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FINANCING THE MECHANIZATION OF AGRICULTURE

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FINANCING THE MECHANIZATION OF AGRICULTURE

Introduction

1. The Bank has participated in financing the mechanization of agriculture in ten countries and is actively considering participation in three others. This participation has taken various forms, and it is the purpose of this report to review the methods used and their relative efficiency in relation to the specific situations they were set to meet.

2. In general terms, the purposes of the loans made by the Bank for agricultural mechanization fall within three categories:-

a) Finance the import of machinery to be purchased by individual farmers;

b) Finance the import of machinery on behalf of government agencies to operate machinery pools either on specific projects or on a custom basis;

c) To provide foreign exchange for imports of agricultural machinery under a general system of import licenses.

3. This report will be mainly concerned with the first of these three categories since it is the one in which the Bank's participation affects most directly the financing of mechanization in agriculture, namely the amount of credit extended to farmers by institutions for the purchase of machinery, the type of security demanded for such credits, the interest rate charged, the repayment terms, the dealers' mark-up for both machinery and spare parts, and the training opportunities, maintenance and servicing made available to users of machinery.

4. Other facets of this type of operation concern the relationship of the borrowing institutions with the dealers including special financial arrangements and control over the responsibility of the dealers.

5. Mechanization loans made by the Bank involve the spending of local currency by the borrowers in addition to the foreign exchange provided by the loans. These local funds are needed to extend credits to farmers above the foreign exchange cost of the machinery and to provide working capital to the farmers to finance the operating costs of mechanization.

Agricultural Mechanization Loans

6. The following loans were made by the Bank in whole or in part to finance the import of machinery to be purchased by individual farmers:-

No.of Loan	Country	Amt.Allocated	Borrower
6-CH	Chile	$ 2,500,000	Corporacion de Fomento de la Produccion
18 & 108-CO	Colombia	10,000,000	Caja de Credito Agrario, Industrial y Minero
44-NI	Nicaragua	1,200,000	Banco Nacional de Nicaragua
86-PAN	Panama	300,000	Instituto de Fomento Economico
105-PE	Peru	2,550,000	Banco de Fomento Agropecuario
55-PA	Paraguay	3,420,000	Republic of Paraguay

Under consideration: Costa Rica
Guatemala

7. The following loans were made in whole or in part to finance the organization of machinery pools:-

61-FI	Finland	$ 1,000,000	Bank of Finland
19-IN	India	7,500,000	Dominion of India
62-PAK	Pakistan	3,250,000	Dominion of Pakistan
86-PAN	Panama	700,000	Instituto de Fomento Economico
67 & 98-PE	Peru	3,000,000	Republic of Peru
55-PA	Paraguay	120,000	Republic of Paraguay

Under consideration: Japan.

8. Finally, portions of the following loans were set aside to provide the foreign exchange necessary to meet part of the needs of general import programs of agricultural machinery under licensing systems:-

26-66-96 & 111-AU	Australia	$96,800,000	Commonwealth of Australia
79-IC	Iceland	$ 200,000	Iceland Bank of Development

Financing of Imports

9. Machinery imports are financed in various ways:-

a) The Bank borrower accepts order from distributors, passes them on to the manufacturers, imports the machinery for its own account, and consigns it to distributors for sale within a given period of time. In effect, the borrower interjects itself in the normal pattern of imports in order to finance the distributors during the several months which elapse between the time the machinery is shipped from the factory and the time it is sold (Colombia).

b) The Bank borrower makes local currency loans to farmers for the purchase of machinery from dealers who use these funds to purchase from the Central Bank the foreign exchange made available by the Bank loan to finance imports (Peru, Panama, Nicaragua).

c) Government agencies import machinery for their own account and sell it directly to farmers (Paraguay).

d) Government agencies import machinery for their own use(India,Pakistan).

e) Government agencies purchase machinery imported by local dealers, using Bank loan funds to replenish the foreign exchange resources of the Central Bank (India, Pakistan, Panama).

10. The first, second and last methods make use of established trade channels and serve, if properly handled, to strengthen distributor organizations. The two other methods, while increasing mechanization, do not strengthen distributor organization since they do not provide, parallel with the increase in the machinery fleet, for an increase in servicing facilities.

Credits for Purchases of Machinery by Farmers

11. In most cases, farmers require credits to meet part or in some instances, the entire purchase price of agricultural machinery. Credits are available from three sources:

a) Short and medium-term credits from commercial banks;

b) Short and medium-term credits from distributors;

c) Short to long-term credits from the Bank borrower.

