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Vol XVI
No. 1

ISSN 0019-5014

CONFERENCE
NUMBER

JANUARY-
MARCH
1961

INDIAN JOURNAL OF AGRICULTURAL ECONOMICS



INDIAN SOCIETY OF
AGRICULTURAL ECONOMICS,
BOMBAY

PROBLEMS OF MARKETABLE SURPLUS*

P. C. BANSIL

*Perspective Planning Division, Planning Commission
New Delhi*

Production is "one end" of the food problem in India, the other being distribution. Along with production, distribution of foodgrains may thus be an equally important problem to be faced within a developing economy. This has got two facets—distribution machinery and creation of marketable surplus.

The existing distribution machinery which is primarily in the hands of private traders is already being substituted by marketing co-operatives so as to narrow the farmer's mark-ups to the point that they no longer sap producer's incentives. Substantial rise in the average level of government stocks is contemplated today. Once the market has been appropriately conditioned in these ways by allowing it free play as a pricing and allocating device, long term outlook for food distribution would possibly improve.

But then the basic question of collecting enough food from farmers to meet the demands of ever rising non-farm population will still remain. This would involve problems relating to 'marketable surplus' which represents the theoretical surplus available for disposal with the producer, left after his genuine requirements of family consumption, payment of wages in kind, feed, seed, and wastage have been met. This may, however, be distinguished from the 'marketed surplus' which represents only that portion of the 'marketable surplus' which is actually marketed and is placed at the disposal of non-producers. What is, therefore, important for all practical purposes is the 'marketed' as against the 'marketable surplus'.

Marketed surplus may be less, equal to or even more¹ than the 'marketable surplus' depending upon the external factors operating on the market economy. Both the 'marketable surplus' and 'marketed surplus' will be equal only under ideal conditions. The process of economic development is accompanied by a faster rate of urbanisation or a reduction in the percentage of population engaged in agricultural production. The resultant rise in the standard of living both of the producer and the non-producer generates forces which result in larger retention on the farm and restricted flow to the market.

Bigger crops do not thus necessarily mean larger market arrivals, and thus larger sales by the farmer. This will be substantiated by what is known as 'scissor crisis' in U.S.S.R. and the experience of India during the last year when in spite of a record crop of 73.5 million tons (12 million tons more than the previous year), larger marketable surplus did not flow out of the agricultural sector. Marketed surplus does not, therefore, depend on production alone but also on farmer's behaviour regarding retention on farm.

* This represents the personal views of the author.

1. This was said to be the situation in the pre-war period when the cultivator was driven to what are known as 'distress sales'.

PRESENT POSITION

Existing information about the marketed surplus and factors influencing it is quite inadequate to enable one to come to any definite conclusion. Based on the scattered information contained in the different Marketing Reports, an attempt has been made in Table I, to have a rough idea of the marketable surplus. Production data under column 2 are for the year 1958-59 while the ratios in column 3 relate to earlier periods according to the availability of data for different commodities.

It is quite possible that due to a number of factors militating against the normal flow of marketed supplies as discussed later, the figures calculated may turn out to be an over-estimate. Actual marketed surplus during recent years may thus be less than 19 million tons as calculated in Table I.

TABLE I—A THEORETICAL ESTIMATE OF MARKETABLE SURPLUS OF CEREALS AND GRAM IN 1958-59

Foodgrains	Production (000 tons)	Marketable Surplus percentage of 2	Total Marketable Surplus (000 tons)
1	2	3	4
Rice	29,721	30	8,916
Wheat	9,694	30	2,908
Maize	2,990	24	718
Jowar	8,689	24	2,085
Bajra	3,791	27	1,024
Ragi	1,722	19	327
Other millets*	4,688	16	750
(a) Total Cereals ..	61,295	27.3	16,728
Gram	6,826	35	2,389
Total Cereals and Gram	68,121	28.1	19,117

* includes barley.

This much quantity of foodgrains constituting roughly 28 per cent of the total should normally be sufficient to meet the day-to-day requirements of about 20-22² per cent of urban population. More so when it is known that the per capita cereal consumption of urban people is roughly 75 per cent that of the rural areas.³

The fact that a bumper crop of 73.5 million tons during 1958-59 and an all time high import of 3.8 million tons in 1959 failed to have an appreciable effect on prices, would show that the estimated surplus (Table I) did not have its normal flow. This would call for an investigation of the causes leading to this malady.

2. Urban population increased from 12.8 to 17.3 per cent during the decade 1941-51. This might have gone up to 20-22 per cent by now.

3. Cf. P. C. Bansil: India's Food Resources and Population, 1958, p. 222.

Prices are undoubtedly determined by the interaction of the forces of supply and demand. Insofar as agriculture is concerned, agricultural prices would depend on the volume of marketed surplus, *i.e.*, surplus of the agricultural sector which is exchanged with the non-agricultural commodities. To be more precise, in the case of foodgrains, supply is not total production, but what comes into the market at a particular time and demand is also not the demand of the total community, but only that of the non-producers who depend upon the marketed supplies.

During recent years a number of factors have tended to restrict the 'marketed surplus'. They are :

- (i) various land reform measures,
- (ii) increased income of the cultivator,
- (iii) speculative tendencies due to uncertainty about prices.

LAND POLICY

Abolition of intermediaries has placed the entire produce from land in the hands of small tillers. This has affected the 'marketed surplus' in two ways. First, the theoretical surplus available with the big landlords is placed in the hands of a larger number in smaller units. Secondly, the small cultivators who were previously not in a position to meet their home requirements from their total produce or wages in kind, would now consume or at least retain more with them. Net result of both these factors is a shrinkage in the absolute quantity of marketed grain. Marketed surplus is actually directly related to the size of holding as shown in Table II.

