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INDIA'S FOOD SURPLUS

by Hannan Ezekiel

I—Burden or Opportunity?

The foodgrains harvest in 1984-85 is likely to match if not exceed the record harvest of 1983-84. The reckoning is that while official foodgrain procurement will spurt, offtake from the public distribution system will show a sustained decline.

Should India export foodgrains in order to tackle the problem of excess stock? The author points out that the export market for wheat, our main surplus grain, is weak. Should the government change its procurement policy and reduce or abandon its commitment to procure foodgrain? If this were done, the author notes, it would very justifiably be construed as a betrayal of the farmer. It would generate grave resistance to any compulsory procurement introduced in any future year in which there is a bad harvest.

The problem of an embarrassing surplus in foodgrains is really a surplus of supply over demand and not of availability over need. It is a surplus which has arisen in the face of widespread poverty in the country with a large proportion of the population—many millions of people—not having enough to eat.

The author argues that what the country needs, in order to deal with the problem of food surplus and large and rising official food stocks, is a systematic programme of labour-intensive productive activity supported by the use of the available surplus food.

As a result of a bumper harvest of 151.5 million tonnes of foodgrains in 1983-84, India faces an embarrassing surplus of foodgrains. Official procurement in the current season amounted to more than 17 million tonnes. Official foodgrain stocks at the beginning of July reached the high level of around 22 million tonnes.

Normally, offtake of foodgrains from the public distribution system amounts to around 13-14 million tonnes per annum. However, food is available in plenty in the open market because of the bumper harvest and open market retail prices this year should be little higher than those charged by the public distribution system. Experience has shown that offtake from the public distribution system in this situation tends to be smaller than usual. This is because many of those entitled to buy from the pub-

lic distribution system prefer the convenience of making their purchase in the open market when the price difference, if any, is small. Offtake this year may therefore be only 10-11 million tonnes.

The current year's harvest is also expected to be a bumper one—around this year's level or even higher. Procurement will probably be heavy once again. It may even be larger than it has been this year as market purchases by traders fall off and the own stocks of farmers reach their limits. Official stocks will therefore rise even further and may reach not less than 25 million tonnes and perhaps as much as 28 million tonnes or more. Offtake from the public distribution system next year will once again be small. Stocks will therefore tend to come down from these high levels at a slower pace than usual.

This year's official stocks are already much higher than the public distribution system has the capacity to store securely. Substantial quantities are therefore being stocked in the open and without adequate security or protective arrangements. Newspaper reports indicate that the unprotected stocks may already amount to over 2.5 million tonnes. Losses through weather damage, vermin infestation, and theft will thus be higher than usual this year and may rise even further next year.

Some additions to storage capacity could of course be made through an emergency programme of warehouse building. There are, however, obvious doubts about whether such a programme can be satisfactorily implemented on the required scale even if the resources for the purpose could be made available. In the present situation of acute scarcity of resources, it seems extremely unlikely that the resources could be found. There are certainly better uses to which the available resources could be put. Besides, if the warehouse capacity for the storage of foodgrains by the public distribution system is expanded to meet the immediate situation this will certainly lead to large unutilised warehouse capacity in future years when foodgrain stocks in the public distribution system come down to more normal levels. This will add to the costs of the public distribution system and result in increases in either retail prices or subsidies at that time.

As it is, the carrying costs of foodgrain stocks are high. The need to finance the larger stocks will divert invaluable resources from other more fruitful ventures, while the higher carrying costs resulting from the larger stocks will impose a heavy burden on either the consumer or the treasury.

It is therefore necessary to consider what can be done to reduce foodgrain stocks with the public distribution system immediately and to prevent them from rising to even greater heights when procurement begins after the next harvest.

One possibility, at least for the next harvest, is for the government to give up or moderate its present procurement policy. In other words the government might refuse to procure foodgrains altogether at the next harvest or at least limit its procurement operations so that its maximum stocks even after the next harvest do not rise to more than say 20-21 million tonnes of foodgrains.