12. Generally speaking, the facilities offered by commercial banks and rural credit institutions are relatively limited and are available only to farmers with exceptional credit standing. The credit facilities available from distributors are also limited, first by their own resources and by the lack of adequate discounting facilities. The inadequacy of these normal credit sources has been an important factor in keeping the mechanization of agriculture from developing as rapidly as was warranted, even if the countries involved would have had adequate foreign exchange resources.

13. These two factors, lack of adequate credit facilities and shortage of foreign exchange, have been alleviated by the Bank loans which enable government or semi-governmental agencies to expand their lending operations into the medium and long-term agricultural machinery credit field.

Types of Credits Offered by Bank Borrowers

14. Each borrower is following a different pattern for agricultural machinery credits. In Colombia, the Caja Agraria grants credits at 6% to 7½% for up to 70% of the sales price of machinery imported by its own Machinery Department and financed from the Bank loan, or from the Revolving Fund on terms varying from 12 to 48 months. In the case of machinery imported through private trade channels, the amount of the credits is limited to 50% for terms not exceeding 30 months. Repayments are generally made in a number of equal semi-annual installments.

15. In Nicaragua, the Banco Nacional grants credits at from 8% to 12% for up to 100% of the sales price of the machinery on terms varying from 1 to 3 years. Repayments are made in a number of equal semi-yearly or yearly installments.

16. In Panama, IFE is limited by internal regulations to credits of up to 50% of the estimated value of the machinery. So far, the number of loans granted for this purpose has been very limited; 50% being too small an amount to enable farmers who do not have access to commercial banks' facilities to finance the balance of the sales prices from their own resources.

17. In Peru, the Banco Agropecuario grants credits at 7% + 2% commission for 70% of the sales price of the machinery for 48 months, with repayments scaled down from the first to the last one, to allow for increasing cost of maintenance.

18. In Paraguay, CAH grants one year loans of up to 100% of the sales price at 8% with possibility of renewals. The Banco del Paraguay grants similar loans for small equipment, but makes 3-year, 8% loans for heavier equipment.

19. In Chile, the Corporacion de Fomento sold the machinery on credit amortized over periods not exceeding 7 years.

Credit Facilities to Finance Agricultural Mechanization in Countries where the Bank Borrowers are not Credit Institutions

20. In Iceland, the co-operatives usually grant short-term credits to farmers for the financing of farm machinery purchases.

21. In Australia, farmers can finance the purchase of farm machinery from commercial banks overdrafts at 5½%, or from distributors credits of up to about 4 years at standard bank interest rates. The distributors of machinery obtain from the central banks, upon proof that adequate import licenses have been issued, the foreign exchange with which to pay for the imports.

22. Levelling, land improvement and other work required by farmers to extend their cultivations is often performed by machinery pools which have been financed out of proceeds of Bank loans. Credits are or will be available to farmers to finance the capital costs of improving their land through the facilities of these pools from the following sources:

a) In Finland from co-operative credit banks.

b) In Paraguay from the Credito Agriculturo de Habilitacion. The terms and the rate of interest have not yet been decided upon.

c) In Peru, the investment budget of the Banco Agropecuario includes funds for the granting of medium-term credits for this purpose. As in Paraguay, terms and rate of interest have not yet been fixed.

d) In Panama, farmers can obtain short and medium-term credits for IFE, and in some instances short-term credits from commercial banks.

e) In Central India, farmers whose land is being reclaimed by the Central Tractor Organization, have to pay the cost of reclamation to the States in 5 yearly installments. No interest is charged since the States originally received the funds to pay CTO from the Central Government in the form of grants in aid.

f) In the Thal area of Pakistan settlers on land reclaimed by the Thal Development Authority repay to the Authority the cost of developing land over a 17-year period at a rate of interest of 3%.

Security Required

23. In most cases, farm machinery credits granted to farmers are secured only by a mortgage on the machinery, provided however that the general credit standing of the farmers is satisfactory.

24. In some cases, real estate mortgage or crop mortgages are required, especially when the amount of the loan is in excess of 70% of the sales price or when the farmer is not known to the institution.

Contractual Relationship between Bank Borrowers and Distributors

25. In two cases only, Colombia/Caja Agraria and Peru/Banco Agropecuario do Bank Loan Agreements require that the borrowing institution deal only with distributors having adequate financial and technical facilities to service and maintain the machinery which they sell to farmers.

26. In the case of the Caja, where the Bank financed machinery is imported by the Caja itself to be consigned to the distributors, the Caja has signed contracts with distributors who import from 80% - 85% of all the farm machinery imported in Colombia, guaranteeing that it would accept orders from each of them up to a specified amount related to each distributor's financial resources and ability to handle the resulting volume of sales. On the other hand, the distributors obligate themselves to provide training to the buyers of the machinery as well as to provide servicing and maintenance for the machinery they sell.