TABLE II—DISTRIBUTION OF MARKETED SURPLUS BY SIZE-LEVEL OF HOLDING
(685 FARM-FAMILIES: 1953-54)

	Farm-size (Acres)						Marketed Surplus as percentage of total produce
1.	1.25 and less	..	..	..	..	..	5.8
2.	1.25 — 2.50	..	..	..	..	..	32.0
3.	2.50 — 3.75	..	..	..	..	..	34.6
4.	3.75 — 5.00	..	..	..	..	..	15.1
5.	5.00 — 7.50	..	..	..	..	..	35.5
6.	7.50 — 10.00	..	..	..	..	..	37.3
7.	10.00 — 15.00	..	..	..	..	..	34.2
8.	15.00 — 20.00	..	..	..	..	..	36.6
9.	20.00 — 25.00	..	..	..	..	..	26.8
10.	25.00 — 30.00	..	..	..	..	..	23.8
11.	30.00 — 40.00	..	..	..	..	..	26.2
12.	40.00 — 50.00	..	..	..	..	..	21.7
13.	50.00 — 100.00	..	..	..	..	..	50.0
14.	100.00 — 150.00	..	..	..	..	..	53.5
15.	150.00 — 200.00	..	..	..	..	..	39.5

Source: A. M. Khusro: Reflections on Redistribution of Income, Wealth and Opportunities in India: 1950-60, Enquiry No. 4.

The problem is likely to be further aggravated by the imposition of ceilings, which will reduce the quantity of foodgrains available for feeding the urban population. Agriculture in India is carried on mostly for subsistence. The small cultivator grows food primarily for his own consumption and parts with just enough to pay off his rent and interest charges and to buy his minimum requirement of consumer or other goods. On the larger farms a much greater percentage of output goes to the market. A reduction in the size of large farms would immediately reduce the marketed surplus. We have before us the example of Poland, where land reforms after World War II brought about a reduction not only in the rent and size of holdings, but also abolished old debts. This had the effect of reducing marketed surplus.

The larger producers (whatever their number) now occupy a position of great importance in the rice economy of the country. On the one hand, they extend credit to small producers on conditions of repayment in paddy and thus acquire command over paddy stocks after harvest. On the other hand, they have combined in themselves the functions of wholesale trade and in some cases even milling. They have also increased the practice of buying the produce of small cultivators and holding it back from the market.⁴

INCREASED PURCHASING POWER

Huge sums of money are being pumped into the rural sector of the development of agriculture. A number of programmes were also subsidised during the first two Plans. There has been a rapid increase in the co-operative credit facilities to the growers. This increase in the case of some villages near Chandausi and Hapur is reported to be about 60 per cent during recent years.⁵ All this plus implementation of land reforms, increase in the production of commercial crops and higher prices of agricultural produce⁶ have placed more of purchasing power in the hands of the cultivator. 'Cash needs of the cultivator are never very large and most of them, such as rent and land revenue, have remained unchanged over a long period.'⁷ The share of land revenue and taxes in total cost of cultivation has accordingly been reduced to an insignificant figure of 2-3 per cent. An increase in his purchasing power, other things remaining constant, would thus mean lesser sales for meeting inescapable cash needs of the farmer.

This has *inter-alia* improved the retentive capacity of the cultivator. In the earlier period, he was forced to sell a portion of his produce soon after the harvest in order to meet his immediate cash requirements. But under the changed circumstances, along with the trader and the middleman, another hoarder has appeared on the scene. As the number of these producer-hoarders is appreciable, even small quantities hoarded by each of them make a marked difference in the total quantity of marketable surplus. Such small changes in the holdings of stocks

4. Report on Market Arrivals of Foodgrains, Season 1958-59, Directorate of Economics and Statistics, Ministry of Food and Agriculture, Government of India, 1959, pp. 9-10.

5. *Ibid.*, p. 22.

6. Comparatively higher prices for oilseeds, gram and pulses in 1958-59 led to withholding of wheat from sale in many parts of the country. High prices of gram relatively to wheat in Madhya Pradesh, led to the payment of wages in wheat instead of the usual practice of payment in gram. (Report on Market Arrivals, pp. 2-4).

7. Report of the Foodgrains Policy Committee, 1943.

tend to modify significantly the marketable surplus resulting in an aggravation of food prices.⁸ This is because even 1 per cent of hoarding in the rural area will worsen urban supplies to something like 6 per cent.

CHANGES IN PRICES

Agricultural prices are subject to wide fluctuations not only from year to year, but also from season to season. As a result of his experience during the past few years, the cultivator has found that in spite of his best efforts, the Government has failed to have a check on the prices of foodgrains during the lean period.

This coupled with his enhanced retentive capacity to hold has encouraged the cultivator to take to speculative hoarding. Such a tendency should normally mean only a staggering of the total produce in expectation of higher prices. This evening out of supplies during different seasons should normally be a welcome sign. But in a period characterised by general or even psychological shortage, deferred sales by farmers may have an unsettling effect. This may even result in a reduction of the total market arrivals.

GOVERNMENTAL INTERFERENCE

A rational human being would normally respond to prices in the sense that an increase in prices would induce him to put up more in the market for sale so as to earn maximum profits. This may be true in the case of advanced economies where agriculture is more a business than a profession. In under-developed countries like India, the phenomenon of 'backward sloping curve' operates. As we have already seen if the cultivator is better off and had more of purchasing power, his propensity to hoard increases. A rise in prices leads to a similar situation. Instead of being an incentive to produce more and sell more, the tendency on the part of the cultivator is to produce less and sell less just to be liquid enough to meet his bare needs. A decline in prices would correspondingly induce the cultivator to produce more and sell more for at least meeting his minimum requirements.

This is true under free market conditions, when the cultivator has no inhibitions and acts on his own. But if prices are controlled by the Government at a level lower than the open market price, the cultivator develops a psychological resistance towards the imposition of controls and manifests his displeasure by withholding stocks just against the normal principle of bigger sales during lower prices.

Such an interference by the Government does not, therefore, help to relieve the situation, but accentuates it as is said to be the case during 1958-59.

REMEDIAL MEASURES

Having examined the various factors which affect marketed surplus and the problems connected with its proper flow, it becomes necessary to find out solutions, both short and long term, for a proper mobilisation of agricultural surplus. A failure of this would otherwise result in a distorted price structure and hinder

8. Report on Currency and Finance, 1956-57, Reserve Bank of India.

the planned growth of not only agriculture but the whole economy. If necessary supplies needed for urban consumption, industries as well as export are reduced, the tempo of development is bound to be hindered.