Such a change in what has been a basic policy of the government would hit farmers at the worst possible time for them, i.e., when they had harvested a bumper crop for the second year in succession. It has been one of the strongest government arguments in favour of the public distribution system that it helps to support foodgrain prices when harvests are good (and of course seasonally after every harvest). To give up procurement at such a time without putting an alternative foodgrain strategy in place would certainly disrupt the entire production and marketing system and cause grave harm to the economy as a whole, particularly in the long run. It would very justifiably be construed as a betrayal of the farmer and generate grave resistance to any compulsory procurement introduced in any future year in which there is a bad harvest.

There are certainly strong arguments in favor of moderating or abandoning public procurement and distribution, particularly as the country moves increasingly into an overall surplus foodgrain situation (or at least into a marginal surplus/deficit situation). It would be wrong, however, to do so at this time and in any case without putting into place a proper alternative food strategy that would work in the larger national interests under an open market system. In any case, neither the government nor the country appears to be ready for such a step at this time. Indeed, little discussion has taken place so far on the possible nature of an alternative food strategy for the country.

It is therefore necessary to carry out a careful examination of other possible ways of dealing with the surplus stocks of the public distribution system. Such an examination will also throw considerable light on the elements of a proper food strategy for the country under an open market system in view of the emerging scenario of possibly embarrassing large foodgrain harvests in India in the future. This follows from the fact that the problem of excessive stocks faced by the public distribution system is ultimately merely a symptom of the more fundamental problem affecting the foodgrain sector, namely that of an embarrassing excess of supply over demand for foodgrains in the country as a whole.

One possibility is to consider exporting substantial quantities of foodgrains from India during the next two years. The theo-

retical case for exports is strong. Even if it were felt that the country should be conscious of the food deficits that might arise in the future, the case could be made that it would be better to hold reserves in the form of foreign exchange than in the physical form of foodgrain stocks. Foreign exchange reserves would earn interest, while foodgrain stocks involve cost—interest, storage, and damage or loss. World prices of rice are favourable compared to the cost of exporting Indian rice. However, in spite of the bumper total harvest this year, rice remains in short supply in the country. Although, as in past years, India will export some Basmati rice and other high quality rice, it will import much larger quantities of fair quality rice, so that trade in rice will yield a substantial net import surplus in volume terms. It is wheat of which India has a large net surplus. The question at issue is therefore whether India should export substantial quantities of wheat.

Unfortunately, world prices of wheat, our main surplus grain, are at extremely low levels and even at the current exchange rate of the rupee, well below the c.i.f. export price at which India could cover its costs. Exports could therefore only be made at a huge loss. The country would earn foreign exchange and the interest on this would also be earned in foreign exchange. The resulting situation would have to be compared with the higher holding cost and the higher losses that would have to be borne if the government held on to its excess stocks. A comparison of these two sets of costs might well prove to be illuminating, considering how high the costs are of holding even normal buffer stocks. Such a comparison—taking of course into account the possibility that world food prices might be higher when India needs to import food in the future—might still favour exports. An approach based on wheat exports would still, therefore, be worth considering.

Any discussion of large-scale wheat export at this stage should however raise in everyone's minds some fundamental questions about the nature of the food surplus facing the country. It was described at the beginning of this article as an embarrassing surplus. The surplus is embarrassing, however, not merely in the sense that it is large enough to create many complex problems of storage, financing, and losses for the public distribution system. It is embarrassing in a more important sense

because it is a surplus of supply over demand not of availability over need. It is a surplus which has arisen in the face of widespread poverty in the country with a large proportion of the population—many millions of people—not having enough to eat.

What this brings out is the dual nature of the problem of food. On one side, it is a problem of food production, the problem of how to produce enough food to meet the country's needs. On the other side, it is a problem of demand for food and income generation, the problem of how to generate enough income in the hands of people all over the country so that they have the income with which to buy the food they need.

This latter problem has sometimes been mistakenly described as a problem of income distribution as if income is produced at one end and distributed at another. It is better understood as the problem of how to bring about widespread generation of productive employment and creation of opportunities for earning an income in other ways for the vast masses of people who suffer from open unemployment, seasonal unemployment, disguised unemployment, or low-productivity unemployment.

