market economy, makes it possible to induce individuals to take part in development programmes, and to take up loans for this purpose. Sometimes, however, the mere prospect of maintaining net income at existing levels may be enough incentive, especially at times of falling prices.

170. A number of problems may arise in connection with the size of the expected additional income. Clearly this must vary with the size of farms. A small farmer generally tends to expect a very substantial increase in his net income, perhaps twice as much as before; the reason is that his present income is so low that even an appreciable percentage increase may appear insignificant in absolute value. A big farmer, by contrast, may well be satisfied with a reasonable percentage increase in his present income, for this would give him an acceptable extra amount in absolute terms. To be really effective, a credit programme should not merely raise net farm profits, but should also, and mainly, be geared to the sociological setting in which it must operate. Coercive methods must be avoided at all costs; success can be vouchsafed only by the free and voluntary participation of farmers.

171. Unfortunately, even the best devised programme can fail. There is no lack of examples to prove this. Cases in point are the groundnut schemes in several West African countries. These were financed first by the European Development Fund and later by the World Bank, and aimed at raising groundnut yields by the use of fertilizers, pesticides and animal traction. The idea was to increase output and thus to make good the shortfall in incomes following the abolition of the preferential prices paid by France. But in Senegal, for example, bad weather, unpopular development services and a price policy which withheld the rise in world prices from the producers, combined to cause the marketed production of groundnuts to fall from 985,000 to 450,000 tons between 1965/66 and 1970/71. Producers preferred to reduce their groundnut acreage and to revert to subsistence millet crops. The government had to take very energetic measures, including considerably higher producer prices and cancellation of debts, to get farmers interested in groundnuts again.

172. Similarly, in Tunisia, the 1964 financing programme for agricultural production co-operatives ended in failure. These co-operatives had been formed by attaching to a nucleus of former settlers' land a number of neighbouring traditional farms, with a view to establishing production units of viable size. But the managers of the co-operatives were not sufficiently competent, the members had no co-operative spirit but rather

tended to regard themselves as mere farmhands and withheld their livestock, and there was a lot of political interference. Altogether the expansion of the co-operative movement was pushed faster than available leadership permitted. The whole programme failed and was abandoned in 1969, at least in its initial form.

173. These examples illustrate the need to avoid rigid programmes and to adopt flexible methods, methods which can be adapted in the light of the results obtained in the field and which remain subject to review at frequent intervals.

THE LENDING DECISION

174. From the point of view of a lending bank, agricultural credit is far from being lucrative. Admittedly, a government bank does not have to make a profit, but rather is meant to assist economic development, whilst breaking even in its own accounts. However, agricultural banks often cannot even cover their costs without a subsidy. There are two reasons for this:

- (1) Agricultural credit occasions *high administrative costs*, aggravated by its seasonal nature, which requires staff to be numerous enough to investigate all credit applications within a rather short time, and hence leaves some staff with little to do outside the peak season.
- (2) It brings in *insufficient earnings*, because, unlike commercial credit, it does not set in motion a whole set of operations by which the bank earns commissions and other profits. By and large, all that a bank gets in return for an agricultural loan is interest, and that very often at a rate lower than the opportunity cost of capital.

175. Not only are the returns on agricultural credit so low as to sometimes fail to cover costs, it may even cause downright losses when a loan cannot be recovered.

176. Given all these difficulties, the question arises as to whether credit institutions are in a position to make a careful investigation of each

individual credit application, and to work out, for each borrower, all the costs and benefits attributable to enterprises or projects financed by a credit programme.

177. The position differs according to the size of farm. *Large farms* are generally few in number and are managed by people competent enough to furnish all the basic information required for the construction of a farm budget. The lending bank should have no major difficulty in carrying out a detailed analysis of each credit application. However, the budget to be constructed will differ according to the nature of the credit concerned. For short-term or working credits, the budget can be quite simple since the time horizon of forecasts is relatively short. But for investment credits forecasts have to cover a number of years, and the budget will have to be much more elaborate. Either way, there are not many cases of this kind. These credit applications have to be scrutinized on an individual basis, when data are available.

178. *Small farms*, on the other hand, are so numerous as to preclude separate investigation and the construction of a farm budget for each credit application. The lending bank then has the following alternatives.

179. **SHORT-CUT METHOD.** In its simplest form this is a rough and ready appraisal without reference to any budgeting principles. This is obviously the easiest way and might be adopted when the purpose of the credit programme is to make funds available in the context of a given social situation without consideration of the results rightly to be expected from a genuine credit policy. Such credits are often extended, say, on the basis of the preceding years' average marketed produce and up to a certain proportion of it.

180. The method can be refined so that it has some of the features of the district/crop approach used in the Farm Budget Method given below. Thus in India the use of standard credit limits based on per-unit area averages has been very widespread. Given the vast numbers of borrowers involved in that country, any significant sophistication of the credit limits procedure would be prohibitively

expensive. But the use of the credit limits method is facilitated in India by the fact that land is registered and therefore the area at the disposal of each potential borrower is accurately known. The loan limit calculation is therefore made simply by multiplying the standard per-unit area limit by the borrower's land area.

181. **FARM BUDGET METHOD.** The lending bank can try to group small farms in some way and thus establish model budgets applicable to separate categories of farms according to their specific circumstances and on the basis of a common denominator. This certainly is not an easy thing to do and presupposes the existence of statistical methods and research services specially adapted to farm management surveys and economic analysis. But this procedure certainly would have the advantage of credit distribution on a scientific basis. There is a strong case, therefore, for governments to promote the construction of model farm budgets representative of as diversified a range of farm models as possible.

182. There are three steps in the preparation of model farm budgets.

1. *Collection of data.* The information needed for the construction of standard farm budgets must be collected by the joint effort of all institutions concerned with agricultural development. The Ministry of Agriculture and its separate departments (agricultural production, extension services), agricultural colleges and universities, institutes of applied research, credit institutions and even, in some cases, trade organizations should all bring their point of view and their experiences to bear on the joint work of defining and adopting realistic data.
2. *Determination of relevant variables in classifying farms.* Farms have to be classified on the basis of certain factors which, in combination justify the inclusion of an individual farm in one category rather than another. These factors include:
 - (a) geographical location, e.g., whether a farm lies in a region with high rainfall and renowned soil fertility, or in an arid region;

- (b) the type of crops grown, for returns vary according as to whether a farmer grows cash crops like vegetables or citrus fruit, or industrial crops, or low-priced crops like certain cereals, not to speak of differences between rainfed and irrigated crops;
 - (c) the size of the farm business, which is intimately connected with the two previous points and must in no case be appraised as a separate factor;
 - (d) land tenure conditions, i.e., whether a farm is worked by its owner or by a tenant farmer, or under some form of landlord-farmer relationship;
 - (e) labour supply.
3. *Construction of the model farm budget.* The model farm budget must bring together all the flows of farm inputs and outputs. The first step is to make an estimate, in physical terms, of the inputs needed for current production (seeds, fertilizers, pesticides), of investment (machinery or livestock to be purchased, area to be planted, etc.), and of expected yields and production. All these quantitative estimates must of course be brought up to date from time to time, so that adjustments can be made for the introduction of new techniques. For instance, the use of selected seeds may raise the necessary quantity of fertilizers and also the manpower requirement. Or a reduction in the use of manpower might be occasioned by an increase in the quantity of machinery used.
- Once the real flows through a farm are determined, all the items in the budget have to be expressed in money terms. This is easy enough for inputs, which are simply entered at current prices. For outputs, receipts for each enterprise have to be calculated in terms not only of current prices but of such other factors as expected price changes, marketing problems, distance of production areas from consumption centres, and the structure of demand (e.g., a sole buyer with monopsonistic power to impose his prices on the producers or else numerous buyers and competition among them).

183. With the farm budget now at hand in money terms, the next question is how to finance it. Should farmers be required to make a personal contribution in the form of self-financing, and if so, in what proportion of total cost? Should the proportion of self-financing be the same for operating expenses and investment expenditure? There seems to be a good case for asking farmers to make some contribution, however small. In the limiting case, it might be possible to accept self-financing in the form of work. However, it seems right to provide relatively more credit for investment than for operating expenses.

184. Forward estimation of all expenditures and receipts for the duration of the project makes it possible to trace the course of the latter and to determine the relevant cash flows year by year or, if necessary, month by month. These projections should make it clear just at what date the net cash flow will be sufficient to allow loan principal and interest payments.

185. Farm budgets can be most useful in that they help to define the role of credit in a strategy of agricultural development. To the extent that a budget reveals whether any currently marginal farm can be made viable with the help of credit, or that another is so destitute that credit is unlikely to help, this method of analysis goes a long way towards the adoption of a selective credit programme.

186. **ASSESSMENT OF MANAGERIAL ABILITY METHOD.** Some credit programmes take individual farm managerial ability into account when assessing borrowers. Others do not. The method proposed here makes an assessment of a borrower's ability at managing his present farm enterprise the *major* factor in the bank's loan decision process. It should be stressed at the outset that the method briefly described here is not necessarily being recommended at the moment. It is untried, therefore no endorsement of it is possible. However, it is included in this section because it is felt that farm management ability is so critical to labour, land and capital productivities that it should be of great importance in a lending institution's decision-making process. First the theory is given, then a possible method, based on this theory, is outlined.

187. *The theory.* The effect of introducing credit (or additional credit) into a farm enterprise is to make the task of managing the farm more difficult. This is because the farm managerial task is a function of the complexity of the farming (that is the type of technologies involved) and the size of the enterprise. When credit is introduced into the enterprise then the aim is to increase land or labour productivities, or both, by implementing new technologies (thus increasing the complexity) or by increasing the scale of operations involving current technologies. Either way the managerial task is increased. Thus the effect of introducing credit is to increase this task.

188. Such field investigations as have been carried out in this area of study have established that there are wide variations in the efficiency with which small farmers manage their farm-production enterprises, that is the efficiency with which they carry out their farm-managerial task. This being so then it is at least possible that a major cause of loan failure is that loans are given to farmers who are already performing their current farm-managerial task with low efficiency. In such cases, the application of credit, with the consequent increase in the difficulty of the task, will almost certainly result in very poor productivity of the inputs purchased with the loan.

189. Normally the assessment of managerial ability is a time-consuming process, quite unsuited to conditions where loans are both very numerous and very small. Thus credit institutions usually operate procedures described above, whereby loans are wholesaled, that is, issued to borrowers in accordance with standard technology packages and standard credit limits. Faced, as they are, with the heterogeneity of small farmer communities, heterogeneity which embraces scale, technology and managerial ability, such wholesaling procedures are not easy to formulate. Moreover their formulation inevitably pays insufficient attention to the human element.

190. The procedure outlined below is designed to:

- (a) overcome the disadvantages of the standardization inherent in normal wholesaling procedures, which overlook the wide range of management ability in small farmers, and

- (b) harness the range in farm managerial ability so that it can be used as a method of choosing those farmers to whom loans should be made.

191. *The proposed procedure.* The analysis given above suggests:

- (i) that, if a farmer can be identified as carrying out his current farming task with relatively high efficiency, then he is likely to be able to handle a more difficult task, that is, he could use credit (or additional credit) in his enterprise;
- (ii) that, if a farmer can be identified as performing his current farming task with relatively low efficiency, then he should not receive credit because this would give him an even more difficult task. He is clearly in need of assistance which may or may not include credit, but of which the principal focus would be educative.

192. Thus in order to identify suitable borrowers it is necessary to be able to gauge loan applicants' respective levels of farm management ability. The procedure now described for doing this cannot claim to be a direct or absolute measure. Indeed, estimates of this sort are still at a relatively early stage with respect to developed agriculture. However, the method does give a useful indication, and one that might be adequate for loan allocation purposes. Basically it involves providing a means for ranking potential borrowers by management ability. The ranking is accomplished by comparing the production achievements of farmers attempting a similar type of enterprise.