This in any case is a problem which is not peculiar to India. Most of the agricultural countries which have passed through this phase of rapid economic development when put in a similar situation adopted different measures suitable to the occasion.

The result of agrarian reforms and the breaking up of large *kulak* estates in Russia was that marketed surplus during 1923 fell there by about 60 per cent of its quantity in the pre-war period. What is known as 'scissor crisis' in Russian economic history was overcome by the setting up of large scale state farms and collectivisation of agriculture. Marketable surplus of grain went up by about 250 per cent in 1938 as compared to 1928.

Japan when faced with a similar situation during the period of rapid economic development (1887-1914) siphoned off agricultural surpluses by heavy land taxes. In 1893-94 such taxes constituted about 45 per cent of the total tax revenue. After World War II, in order to encourage the flow of marketed supplies, Poland provided greater credit facilities and increased the supply of consumer goods for the peasants. Even the investment policy had to be reversed for the purpose.

Land Reforms in China resulted in distributing land into tiny holdings. For a smooth flow of marketable surplus, Chinese agriculture was organised into co-operative farms. Agricultural tax accounting for about 10 per cent of total revenue was collected in kind. Total state purchases including agricultural tax were thus of the order of 44 million tons out of a total production of milled rice of 144 million tons in 1955.⁹

The present problem in India has already been analysed. Additional surplus resources will have to be mopped up by more taxes, rural savings and direct investment. Whatever additional taxes can be collected from land under the existing political situation will be most welcome to all those who are up against the task of finding resources for carrying out the plans. But in a voluntary development effort taxation beyond a certain limit may not be possible. Compulsory procurement of foodgrains, at the same time, may be rather difficult in the context of democratic planning and free economy.

Besides taxation and encouragement of rural savings, some of the additional withholdings can be taken away from the rural sector by re-orientating the policy of loans. Loans may as far as possible be advanced as well as recovered in kind. The cost of one ton of fertilizer which produces two tons of grain can, for example, be recovered by procuring one ton of grain. The cultivator will still be left with the additional ton of grain at practically no cost. Similar ratios can be worked out for the other loan schemes.

9. Cf., R. N. Poduval, "Economic Development and Marketed Surplus in Agriculture", *Agricultural Situation in India*, August, 1958 for further details about the experience of Russia, Japan, Poland and China.

The present policy of the Government to build up buffer stocks by importing foodgrains under PL 480 may pay rich dividends by building up market psychology and holding the price line. In the history of the food economy, the Government is having the biggest food reserves with them now. This will surely serve as a disincentive for any type of hoarding, speculative or otherwise.

Real solution of the problem, would, however, lie in increasing actual production. The Government is no doubt making a vigorous effort in this direction. But this is not likely to bear fruit unless we take some bold measures with regard to the implementation of land reforms. Both the tiller and the landowner must know their actual position on the land. They will not otherwise take any interest in bringing about an improvement in the land.

A further opening up of rural areas so as to enable the ruralites to have a closer and more frequent touch with the urbanites and reduction in the rural urban price-spread by reducing the transport expenditure, will be another handy measure for not only encouraging marketable surplus, but also rural development as a whole.

As for the long term solution of the problem, it needs stimulating farmers' desire for the things they can do with cash. They have to be induced to make cash consumption purchases, away from the farm. Besides making terms of trade favourable for agriculture,¹⁰ a major hurdle will be crossed if conditions are created for the cultivator to improve his standard of living. Once he is awakened to this need, he will be automatically forced not only to develop agriculture but also resort to investment in human capital. For all this he will need more of cash. Once the vicious circle is broken and further monetization of the rural market is made easy, the cultivator in India will naturally behave just like his counterpart elsewhere in the world. This is anyhow a slow process and has to be preceded by a continued extension work among the rural masses.

Again, the question of land revenue in kind has been discussed from time to time. But the whole case needs a re-examination under the changed conditions. The present considerations, perhaps never figured in the discussions before the Taxation Enquiry Commission. By the widespread construction of warehouses and godowns and the construction of village roads, some of the practical difficulties envisaged may be solved.

THE PROBLEM OF MARKETABLE SURPLUS IN INDIAN AGRICULTURE

M. BALASUBRAMANIAM

Lecturer in Economics

Annamalai University, Annamalainager

That an increase in agricultural productivity is an indispensable basis for rapid economic development of an undeveloped and under-developed economy

10. This may serve as a sufficient incentive for the farmers to part with their crops.

like that of India, hardly needs any emphasis. (However, an overall increase in agricultural production or agricultural productivity in general may not by itself be sufficient to sustain the tempo of development. What is far more germane to the process of development is the marketed surplus (the actual quantity marketed) out of the increased production. If marketed surplus does not increase *pari passu* with the increase in production, it may well constitute a fundamental limiting factor on the tempo of development, by reducing the supplies, necessary as a source of funds for capital formation and for increasing foreign exchange earnings through exports of surplus produce or for relieving the strain on the balance of payments by reducing imports of foodgrains and raw materials.) How crucial the role of this marketable surplus has been in economic development may be illustrated by the experience of predominantly agrarian economies which have seen rapid economic growth, such as Soviet Russia, Japan and China.

It is the experience of several countries such as Russia, China and Japan that a substantial increase in the marketable surplus in agriculture has to be striven for as a necessary element in the development and expansion of the general economy on a suitable pace. A comparative study of the process of economic development highlights in the first place the importance of increasing agricultural productivity as a basis for rapid industrialisation and secondly the flow of marketed supplies to sustain and quicken the tempo of development. Increase in productivity has been brought about by organisation of collective farms and by heavy input of capital in Soviet Agriculture. Japan has solved the problem of marketable surplus by the State's appropriating through heavy land taxes, a substantial part of the gain in the productivity in agriculture. It may be said that land taxation played in Japan the same role as compulsory grain collections from collective farms played in Soviet Russia and these measures constitute the means by which the agricultural surplus due to increase in productivity is diverted for industrial development. China has sought to increase the flow of marketable surplus for urban consumption and for industrial development by the organisation of agrarian co-operatives, collection of agricultural tax in kind, facilitation of rural-urban exchange through supply of consumer goods to the peasants, provision of liberal credit facilities for production purposes and guarantee of reasonable prices for agricultural products. Increase in the flow of marketable surplus has been brought about in Poland by the offer of various incentives to peasants like greater credit facilities, increased supply of consumer goods and even by reversing its investment policy. Compulsory grain levies, have been adopted in Poland as in Russia to augment the marketable surplus.