It is important to recognize that if opportunities for productive employment and income generation are created in the country, the domestic demand for food would rise and could even become greater than the present supply. Whether the present excess supply situation will turn into an excess demand situation in the short run depends on the way which additional employment opportunities are created. If they are created through activities that tend to increase food production directly or indirectly, then the increased demand for food will be offset at least partially by further increase in food production. There will be no such offset to the extent that the additional employment is generated in the non-food sector. However, there will be other effects that are relevant to the overall situation.

To the extent that additional income is generated in the production from existing capacity of non-food consumer goods such as textiles that would not have been otherwise produced, this will meet some of the additional demand for such goods that will arise as incomes rise. Again, to the extent that additional income is generated in the production of certain types of intermediate goods such as cement (from existing ca-

capacity) there would be an increase in the supply of such goods needed to make possible the employment generating activity.

This discussion of the relationship between the demand for food and the present supply situation is intended to focus attention on possible ways of handling the food surplus so that it can contribute to the country's development instead of being a problem and a burden. Properly treated, the food surplus can be a valuable resource. It represents a great opportunity, which the country cannot afford to miss.

It is interesting in this connection to look at the way in which the United States and the countries of the European Economic Community have handled the problem of food surpluses, whatever one may think of the policies that have resulted in such surpluses. These countries have been using some of these surpluses to provide food aid to less-developed countries that are less fortunately situated than themselves with respect to food. Some of this food is being provided to meet emergencies arising from disasters of various kinds. Some of it is being used for relief, nutrition or incentive programmes. The rest has been used for directly developmental purposes, mainly different types of Food-for-Work Programmes.

Unlike the United States and the countries of the EEC, India is hardly in a position to provide a substantial amount of food aid

to other countries, though it would be better to provide some food aid (selectively and innovatively) rather than to allow that food to go to waste. In general, however, although it has a large food surplus which may continue for the next year or two, its overall economic position is still weak, weaker than many of the countries now receiving food aid. Per capita income is still low. Large numbers of the people are still below the poverty line. There is therefore tremendous scope for using food within the country as a resource for promoting development in a manner similar to food aid.

What the country needs in order to deal with the problem of food surpluses, and large and rising official stocks, is a systematic programme of labour-intensive productive activity supported by the use of the available surplus food. Such a programme could be run as a normal employment programme with wages paid in cash but supported by the positioning of adequate stocks in the relevant areas. Or it could run as a Food-for-Work Programme, with wages or a substantial proportion of them, being paid in food. The great merit of such a programme would be that the surplus food, which might otherwise rot and which in any case would entail heavy carrying costs, would instead be able to play a valuable role in promoting the country's economic development.

October 31, 1984

II—Financing Its Utilisation

In the second part of this article, the author shows that by using the "surplus" foodgrain in programmes of employment generation, the government can save close to Rs 1,000 crores on the expenditure it would otherwise incur on the public distribution system. This order of resources could be garnered through savings in carrying costs of foodgrain, savings in consumer subsidy and savings in storage losses. Savings so effected would substantially pay for the cost of an employment generation programme, using 9 million tonnes of foodgrain over a three-year period.

The author argues the case for bank finance for the proposed employment generation programmes. This would hardly require additional resources from the banking system. For banks will be financing physical assets created by employment generation programmes instead of financing unsold foodgrain stocks.

The reckoning is that by 1988-89, returns from the investment in the employment generating programmes would be sizeable, and a significant proportion of the bank credit would be paid off even before it would have been paid off in the absence of the programmes.

Besides, if the programme makes a direct contribution to food production, official food stocks will show a more favourable behaviour over the entire period and stocks on July 1 of each year should be correspondingly higher than anticipated. Bank financing initially provided against food stocks, could then be justifiably used to finance the assets created through the proposed programme over a correspondingly longer period.