193. The steps are:

1. Investigate current farming practices in a given area in order to identify the main production technologies for the chief farming enterprises. The components of the technology, for crop production, would include: soil cultivation method, planting and weeding methods, type of seed, use of fertilizer, pest control. In the case of livestock production they would include: type of animal, breeding and feeding management, method of obtaining the livestock product, disease control.

2. For each technology (typically four or five different packages might be in use) identify the range of yields per hectare associated with, say, six different levels of labour input per hectare. Use this information to construct a table (Efficiency Analysis Chart) which would enable loans officers to assess each loan applicant's level of management efficiency. This level would, of course, be judged by the yield results they achieved within given technology packages and with given intensities of labour. Each crop and livestock enterprise would have its own table for each particular district.
194. It is evident then that this proposed procedure involves fieldwork both in order to identify farm technology packages (with labour input levels and associated yields), and to obtain relatively reliable information regarding each loan applicant's current farming operation. Thus it may be argued that the scheme is too costly to be practical. However, it should be realized that most of the information being asked of individual loan applicants is already required under existing loan schemes. What is additional is the Efficiency Analysis Chart system which enables the loan applicant's data to be assessed more usefully than is usually the case.
195. The initial fieldwork necessary for the compilation of the charts may prove expensive or, on the other hand, may be carried out for comparatively little outlay, depending on circumstances. Again, of course, the number of potential borrowers covered by one set of crop/district charts would also have a bearing on whether the fieldwork and subsequent analysis may be regarded as expensive or not. A further factor bearing on the cost of compiling Efficiency Analysis Charts is the extent to which previous investigations have been carried out in a given area. Many relevant studies have been produced, for example, for Nigeria (particularly Western State), for Ghana, for the Moshi District of Tanzania and for several provinces of Zambia. These are just a few examples. There are many more. Such studies may not be sufficiently detailed or recent to enable meaningful Efficiency Analysis Charts to be compiled without further field investigation, but, by providing information on existing farming systems, they would constitute a useful start in this direction.

196. Although there is increasing evidence that the choice of borrower rather than choice of the type of investment to which borrowed funds are applied is the critical area of decision for the credit institution (since the farmer himself is frequently in the best position to identify investments which are suitable for his own circumstances), it may also be necessary for a credit institution to advise on or even control the choice of loan-purchased items when a new technology is contemplated. If this is the case, then the Efficiency Analysis Charts provide a means for doing so. This is because they show a series of technology packages ranging from those which are relatively simple, with low productivity, to those which are relatively complex, but which are potentially much more productive.

197. A farmer who wishes to improve his production technology rather than merely to use credit to increase the scale of his present type of enterprise can be advised (or required) to take gentle technological strides, moving just one or two steps at a time. Thus the Charts provide an empirical basis for action, for they indicate the technology packages already being operated in a given area (and not merely technologies based on research station trials), together with associated inputs and outputs. It is not difficult for credit limits to be related to the various technologies in a given area, should a credit institution wish to apply these.

198. The advantages of this procedure can be summarized as follows:

- First, it has been established empirically that high efficiency in farm management is found at all technology and farm-size levels. Since, in the scheme, credit is extended on the basis of efficiency, then allocation of loans on this basis would mean that financial resources being applied through the credit programme are spread over the farming population and are not, as so often has been the case in the past, confined to the larger, wealthier or more "advanced" farmers.
- Second, the loan allocation method is much more objective than many present practices. This means that there is less scope for

the pressuring of loans officials, more opportunity for senior officers of credit institutions to control and check the work of loans officers, and, of course, less chance of corruption.

- Third, because loans are confined to the farmers whose present efficiency levels are satisfactory, then the repayment capacity of the borrowers and, in the long run, the viability of the credit institution, have better chances of being safeguarded.

199. One limitation which is immediately apparent is that a scheme of this type would not be needed in the case of those co-operative systems where loans are made by small primary societies where loans committee members already know would-be borrowers, and their farms, very well.

LOAN SECURITY

200. Loan security has always been the stumbling block of agricultural credit schemes. There has been much debate, not to say controversy, about the nature and scope of security for farm loans, and different or indeed contradictory arguments have been put forward to uphold the divergent views of the parties concerned.

201. AGRICULTURAL BANKS generally regard security as risk cover and hence as a prior condition for any credit at all. If a bank insists on security in the form of landed property this has the additional advantage of enabling it to verify the borrower's title to the land and his rights in the farm enterprise. However, there is now considerable relaxation of this strict view.

202. FARMERS often resent the requirement to pledge some of their property as an infringement of their freedom to deploy their productive capacity in full measure and hence to achieve social and human betterment. On the other hand they may accept, with resignation, the obligation to provide security as a condition of access to credit, but they are often unable to produce registered title, and are put off by the slow and complicated procedures of obtaining one. Others find it

very hard to accept any charge whatever on their land. Their attachment to the land is so strong, especially if they have inherited it from their ancestors, that they tend to be emotional and seemingly irrational about this question. They sometimes prefer to remain stuck in subsistence farming rather than take up a loan, even though they are convinced of the benefits to be gained from it. And of course, there are many farmers who simply have no assets they can offer as security.

203. GOVERNMENTS often regard the problem of loan security as an altogether secondary matter. Credit is seen as a means of implementing an agricultural development policy intended to achieve certain targets such as higher output, reduction of rural unemployment and improvement of social conditions. To the extent that the authorities accept the need to limit the credit institution's risks, they often take the view that this can be done by means other than tangible assets, and ask the lenders to give proof of more imagination and a more dynamic approach in working out and adopting other, more original solutions.

204. But quite apart from these divergent views, there are real difficulties involved in the pledge of assets as security, especially in the case of land which, traditionally, is the type of asset most often required. The major aspects of these difficulties are discussed below.

205. ADMINISTRATIVE AND LEGAL DIFFICULTIES. In many developing countries, farmers hold no registered title to the land and indeed the very concept of individual property may be so vague that the actual rights of credit applicants are hard to ascertain. Credit institutions have to proceed to lengthy and laborious verification, with the result that the prospective borrower is either put off altogether or, at best, loses time that may be precious. There are other, aggravating circumstances which apply in many parts of the developing world. Some of these are:

- (a) Customary land law, which is prevalent in most cases, is often far from clear. Courts and registrars are often disinclined to make good these deficiencies and to take energetic action in order to consolidate property rights, but on the contrary are apt to override

them by decisions based on an unfortunate legal approach which tends to perpetuate the existing confusion.

- (b) The absence of a land register makes it impossible to know the exact boundaries of a holding, so that banks have no solid and tangible basis for finding out what actually belongs to the prospective borrower. Regrettably the public authorities, who alone can set up a land register, seem to underestimate its importance. Yet it must be obvious that the ensuing clarification would do much to ease farmers' access to credit and to safeguard the interests of agricultural banks.
- (c) If a farmer does happen to have a property title then frequently this is not in order. It is therefore useless as a legal basis for a mortgage. This situation is made worse by certain transfers between persons living or through inheritance. An original title may well be rendered invalid by a whole series of land cessions. The chief blame must fall on the negligence of the individuals concerned, in so far as they do not attach due importance to having their documents in order and fail to keep their titles up-to-date by registering changes as and when they occur. But the government could help by introducing flexible and relatively simple procedures which would make it easier for the farmer to keep his title deeds in order, instead of discouraging him by a lot of red tape.
- (d) In many developing countries there are collective rights deriving from tribal ownership of land. This makes it very difficult to individualize any prospective borrower's rights, and in practice rules out security in the form of landed property. Again, it is up to the government to find ways of adjudicating individual land rights in order to give farmers access to credit, or else, if a system of collective ownership appears viable, to define its legal, administrative, technical and financial aspects.
- (e) In the absence of formal and precise tenancy contracts, farms are often worked on the basis of tacit agreements resting on customs and usage. A tenant farmer may wish to acquire new equipment in order to obtain better results from his work. He needs credit

but cannot get it unless he can show the bank a document proving his right of exploitation for a period at least as long as the lifetime of the proposed investment. Otherwise the bank cannot be certain of the borrower's status and, unable to call on the owner for a guarantee, can only reject the credit application.

- (f) Movable property, finally, can hardly be regarded as effective security. Most small farmers have few assets that can qualify at all, and even these are not much use as security since the bank cannot control their movements.

206. The above list of administrative and legal difficulties is by no means complete, but it should be enough to show the hazards banks have to face in most developing countries in trying to obtain security for a farm loan. But even if a farmer can offer security, it may not be enough. This brings us to a second set of problems.

207. DIFFICULTIES CONNECTED WITH THE ADEQUACY OF SECURITY. A farmer may for instance wish to develop his property and apply for a fairly large investment loan. This happens often enough in the case of farmers who want to plant fruit trees on their land. A well will need to be dug, an irrigation system installed and finally trees planted. All this may cost far more money than the land is worth at present. Even if the land is acceptable as security, the bank may feel that it is inadequate since its present value is out of proportion to the amount of credit requested. The borrower no doubt counts on the future income he hopes the investment will produce for him, but the bank may take a less sanguine view. It must take into account not only the *future security* implied by the project to be financed, but also the *present security* residing in the borrower's actual financial situation. The bank is aware of the risk of the project's failure and the ensuing consequences, and must weigh this risk against the expected appreciation in the value of the property as a result of the investment. Furthermore, the bank cannot base its value estimate on current prices alone, but must think of the price likely to be paid for the mortgaged property in case of a forced sale in the course of legal action, and will consequently attach a much lower value to the security offered.

208. Yet a bank must establish some sort of balance between the amount of a loan it grants and the value of the property pledged as security for this loan. It may well be asked whether security in the strict conventional banking sense gives the bank any real chance of covering the whole of its risk or even to accept a calculated risk. What, in the end effect, is this security worth which the bank has obtained at so much trouble and on the altar of which it has sacrificed so many credit applications? The answer may differ according as to whether the credit is long term or medium/short term.

209. *Long-term credits.* It has already been mentioned in connection with the expected increase in the value of mortgaged property that a forced sale is likely to result in a loss due to

- (1) the deliberate abstention of local bidders, many of whom may be friends or relatives of the farmer concerned or who may, for reasons of class solidarity, not wish to take advantage of his discomfiture;
- (2) the lack of social mobility in the rural world, which makes farmers from other regions unwilling to leave their own surroundings for new ones, to bid for the property and thus raise its price;
- (3) the disinclination of the courts to pronounce judgement against a debtor and their tendency to equivocate and exert pressure on the creditor so as to make him give the debtor more time — all of which adds yet further complications to an already complex enough procedure;
- (4) the high costs of legal action, which make a big inroad into any sum the creditor can hope to obtain by a forced sale.

210. In any event, legal action cannot be employed on a large scale. It is very unpopular, so much so that for political reasons governments cannot remain indifferent. The bank may soon find itself with the alternative of either cutting its loss by selling the mortgaged property at rock-bottom price, or else acquiring and managing it on its own account. But farm management is neither within the purposes of a bank, nor generally within its means.

211. *Medium- and short-term credits.* The difficulties connected with medium-term and with short-term credits may differ, but the results are in practice much the same. *Medium-term credits* are almost exclusively used for the purchase of livestock or machinery, and the security these offer is more or less illusory. Being movable assets, they are difficult or impossible to control. While the bank can make sure that the borrower has actually bought the goods in question, it cannot be certain that he has kept them and not resold them when he has needed cash. (For certain kinds of machinery such practices can be forestalled in some countries by endorsing a charge on the registration certificate.) In any case, there is always the risk of above-normal wear and tear and hence, for the bank, the risk of loss through low prices at a forced sale, regardless of the proportion of self-financing originally required of the borrower. If the borrower is a tenant farmer, the bank finally runs the risk that he may decide to terminate his contract and to go out of farming altogether.