With the quickening tempo of development, the need for increasing the magnitude and flow of marketable surplus of foodgrains is bound to pose a serious problem for the Indian economy as well. This has been particularly underlined by the Foodgrains Enquiry Committee.¹ On the one hand, with increase in the level of incomes consequent on development, consumption of foodgrains particularly by the lower groups is bound to increase substantially. The pressure of demand arising from higher incomes has to be matched by increase in supplies if inflationary pressures in the economy are to be avoided. On the other hand, the increasing pace of industrialisation would lead to an increase in demand for

1. Report of the Foodgrains Enquiry Committee, Government of India, 1957, p. 118.

marketed surplus. Thus the peasant would have to be induced to part with a larger amount of marketable surplus to feed the non-farm and urban population.

In a predominantly subsistence economy like that of India, the marketed surplus in foodgrains will necessarily be small. The percentage of marketable surplus for food crops in Madras State has been varying from 16 for ragi to 25 for rice and for commercial crops, from 62 for gingelly to 98 for cotton lint. All the amount of marketable surplus may be valued at 60 per cent of the total agricultural output. The marketable surplus in India is estimated to be about 31.4 per cent of the production of rice and 32.7 per cent of the production of wheat. While this may be taken to be the order of marketable surplus of foodgrains, the marketed surplus depends on the level of prices and the expectations entertained of that level. Hence production cannot be equated with supply and it is the variations in marketed surplus even more than variations in production which are important from the point of view of prices. Even if the marketed surplus of the farmer increases, it does not follow, with the existing set up of the marketing structure of the country that the supplies available to the consumer should increase *pari passu*, because there is a chain of superfluous number of intermediaries between the producer and the consumer, and any tendency to build up larger stocks by these intermediaries reduces the flow of marketed supplies. Stock holding no doubt evens out supplies throughout the year but speculative holding of stocks by withdrawing larger supplies from the market in anticipation of a further rise in prices has most deleterious effect on the economy and more so if the speculation is in foodgrains. In a developing economy there will be rise in price but if it generates speculative tendencies, resulting in withholding of stocks from the market, it will tend to aggravate inflationary pressures. Because of this instability in the market brought about by the operations of wholesale trade, there must be some sort of control over the wholesale trade so as to bring about stabilisation of foodgrains prices. This has been also particularly emphasised by the Foodgrains Enquiry Committee.²

Thus to sustain an increasing tempo of development, it is imperative that the magnitude as well as the flow of marketable surplus should be augmented. To have this objective realised, side by side with steps to raise agricultural productivity, measures have to be taken to ensure a larger flow of marketed surplus out of the increased productivity. At present 45 per cent³ of the total consumption in the rural sector is non-cash. With progressive monetization of the economy consequent on development, it can be expected that the peasant will tend to part with a larger amount of his produce to meet his cash transactions. But it should not be forgotten that progressive monetization of the economy is only a long term process. Therefore to increase substantially the flow of marketable surplus, some other measures will have to be resorted to. In the first place as in China, steps must be taken to collect land revenue and irrigation charges in kind. This measure, if well planned and implemented will enable the procurement by the State of fairly large quantities and will secure farm products worth about Rs. 80 crores.⁴ This measure looks in fact simple and practicable and is also in conformity with the canons of taxation, *viz.*, principle of convenience. But as most of the payments will be small and in dribblets, the cost of collection will be inordinately high. This

2. *Ibid.*, p. 86.

3. Consumer expenditure surveys conducted by the National Sample Survey.

4. Total cropped area 360 million acres. Average land revenue per acre of cropped area Rs. 2.24.

means that the collection of land revenue and irrigation charges in kind as a means of garnering the marketable surplus is not justifiable from the principle of economy. If this measure cannot be put into practice owing to reasons more than one, as an alternative we can resort to the measure directed to collection of the price of fertilizers in the form of grains. In the case of distribution of fertilizer like ammonium sulphate, we can well collect for every ton of fertilizer distributed, more than one ton of rice, if not two, because the application of one ton of ammonium sulphate is found to result in an additional production of two tons. Here again difficulty of collection from a large number of small producers is great. To lessen the difficulty of collection, the co-operatives are the best agency for the distribution of fertilizers to the peasants, thus progressively eliminating the traders. The difficulty of collection is bound to persist if any other arrangement is made.

Secondly, as experience has shown that the regulated markets are an effective inducement for the farmers to bring produce to the market, fairly steady and uniform flow of marketable surplus should be encouraged by the establishment of more regulated markets. At present there are only 523 regulated markets established in seven States.

Thirdly, there must be a well-defined price policy which may well constitute a powerful instrument for facilitating a larger flow of marketable surplus. At different markets in different parts of the country there is shrinkage of marketed surplus because of delayed disposal of surplus by producers due to market uncertainties. Hence to impart a certain measure of stability to the market and induce the growers to dispose of a larger amount of their marketable surplus, it is imperative that reasonable minimum prices for principal foodgrains should be announced at the time of harvest and the price is to be kept stable for over a period. In fixing the reasonable minimum prices for principal foodgrains of wide consumption proper care should be taken to see that there is parity between the prices of agricultural products and those of other commodities indispensable for day-to-day life of a peasant.

Fourthly, as inflation is an inevitable accompaniment of the process of rapid development, and in fact it is the price to be paid for development, the peasants must accept some inflationary pressure and develop certain degree of inflation tolerance. With a view to ensuring that inflationary pressures do not mount up too much and that prices do not fluctuate too widely, it is necessary to have a careful watch of all the parameters that affect the economy. This can be done only by a high powered authority which will have the power to study and report to the Cabinet, suggesting measures necessary to secure a balance in the economy. Such a body should function independently of the Planning Commission but should be in touch with Planning Commission. It would have a small economic and statistical unit to supply it with necessary data. But primarily it would function as the authority to advise the Cabinet on price policies and related problems.