The correct solution to India's current problem of surplus food is to develop and implement an immediate programme of labour-intensive developmental activity on the basis of the support provided by the available surplus food. The justification for adopting this solution was presented earlier (in the issue of October 31).

If this analysis is accepted, the critical need is to move out into use the foodgrain stocks that are in excess of available storage capacity. On July 1, this year, foodgrain stocks were so high that foodgrain stocks held in the open were reported to be around 2.5 million tonnes. They may have risen thereafter, but subsequent offtake from the public distribution system may have reduced such unprotected stocks. However, this does not mean that the problem of excess stocks, even in this limited sense of unprotected stocks, has been solved.

If the 1984-85 harvest is also good, as is expected, procurement will be the same as or higher than in the current year, i.e., about 17-18 million tonnes. As offtake during the current year is not expected to exceed 11 million tonnes, stocks on July 1 next year may be around 9 million tonnes in excess of storage capacity. The problem may therefore become even more difficult by that time.

It is true that, after two good years, the harvest in the years 1985-86 and 1986-87 could be bad once again. If that happened, official stocks could fall quite rapidly during 1986-87, as offtake rose and procurement fell. A conservative approach would wish to protect against this eventuality. Even with a conservative approach, however, at least 6 million tonnes of foodgrains would be available to support such a programme of development-oriented projects over a two-year period. This would be in addition to whatever quantity of foodgrains is being used at present to support various types of Food-for-Work or employment guarantee schemes in the country, as these current programmes are already reflected in the existing data on offtake on which these computations are based.

What is needed therefore is a programme for the additional use of approximately 3 million tonnes of foodgrains per year for two years. As it takes time to develop a proper programme and to set up the machinery for its implementation, this programme may have to be phased with perhaps only about 2 million tonnes of foodgrains being utilised during 1984-85 and the remaining 4 million tonnes being utilised in 1985-86.

If the programme is drawn up in such a way as to make a positive and immediate contribution to food production, there may be less need to adopt such a conservative approach. If the harvest for 1985-86 is not as bad as is assumed here, the case for extending the programme would certainly be strengthened. It would be possible to provide another 3 million tonnes for use in this manner in 1986-87, subject to cancellation or modification in the light of developments relating to the harvest for 1985-86.

The costs of a programme for the use of around 9 million tonnes of foodgrains over a three-year period would certainly be large. The cost of foodgrains alone would be in the range of Rs 1,500 crores spread over a three-year period. This is by no means excessive for a programme that will generate employment and income among the poorest sections of society, increase their foodgrain consumption, and expand agricultural output. However, there are certain direct offsetting savings for government resulting from the fact that the stocks would not have to be held, which must be taken into account.

If the programme is implemented as indicated, carrying costs would not be incurred on 2 million tonnes for two and one-half years, 4 million tonnes for one and one-half years, and on 3 million tonnes for one-half year, i.e. on say 12½ million tonnes for one year. At the rate of about Rs 30 crores per million tonnes per annum, this would yield savings of Rs 375 crores.

When foodgrains are actually sold from official stocks, the government pays consumer subsidies (exclusive of the cost of carrying buffer stocks). The actual amount

per tonne varies from year to year. Assuming this at Rs 250 per tonne, the consumer subsidy would amount to Rs 225 crores on 9 million tonnes.

Normal losses are taken into account in the consumer subsidy and the costs of holding stocks computed above. However, when stocks are excessive, the losses of foodgrains on additions to stocks are heavy. Assuming that losses on the 9 million tonnes of foodgrains used in the programme would have been 2 million tonnes if these had been retained in official stocks instead, the savings on this account would amount to Rs 340 crores.

By using 9 million tonnes of foodgrains in a programme of development, the government would thus save Rs 940 crores on the public distribution system over these three years. On this basis, the net cost of the proposed programme would be only Rs 560 crores as compared with the gross cost of Rs 1,500 crores.

It is of course possible to dispute the exact figures used in these calculations. There may, however, also be elements of savings that have not been taken into consideration at all. That there are offsetting savings is, however, not to be doubted. It would probably be fair to say that the net costs of the programme would probably be in the range of Rs 500-700 crores as compared with the gross costs of Rs 1,500 crores given by the value of 9 million tonnes of foodgrains.