27. In Peru, the Banco Agropecuario will submit to the Bank a list of the distributors which it has approved as being financially and technically able to service the machinery they sell to farmers who have received loans from the Banco for machinery purchases.

28. In Panama, it was suggested that IFE reach an agreement with distributors whereby they would cosign machinery loans to farmers. This proposal has not yet been acted upon.

Facilities made Available to Buyers of Bank Financed Machinery

29. For several years already the Bank has been very concerned about the problem of maintenance of the machinery it finances. It has taken the view that Bank loans were a means whereby the maintenance set-up in the borrowing countries should be generally strengthened.

30. Adequate maintenance hinges mainly on the availability of adequate stocks of spare parts and of adequately trained mechanics. With the exception of the first two agricultural loans (Chile-6 and Colombia-18), all Bank machinery loans include specific provisions for the import of spare parts, tools and other maintenance and repair equipment. The second loan to the Caja also mentions the promotion of training of skilled mechanics and operators as a needed part of an adequate maintenance program.

31. In Nicaragua, Colombia and Peru, most dealers have set up a system of follow-up of the machinery they have sold. They send up at regular intervals, varying from two to four times a year, mechanics equipped with a basic tool kit to inspect the tractors they have sold, provide preventive maintenance and recommend overhauls or repairs necessary. In most cases these

check-ups are provided free of charge, the farmer being asked to pay only for actual work that has to be carried out.

32. The first loan agreement in which specific provision is made to ensure that this service by distributors is effectively carried out, is the second Caja loan. This loan agreement provides that adequate provision should be made for field inspection by the Caja to check on maintenance and servicing facilities.

Supply of Spare Parts

33. In general, the Bank has limited its requirements for the import of spare parts in projects falling within the first category of agricultural mechanization loans to setting aside a portion of the loan for this purpose, or to provide within each category of the list of goods for the inclusion of spare parts. From the borrower's side, the Caja alone has made provisions in its contracts with the dealers for the import of a given percentage of the value of the machinery in spare parts. Further, its contracts with the distributors also give it discretion to import spare parts in addition to this 18% to be consigned to any distributor who in its opinion does not maintain adequate stocks. So far, this provision has not been enforced, but to carry out the provision of the loan agreement requiring field inspections, the Caja proposes to hire a farm equipment specialist who would also be able to make recommendations in this connection whenever necessary.

Financing of Maintenance and Servicing of Farm Machinery

34. With one exception, Bank borrowers have not so far given special consideration to the problem of financing the maintenance and servicing of agricultural machinery. The exception is the Banco Agropecuario of Peru, which provides for a scaling down of the repayments of the purchase loans to allow for the increase in costs of maintenance. However, under this system the farmer still has to finance the cost of maintenance from his own resources or from short-term credits. IFE is considering the possibility of financing maintenance by including in the machinery loan a certain amount to be available within a two-year period for the financing of repairs. However, no action has yet been taken.

Dealers' Mark-up

35. The Bank has given much thought to the problem of dealers' mark-up, which has often been very high and, therefore, not only tended to limit the expansion of agricultural mechanization but also made it very attractive for fly-by-night importers without facilities for adequate servicing and maintenance. The first action by the Bank to remedy the situation was in connection with the first Caja loan where mark-ups were limited to 35% of the CIF dealers' warehouse costs. However, 10% of this mark-up was to revert to the Caja to cover its costs of importing the machinery. The dealers were free to place higher mark-ups on machinery imported from their own resources, and so a system of double pricing developed. However, since credits available to farmers from the Caja to purchase Caja imported machinery were more

favorable than for the purchase of other machinery, the dealers had either to limit their own imports of farm machinery or provide their own credit facilities to buyers on terms similar to those offered by the Caja for Caja-imported machinery. Since the financial resources of the distributors were limited, this in fact limited imports of machinery. Since at the same time the resources available to the Caja for financing imports of machinery were restricted, imports of machinery in Colombia were kept down. The second loan makes it possible for the Caja to increase imports and, therefore, improve the situation of the machinery distributors who need a large volume of sales to be able to operate a limited mark-up.

36. In Nicaragua, no limitation was set on mark-ups and machinery has been sold with a mark-up of about 33% of CIF price.

In Peru, machinery is being sold at similar mark-ups.

In Paraguay the mark-up is 35% of the delivered cost Asuncion.

As far as Panama is concerned, there is not enough experience to indicate what the average mark-up is.

37. Experience so far would appear to indicate that in order to be able to provide adequate maintenance and servicing facilities, distributors must have an adequate mark-up or conversely if the mark-up is limited, to have large enough a volume of business to ensure adequate profit.