Fifthly, it is necessary to establish floor prices for some of the more important foodgrains like wheat, rice, jowar, etc. The establishment of such floor prices will be no innovation. The argument that at present food prices are high and therefore there is no need to have floor prices, is very weak. Fluctuations of agricultural

commodities are so frequent as to cause unexpected economic distress similar to that in 1954. Hence a permanent scheme of incentives provided by a system of floor prices must be part of a sound food production and food price policy.

Of the two major foodgrains of wide consumption wheat presents no serious problem. With increased production and large imports planned under P. L. 480 wheat prices can be held pretty firmly. But in respect of rice, both production and imports will not be adequate. Some measures of control of rice procurement and distribution would seem to be necessary. It is desirable to keep the margin of prices between rice and wheat sufficiently wide to tempt the consumer to switch over to wheat. Some shift has taken place recently but this should be strengthened. It is, however, likely that rice will continue to be a problem with us for sometime.

Sixthly, to increase substantially the flow of marketable surplus, assured and stable prices for the agriculturists, would have to be linked with co-operative marketing of their produce. This would lead to the expansion of production credit, as this expansion is itself dependent on expansion of marketing. The close link-up of credit with co-operative marketing would be an important means of building up one of the pillars of the integrated structure that the Reserve Bank Rural Credit Survey has placed before the country.

Seventhly, compulsory levies resorted to in countries like Russia and China, to increase substantially the marketable surplus are hardly suited to Indian environment where planned development is sought to be brought about by democratic processes. The compulsory levies, (if resorted to in India, apart from retarding production, would defeat the very object by inducing the farmers to underestimate their surplus). Today even Russia has given up compulsory deliveries of farm produce as it is too complex to act as an incentive and too mechanical to be just. (Therefore in the democratic set up of our country, physical controls are to be replaced by a form of price mechanism aimed at furnishing a greater incentive to the farmers to raise the level of their output.)

Lastly, no large programme of agricultural development in a predominantly subsistence economy like that of India, could make any headway unless the actual cultivator is given his due status and importance in Society. The cultivator has to be made to feel that he gets a fair deal. No doubt he has come to realise the value of fertilizers and manures and other techniques which will secure for him a much higher return from land. Even with these developments, the tempo of agricultural development will not gain momentum, unless the cultivator feels an active sense of participation and is entrusted to carry out the programmes. Therefore, an Agricultural Commodities Advisory Committee to advise the Government not only on price policy for agricultural commodities but also on the various programmes relating to agricultural production, should be set up.

Conclusion

(Bearing in mind the solutions to different problems of marketable surplus in Indian Agriculture outlined above, if a concentrated, comprehensive and coordinated programme of intensified cultivation comprising of schemes of land reclamation, development of double-cropping, better and economical use of ma-

nures and improved seeds, plant protection and improved practices as major items, is chalked out and implemented to increase agricultural productivity and consequently the value of agricultural production, there is no room for anxiety whether there would be substantial increase in marketable surplus or not. The increase in production envisaged in the programme would be obtained to some extent through more land coming under plough. But the bulk of the increase would come through more and better balanced inputs, more efficient crop and land use planning and improvement of agricultural techniques and organisation.

PROBLEMS OF MOBILISATION OF THE MARKETABLE SURPLUS IN AGRICULTURE IN INDIA

SAILESH KUMAR BOSE

Head of the Department of Economics

Bihar National College, Patna

ROLE OF AGRICULTURAL SURPLUSES IN ECONOMIC DEVELOPMENT OF BACKWARD ECONOMIES

For the development of a backward and predominantly agricultural economy the importance of the marketable surplus in agriculture is now well recognized. For transformation of an unbalanced and low-income economy into a more balanced higher income state, industrialisation is inevitable, together, of course, with simultaneous expansion of the other sectors of the economy, secondary or tertiary. The necessary capital equipment for industrialisation is ex-hypothesis unobtainable internally, and has therefore to be imported from abroad. Since the country in question is, by definition, mostly agricultural, no other sector of the economy except agriculture is likely to have any capacity for export. Hence agricultural exports must go up to finance the growing imports of capital equipment necessary for rapid and balanced development.

Even without any deliberate programme of economic development, of course, in its foreign trade, a predominantly agricultural country naturally specialises in exporting agricultural produce and in importing manufactures or semi-manufactures. When industrialisation starts, even under private enterprise, the same process continues and the character of exports at the earlier stages remains unaltered, though the character of the imports may be undergoing a change with growing emphasis on producer rather than on consumer goods. The magnitude of the export surplus, in the absence of foreign aid, initially almost directly regulates the rate of growth of industries, though subsequently, as the other sectors develop export capacity, the strain on the primary sector is correspondingly reduced. The burden on agriculture proper is lightened further to the extent that the primary sector in the economy possesses important and developed sections other than agriculture, e.g., mining or plantations.

This has been the familiar pattern of economic development, *e.g.*, in the U.S.A. in the 19th century under private enterprise, as also in the more recent history of planned development of the U.S.S.R. after 1917. The second half of the 19th century saw a similar pattern of trade evolve in India with the construction of the railways and the beginnings of modern industrialisation in the country, though the degree of industrialisation was limited. Food exports continued from India throughout the last quarter of the 19th century largely uninterrupted by the famines of the period.

The quantum of the surplus, of course, diminishes where the agricultural sector, though numerically preponderant, is an inadequate supplier of the needs of the population. But even in conditions of scarcity a country may be compelled to maintain agricultural exports, as in India in the 19th century and also in Czarist Russia, if not as a real surplus over local needs, yet as "distress sales" under the compulsion of the economic obligations on the farmer towards the Government, the absentee landlord or other urban economic interests. In India it constitutes a part of the "economic drain" from the country in the special context of Indo-British political and economic relations.