212. *Short-term credits* finance current production and are generally secured on crop liens. But again the security these offer may not be worth very much. If there is a succession of poor harvests, the farmer, though willing, may be unable to honour his debts, and the bank has no recourse because it cannot seize and sell a crop which does not exist. If the bank has any rights on the land it can try to exercise them, but then it comes up against the difficulties over land sales mentioned earlier. The borrowing farmer can be dishonest in the first place and misappropriate the crop so as not to have to repay his loan. The bank will know nothing about it until the crop is sold and the debt still unpaid. The lien in this case has proved useless. The bank can try to lodge a protest with the marketing agency, but of course the farmer is free to sell his crop in the name of some of his workmen or relatives. Despite these difficulties, crop liens can be very effective with export crops or crops which require bulk processing after sale by the farmer. Here the marketing can be controlled. One example is coffee, but there are many more.

213. Sometimes the bank asks for personal sureties to make up for the lack of real security, but these are not easily obtainable by a small

farmer. And it is hard to make people accept the notion of joint responsibility within a group or co-operative society.

214. In short, however much importance banks attach to securing their loans on tangible assets, those assets may turn out not to provide much security in the end. Thus the whole problem needs some imaginative rethinking, and new criteria must be devised which are compatible with the purposes of development.

215. The borrower's repayment capacity is one such criterion which could, with advantage, be applied to the appraisal of a farm loan. This should reflect the farmer's ability to make good use of additional funds, so that he can produce and earn more and repay the loan without detriment to the satisfaction of his family's subsistence needs.

216. Repayment capacity must be assessed in human and in technical terms. The first requires more intimate knowledge of the borrower and of his skill and competence in farm management, with particular reference to the enterprise for which he requests the loan. The borrower's reputation likewise enters into this human appraisal; if he is known as an honest, responsible and trustworthy man, the bank will be more ready to lend him money without fear that he will misuse it or divert it to other needs.

217. Technically speaking, the lending bank needs to know more about the borrower's production capacity, so as to appraise the technical chances of the project for which a loan is requested. The bank will want to know more, first, about the farm as such: its size, the fertility of its soil, average yields in the district, access to markets, etc.

218. Secondly, the bank will have to find out details about the purpose of the credit. In the case of a short-term working credit, for example, there is the question as to whether a proposed crop is suitable in the district's soil and climatic conditions; in the case of an investment credit, the bank will investigate whether the project is technically feasible, whether it is suitable for local conditions and what are its chances of success.

219. Lastly, there is the problem of the financial and economic justification of the credit. Regardless of whether the farmer requests a short-term or an investment credit; the bank has to calculate whether the proposed enterprise is likely to be profitable for the borrower in the light of long-term market trends at home and abroad.

220. This concept of repayment capacity clearly is a great step forward from the traditional view of credit worthiness in the sense of full coverage of a loan by tangible assets. The problem of agricultural credit is shifted into a dynamic perspective and credit becomes more responsive to the creative potential of an agricultural investment programme — which in itself, of course, must be well planned, well implemented and well supervised.

221. But whilst repayment capacity is a useful concept, it raises problems of its own. A bank may not always be in a position to know all its clients well enough to assess their individual character and skill. This is especially true when the bank is handling a credit scheme for small farmers. In any case, the bank will need to have a dense network of agencies and to set up contacts in villages through liaison men, credit committees and co-operative societies. And if a bank is to assess the technical and economic feasibility of an investment, it will need to strengthen its research department — unless the government takes on this function and lets the bank know the results. The authorities and the bank will in any case have to co-ordinate their action in this field.

222. The adoption of repayment capacity as a criterion of a bank's loan policy does not, of course, preclude tangible security. It will certainly be difficult to refuse a loan for lack of security if the borrower has proved his repayment capacity, but there are cases where there is much to be said for insisting on security as a prior condition of any loan. First of all, this may have a psychological effect on the behaviour of debtors by causing them to be more prudent. And secondly, security will probably be needed in any case for long-term credit for up to twenty years, especially when repayments are deferred for some time.

223. To sum up, it can be said that the concept of loan security has two equally important facets. It is static, in so far as it requires a loan to be covered by existing assets; it is dynamic in so far as account is taken of the borrower's productive capacity, which has a major bearing on his repayment capacity.

224. The proportions in which these two considerations are to be combined are difficult to determine, but somehow the bank has to strike a balance in the light of its knowledge of the borrower's abilities and of the nature of the loan. The policy decided upon by any given bank will, of course, depend to a large extent on the conditions in the area in which it operates. But no matter what policy is agreed, it will be reflected very largely in the loan assessment procedures adopted. Various alternatives are given in paragraphs 174 to 199.

225. No matter what collateral policy is decided upon, the government always has a responsibility to safeguard the bank against such abnormal risks as may be inherent in an agricultural credit programme.

ASSESSING THE BENEFITS TO THE ECONOMY

226. In making an assessment of the benefits of credit projects to the economy the procedure is similar to that for other projects involving investment. To work out such projects will generally be incumbent upon government, but an agricultural bank owes it to itself to take part in the necessary processes and may even need to take the initiative in launching them. The purpose must be to improve the use of resources. To this end it is necessary to discover what changes in the choice and combination of enterprises are, in the light of any given region's present and future potential, likely to generate the largest net increments in local farm profits. Realistic profit estimates can be calculated only with the help of farm budgets, constructed separately for different types of enterprise (and on principles to be discussed below). Only in this way can the net profit that farmers should be able to earn once the project has been carried out be compared with their actual

pre-project net profit. In other words, farm budgets are the very foundation of any development project, inasmuch as they make it possible:

- to ascertain farmers' future requirements with a view to providing for their satisfaction;
- to examine how best to reorganize farms with a view to optimal utilization of the services and facilities to be provided by the project;
- to assemble all the basic data needed for calculating the costs and benefits of the project.

227. However, whilst it is theoretically desirable to base the formulation and implementation of projects on a detailed analysis of numerous model farm budgets representative of a variety of situations, it may in practice prove difficult to construct such budgets. Perfectionism may have its drawbacks, and there is much to be said for starting up projects on a more modest scale, even on the basis of approximate data. Project evaluation on the basis of model farm budgets should make it possible to estimate the returns which may legitimately be expected from the implementation of the project. Generally, two rates of return are calculated in project appraisal, namely:

- *the economic rate of return*, which measures the estimated contribution of the project as a whole to the country's economic development, and thus enables any one development project to be compared with other possible projects in terms of the opportunity cost of capital, that is the productivity of capital in alternative uses;
- *the financial rate of return*, which measures the profitability of the project for its participants and thus makes it possible to ensure that individuals, companies and agencies alike will have sufficient motivation to take part in the project and draw on credit in order to do so, rather than employing their resources for other ends.

228. The two rates of return thus measure, respectively, the capacity of an investment to generate benefits for the economy as a whole and

for participants individually. Both are rates of additional return, since they refer exclusively to the costs and benefits connected with additional investment, and not with the total capital employed either in the economy or by participants. In order to measure the additional costs and benefits of an investment project, the forecast costs and benefits after the proposed investment must be compared with those which would exist without it.

229. Both the economic and the financial rate of return are determined by the discount rate at which the present (discounted) value of the expected flow of income resulting from the new investment during its economic lifetime equals the present (discounted) value of the expected flow of costs occasioned by the same investment. Depreciation is not counted as a cost, nor are interest charges, because discounting both costs and benefits in itself implies their equalization at a particular rate of interest.

230. Although the same technique is used in calculating the economic and the financial rate of return, the results may be fundamentally different, for the costs and benefits are considered from the point of view of the economy as a whole in one case, and from that of project participants in the other. From the point of view of the economy, for instance, allowance will have to be made for the cost of extension services, which is incurred by government and not by farmers. Likewise, adjustment will have to be made for those portions of costs and benefits which represent transfers, such as subsidies or taxes, as well as for wage and price distortions by pricing which does not reflect true economic value. For the financial rate of return, by contrast, only market prices are relevant.

231. In very large projects it is desirable to refine somewhat the assessment of benefit to the economy by allowing for socially desirable factors such as employment opportunities and the redistribution of income to be taken into account. We now consider the principles of accounting for *social* benefits.

232. The same basic accounting principles apply in determining both the financial and economic (or social) profitability of an agricultural credit project. There are, however, some important differences in both the components included and the values attached to them in the social profitability calculations. These differences reflect the divergences between private and social (national) objectives, and differences between the private and social values of various inputs and outputs used and produced by the project.

233. We begin by considering the possible differences in objectives. Any investment project is a method for changing the intertemporal profile of consumption. This is because resources which are not invested could be currently consumed, whilst investment provides a flow of consumption in the future, and alternative investments will provide differing time shapes of future consumption flows. From a social viewpoint the government's overall objective in investment planning can then be taken to be the choice of an intertemporal consumption profile which maximises the social value of consumption accruing at different dates. This objective necessarily involves social value judgements about the relative value attached by society to consumption increases/decreases at different dates. Whilst, given human mortality the consumption changes accrue at different dates to different generations, and hence the social values attached to dated consumption must imply a distributional weighting of the relative welfare of different generations.

234. A private individual too is making decisions about his own intertemporal consumption profile when he is saving and investing, but he is only likely to be moved when making these choices by his own relative welfare during his lifetime. However, as society, at least in principle, is immortal (unlike individuals), it should take account of the relative welfare of future generations. Other things being equal then, the savings (future consumption) generated as a result of the decisions of private savers are likely to be less than socially optimal. Hence the government, as the custodian of the welfare of all generations, may want to raise the level of savings in the economy above that desired by private individuals. This divergence between private and social

goals is sometimes expressed by saying that the rate at which society discounts future consumption (and hence the welfare of future generations) is lower than that used by private individuals. The reason why society discounts future consumption at all is not because of the remoteness of the future, but because given the on-going process of economic growth, it is expected that future generations will in any case be richer materially (and hence have more consumption per capita) than the current generation and clearly on grounds of equity, an extra unit of consumption accruing to a richer generation should be valued less highly than that accruing to (or taken away from) a poorer generation.

235. A similar problem of equity gives rise to a second difference between private and social objectives. An individual when making savings and investment decisions is essentially transferring consumption to himself (and his family) from one date to another. Society's savings and investment decisions, however, involve transferring consumption from certain individuals in one generation to a (possibly) different set of individuals in the current and/or future generations. Thus, unlike an individual, society has to assign relative social weights too, to the changes in consumption of different income groups within generations which are induced by its investment decisions. Once again equity demands that the gain/loss of consumption of a rich man be valued socially less highly than that of a poor man.

236. The third source of divergence in value attached to the inputs and outputs in private and social profitability calculations, is due to what are termed "distortions" in product and factor markets, so that market prices do not equal the social values of the various goods and services used and produced by the project. For a private individual it is obvious that the market prices he pays and receives are the relevant ones in determining private profitability. However, for society the "shadow prices" are those which reflect the social value of the outputs produced and the social opportunity costs of the inputs used. Under a perfectly functioning price mechanism market prices of goods and factors equate and equal the marginal social cost of producing and the

marginal social value of using the relevant goods/factors. However, distortions (like monopolies, taxes and subsidies, externalities) result in divergences between market prices and the marginal social values and costs of the various goods and services.

237. One of the most important sources of distortion in developing countries is the foreign trade control system, which generally helps to maintain an overvalued foreign exchange rate, so that the marginal social cost of producing foreign exchange (given by the effective rate of exchange for exports) is less than the marginal social value of using it (given by the effective exchange rate for imports). This leads to the general foreign exchange scarcity which is a common feature of most developing economies. Hence the market prices of traded commodities will not represent their true relative costs when they are used as inputs and values when they are produced as outputs. Hence in evaluating credit projects (and other investment projects) from a social viewpoint it will be necessary to derive and use shadow prices which reflect the true relative social values of various goods and services to the economy, rather than the market prices which are relevant for assessing the private profitability of such projects.