Adoption of such a programme would thus yield an investment worth Rs 1,500 crores at a cost of less than half that amount. It would also make possible an increase in foodgrain consumption amounting to 9 million tonnes over a three-year period, presumably by those whose foodgrain consumption would otherwise have been inadequate. These are valuable benefits and everything possible should be done to generate them.

This is not to suggest that there are no difficulties in connection with such a programme. Any Food-for-Work programme has costs other than those for the food itself. There are administrative costs involved in drawing up and implementing such a programme. Intermediate goods such as cement and steel would be needed for many of the projects to be implemented. Machinery and equipment would also be needed for use in combination with labour. The more effective the projects are to be

from a longer-term or development point of view, the higher in general are likely to be the costs of machinery and equipment and of steel and cement as a proportion of total project costs even if care is taken to make the projects as labour-intensive as possible.

Besides all this, it may be necessary to pay at least a portion of wages in the form of cash to allow for the purchase by the workers of other food products, nonfood consumer goods like cloth, and services of all kinds, e.g. transportation and medical treatment. Workers may also wish to repay some debt or to build up savings for the acquisition of assets including land. If the entire wage is paid in the form of food, the workers may try to sell it in the open market. They would have to do so at a loss. Under prevailing conditions of abundant availability of food, the loss may be substantial. In effect, the real wages of workers would be lowered. Therefore, their willingness to work on the Food-for-Work project might well be reduced.

If only a portion of the wages are paid in the form of food, other resources will have to be found for the programme, but on the other hand the given quantity of foodgrains will be able to sustain a larger investment programme and provide a larger volume of employment. Other resources will in any case be necessary to cover administrative costs and the costs of machinery and equipment, cement, steel, and other intermediate materials.

Let us assume that all these costs of the programme can be limited to the amount of the budgetary savings computed earlier resulting from nonholding of these foodgrain stocks because they are used up in the programme, i.e., Rs 940 crores or, more roughly, between Rs 800 crores and Rs 1,000 crores. In that case, an investment programme distributing Rs 1,500 crores worth of foodgrains and having a gross cost of between Rs 2,300 crores and Rs 2,500 crores would become possible at a total net cost of Rs 1,500 crores.

In looking at the problem of financing this programme, i.e., of raising the amount of Rs 1,500 crores required to implement it, it is useful to remember that if the programme is not implemented, it would be necessary to finance the holding of foodgrain stocks to that extent in any case. Bank funds are used to finance stocks of foodgrains. When these stocks are used

in development projects, the banks can substitute financing of the development programme for financing of the food stocks. The total liability to the banking system would remain unchanged, but the assets financed would in the effect be not food stocks but those created through the programme. Assets in the shape of unproductive food stocks would have been converted into productive assets of different types worth much more but the liabilities to the banking system would remain unchanged.

Admittedly, there is a problem here. This arises from the fact that food stocks normally get liquified when they are sold and the proceeds can be used to liquidate the liability to the banks. In the arrangement suggested, the food stocks would indeed disappear, but they would be converted into physical assets of a fixed capital nature and the liability to the banking system would remain unliquidated.

The justification for nevertheless adopting this method of financing the scheme is that in the absence of the scheme, the food stocks would have remained unsold and the liability to the bank unliquidated in any case. Whether the relevant asset financed by the bank is food stock or some physical productive asset does not affect the result as long as the government would have continued to hold the food stocks in the absence of the Food-for-Work programme.

The question at issue, therefore, is when the food used in the Food-for-Work programme would have been drawn in the absence of the programme. Until that point of time, the use of bank financing for the programme (i.e., the assets created through it) instead of for holding food stocks would have no adverse effects on the economy.