The concept of the marketable surplus of agriculture is of significance not only in the context of economic development, but also in the context of the relationship between the rural and urban sectors of a country. In a predominantly agricultural country the non-rural sector is too small to pose much by way of problems of essential food supplies. These problems grow in importance as development of the non-agricultural sectors proceeds. Taking a very long range view, as the economy gets substantially diversified, transfers of labour force are effected from the rural to the urban sectors and the quantitative importance of the flow of the "surplus" and of its regularity increases, as any interruption in food supplies will interfere with the progress of internal industrial growth besides making difficult import of capital goods from abroad. Dislocation of the normal trade channels supplying food to the towns constituted an important factor in the general economic breakdown of the period of War Communism in the U.S.S.R. In India the exigencies of the Second World War's production requirements saw the beginnings of rationing and food control in the major industrial towns of the country, illustrating the importance of maintaining the flow of food stuffs to non-rural areas. In brief, as development proceeds and non-agricultural occupations and non-rural centres of population grow in importance, the importance as also the difficulty of mobilising agricultural surpluses grows. In the case of India the problem is further complicated by the overall inadequacies of the country's productive capacity in agriculture, both absolutely as also relatively to needs. With persistent overall shortages yet to be overcome India cannot, in the near future, think in terms of developing an export surplus in foodgrains, though the possibilities of export of some commercial crops need not be ruled out. The plantation and other commercial crops, grown entirely for the market or for export, of course stand on a different footing and do not present problems of mobilisation. The real problems of mobilisation arise with regard to the foodgrains, occupying about 80 per cent of the gross sown area.

THE PROBLEM OF THE SURPLUS IN INDIA

Even while admitting the overall shortage of agricultural produce in general and foodgrains in particular in the country, there is a general presumption that

there is substantial scope for increasing the flow of agricultural produce from the growers to the market in India.

Factors Governing the Market Flow

Three basic factors may be listed as affecting the flow of agricultural produce to the consumer: (i) the volume of the output, (ii) the level of consumption by the grower, (iii) stocks maintained by the grower and the trade. While the size of the output is the most important of the factors, and maximum possible efforts should undoubtedly be made for increasing it, this is not a problem of mobilisation as such, thus lying outside the scope of the present discussion. The second factor also is largely, but not entirely so. Insofar as the quantum and flow of the surplus represent a vital element in the process of economic development, regulation of the volume of consumption may be regarded as an aspect of the wider problem of mobilisation of the community's resources, of generating "real savings" in the rural sector. With standards of consumption precariously low, there appears, *a priori*, to be little scope for reduction in the existing levels of consumption, though the levels are going up, and the last decade or more has witnessed a shift from the coarse foodgrains to the finer cereals on the part of the poorer sections of the rural population. While in the context of our pre-existing low consumption levels, no absolute lowering of the same is feasible, it is clearly the task of the resource mobiliser to see to it that the improvement in output is not entirely absorbed in greater consumption. Further, inequality in the distribution of land holdings, as recently confirmed by the N. S. S. indicates the existence of surpluses at some points even if average consumption levels in villages may be low.

The Problem at the Level of the Grower

The grower may dispose of his produce in three possible ways—self-consumption, sales and building up of stocks. It may be presumed that while the grower may have, compared to a decade or two earlier, marginally raised his food consumption level, he will not be perpetually raising it *pari passu* with growth in his output. The real problem therefore, relates to the manner of disposal of the surplus after consumption, *i.e.*, to induce the grower to part with the largest possible part of this surplus and to minimise his personal stocks.

The Grower's Diminished Liabilities

The traditional non-rural demands on rural incomes are in the form of the land tax and payment for the purchases by the rural producer of non-agricultural urban manufactures. With agricultural prices standing several times above the pre-war levels, the real burden of tax demands in fixed monetary terms has become much lighter. This *prima facie* warrants assumption of larger stocks with growers who can now meet their tax liabilities by parting with smaller physical quantities of output. A study of price changes of agricultural commodities and of consumer goods of industrial origin leads generally to the conclusion that the terms of trade of agriculture have improved over the last two decades. The relative improvement in the bargaining position of the agriculturist has long been, of course, one of the objectives of reform of agricultural marketing conditions, but has, in the context of the requirements of planning, to be modified in terms of social needs. Between 1939-40 and 1947-48 while the Price Index of Agricultural Commodities (with the index on 19.8.39 as the base) moved from 127.5 to over 356, that for

Manufactured Articles moved to about 288 from 131.5. The disparity in price movements between these two groups of commodities was reduced in the subsequent years up to the end of the First Plan, mainly due to the success of the food programme, though even in this period agricultural produce, other than food articles continued to remain relatively costlier than manufactured articles. The Second Plan period's agricultural shortages, despite some good food harvests have again witnessed price indices of both Food Articles and Industrial Raw Materials move faster than that for manufactured articles.

METHODS OF MOBILISATION

Assuming the existence of mobilisable stocks large or small the essence of the problem, of course, is its *modus operandi*. No single method obviously could succeed in tackling a problem of the magnitude that exists in this country, keeping particularly in view the inadequacies of our administration.

Price Manipulation

One obvious method of preventing the enhanced bargaining power of the grower from getting the upper hand over social interests is price manipulation. The objective of price manipulation would be to compel the grower to disgorge his stocks purchasing his requirements of manufactured goods, akin to the Scissor's Policy followed in Soviet Russia in the period of the N.E.P. Any such price policy will, of course, have to be on very careful guard against running into the opposite extreme of generating price disincentives in agriculture. A late application of price support after the bumper harvests of the First Plan (1953-56) is generally held to be partly responsible for the subsequent shortages in agricultural output. As the Food Grains Enquiry Committee put it, "while the cultivator is encouraged to part with his grain after harvest, he must not be left high and dry in the subsequent lean part of the year." [Excessively low prices may not only affect production incentives but encourage wasteful consumption at the grower's level and too great a fall in the farmer's power to purchase manufactures may similarly induce him to withdraw fully from the market.]

Theoretically, price policy may be a powerful device to bring out stocks from growers but fixation of appropriate relative price rates is analytically a ticklish job, [the machinery necessary for such comprehensive price manipulation has to be extremely elaborate and powerful and is unlikely to be available in this country in the near future.] Without complete socialisation of trade, including trade in manufactures in rural areas a "Scissors" type price policy is not practicable. Attempts have, therefore, to be concentrated on lowering or keeping in check rise in prices of agricultural produce through measures of physical, fiscal and monetary controls, rather than by any upward manipulation of non-agricultural prices which will, in addition, affect the non-agricultural population as well and may be otherwise undesirable.