238. Finally, there will be some differences in the components of net benefit calculations from a social as opposed to private viewpoint. Thus the private costs of servicing the loan will *not* be included as *social cost* in the social appraisal, whilst the incremental costs of administering the lending operations, and/or any technical assistance provided as part of the credit operations will have to be included as a social cost of the credit operations.

THE ADMINISTRATION OF AGRICULTURAL CREDIT PROGRAMMES

239. Credit programmes must of course be administered. What administrative structure is best suited to this task? There is no simple or single answer to this question. Many different types of institution have satisfactory records of operation in a wide range of circumstances. Nor does the institution handling small farmer credit need to be a bank.

There are cases, for example, where marketing bodies and resettlement authorities successfully operate credit programmes for small farmers¹.

240. Nevertheless, decisions frequently have to be made by governments as to the appropriate type of credit institution to be promoted and supported in order to service the small farmer sector. For example, should credit be linked to a certain crop, and handled by a marketing agency for that crop; or should the already existing development bank be required to undertake lending in the small farmer sector or, again, should government effort be directed towards the establishment of co-operatives and, if so, which of the various types of primary society should be sponsored?

241. Each institutional type has its own set of advantages and disadvantages, and its own set of pre-requisites. Therefore, in order to obtain a basis for making a decision on the institutional type to be supported, the requirements of the institution, and some major features of the environment in which it is to operate must be matched against the respective special features of the various institutional types being considered.

¹ There are of course a large number of possible sources for agricultural credit. For example one might list the following:

- Supervised credit agency with branch offices;
- State agricultural bank with branch offices;
- State development bank with "window" for agricultural loans;
- National development or agrarian reform agency with credit functions;
- Regional development agency with credit functions;
- Crop purchasing authority or marketing board;
- Government organized "farmers associations";
- Government sponsored multi-purpose co-operatives;
- Private multi-purpose co-operatives supported by co-operative bank;
- Private multi-purpose co-operatives;
- Government sponsored savings and credit co-operatives;
- Private savings and credit co-operatives supported by co-operative bank;
- Private savings and credit co-operatives;
- Rural banking systems;
- Commercial banks with rural branches;
- Private processors and exporters providing credit functions;
- Input suppliers or supplier distributors with credit functions;
- Village merchants;
- Village moneylenders.

242. This match-making cannot hope to be perfect. For one thing circumstances are always liable to change and, for another, there are always difficulties in exactly specifying both the socio-economic environment and the ability of the various institutional types to achieve given objectives in a particular situation.

243. The factors relevant to the institutional decision may be classed into two groups. Firstly there are the *general factors*, factors which apply in virtually all situations and with which the various institutions may cope with varying degrees of success. These are:

- adaptability to different objectives and changing economic circumstances;
- ability to reach the small farmer;
- efficiency, both in operational and cost terms;
- ability to attract and retain good staff.

244. Secondly, there are the *specific factors*. These may, respectively, be very important in some circumstances, and of marginal importance in others. Or the factor itself may be very variable in that one particular institutional type might be optimal at one end of its range, whilst at the other a completely different institution would be indicated. The list of specific factors would include the following:

- political orientation of the government and extent of governmental commitment to small farmer credit programmes;
- production/development strategy;
- necessity of farmer motivation;
- lending requirements;
- degree of existing supply of farmer services;
- source of funds for on-lending;
- desirability of incorporation of a farmer-savings programme;
- nature of existing credit facilities;
- level of development;
- small farmer orientation.

245. The list of factors may well not be comprehensive, but does provide a basis for the consideration of institutional types. These

are mentioned under the headings given below only when they have particular relevance to the factor being considered.

246. **ADAPTABILITY.** The establishment of a credit programme involves the investment of funds and valuable administrative time. It also involves getting staff and farmer-borrowers used to a particular method of operating. Once a credit programme has been started, therefore, there is a lot to be said for keeping it going. However, economic circumstances and governmental objectives may change. Which institutional type is best able to accommodate to these changes and continue to give satisfactory service to the small farmer sector? Generally speaking the farther the institutional form is from that of bank, the more difficult it is for it to adapt. For example, a central crop marketing authority handling chiefly tobacco for export may find it very difficult, in the face of changing circumstances and a consequent switch in government policy, to organize credit for food crop production. The change would be particularly difficult if, as is likely, the tobacco was handled through a central tobacco auction floor whereas the food is to be sold at local markets. On the other hand a bank-type institution, whether co-operatively structured or otherwise, will have had direct and comprehensive contacts with its farmer clients and would be in a better position to face the change given in the example above.

247. **ACCESS.** Many issues raised in this report have led to the conclusion that the institution serving the small farmer must be easily accessible to him. This helps both the institution and its clientele. The cost of a good branch network is discussed below when government subsidies to credit programmes are considered. In any case, satisfactory contact with farmers is expensive to establish and to operate. From the point of view of the farmer it is clearly best for the credit institution to have a local branch office, easily recognisable and close to his home. Such a requirement may be met either by a co-operative or an agricultural bank. It is less easily fulfilled by a crop authority or by those banking institutions basically geared to urban business, for example commercial banks and development banks.

248. **EFFICIENCY.** High efficiency helps both lender and borrower. Poor efficiency usually means wasted time, which borrowers find irksome, and is often reflected in complicated procedures and pompous attitudes. These can readily discourage farmers from participating in credit programmes. Low efficiency hurts institutions because of its cost implications, but in addition, the built-in characteristics of a given type of credit intermediary greatly affect its operating costs. One of the biggest costs is that of manpower. Therefore those types of lending structure which can give satisfactory service to farmers at reasonable cost are to be preferred on these grounds. Although actual data are difficult to obtain, it is likely that crop marketing authorities employing extension/credit officers can operate as cheaply as most types of institution, provided the comparison allows for the fact that only a part of the time of marketing authority personnel is occupied with credit. As mentioned above it is notoriously expensive for a banking institution to establish and run a small farmer credit programme. Although co-operative structures have frequently been hailed for their efficiency in establishing contact with farmers (because of the extent of farmer involvement and "voluntary" manpower input) it is doubtful in fact whether they operate a branch network much more cheaply than banks. Many of the costs of operating co-operatives may be hidden in the fact that they are often supported by government departments or ministries other than those directly concerned with agriculture.

249. **PERSONNEL.** Adequately trained and well motivated staff are clearly essential to the success of a credit programme. Those institutions offering sound training and worthwhile career prospects are the most likely to succeed in attracting and keeping good staff. Crop authorities are at a disadvantage here, as are development banks; the latter because those staff involved in the agricultural side of the business are likely to be in a junior or secondary category to their colleagues. This leaves, broadly speaking, co-operative structures and agricultural banks. The former can usually provide sound training; the latter can offer good career prospects.

250. COMMITMENT. The extent to which a government is genuinely committed to providing a satisfactory credit service to small farmers can play an important part in determining the type of institution to be promoted. Where the commitment is weak or transitory, then crop authorities might be established, perhaps on an *ad hoc* basis to encourage production to meet a particular domestic shortage or an export opportunity. Alternatively commercial or development banks might be encouraged (through special concessions such as low cost rediscount facilities) to give farming loans. On the other hand, where the commitment is strong and the government is prepared to provide the necessary legislation and long-term investment (of funds, personnel, etc.), a specialised agricultural bank might be established, with a good branch network. Alternatively heavy support might be given to a co-operative structure. The choice between these may depend on the political orientation of the government.

251. STRATEGY. If circumstances mean that the government's strategy on small farmer development is based on encouragement to produce, say, a particular export crop, or other crop marketed through a single agency, then a specialized crop marketing authority may well be the best way to handle small farmer loans. On the other hand, more broadly-based development plans would call for a more flexible type of credit institution, such as an agricultural bank or co-operative structure.

252. MOTIVATION. Farmers in a given country or area may be already motivated to produce for the market, wanting, from a credit institution, only a satisfactory supply of loans. But where motivation is uncertain or weak, some sort of educative effort may have to be associated with the lending programme in order to encourage a commercial attitude to farming. Where such is the case then co-operative societies, which are known for their special emphasis on education in the broad sense, may well be the best type of institution to implement the necessary educative effort.

253. LENDING REQUIREMENTS. Lending requirements, that is, type of credit required are governed, at least in part, by the development

strategy being pursued by the government, by the crop and/or livestock enterprises suited to given regions (by reason of climate, soil type, topography, etc.) and by current usage or fashion. Thus in parts of India the major credit need might be for tubewells, a type of investment requiring long or perhaps medium term loans. In parts of Uganda loan demand might be largely seasonal, for the purchase of insecticide and hire of labour for cotton cultivation. Clearly a preponderance of demand for seasonal loans widens the possibilities when it comes to deciding on an institutional type to handle loans. Virtually all types can handle short term loans. If, in a given district, all agricultural credit is used for the short term loans associated with a single export crop then a crop marketing authority may well be the appropriate body to handle farm loans. But medium and long term loans are a different story. Crop authorities and co-operative societies could find it difficult to raise the necessary long and medium term capital. Banks, especially development banks and agricultural banks, are much better suited to handling longer term loans because of the nature of their sources of capital — government equity, central bank funding, etc.

254. **SERVICES.** Much has been written both in this report and elsewhere on the necessity of other services — input supply, extension and marketing — being provided when farm credit programmes are in operation. In situations where this provision is assured by existing structures then the form of the credit institution is not an issue. However, if there is a lack of some or all of these services, or grave doubts exist as to their reliability, then the credit institution may have to be closely associated with their provision. Which type is best suited to this? The special crop marketing authority is the obvious candidate, though multi-purpose co-operative societies (as opposed to those concerned only with savings and loans) or local processing factories may also be well-placed to provide these ancillary services. This applies particularly to those crops which require bulk processing shortly after harvest, for example, coffee (co-operatives in Kenya) and tea (outgrower schemes in various places). In certain cases banks also can directly provide services, as has been done for example by the Agricultural Credit Bank

in Colombia. This handles about 80 per cent of all agricultural credit and distributes about 25 per cent of the fertilizer used in the country.

255. FUNDING. The funding restriction has already been mentioned in connection with the demand for short-term *vis-à-vis* longer term credit. But some types of institution may, in any case, find it difficult to raise funds, regardless of the use to which they are to be put. This may apply particularly to obtaining the ever-increasing amounts of capital needed in a developing situation. With respect to government funding, development and agricultural banks are generally well-placed: co-operatives and crop authorities may find it more difficult to attract this type of capital; co-operatives because their reliability is often suspect and crop authorities because they may depend to a large extent on budgetary allocations, allocations which may or may not be recurrent in nature. Funding from personal savings, usually a minor source of capital, is directly associated with the ability of the credit institution to operate a savings programme.

256. SAVING. It is widely believed that agricultural credit programmes are assisted by the ability of the credit institution to incorporate a savings programme in its operations. Such a programme may constitute a source of capital, albeit a minor one in the early development period, but it is chiefly relevant as a financial service to farmers, assisting them by providing an institutional saving facility and, at the same time, helping them to identify with the credit institution — a not unimportant factor in assuring good repayment rates. Any institution which cannot operate a branch office within easy reach of farmers will find it difficult to attract savings; development banks and crop authorities would come into this category. By contrast co-operative societies and agricultural banks would be better placed to operate savings programmes. Of these two, agricultural banks are sometimes considered to be more reliable, but co-operative societies in many parts of the developing world already have a notable record in attracting personal savings in rural areas. This suggests that a suitable institutional arrangement might be for

co-operative societies to be backed up by an agricultural bank or, perhaps, by a central co-operative bank.