The food that is used for the programme is not any different from the food that continues to remain in stock. It is not therefore possible to identify when that food would have been sold if it had not been used for the programme. The question has, therefore, to be treated logically rather than in terms of physical qualities. Since the programme is being proposed on the grounds

that the stocks are excessive, it would be correct to say that these stocks in a sense "float" on top of the total stocks, while the withdrawals come from the bottom. It is only when taking offtake and procurement together, i.e., as on July 1 of any year, food-grain stocks would have fallen to within a "normal" ceiling even in the absence of the programme that the food stock used up for the programme should be considered to have been sold in the usual course. Up to that point of time, there would be no difficulty in using what is essentially food stock financing by banks for the financing of the proposed development programme. This point may take up to 1988-89 to reach.

By that time, the returns from the investment in the Food-for-Work programme—incidentally this investment amounts to Rs 2,300 crores while the bank financing would be only Rs 1,500 crores—should have already come in for some time and could be logically treated as first paying off the bank credit. A significant proportion of the bank credit would be thus paid off in this manner even before it would have been paid off in the absence of the programme. Some proportion of the bank finance may still remain unpaid at that time but it would now form only a small proportion of the total assets created.

Besides, if the programme makes a direct contribution to food production, official food stocks will show a more favourable behaviour over the entire period and stocks on July 1 of each year should be correspondingly higher than anticipated here. Bank financing initially provided against food stocks, could then be justifiably used to finance the assets created through the proposed programme over a correspondingly longer period.

The crux of the problem is therefore to draw up and implement a Food-for-Work programme that is effective and contributes strongly and quickly to increased food production. The more successful it is in this direction, the greater the overall benefits of the scheme and what is more relevant in the context of this discussion, the easier it is to finance without other adverse effects.

November 1, 1984

III—A Development Resource

The discussion so far has been based on the assumption that food should be used primarily to support agricultural or rural development. In the concluding part of the article the author notes that food can be used to pay part of a worker's wages, but the work for which this wage is paid need not necessarily be carried out on the creation of assets that increase food production or even more generally rural or agricultural assets.

The critical constraints that must be kept in mind are regarding the labour-intensiveness of the project and the "food-intensiveness" of the wage. Otherwise, there is no real limit to the sectors for which food-for-work projects can be framed. Some of the important considerations relating to food-for-work projects may actually result in a higher priority being given to other sectors than agriculture for such projects.

One such consideration is the availability of ready projects, which have perhaps already undergone careful scrutiny and appraisal and which may require modification only to the extent that food is to be used to pay a substantial proportion of the wage bill. Another is the existence of an organisation capable of implementing the project with a reasonable degree of efficiency after getting it suitably modified and updated.

The railways stand out as a major sector in which both these criteria are clearly satisfied. The railways have a large number of projects—fully drawn up, costed, and evaluated—and they have an organisation capable of implementing these projects.

The general conclusion is inescapable. The country's food surplus, far from being a problem, is indeed an opportunity. To take that opportunity, powerful and innovative action is needed.

The current surplus of foodgrains in India is a valuable resource which can be utilized to promote the country's economic development. It may achieve this in part by promoting increases in food production. Utilising the food surplus in this manner is the best solution for the problem posed by excessive official foodgrain stocks, which are not only larger than the needs of the public distribution system, but greater in volume than the available warehouse capacity for their storage.

On the basis of the current foodgrain position and a conservative assessment of likely future developments in the food-grain sector, it can be assumed that 9 million tonnes of foodgrains could be used for such a programme over a three-year period. The main objective of this programme should be to create productive assets through labour-intensive projects for which wages are paid wholly or largely in the form of food. Such a programme would have an estimated total cost of Rs 2,300-2,500 crores with a food component valued at Rs 1,500 crores. However, because of offsetting budgetary savings, the net cost would be about Rs 1,500 crores.

This expenditure could be financed from the bank funds that would have been provided for holding the foodgrain stocks if those stocks had not been used in such a programme. However, if this procedure is not to have any adverse effects, these bank funds would have to be repaid after a few years. This point of time would be reached when peak official food stocks would have fallen back to more "normal" levels even in the absence of the programme. To ensure such repayment within this period and in any case to justify the adoption of the proposed solution to the problem, it is of critical importance to draw up the programme along sound lines.