Revision of Land Revenue Charges

Revision upwards of land revenue and other charges on the peasant is a much clearer policy decision though not an easy task administratively. For the entire period of the Second War and post-war years till 1949-50, land revenue receipts

remained virtually static, though agricultural prices went up by over three times. Land revenue receipts have been increasing steadily over the last decade, more due to the State progressively appropriating the share of the former intermediaries than to any substantial increase (neglecting occasional surcharges, etc.) in the tax liability on the land.

Despite the absolute increase in the total land revenue receipts, the proportionate importance of land revenue in the total revenue of the State and Central Governments, has been going down. Between 1938-39 and 1953-54 it went down from 16.1 to 8.6 per cent of total Government revenue receipts and there is a very good case for a general revision of land revenue assessments on various grounds, including rationalising the system and making the revenue burden more equitable *inter se*. It is difficult to justify inaction on this score on grounds other than those of political expediency, except in the former permanently settled and zamindari areas where the necessary governmental machinery has first to be brought into being.

Suggestions have been made for realisation of land revenue in kind. The practical difficulties of the Revenue Departments themselves in handling diverse forms and qualities of agricultural produce and in their valuation would of course, be enormous. An experiment may, however, be made in co-operation with licensed warehouses and warehouses under the control of the Central Warehousing Corporation or the State Warehousing Corporations, in compulsory collection of revenue in kind, particularly in areas where Gram Panchayats are functioning as revenue agents, by getting the warehouses do the valuation and disposal of the grains, the sale proceeds being subsequently credited to the revenue agency concerned. The warehousing programme, of course, has to be properly organised and implemented before it can be charged with this very great responsibility.

The Food Grains Enquiry Committee referred to the practice of repayments of fertilizer loans given by co-operatives in Orissa in the form of grains depositable in grain *Golas* which extend to and collect from farmers paddy loans with interest accrued, a system that may be applied to revenue collection.

Co-operative Marketing and Warehousing

Location and institutionalisation of surplus stocks is the first pre-requisite of their mobilisation. Therein lies the significance, in the current context, of co-operative marketing and warehousing. The Integrated Credit Scheme recommended by the Committee of Direction of the Rural Credit Survey was accepted officially in 1955 and subsequently incorporated in the Second Five-Year Plan. Progress so far, however, has been quite inadequate. The co-operative marketing unions and warehouses that have been established have yet to find their feet firmly on the ground before any significant stocks come into their possession. Once substantial stocks start being held by these institutional agencies, the problem of their physical location is solved, whereafter physical and price controls over them may be initiated.

In 1956-57, in the ten major States of the country, the total value of sales transacted by the primary marketing societies amounted to Rs. 87 per cultivating family; taking the Central Marketing Unions or Federations, another Rs. 72

worth of goods were sold per cultivating family in the ten States jointly. Of these amounts, however, the two States of Bombay and Uttar Pradesh accounted for the bulk of the transactions. According to the Rural Credit Follow-Up Survey, out of the ten districts reviewed, in only two (Broach and Dharwar) were any substantial proportions of the total marketed produce sold through co-operatives, these being the two districts where Pilot Integrated Rural Credit Projects were in operation.

The total number of warehouses set up so far by the Central Warehousing Corporation amounts to 26 (till March, 1960) and those by the State Corporations to 138. Besides the warehouses, godowns are run and constructed by large sized credit and marketing societies. The Second Plan provided for 4,000 godowns for large sized societies and about 1,500 for marketing societies. According to the report of the Central Warehousing and Co-operative Development Board about 1,360 godowns of the large sized societies and 648 godowns of the marketing societies were financed by the Board in the three years ending with 1958-59.

Primary marketing societies in 1951-52 numbered 8,264, the number of Marketing Unions and Federations being nearly 2,000. In 1957-58 the primary societies numbered 9,368, the number of Supervisory Societies being 2,871. Of these the bulk are Sugarcane Societies (the number of primary cane societies in 1957-58 being 7,469 and that of Central Cane Societies being 187). Thus progress though steady, is not rapid enough for using the apparatus of co-operative marketing for the purpose in view extensively in the near future.

The Second Plan adopted a target of 1,900 additional primary and district marketing societies by 1960-61.

Rural Credit

Insofar as credit sustains the power to hold stocks, control of the volume of credit should have a considerable influence in regulating the quantum of stocks at all levels. To the extent, however, that institutional credit has failed to reach the grower, the effectiveness of the credit instrument is weakend. The Rural Credit Survey of 1951-52 revealed that co-operatives constituted 3 per cent and organised banking institutions only 1 per cent of the total supply of rural credit. No quantitative estimate of changes, if any, in the field of All-India rural credit are available since the 1951-52 Survey. The Follow-Up Survey of 1956-57, covering only 11 districts throughout the country does not give data of a strictly comparable nature, as only 3 of the districts selected were such as were included in the 1951-52 Survey. Except in the four districts of Broach, East Khandesh, Dharwar and West Godavari, co-operatives supplied only between 1 and 11 per cent of the total borrowings of cultivators from all sources. In the four districts mentioned above co-operatives supplied between 22 and 48 per cent of the total borrowings as a result of concerted efforts under the Pilot Integrated Rural Credit Schemes. Government lendings, except in two districts were confined to between 1 and 3 per cent of the total lendings by all agencies.

These comparative data indicate, no doubt, the possibilities of co-operatives playing a significant role in rural credit supply, provided concentrated efforts are undertaken as under the Pilot Schemes in the four aforesaid districts. These

are also the areas where the Follow-Up Survey reported substantial progress of marketing co-operatives.

It is further important to note that in 8 out of 11 districts surveyed, commercial banks contributed nothing to the supply of rural credit.

The last four years have, of course, witnessed a substantial expansion of the co-operative movement including co-operative credit. There has been considerable growth in the number of societies and of membership and working capital has gone up by more than 100 per cent (compared to 1951-52). Supposing each member of a co-operative to represent a family, nearly 30 per cent of the population has been covered by the movement, but the very large number of dormant societies and the as yet low capital per member leaves the co-operatives an inadequate force to reckon with in rural areas. The use of credit control as a direct regulator of stocks with growers will, however, have to wait till the time when the organised financial institutions will supply a substantial part of rural credit.