257. **EXISTING INSTITUTIONS.** Clearly the current structure of agricultural credit provision is an important factor in the institution decision. Do existing institutions work well, that is, do they meet environmental criteria such as those given above? If so, they could be supported; if not, can they be rehabilitated and then supported? Sometimes existing structures are so far removed from what is really required that a fresh start is desirable. But sometimes creation of a new institution involves little more than a change in name. The new body occupies the same premises, employs substantially the same people and has roughly the same mandate. Because of these dangers a genuine rehabilitation of an existing institution may be more valuable than a phony fresh start. Again, where non-bank structures such as processing factories (providing input supply, extension and marketing services to farmers on a grower's contract basis), marketing authorities and input suppliers, are performing a useful, efficient and equitable loans service to farmers then these too should be supported. Indeed, the provision of all services together can improve input supply, extension and marketing, as well as credit.

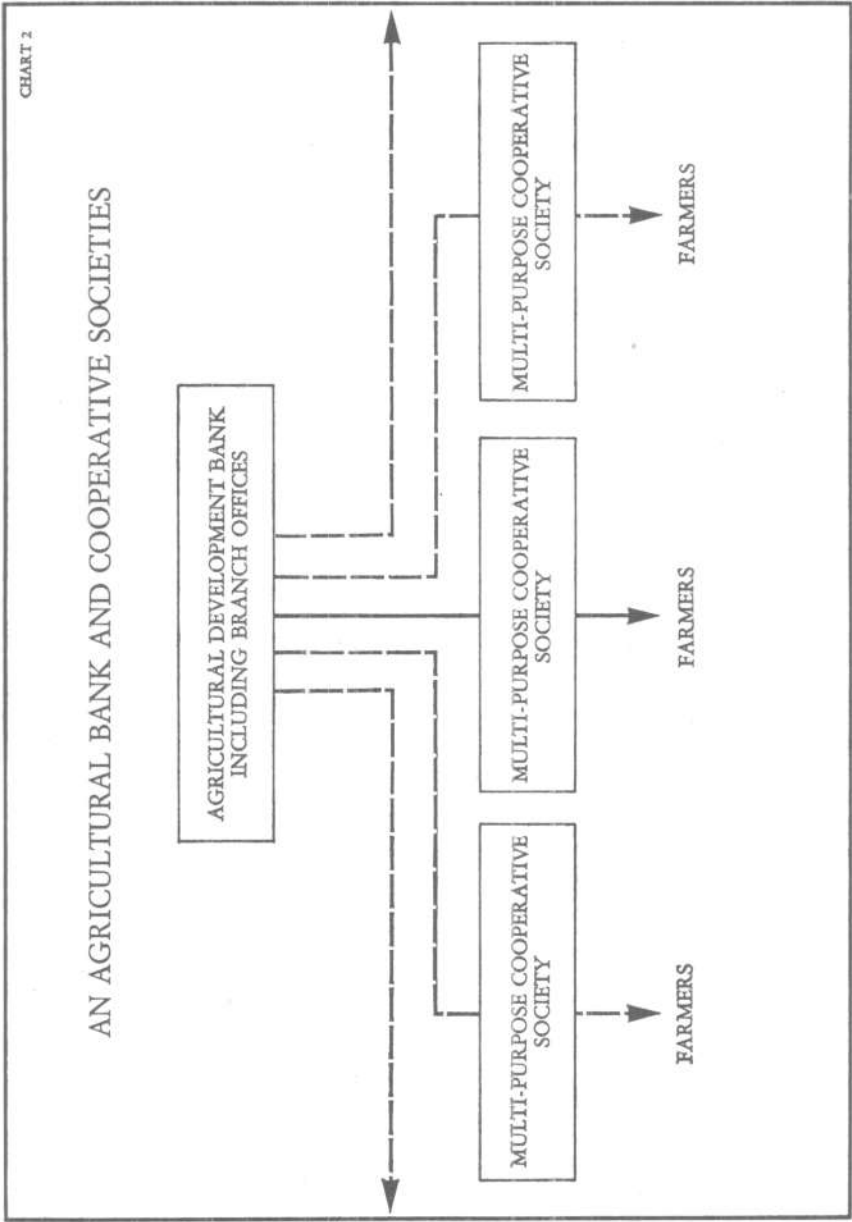
258. **LEVEL OF DEVELOPMENT.** This factor is of course a combination of many others. It may well affect the institutional decision because of these other factors. For example, at an early stage of development the pool of administrative talent and skilled personnel generally, as well as other resources in the country may be too small to permit the establishment of a special banking institution to handle development loans. Agricultural credit might then be available, in certain areas, from special crop development authorities. Later a development bank might be set up, handling agricultural loans through a special department. Still later, when the resources become available, it may be seen as advantageous to establish a special agricultural bank.

259. **SMALL FARMER ORIENTATION.** Many types of credit source may profess concern and commitment to the small farmer sector. But all too

often the need to run a profitable operation conflicts with this concern and the loan portfolio undergoes a shift to the larger farm sector, or even to other areas of investment. Again it is generally desirable to arrange for farmer-borrower representatives to participate in the policy-forming body of the credit institution. Which institutional type best lends itself to these requirements? Crop authorities and processors are firmly committed to agriculture, but not necessarily to the small farmer; nor is it easy to arrange for farmer participation in their affairs. Development banks are notorious for the type of portfolio shift mentioned above. Agricultural banks have a statutory concern for agriculture, and, like co-operatives can accommodate farmer participation perhaps more readily than can the other types. But although the last two named institutional forms may fulfil the requirements under this heading rather better than the others, they cannot usually guarantee continued and effective small farmer orientation.

260. In short the institutional decision is a complex one and, apart from the criteria noted above, persons charged with making the decision may be strongly influenced by their own background, experience and loyalties; generally speaking however the discussion above indicates that in many circumstances, especially where permanence, adaptability and the ability to foster the development of financial markets are important, agricultural banks and multi-purpose co-operative societies have advantages over other types of credit delivery systems. But these two institutional forms also display their own specific characteristics.

261. Agricultural banks have advantages with respect to raising outside funds, whereas co-operative systems are generally better able to handle both the mobilizing of local resources and the organization of links with input supply and marketing. Thus the effectiveness of an agricultural bank in servicing the small farmer sector might well be increased by the formation of multi-purpose co-operatives through which it could reach small borrowers. On the other hand, co-operative systems might well find association with a bank an advantageous position, both in raising finance and in withstanding undesirable influences from powerful individuals or pressure groups. In diagrammatic form then:



INTEREST RATES

262. The problem of appropriate interest rates for agricultural credit has been debated at great length in many countries, and still there are as many different opinions as ever. The reason, no doubt, is that interest rates play a number of different roles.

263. *In economics*, interest is the price paid for the use of money. Money is regarded as a good like any other, and it follows that if money is loaned, as it is in any credit transaction, a rent has to be paid for it. The interest rate, so defined, is determined according to the laws of price formation, that is, by the demand for capital and its supply, apart from any risk-consideration.

264. To the extent that the interest rate really corresponds to the market situation, it can be used to good effect in the choice of projects to be financed. Projects with returns lower than the normal interest rate will have to be discarded in favour of more profitable ones. This would have the advantage of avoiding the waste of scarce capital.

265. *In monetary terms*, the rate of interest is an essential tool by which the central bank controls the money supply and guides economic activity. It is determined in the light of economic conditions and by the monetary authorities' policy in dealing with any given situation. Generally, the manipulation of interest rates is part and parcel of overall monetary policy.

266. In *banking*, the rate of interest may be thought of as the result of the aggregation of the following components:

- (i) *Financial costs* consist of the remuneration of funds put at the disposal of a bank to enable it to fulfil its function as lender. The level of this remuneration depends on the origin of the funds, which may be:

- Sight deposits from the public or financial institutions; given their liquidity, the bank pays little or nothing for them.

- Time and savings deposits, which whilst giving the bank more stable resources and enabling it to invest for a longer term, are correspondingly more costly for the bank.
- Funds obtained by drawing on the rediscounting facilities of the central bank and enabling the primary lender to obtain cash against part of its bill portfolio. The rediscount rate is fixed in the light of the imperatives of monetary policy, as mentioned above. Generally speaking, however, it is higher than the bank interest paid on time deposits, and, especially, on sight deposits. If central banks overstep the boundaries of their traditional functions and take an active part in the government's development policy, as they often do, they may be led to concede reduced rates for short or medium-term agricultural loans.
- Medium and long-term funds borrowed by the bank either from the government or from foreign aid organizations, or raised from the capital market through the issue of bonds.
- Grants and endowments.

A bank's direct financial cost is the resultant of interest rates paid on all these different resources; a weighted average of disparate separate costs.

- (ii) *Overhead costs* include all expenses incurred by a bank in running its business, including personnel costs (salaries plus social charges), pensions, expenses for the maintenance and repair of premises and equipment, as well as depreciation.
- (iii) *Provision for doubtful debts* has to be made by a bank, for, like any trader, it always has to face the risk of a bad deal. In banking, this is a very real risk. A bank may have given a loan to a client without knowing that he was already deeply in debt, or a client's situation may deteriorate as a result of some unforeseeable events. The ensuing losses would be prejudicial to the bank's financial position, and to guard against them it allocates part of its gross profits to a reserve fund earmarked for the coverage of any real depreciation of assets.

- (iv) *Return on capital* has to be paid, after all these costs have been met, in the form of a dividend to shareholders. This may be a statutory obligation for the bank, and it certainly is good policy, for the payment of a dividend encourages shareholders to save and hence makes it possible to mobilize the savings of new social groups. But this is a problem which an agricultural bank encounters only in the rare case in which it has private shareholders. Usually, agricultural credit institutes get their capital by government appropriations on which no dividend is payable; on the other hand a problem of a similar kind does arise for co-operative credit institutes. However also state-owned agricultural banks should allow for an adequate profit-margin in their operations for the purpose of self-financing their own growth and expansion.
- (v) Finally, a *general reserve fund* has to be built up against unspecified future risks. Unlike the provisions, which cover real and individualized depreciation of bank assets, general reserves are set aside in order to enable the bank to survive adverse economic conditions (a sequence of poor harvests, natural disasters, a collapse of prices in certain sectors, conversion of a category of assets under pressure from international market conditions, etc.).

267. These, then are the components which enter into an agricultural bank's interest calculation. The bank must take into account all of them, even if some of them are uncertain. It cannot lower its lending rates beyond certain limits except to the detriment of its depositors, of the quality and quantity of its personnel, and of the financial and/or socio-economic efficiency of the bank's performance.

268. To pay lower rates on deposits certainly would run counter to any policy to encourage saving and might even drive depositors away from the agricultural bank to commercial banks offering better returns. This might well undermine the whole system.

269. Moreover, if an agricultural bank were to apply interest rates too low to allow adequate provisions for doubtful debts, its management

would be induced sooner or latter to restrict credit to those borrowers or types of borrowers whose "default rate" exceeds the "risk-premium" computed into the loan rate-level.

270. As regards personnel, a bank which tries to save on overheads may well lose some of its best people, since these should have no difficulty in finding better-paid jobs elsewhere. This qualitative downgrading may be fatal for the system, in so far the complexity and diversity of agricultural credit operations require highly specialized and competent staff. There is also the question of numbers. The bank will, of course, try not to have excess staff, but undue personnel cuts may well impair the volume of business, especially that of a seasonal character, as well as the speed with which transactions are handled.

271. Interest rates may, finally, be considered from a *political and social point of view*. The government's approach may be entirely different from any of those described so far, inasmuch as the government's primary aim is to help a social group which, in most cases, makes up the great bulk of the country's population and could not in the foreseeable future find any livelihood outside agriculture. This is the underlying conception in any government action.

272. Many may believe therefore that the question is not one of choosing projects in the light of their returns at normal interest rates, but of adjusting the interest rate so as to make agricultural projects viable. Politically and socially, this may appear to be a justifiable position. But it calls for two comments.

First, if this is to be the government's policy, it must be unequivocally defined as such. The cost of lending at a rate low enough to make credit accessible for agricultural projects must not fall upon the lending institute, but must be met in full by the state.

Second, there remains the basic question as to whether such a policy of reduced interest rates can really be effective in terms of the general soundness and success of agricultural projects and credit institutions.