The proposal is to use the available surplus of foodgrains to support asset-creating activity in the country. The assets created should be such as to generate an increase in annual employment and income perpetually in the future through increases in the production of food, other agricultural commodities, or other products and services. India has considerable experience of employment-guarantee schemes and Food-for-Work schemes. The principal objective of these schemes

has, however, been to provide relief by generating employment and income during the project phase. The possibility of generating employment, output, and income on a continuous basis from the assets created has been generally treated as being of secondary importance.

In the programme that is proposed here, these priorities will have to be reversed. The primary emphasis will have to be on the creation of durable productive assets from which there will be a continuous flow of employment, output, and income in the future. However, since food is to be used as a resource in creating the asset, and since it can be used in this manner only through the payment of wages in the form of food, the programme must necessarily consist largely of labour-intensive projects.

On the basis of the estimates of the costs of the programme presented earlier, it is clear that the food component of the total costs of all the projects taken together should be 60-65 per cent. On the assumption that 80 per cent of the wages are paid in foodgrains and the rest in cash, the wage component of total project costs would have to average 75-80 per cent. These ratios are undoubtedly rather high but could be tempered if additional financial resources are made available for the programme.

It needs to be kept in mind that there is no need to separate Food-for-Work projects completely from other labour-intensive projects once the Food-for-Work projects are also based on the criterion that they must create productive long-term assets. Consequently, wages could be actually paid in food over a broader range of projects, thus making it possible to keep the proportion of wages paid in the form of food lower than would otherwise have been possible. This would resolve some of the practical problems that arise when the whole of the wages or a very high proportion of them on any project are paid in the form of food.

There is a wide range of rural infrastructure works that can be undertaken on a Food-for-Work basis. Construction of secondary roads has been popular in this context but one can think of terracing and contour bunding of land, fencing, and land reclamation through clearing and weeding. Many suitable projects can be found in the irrigation sector. Building of small bunds or digging of tanks and wells, as well as

construction of secondary, feeder, and field channels from canals are all potentially useful projects to undertake. Afforestation on village or public lands, using some of the new "miracle" trees, could contribute greatly to rural development. A number of community development projects could be envisaged that would contribute to education, health, or social welfare in general with positive feedback for production. Digging of drainage channels to prevent flooding as well as water logging and salt efflorescence can also be very useful.

If the proposed program is to serve its purpose, it would be necessary to select projects carefully so that they are at the same time both labour-intensive and highly productive from a longer-term point of view. It is useful in this connection to classify projects into those resulting in the (a) creation of new assets; (b) improvement of existing assets; (c) repair of damaged or disused assets; and (d) maintenance of existing, functioning assets. As a general rule, it can be said that, as one moves down this list from (a) to (d), the incremental capital-output ratio is likely to fall. In other words, the developmental impact in terms of long-term employment and income generated is likely to rise.

Another important criterion in project selection relates to the existing or potential economic environment in which the particular asset will operate. This environment includes the various assets already in existence or to be created in the sector and/or region in which the new project is to be implemented. It also includes the various developmental schemes and economic services in place or to be provided in the area in which the project is to be set up. The productivity of a project, and its effectiveness in contributing to the growth of income and employment, depends on its ability to draw on and make more effective these assets, schemes, and services.

It is obvious that construction of feeder or field irrigation channels will be productive if irrigation canals or primary and secondary channels, with full water availability, are already in place. It is less obvious but equally important that the completion of these channels will have a more powerful developmental effect if systems for distribution of fertilizer, provision of new seeds, and supply of credit are already in place or to be set up. Similarly, extension services must be in operation and effective ar-

rangement made for marketing the additional output.

The Food-for-Work projects, or more accurately the additional projects made possible by the proposed Food-for-Work programme, must thus be integrated into a proper programme of rural or agricultural development, if they are to succeed. In addition to all this, it is necessary to ensure that the assets to be created are well-designed and engineered, and that they are built with suitable materials to proper specifications under adequate supervision.

