

Our Delhi Letter

Ford Foundation Team on Food Crisis

IT is a well-known fact that the major limiting factor for the development efforts of an underdeveloped country is often the insufficient response of food production to the pressure of demand. This is particularly true of countries in which the rate of population growth is high and the standards of consumption are already low. It is therefore not surprising that the Ford Foundation Team should recommend for everybody's consideration a major effort for increasing rapidly India's food production. What they say has in fact been said by many experts and non-experts before. But what is new is the vehemence with which they argue the case for increased attention to agriculture.

During the First Plan period, India's population growth was about 5 million persons per annum. Comparing this rate of growth over the years since the beginning of the First Plan, it is estimated that food will have to be provided for 80 million more people by the end of the Third Plan. Keeping in view this addition to the number of mouths and allowing for some improvement in *net* daily consumption per person of cereals and pulses, preliminary estimates, in recent discussions of food target, put requirements at 100 million tons. The Team is not satisfied with this target since it does not make sufficient allowance for reserve stocks, which they want to be of the order of 10 million tons.

Their target is therefore 110 million tons, and they make it clear that unless heroic efforts are made, the achievement of this target will be well-nigh impossible. It requires action at the highest levels of Government. "Decisions which are binding on all Ministries of Government, and on all levels of Government and which are supported by political leaders, must be made". For, in order to produce 1.10 million tons of foodgrains by the end of the Third Plan, the rate at which food production grows must be more than doubled from 3.2 *per cent* between 1952-53 to 1958-59 to 8.2 *per cent per year* in the next seven years!

How then is this order of increase in foodgrain production to be achieved? In fixing priorities for investment in agriculture, the pride

of place until now has *gone* to irrigation, particularly by major irrigation works. Now it is being realised that provision of more water for increasing yields would be costlier than to get the same increase in yield through the consumption of more chemical fertilizers. The relationship between fertilizer and water is clearly not one of perfect substitutability there would not be any increase in yield if fertilizers were applied to dry lands. But after the completion of the Second Plan, we should have enough of wet land on which production could be increased substantially through a more intensive use of fertilizers. And this, in fact, would yield much better results than mere extension of irrigation.

The most favourable increase in production due to more irrigation that can be expected is estimated at about a third of a ton per acre: that is, to increase food production by one ton would require provision of irrigation to three acres. For 'major' irrigation projects the capital cost per acre amounts to Rs 350, so that to increase food production by one ton would require a capital investment of over a thousand rupees. On the other hand, it may be observed from the experiments that have been undertaken in our country, that one ton of nitrogenous fertiliser will produce at least 10 tons of foodgrains. Since the cost of producing one ton of fertiliser would be approximately Kg 4,000, the capital cost needed to increase food production by one ton through increased use of this fertilizer would work out at about Rs 400. These estimates are in fact on the conservative side. For example, the average response to fertilizer and unit production capacity of nitrogen, as noticed in cultivators' fields in the Bihar experiment, were as given in the table alongside.

(In the Bihar experiments response varied from 1.5 to 4.7 mds per acre for a standard dose of 20 lbs of nitrogen per acre. This means response came to 3.4 mds per acre or 13.9 pounds per pound of nitrogen applied.)

Although the Ford Foundation Team has put considerable emphasis on better water-management for

greater and more immediate gains in food production, the target it has set for fertilizer production (which is twice for nitrogen, four times for phosphorous and seven times for potassium over the target set by the Working Committee on Fertilizers of the Ministry of Food and Agriculture) implies that fertilizers will have to play a major role in increasing food production. But this has to be inferred. Such difficulties of interpretation arise again and again in the Team's report probably because different chapters were written by different members. The result is that we do not get any co-ordinated plan of action with priorities; and everything, from reduction of the number of cattle to changing food habits, seems equally important for meeting the crisis. Nor has the Team examined the implication of much greater emphasis on agriculture against the total resource position and the impact it will have on industrialization or the building up of the capital base during the Third Plan. All the same, some of the defects with regard to water utilization pointed out by the Team such as unduly large seepage of water (it has quoted a report where it is stated that 50 *per cent of* water diverted from rivers and streams is lost in conveyance), bad distribution of water due to irregular formation of fields and inability to grow more than one crop in 88 *per cent of* irrigated areas— may well be remediable without too large a diversion of resources and be extremely useful in raising productivity per acre.

<u>Crop</u>	Response
	to N in mds per acre.
	<u>25 lbs of N.</u>
1. Paddy (Response)	5.3
UPC*	17.0
2. Wheat (Response)	3.6
UPC	15.8
3. Maize (Response)	3.7
UPC	10.6

*UPC— Unit production capacity (grain in pounds per pound of fertilizer used)

(See Fertilizer News published in March 1958 by Fertilizer Association of India).