In this connection, several points have to be raised:

- (i) Consider the proportion of interest charges in the total costs of farming. We use, as an example, a typical grain farm in Tunisia. Costs per hectare amount to roughly US\$ 100; the farmer would need \$ 70 in credit, if he contributes 30 per cent by self-financing. At a rate of interest of 7 per cent for a loan covering the production cycle, his interest payments would amount to no more than 3.66 per cent of his total costs. It may be argued that while the incidence of interest on short-term credits is small, this does not apply to medium- and long-term credit, where the calculation has to allow for longer periods of interest payments. This is true, but in the two latter cases the borrower gains through the effects of monetary depreciation, the more so as many credits often require no repayment of principal during the first few years.
- (ii) What is the impact of a rate reduction on the beneficiaries? It is a fact that astonishingly little, or indeed no reference at all is made to interest rates in a list of farmers' grievances and claims. This surely proves that farmers are not particularly responsive to interest cuts, but would prefer measures which lower the prices of their inputs or raise those at which they sell their produce, not to speak of quicker and simpler procedures. This attitude may be partly explained by the fact that many farmers live at the margin of the institutional credit market and may have been used to paying usurious rates of interest.
- (iii) Low interest rates may create a dangerous situation, where it is likely that cheap farm credit will be siphoned off into investments which have little to do with developing the small farmer. The subsidy in this case does not help production in this sector since it does not reach those for whom it was intended.
- (iv) Then there is the familiar argument that the farmer's investment policies may be distorted by low interest rates since the true cost of capital is not reflected in the farmer's transactions. A shift to more reliance on capital and less on labour might be expected. The disadvantages inherent in this are further compounded because such a shift in production factors usually involves an increased

managerial task. Cheap credit may cause wasteful use of capital and even premature consumption, thus reducing capital formation at the village level.

- (v) When interest rates are very low then it is likely that demand for credit will exceed supply, and rationing will be necessary. This need for rationing causes several major difficulties. Inevitably it places an extra burden on the administrative staff of credit institutions and, because of pressure from would-be borrowers, a situation exists where the chances of corruption are great, with a consequent harmful effect on staff morale. But the primary direct effect of very low interest on the small farmer is allocative, in that when rationing takes place the smaller man is likely to be muscled out by those who have more influence with the officials supplying inputs and credit. A related disadvantage is that when a low interest-rate policy has been in force, those officials who have the power to change interest rates may have personal reasons for keeping them low, reasons which are not connected with assisting the small farmer.
- (vi) There is always the danger that a credit institution lending money at a very low rate of interest is somewhat at the mercy of its political masters and may find itself insufficiently compensated. In these circumstances it faces the danger of decapitalization, it will almost certainly be forced into a situation where it concentrates on large loans to established farmers in order to economize, and it may find difficulty in raising capital, partly because of its inability to offer attractive interest rates on deposits.
- (vii) Very low interest rates in one sector of the economy have a tendency to hinder the integration of capital markets, thus decreasing the efficiency of the economy by restraining the transfer of resources.

273. Despite these disadvantages, governments may want to reduce the interest rates on agricultural loans for political reasons; it is an easy measure and one that makes good publicity. But then governments would do well to consider a policy of subsidized interest rates in the general context of their farm support policy, and to ask whether it

is better to act on the price for the use of money, on the price of the inputs farmers need or, as is recommended later, on the improvement of institutional infrastructure.

TIMING OF LOAN DISBURSEMENT AND REPAYMENTS

274. There is another aspect of credit which is of great importance to farmers, and that is a reasonable time schedule for disbursements and repayments. This can do much to help them conduct their work in a rational way and make the best of their harvest.

275. Credit needs to be disbursed at the time when farmers start the new season's work and consequently need supplies of farm inputs. If a loan is paid out too soon, this may encourage its use for other purposes; if too late, the beneficiary may be forced to do his work less well than he should, to the detriment of his productivity. It can be discovered from farm budgets just when money is most needed, and credit can then be organized in such a way as to meet requirements at the right time. In addition, cash flow diagrams show whether a beneficiary needs to have his credit paid out in one lump sum or in several instalments, timed to fit the expected state of progress of his work. The establishment of a time table of agricultural credit on a district basis is a useful and easy measure to adopt.

276. The schedule of repayments should be adapted to the timing of the flow of receipts. Farm budgets reveal with some precision the date by which a borrower should have the cash to repay his loan, but due dates should be interpreted generously and should make allowance for contingencies in marketing. Clearly, the mere fact of having brought in his harvest does not enable a farmer to repay his debt; he needs time to sell, and this may be a matter not under his own control. It would be most unfortunate for the lender to force him to sell his produce at unfavourable conditions. On the contrary, it is in any lender's own interest to help borrowers to obtain the best possible price. The bank may well, for instance, help farmers to store their crops and accordingly postpone the due date of credit repayment. In some circumstances there

is a case for establishing a warehousing credit system in order to enable farmers to escape pressure to sell at poor prices. This concept is now discussed in greater detail.

WAREHOUSING CREDIT SYSTEMS

277. Warehousing credit systems are of particular appeal to banks interested in laying out short-term credit. Preferably such a warehousing system should be set up by statute and operate under continuous government inspection. The operator is then usually required to arrange bonding in order to insure users against fraud and theft. His books are open to inspection and his stocks are checked periodically to see that they conform with the quantities and quality represented by the outstanding receipts.

278. The warehouse operator has sole custody of commodities stored with him, and issues to the depositor a certificate of storage defining the commodity exactly. The products can be removed only upon surrender of the warehouse receipts. Such receipts are then acceptable as a basis for credit since the warehouseman will only release the goods in store to holders of the warehouse receipts. Thus, the owner who has borrowed must repay the loan and regain the receipts in order to obtain the commodities used as collateral. A similar system may be applied to processors' or merchants' own warehouses. A specific part is locked off from the remainder and placed under government bond and supervision. A certificate is then issued and can be used as collateral for loans. The owner is not permitted to break the seal unless he surrenders the certificate. In this way the owner can obtain short-term credit without paying the cost of moving his products out of his own warehouse.

279. Such a system enables the owner of the product in storage to wait for seasonal increases in price, when otherwise he would have been obliged to sell outright in order to obtain funds to meet immediate obligations. In practice the main users of such systems are enterprises trading in agricultural commodities. Bringing produce to such a

warehouse, getting it valued, taking the certificate to a bank and then carrying out the operation in reverse when it is judged timely to sell is too cumbersome a procedure and involves too much handling and transport to be convenient for farmers except those situated in the immediate vicinity of the warehouse. Moreover the farmer may still face problems in getting his produce out of store in order to sell it; this may require going to another moneylender. It is also difficult to use the warehouse to capacity when many lots in different ownership must retain their identity. Farmers benefit indirectly, however, in that the agencies buying from them are able to offer higher prices at harvest time because they can make their own working capital and bank credit lines go much further. The extent to which farmers benefit in this way depends, of course, on the degree of competition between such buyers.

280. This type of storage and credit system grew up in the developed countries under conditions of prevailing free enterprise. Among developing countries it has been taken up on a large scale only in India where warehousing storage has been erected by Central and State Warehousing Corporations in many parts of the country.

281. Warehousing systems for apples and potatoes have played an important role in Lebanon and India respectively. Refrigeration to maintain a constant low temperature permits the extension of the market life of the product for 4 to 6 months. These facilities have been developed by private enterprise with credit provided by commercial banks on security of produce in identified and approved storage.

282. A critical question is whether the financial and organizational investment is justified for basic grains as compared with the establishment of a public price stabilization system with its own system of storage. The Indian warehousing corporations were set up to supplement predominantly free enterprise grain trading at a time when the Government undertook only administrative price control action and the maintenance of limited reserve stocks. With the advent of stabilization operations and direct procurement by the Food Corporation of India the farmer should be able to sell to its agents at the guaranteed base

price. Only if he expects the price to rise well above that offered by the stabilization agency is it worth his while to hold on to part of his crop and put it in storage where he can obtain credit. In recent years farmer use of the warehouses to store for price rises has been mainly for gur and oilseeds for which pricing is still free.

283. However, it is reported that 5 or 6 village level warehouses built with the assistance of a fertilizer company in the Cawnpore area led to further such construction by local initiative. In this case lodging grain in the warehouse enabled the farmer to take away fertilizer up to an agreed proportion of its value. The grain was eventually sold at a time determined by the farmer. Thus there still appears to be a role for warehousing credit for foodgrain producers in India if it is organized conveniently and opens a way to other advantages.

284. A further requirement for efficient operation of a warehousing and credit system is acceptance and application of a standard grading system. Otherwise much space is wasted and management complicated by the need to keep each lot separate in sacks. With standardized commodities, the warehouse operator is not required to return the same articles upon presentation of the receipts, but can offer an equal quantity of a comparable grade from another source, which permits a great saving in storage operations. In practice the main vehicle for securing adoption of standard grades in the domestic marketing of food grains is their use in field level purchases by a public stabilization agency. This was one of the benefits ensuing, for example, from the rice buying activities of I.N.A., the stabilization agency in Colombia. Pending the feasibility of storage by grade and its acceptance by farmers, large-scale storage is likely to be occupied most efficiently by grain for which the price of purchase from the producer is no longer an issue.

285. Considerable caution is needed therefore in advocating the establishment of warehousing and credit systems. It must first be established who will use them and secondly whether the investment and management input merits high priority in development activities. In a number of African countries expensive storage structures have been erected that are never or hardly used.

286. From a preliminary review of marketing/credit/storage developments under such conditions the following possibilities may be observed:

- (i) Establishment of a stabilization agency which buys part of the crop at a guaranteed price and leaves the rest for local consumption and sale. Its purchases will be held in its own stores or those of its agents, as in some East African countries.
- (ii) Acceptance by a credit or input supply agency of produce in repayment of credit, either directly or through agents — as in parts of North Africa. Here again ownership will generally pass to the agency on receipt of the grain.
- (iii) Continuance of small scale trading with consumption shifts between alternative food crops in response to price changes — as in Central and coastal West Africa, where maize, yams and cassava are fairly easily available alternatives.

287. With options (i) and (ii) it seems likely that warehousing credit for food-grains, particularly for small farmers, will only be supplementary to such systems. In India it has been regarded as advantageous for an independent specialized corporation to hold stocks on the basis of which bank credit is extended. This corporation is subject to statutory inspection and additional checks by the bank providing credit. It is a protection to the government against the disappearance of stocks through malpractices within the stabilization agency. Farmers and assembly agencies likewise have an alternative should they face like difficulties in making a direct sale at the guaranteed price. It still remains of supplementary significance for development in a country with very limited resources.

288. Under the conditions of alternative (iii) warehousing credit could be useful to both farmers and traders, but would need to be organized locally and on a small scale to ensure easy access. It might be difficult to secure, in practice, the quality of management and supervision necessary to maintain the confidence of a credit agency and potential users. There would be a corresponding need for outside assistance.

ASSESSING THE ADEQUACY OF INDIVIDUAL LOANS TO MEET THE FARMER'S NEEDS

289. Farm budgets make it possible to estimate the total expenses that will be incurred by a farmer in the course of his work, as well as the various receipts he can expect. They can also be used as an objective and rational base for the determination of the volume of credit a farmer needs.