There is, of course, nothing new in this. Nor does it apply in any singular fashion to Food-for-Work projects. It is necessary to focus attention on these considerations here only because they tend to be forgotten when Food-for-Work projects are under consideration. They are particularly important because the very success of any programme for utilising India's surplus food along the lines I have proposed hinges on the long-term productivity of the projects implemented.

The programme must draw for this purpose on the pool of projects (both local and regional), that presumably already exists in the country. A large number of projects are unable normally to find financing. With financing available through the food surplus in the country, all that is needed would be to match these resources to suitable projects from the pool.

It is likely, however, that once resources start looking for projects, the so-called pool of projects may prove to be a mirage, with very few of them having been properly designed, engineered, and evaluated. If this happens, it will only mean that a serious gap in India's development organisation, which has long been suspected, will have become apparent. Suitable steps to fill this gap will have to be taken if the proposed programme is to succeed, particularly because the very implementation of the programme, taken together with other developments in the country, may well result in very frequent generation of such surpluses in the future even in the face of more rapidly rising demand. It will also be necessary to build up a suitable organisation for the implementation of the programme, though it will be possible to draw upon the existing public food distribution system for the actual handling of the food involved in the Food-for-Work programme.

The discussion so far has been based

on the assumption that food should be used primarily to support agricultural or rural development. This assumption is not entirely justified. Food can be used to pay part of a worker's wages, but the work for which this wage is paid need not necessarily be carried out on the creation of assets that increase food production or even more generally rural or agricultural assets. It is important to recognize this point because it liberates the vision in considering what productive use can be made of food in the country's development. The critical constraints that must be kept in mind are regarding the labour-intensiveness of the project and—to coin a phrase—the food-intensiveness of the wage. Otherwise, there is no real limit to the sectors for which Food-for-Work projects can be framed.

Some of the important considerations relating to Food-for-Work projects set out here may actually result in a higher priority being given to other sectors than agriculture for such projects. One such consideration is the availability of ready projects, which have perhaps already undergone careful scrutiny and appraisal and which may require modification only to the extent that food is to be used to pay a substantial proportion of the wage bill. Another is the existence of an organization capable of implementing the project with a reasonable degree of efficiency after getting it suitably modified and updated.

Looking at the economy with an open mind from this point of view, the railways stand out as a major sector in which both these criteria are clearly satisfied. The railways have a large number of projects—fully drawn up, costed, and evaluated—and they have an organisation capable of implementing these projects if the resources are put at their disposal. A number of projects, which the railways consider highly viable and which often are also of critical importance both to their well-being and to the strength of the economy as a whole, have been put on the back-burner because of paucity of resources. Many of these will certainly qualify also as being heavily labour-intensive.

If the railways are offered the opportunity to implement these projects with the help of food surpluses, supplemented by some financial resources, they should certainly jump at the opportunity to show what they can do in this field.

It is true that even here great care will have to be taken in the selection and design of projects. The projects will have to be small enough—and advanced enough in other respects—to be completed within a year or two. They must be highly cost-effective and have relatively low ICORs. For this purpose, they must in most cases be complementary to existing assets or facilities and must be expected to have a more than proportionate impact on the economy for that reason on completion. Wherever possible, the opportunity should be taken to complete partially completed projects that have been held up for lack of resources so that the volume of resources locked up in incomplete projects is reduced as much as possible.

The value of such railway projects will *lie not merely in the immediate return* they are likely to generate for the railways them-

selves but in the strengthening they will bring about in the ability of the railways to transport the nation's goods. It might in any case be a good idea to allocate some of the available resources, particularly in the initial stages, to the railways for suitable projects from its portfolio, while the necessary apparatus is being set up to implement a programme of rural or agriculture-based Food-for-Work projects.

The general conclusion of these articles is inescapable. The country's food surplus, far from being a problem, is indeed an opportunity. To take that opportunity, powerful and innovative action is needed. At the same time, great care and caution needs to be exercised. Given all this, India's current food surplus is a most valuable resource for the country's economic development.

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