Local Currency Needs and Use of Counterpart Funds

38. Bank loans for mechanization of agriculture through sales of machinery to farmers fall into two broad categories:

a) Loans in which the local currency counterpart fund is deposited in a special account to be used either as a Revolving Fund for further purchases of machinery or as a frozen fund to be used solely to the purchase of foreign exchange needed to repay the Bank loans.

b) Loans in which the local currency counterpart is being used to increase the resources of the borrowing institution.

39. The two loans to the Caja are the only ones which provide for a Revolving Fund to be used freely for additional imports of machinery. The credits extended by the Caja to farmers for the purchase of farm machinery have, therefore, to be provided from the Caja's own local currency resources. The Revolving Fund is being used solely to purchase from the Central Bank the foreign exchange necessary for further machinery imports and as they fall due to meet principal repayments on the Bank Loan.

40. In the case of the loan to the Banco de Nicaragua, the counterpart funds were first deposited in a frozen account but since these counterpart funds accrued within three years from the payment of the loans extended by the Banco to farmers for the purchase of machinery while the Bank loans have a seven year term, the Bank agreed to the use of these frozen funds for further machinery imports, thus creating a sort of Revolving Fund.

41. In Paraguay, the counterpart funds are accrueing to revolving funds which so far have not been used. Loans to farmers by CAH are made from funds budgeted for this purpose. Banco loans are made from its general funds.

42. The two loans falling under group b) above are the loans to the Banco Agropecuario in Peru and to IFE in Panama. The local currency proceeds of farm machinery loans by the Banco Agropecuario will be available to it freely for its general operations for several years since the term of the Bank loan is eight years, while the credits to farmers are for a maximum of four years. In Panama, the delays by IFE in starting the program of loans to farmers for the purchase of machinery will materially limit the benefit IFE could derive from the accumulation of counterpart funds.

Future of Financing

43. The ultimate goal for the financing of agricultural mechanization should be the establishment of such facilities whereby the farmers can obtain loans from credit institutions, agricultural banks, development institutions or regular commercial banks, and then go to a regular distributor to purchase the machinery they need. At that time, the need for credit institutions to take the lead in giving advice to farmers should have been eliminated, this task falling rightfully into other hands, extension and research agencies.

44. In most cases, where the Bank has granted loans to finance the import of farm machinery to be purchased by individual farmers the borrowers are established development or agricultural credit institutions which are actively engaged in promoting the mechanization of agriculture. Under ideal conditions, as stated in the preceding paragraph, loans should be granted to credit institutions free of the necessity of engaging in developmental or extension service activities. That this has not been possible until now is due to many causes. In some cases the distributors have not been able to obtain sufficient resources to finance a high enough volume of imports to meet the demand without assistance from the Bank borrower. In other cases regular credit institutions have been unable or unwilling to meet the demand for medium term loans by farmers because of a lack of sufficient resources and the inadequacy of discounting facilities.

45. Farm credit institutions need a large volume of loans to earn their keep and only short-term loans can provide this volume with the limited resources which are usually available.

46. No one type of institution is best suited to provide the credits necessary to finance mechanization as long as it can extend medium and long-term credits to farmers to purchase machinery or pay for the cost of land improvements at terms compatible with their future earning capacity and at reasonable rates of interest. To be able to expand its portfolio of medium and long-term loans without affecting its volume of business, the credit institutions should either be able to dispose of sufficient discounting facilities with the Central Bank or to increase its paid-in capital at a rate commensurate with the increase in loan volume.

47. The financing of distributors should cease as soon as the need to ensure adequate servicing, maintenance and training facilities has passed. This will happen as soon as sufficient supplies exist and competition between distributors has developed. In a country whose mechanization of agriculture has reached optimum levels, the demand on distributors for replacment parts and machines should be enough to provide the volume necessary to not only enable, but also incite distributors to provide adequate facilities.

Revolving Funds

48. The Bank's experience with revolving funds has on the whole been satisfactory. In Colombia, where such a fund has been in full operation, the volume of imports has been quadrupled over a five-year period. In Nicaragua where originally the counterpart funds of the loan were deposited in a frozen account, the Bank agreed, belatedly, to their use, with the result that imports increased by 40% over those financed with the original loan. The circumstances under which revolving funds have been created have varied and their usefulness as generators of additional imports of machinery has to be weighed against the benefits which could accrue to the borrowers from the free use of the counterpart funds in their operations. One point is clear, however, that unless there exists a real danger of inflation, the counterpart funds should not be frozen. Even then, some other productive method should be devised.

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