290. However the amount of expenditure incurred in running a farm is not the only criterion to be considered in the determination of the amount of a loan. Allowance has to be made also for self-financing, that is, the farmer's capacity to meet part of his operating expenses from his own funds. This capacity can be estimated only on the basis of an income analysis. No farmer, of course, can use the whole of his income for self-financing, for this would leave nothing for the family to live on. The amount of a farmer's self-financing must be compatible with his income. On the other hand, consumption credits may be needed to help farmers over the hungry season between sowing and harvesting. In any event, these primary needs must be allowed for in determining the typical proportion of total working expenses to be covered by self-financing. The size of the self-financing quota depends on the following factors:

- (i) *The size of the farm.* Small farmers have such low incomes that they can afford little for working expenses. In appraising the size of a farm, account has to be taken of physical conditions in the region. A farmer who goes in for extensive cultivation of rainfed crops is still a "small farmer" even if he cultivates several hectares, whilst the same number of hectares under an irrigated crop may be classified as a medium-sized or even a big farm, and will certainly yield a distinctly higher income.
- (ii) *The extent to which family labour is used.* This may have an important bearing on the farmer's subsistence needs. The children or close relatives of a farmer usually get no pay, and hence there is no relevant entry under "wages" in the farm budget; yet they occasion expenses. These fall properly under the heading not of

consumption expenditure, but of working expenditure, for without the family workers the farmer would have had to taken on outside labour and pay wages, which would have been included in his list of expenses. It follows that in the determination of the proportion of self-financing allowance has to be made for family workers, and the credit correspondingly increased so as to enable the farmer to cover all his requirements.

- (iii) *The crop programme.* A farmer who grows only one crop is clearly ill-placed for bridging the hungry season between sowing and harvesting. If he grows several diversified crops, or else one main crop flanked by supplementary activities such as animal husbandry, he can count on frequent and regular receipts which enable him to get by, pending the sale of his main crop. A farmer is a consumer as well as a producer, and if he is to work he has to live — this fact must be taken into account in determining the proportion of self-financing and the amount of credit. Yet many credit institutions lend only for production purposes, even though they know perfectly well that part of the credit may have to be used for consumption and that even credit in kind can be diverted, because the farmer may well sell seeds or fertilizers in order to get money for feeding his family. The lending bank has to take a tolerant view of this situation, and accept the fact that a farmer may have to draw on his income or even on his credit to meet the family's subsistence needs. It is in any case hard to draw a line between working expenses and consumption expenses, and very difficult to make sure that loan funds are not used for purposes other than production. This whole problem needs a flexible approach, taking account of diverse situations such as the difference between a big and a small farm.

COST OF ADMINISTERING AGRICULTURAL CREDIT

291. Agricultural credit is not a glamour spot in banking. Risks are high and the turnover of funds is slow. Moreover and as pointed out above, agricultural banking operations normally do not generate a

succession of operations and transactions which give a bank additional income from commissions and other charges. But the most severe drawback of agricultural lending is the high administrative cost associated with this type of banking operation. Loans are relatively small and the borrowers remote from urban areas. Moreover, banking institutions are very often new to this type of clientele, so there is little in the way of accumulated knowledge of the potential borrowers, accumulated knowledge which would permit certain administrative economies.

292. Turning to actual costs, it is worth mentioning some figures. One agricultural bank in Central Africa, in 1972, found that it cost the equivalent of US\$ 2.0 m. to administer farming loans to the value of the equivalent of US\$ 11.5 m. In other words, this institution found that administration costs alone amounted to more than 17 per cent of money loaned during one crop season. In this case the administration costs were inflated by a number of rural branches which did very little business. In fact, for some of these, total loan volume was less than the cost of operating the branch, pointing to a painful fact of agricultural banking, that is, the *heavy cost of a good branch network*.

293. Nevertheless, it is vital for a lending institution to be as close as possible to farmers, both for reasons of accessibility and because close physical contact means that loan officers have an opportunity to get to know local farming conditions.

294. The next important question is, how dense should a branch network be? Some evidence from Africa indicates that the number of institutional savings accounts per head of population falls off markedly beyond a radius of 15 Km. from the branch office of the savings institution. In many developing countries the bicycle is the chief means of personal transport for farmers. There is a limit of approximately 30 Km. which one can reasonably cycle in one day, and one day should be the maximum time a farmer need spend on a visit to his bank. This density would mean that one branch could cover something like 70,000 ha. of farmland.

But this is assuming full utilization of land and roads for cycle tracks radiating out from the bank branch. A more realistic figure would be obtained by assuming 30 per cent land utilization and 80 per cent roading efficiency (giving an effective radius of operation of 12, not 15 Km.). This reduces the farmland area to 13,500 ha. Allowing 3 ha. per farmer this means a potential bank clientele of 4500 heads of households. Again, if a seasonal loan of \$ 40 per ha. is the average, the seasonal lending potential for the branch would be about \$ 0.5 m. A more realistic figure of actual utilization might be 40 per cent of potential, that is, 1800 borrowers and a seasonal loan fund of \$ 200,000.

295. These are hypothetical figures certainly, but they serve to indicate that a branch network should ideally be relatively dense, with a large number of bank branches or agencies, each handling a comparatively small amount of business.

296. A useful example of the spread of a branch network comes from India where the co-operative banks, between 1961 and 1970, increased in number to the extent that the average population per banking office decreased from more than 220,000 to less than 120,000. It has been recommended, again from India, that ideally a rural bank should serve between 5,000 to 20,000 people, whether it operates as a rural branch of an agricultural development bank or whether it is co-operative in structure.

297. But whether or not a link is made with co-operative structures in order to achieve the desirable type of network, the administrative costs are going to be heavy. This leads us to a consideration of ways in which the problem of high administrative costs can be overcome. There are several possible solutions:

- increase the interest rate charged to the borrower;
- simplify lending procedures;
- utilize other agencies for much of the supervision of loans;
- lend to groups rather than to individuals (in this case the branch network need not be so dense);
- obtain a government subsidy to help with administrative costs.

298. As discussed earlier, there is no doubt that *interest rates* on farming loans can be raised in many countries. This is now widely accepted, even if there has been so far little application of this principle. Perhaps the political disadvantages associated with any big changes here are too great for an attempt to be made to cover administrative and other costs entirely by interest income. On balance it may be best for interest rates to rise so that they are more in line with those in the commercial sector, but not to expect them to meet the full cost of farming loans.

299. A further measure is to *simplify lending procedures*, but many agencies have in fact already done this, and this policy cannot, in any case, be taken too far. A bank always needs to be able to identify the borrower and the loan, and to know enough about local farming to be able to distinguish the better borrowers.

300. In many countries *other agencies*, for example Agricultural Departments, carry out a lot of the work associated with agricultural credit. This is one way in which a government can assist with loan administration costs. But again there is a limit to what is appropriate for such an agency to handle and, in general, such intervention is best when limited to extension aspects of the use of inputs or equipment purchased with loaned funds. In other words, most of the banking part of the business still has to be carried out by the credit institution, with the exception of loan collection from farmers, which can often be arranged to be effected by marketing agencies. But even here costs are involved, and these agencies may make a charge for this service to the bank.

301. The last two suggestions for coping with the high administrative costs of lending in the small farm sector, namely *group loans* and *government subsidy* warrant attention in some detail.

302. **GROUP LENDING.** Group lending is where a loan is made to a group of farmers rather than to individuals. Thus responsibility for obtaining the loan, for disbursement and for repayment is vested either in an

individual (as a group leader) or in a committee. Group lending could be expected to reduce administrative costs since the number of individual operations in each phase of the lending process is markedly reduced, as far as the lender is concerned. There are other advantages, namely:

- the ultimate choice of end-user can be made by persons (fellow group members) who are very well-placed to make a sound decision,
- security for loans may be provided by the possibility of various types of group sanctions against defaulters,
- the group could form the basis for the bulk provision of other services (input supply, extension, marketing/processing).

303. The idea is clearly attractive. Why then is it not more generally implemented? The short answer is that it is still very much at the development stage. Programmes involving the group idea are either in operation or are being planned in a few countries in Central America and Africa. Operational experience has been encouraging in many cases, but significant problems remain. Some of these are:

- difficulties over forming satisfactory groups, groups in which members are treated fairly, which are effective channels of genuine production credit and which have sufficient stability;
- problems connected with the identification, formulation and acceptance of a satisfactory legislative framework for group lending to small farmers; there is a wide spectrum of degrees of group formation, the range being from an informal, *loose association* of independent farmers (whose names are linked merely in order to qualify for credit) through *registered groups* such as co-operatives (which have legal status but within which farmer-members may farm collectively but more often, perhaps, farm individually) to *group farming co-operatives* or corporations.

304. In short, group lending appears to offer many advantages, amongst these being administrative economies. But because the idea is still being developed it cannot yet be widely implemented, nevertheless, it is sufficiently promising to warrant further development effort, careful attention and consideration.

305. *SUBSIDY.* A subsidy to assist with the administrative costs of operating farm credit programmes is a measure which can be implemented virtually immediately. But a decision to do this automatically raises the whole question of subsidy to farming development. Because of its importance, detailed attention is now given to this topic.

306. *Types of subsidy.* There are two main avenues for subsidy. The first is the *direct subsidy*, which means an alteration to the price structure of a farmer's actual transactions. These include the prices paid by the farmer for inputs and for credit (in this case the price paid is the interest charge, plus any commitment or other fee) and the price received by the farmer for his product.

307. An *indirect* subsidy, on the other hand, involves financial assistance one or more steps removed from the transactions in which the farmer is engaged. Possibilities here include subsidization of the administrative costs of credit programmes and price stabilization schemes and the provision of research and extension services, and infrastructure such as roads, markets, clinics and schools.

308. *Subsidized credit.* This is probably the easiest to apply of the direct subsidies. Unfortunately, in most circumstances, it is also the type which has most disadvantages. There is evidence that in many credit programmes the interest rate charged on seasonal loans should be of the order of 25 to 30 per cent, if the cost of capital, administration and losses due to default are to be covered; but even this order of interest rate would not include an allowance for inflation. In fact, of course, interest rates in small farmer credit programmes are usually very much lower than this level and, indeed, are often lower than the rates charged in other sectors of the economy. The arguments against very low interest farming loans have been presented earlier in this chapter.

309. *Subsidies on inputs.* Some circumstances justify the subsidization of inputs. Thus, although it is generally better to popularize the use of new inputs and technologies by demonstrating clearly their productivity and profitability in existing market conditions, it may sometimes be

useful to reduce the cost of the inputs for a limited period of time. This has the effect of reducing the risk of the innovation to the farmer and also reduces the working capital requirement during the introductory phase. Sometimes a government may decide to subsidize farming in a particular disadvantaged area or region. In these circumstances a subsidy to cover transport costs may be in order, as has been done for fertilizers in Northern Nigeria.

310. Apart from the special cases noted above, however, subsidies on inputs should normally be avoided. They suffer from many of the disadvantages associated with providing farm credit at subsidized rates of interest. Thus there are likely to be allocative difficulties because of the need for rationing, and those with greater influence with supplying agencies are likely to obtain inputs more readily than others — it is not always the former group that can make the more productive use of the inputs concerned. Again, a direct subsidy on certain inputs, for example machinery, may lead to more reliance on capital than on labour than is really justified at a given stage of development.

311. *Direct subsidies on output prices.* A subsidy on output prices needs careful handling in order to ensure that the intended recipients receive the full benefit of the subsidy and therefore that the subsidy has the desired effect on production. This is all the more important since this type of subsidy can be very expensive; since it usually involves setting a price at the time of planning, with the marketed output being an unknown factor, the commitment by the government is open-ended. A further disadvantage associated with a subsidy on output prices is that when applied in areas where large farmers are interspersed with small, such a policy tends to increase income disparities. This may be an argument for applying an indirect subsidy in such circumstances. Nevertheless, the upward adjustment of output prices, by means of a subsidy, can be very effective in encouraging production of certain types of farm produce in particular localities.

312. A subsidy on output prices is distinct from a private stabilization scheme. The latter sets out to reduce the effect of price uncertainty

by operating a fund which is credited when market prices are higher than an announced price and debited when the reverse applies. Despite the distinction between the two types of intervention, a price stabilization scheme may involve subsidy. This may be direct, as when the stabilized price involves a subsidy, or, as is common, indirect in the form of a grant to help meet the costs of administering the scheme.

313. *Indirect subsidies.* The biggest advantage of an indirect subsidy, that is, one applied to the provision of services or facilities, is the fact that it is hidden. A peasant farmer, in receipt of what is clearly a directly subsidized item, perceives a handout and this in itself affects his attitude to farm production. The direct subsidy either strikes him as constituting bribery, thus arousing his suspicion, or makes him feel that he is being asked to participate in something that is less than serious. In neither case is his attitude towards increasing agricultural production improved. On the other hand, when government resources are directed towards the identification of profitable technologies, to the organization of extension, marketing and credit services and to the provision of necessary infrastructure such as roads, bridges and storage facilities then the effect on the farmer and his attitude towards farm production is positive.

314. The subsidization of credit institutions' operations in remote areas, particularly when these bodies also provide a savings facility, can bring indirect benefits to farm production through helping to educate rural populations towards farm investment and production. Increases in agricultural production are greatly facilitated by perceived need for a cash income from farming.

315. Thus the temptation to subsidize small farmers' production activities by subsidizing interest rates on seasonal loans should be resisted. In certain cases a strategically aimed subsidy on output, or even on inputs, may be applicable, but, in general, indirect subsidies such as providing farm services, and, strengthening the viability of institutions providing such services are likely to be the most satisfactory type for the small-farmer sector.

316. Thus it is likely that the necessity of subsidizing the administrative costs of credit institutions servicing small farmers will continue for some time. However, the extent of subsidy required might be expected to diminish as institutions gain experience and accumulate knowledge of their clientele, as satisfactory methods for group lending are developed and indeed, as the number of clients serviced by bank branches increases.

INDEX-LINKED LOANS

317. Because of the high rates of inflation common nowadays in many countries some attention has been given to the problem this poses for lending institutions. In the face of high rates of inflation, banks may suffer substantial reductions in the real value of their capital. One fairly obvious method of dealing with this situation is to introduce the indexing of loans. By this is meant the adjustment of principal repayments from a base level according to the values of an index which indicates changes in the purchasing power of the currency in which the loan is expressed. Many countries have incorporated a type of indexing in agricultural loans or are considering doing so. Others such as Finland, having operated along these lines for some time, have reverted to a non-indexing policy.

318. The big danger with an indexing policy is that it cannot be considered in relation to say farm loans in isolation of overall credit policy in a country, and that having applied it to one sphere of activity of the financial market it may become necessary to apply it generally. Such a course of action can generate strong inflationary pressure. Because the indexing is based on changes in the purchasing power of the currency this inflationary pressure has a propensity to be self-reinforcing.

319. On the other hand, faced with an annual rate of inflation of 20, 30 or 40 per cent, what alternatives are there for a bank? The possibility of finding an alternative depends at least in part on the period of the loan.

320. It should generally be possible to predict with reasonable accuracy the rate of inflation over the period of a short-term loan. Therefore,

in this case, a suitable allowance can be incorporated in the interest rate from the outset. Medium and long-term loans present a more difficult problem. As mentioned above, these loans can hardly be index-linked in isolation of other credit operations or indeed of the policy regarding private savings deposits held by institutions. The issue of index-linking of medium and long-term agricultural loans is then one on which there appears to be no readily definable best course of action. Clearly this is an area where study of the experience of countries which have had practical experience of index-linking of loans, for example, Brazil and Finland, would be appropriate.

321. Finally, on this issue, it should be pointed out that decisions on index-linking may well have to be taken in an economic environment in which a high rather than low rate of inflation becomes the norm rather than the exception.

PERSONNEL FOR AGRICULTURAL CREDIT OPERATIONS

322. TRAINING. The efficiency of a credit institution depends not only on the technological and economic environment within which it operates and on the manner in which it is constituted and supported by political authorities, but also on the quality of its staff. By "quality" is meant the suitability of staff in various positions to fulfil adequately the requirements of these positions. Thus suitable staff selection, motivation, morale and training are clearly very important.

323. It is no exaggeration to say that agricultural banking operations have tended to be, in many countries, a type of second-best or poor relative to banking in other sectors of the economy. This is due, at least in part, to the less commercial, or even less glamorous nature of an agricultural bank's field of operations. This lowly status can adversely affect staff morale, to the detriment of a bank's effectiveness.

324. In addition, agricultural banking tends to straddle the disciplines of banking, accountancy, agriculture and agricultural economics. Like all such situations, this position means that there is no clear-cut, single-line of training which is an appropriate discipline for young agricultural bankers. Thus, almost inevitably, the profession is less attractive to

topflight people, whether they are from banking, accountancy or agriculture/agricultural economics, since these persons would naturally prefer to pursue the line in which they have already achieved a measure of success. This points to the need to establish agricultural banking as a clearly defined subject area, with its own special training and professional status.

325. One can identify three main types of specific training, following education of a more general nature leading to a high school diploma or a degree in say, agriculture or in commerce. First there is vocational training, carried out by a local institute and specifically geared to the needs of local agricultural credit institutions. Second there is on-the-job or sandwich-type training. This may be organized by a bank, or by a training institute, but no matter which body is responsible and which precise form the training takes, this second type has the special feature of bringing credit institutions very closely into the training programme. A good example is the step-wise sandwich type training organized by the co-operatives in Kenya. In this scheme co-operative officers successively undergo short courses immediately prior to assuming positions of greater responsibility. Third, there is training which is not carried out locally, but necessitates study overseas. This may have features of both of the two aforementioned types, but does have the disadvantage, clearly understandable, of being rather limited in terms of numbers of persons trained. This effectively limits overseas courses to senior or potentially senior persons.

326. Indeed the present training possibilities in most regions of the world appear to be more satisfactory for high level persons than for those in lower categories. Thus senior personnel have, or have had, the opportunity to attend courses such as those which have been or are now offered by the Caisse Centrale de Coopération Economique in Paris, FINAFRICA in Milan, the University of Bradford in England and the Economic Development Institute of the World Bank, Washington D.C. In some countries, for example India, the training needs for medium and lower level personnel are well catered for by special institutions or by courses arranged by banks. But in a large number of other countries

the lower and medium level training is less than satisfactory, a state of affairs which contributes in no small measure to the personnel problems of many institutions handling agricultural credit.

327. One initiative which could be taken in order to create a more satisfactory state of affairs, whilst making full use of existing institutions and teaching personnel, is to establish an international qualification in agricultural banking. This would have the following benefits:

- (i) It would provide an opportunity, indeed a compulsion, for detailed and continuing international exchanges of views concerning the type and level of training required by those handling farm loans. This process would facilitate the transfer from one country to another of advances in thinking on both policy and procedural matters connected with agricultural banking.
- (ii) Because of the international exchange just noted, the national course structures leading to the international diploma could be expected to be more satisfactory as a preparation for work in agricultural banks than might otherwise be the case.
- (iii) The fact that the diploma is recognized internationally would help agricultural banking to be regarded as a discipline in its own right. In turn this is likely to lead to better motivation on the part of students taking the course.
- (iv) Again, this same improvement in student motivation, coupled with enhanced professional status, would lead to better morale amongst staff of banks and, perhaps, to a lessening of the loss of good people from this sphere of activity.
- (v) Existing institutions preparing students for careers in agricultural banking frequently do so under conditions of difficulty. This is not surprising given the many different "recognized" disciplines involved, the paucity of suitable texts and other teaching materials, and, not least, the fact that such teaching institutions all too often have little contact with the banks and credit institutions which eventually are to employ their students. The diploma programme would provide an opportunity for the international mobilization of existing resources for the formulation of syllabi and for the production of suitable teaching materials.

- (vi) The diploma programme would also foster contacts between teaching institutions and banks. It would give agricultural bankers the opportunity, more, the responsibility for the content and standard of instruction of those who are to follow the profession.

328. The proposed international diploma programme could be adapted to existing training courses, whether these are run by banks or by educational institutions. It would also suit as a final test for those persons who undergo step-wise sandwich-type training, where short courses are interspersed between periods of employment at successively higher levels of responsibility.

329. COMMUNICATION. A further problem regarding personnel is the problem of communication between staff at various levels within the organization. If communication is poor, the morale of staff who feel remote from the centres of power will be affected, whilst the bank itself may lose the opportunity of benefitting from ideas generated by those well down the seniority ladder. Suggestion boxes are well-known, and many institutions organize meetings or appoint "contact persons" to act as channels between management and staff. But these efforts often disappoint both groups. In one Central American country the national development bank has instituted a system designed to overcome this communication problem; the success of this system makes it worth describing.

330. The basis of the scheme is that working groups are set up to study particular problems. These groups meet outside working hours and participation is voluntary. Those attending are free to raise issues, ask questions and generally discuss the subject under study. The results of the scheme, which has now been in operation for more than two years, are as follows:

1. Staff morale has improved enormously. Because of this and the more positive attitude shown, it is now easier for administrators to introduce new policies and procedures.
2. Because of the morale improvement public relations are very much better, and this helps the bank's image in the country.

3. Staff are in a position to make a positive contribution towards improving the efficiency of bank operations. Through the working groups virtually every staff member has a definite pathway for his suggestions to reach those persons who are in a position to act on them.

331. The idea of working groups has spread to some other service organizations in Latin America. It is perhaps one which could be considered by banks elsewhere.

SOME ASPECTS OF THE LEGISLATIVE BASIS FOR THE ESTABLISHMENT AND OPERATION OF CREDIT INSTITUTIONS

332. Institutions furnishing credit to farmers operate within general banking and commercial legislation. In addition they usually have related special legislation covering the establishment of the institution and its statutes and bylaws. It is not the intention here to go into details of the legislative basis for agricultural banking. But one or two matters are of relevance.

333. Agricultural credit institutions usually come under fairly direct government control. This results from the government holding all or most of the share capital and from a heavy governmental participation in their management. Consequently, questions of their financial, operational and administrative autonomy are important, at least to the extent that conflicts are bound to arise because traditionally sound banking policies do not always marry well with the requirements of development. Because of this, and because credit institutions exist to aid development and not for their own sake, it is important to ensure that they are constituted so that those responsible for policy making are exposed to the real requirements of the sectors of the community which the banks have been established to assist.

334. The drafting of suitable legislation is vital in ensuring that this requirement is met. There are two main factors here. First, the statutes must ensure that the intended clientele of the bank is represented satisfactorily on the Board of Directors (or equivalent policy-making body). This representation is notoriously difficult, for few, if any, small farmers

have the necessary education to be able to argue their case effectively on such a board. It is more realistic perhaps to allow for farmers to be represented by their political representatives, church officials or, where co-operative structures exist, by officials of co-operative societies.

335. Second, the statutes should ensure that the bank is not jeopardized by being required to undertake operations, on behalf of the government, which it feels may result in unacceptable losses. An example of care in this respect is found in the statutes of the Agricultural Finance Corporation of Kenya where the Board of Directors can refuse to act in accordance with governmental directives if it feels that losses will be incurred "unless the government has undertaken to reimburse the Corporation the amount of any losses in so acting."

336. The inevitability of agricultural banks incurring very high administrative costs has been recognized above. We now make the point that the statutes of the bank should recognize the need for governmental subsidy in certain circumstances, particularly in the first few years of operation.

337. Again, an important issue for banks is the source of funds for lending. The statutes of credit institutions generally recognize their need to borrow directly from other lending institutions, and usually place some limit on this. When special limits are not given then a ceiling on borrowings may derive from more general legislation. Central bank discounting facilities are often an important source of funds for agricultural credit institutions. The legislation affecting the latter in this case is of course that relating directly to the central bank. One comment needs to be made here. It is recognized that central banks often have special difficulties in offering anything other than short-term rediscount facilities. But short-term facilities are not always suitable for agricultural credit institutions. Central bank policy-makers should therefore consider treating the re-discounting of agricultural credit instruments as a special case, in view of the limitations of time caused by natural production cycles and by the fact that benefits resulting from investment in agricultural development works are frequently delayed by some months or even years.