Credit Control

Restricting the volume of bank credit advanced to trade is a natural method of diminishing excessive stocks with the trade, and is the line of action followed recently by the Reserve Bank. Selective credit control was instituted by the Reserve Bank from 1956-57, and continues, with certain changes and relaxations till now, the objective being to keep advances against foodgrains by banks in check. The measure has been a considerable success insofar as advances secured against foodgrains in 1958, 1959 and in 1960 in the month of May could be kept significantly lower than the 1957 level, as the following figures illustrate :

Date						Secured advances of Scheduled Banks against food articles (in lakhs of Rupees)
17.5.57	..	..	..	..	..	37,70
16.5.58	..	..	..	..	..	24,25
15.5.59	..	..	..	..	..	24,71
27.5.60	..	..	..	..	..	27,76

Total secured advances, total of secured and clear advances as also total bank credit, however, steadily increased, which while demonstrating the formal success of selective credit control, does not exclude the possibilities of leakages.

			Total secured advances	Total of all advances	Total Bank credit
(in lakhs of Rupees)					
May 17, 1957	..	..	751,76	747,52	936,98
16.5.58	..	..	780,03	790,28	941,87
15.5.59	..	..	848,25	875,12	1,021,33
27.5.60	..	..	943,90	961,40	1,123,55

Indeed recent experience indicates considerable possibilities of leakages from non-restricted to the restricted channels due to intensified general inflationary trends. The latest phase of credit control is more in the nature of general rather than selective control, which has its usefulness, of course, as a general anti-inflationary measure but could not operate specifically as a dishoarding agent on agricultural stocks. Insofar as in a food shortage economy inflation, due to the high income elasticity of food, would tend to inflate food prices more than the general price index, all anti-inflationary measures are welcome. If, however, money keeps on increasing continuously, as recently, anti-inflationary measures are unlikely to reduce prices. Excess liquidity of the banking system as now would make stoppage of leakages from selective credit control increasingly difficult. During the last few years of selective credit control total deposit liabilities of commercial banks have gone up by Rs. 517.89 crores and bank credit by Rs. 254.83 crores.

Procurement

Starting from the Second World War period authorities in this country have had a considerable experience of procurement operations. The magnitude of procurement of foodgrains by the State was the highest in 1950 when over 4.6 million tons of cereals were procured, *i.e.*, roughly 10 per cent of the total cereal production in that year.

The basic problem in monopoly procurement or compulsory levy as sometimes practised in the past is to locate the surplus producer. The size of the farmer's holding, viewed together with the size of his family, is a reasonable index of the saleable surplus possessed by him. During the last war Bombay Province adopted a system of compulsory and graduated levy of a portion of the surplus of each producer. With monopoly trading by the State, monopoly procurement also follows as a matter of course. It is not necessary for the State, however, to monopolise trade and therefore to monopolise the saleable surplus, if the bulk of the surplus manages to reach the market even through private trade channels, though evasion becomes difficult to prevent when no restrictions are placed on the farmer's liberty of disposal of stocks.

The existing inequality in the ownership of land should render identification of the surplus producers easier as it makes surpluses possible amidst a generally poor peasantry: but for administrative purposes detailed surveys of distribution of land holdings would be necessary rather than sample surveys as have been conducted in the past.¹

The actual procurement operations may be undertaken by the Administration itself or, as was done in some States in the past, through market purchases from traders. Appointment of traders with experience of handling agricultural produce on a large scale, as in the past, works well if abuse of his position by the agent can be successfully checked. As marketing co-operatives, Grain *Golas* and warehouses get organised they may usefully take over these agency functions.

1. The First Report on the sample survey of land holdings by the N. S. S. revealed that 92.4 per cent of households possessed holdings of 15 acres or less in size, comprising less than 50 per cent of total area held by the families surveyed. This should leave only 8 per cent of rural households as potential "savers," who should not be too difficult to tackle administratively if holders of over 15 acres only are regarded as large surplus producers.

A common difficulty of State procurement is inadequate storage space, involving further dependence on the private trader or stockist. It is only with construction of more warehouses by the statutory corporations that this difficulty can be overcome.

Co-operative Farming

On the analogy of the collectivisation drive in the U.S.S.R. in the pre-war Five-Year Plans as also of the current example of the Chinese agrarian co-operatives, it is sometimes suggested that co-operativisation of our agrarian structure would be the best possible method for getting at the agricultural produce surplus or otherwise. In fact, it is thought that with co-operatives functioning at the dictates of the Government the quantum of the "surplus" itself as the difference between the product and its local disposal for consumption would be a matter for decision. Apart from the point that "co-operatives" which merge their identity in the Government would cease to be genuine co-operatives and that such notions about the role of co-operatives would slow down rather than popularise their growth among peasants, it is clear that a pretty long time has to elapse before a significant number of co-operatives, voluntary or otherwise, may be established and be of assistance in institutionalising the agrarian structure.

CONCLUSIONS

Possibilities in the near future, thus of any significant change in the agrarian or marketing structure are remote. Effective mobilisation of agricultural surpluses will be dependent partly on organisational and administrative factors and partly on general policy manipulations. The former will include measures like expediting and strengthening the warehousing and the co-operative programmes, extension of State trading and strengthening of the State procurement machinery, and a general extension of transport and communication in rural areas and a growing emphasis on co-operative farming societies. These appropriate institutional reforms will have to be accompanied by policy measures like fiscal, monetary, physical and price controls.

The broad objective of these measures will thus be to exert a combined pressure on the growers to part with the surplus through a lowering of their holding power, or a general lowering of the grower's elasticity of supply. But it has to be borne in mind that in a country of small holdings, the number of really surplus producers cannot be large and that while economic pressure may compel many growers to part with their stocks, their sales could be done under duress, and though a necessary sacrifice for growth is likely to be overdone in a country of overall shortages. Price manipulation has to be very cautiously done, as it would strike at all growers big or small.

The semi-official Food Survey carried out in Bihar in 1946 under the guidance of Prof. G. N. Sinha found that families owning 15 acres or more of land only could be expected to contribute a true surplus to the market, the supplies coming from the rest being made under duress.

The surplus, it would bear repetition, is not a static quantity and would vary with both the output level as also the level of consumption. With standards of

consumption known to be among the lowest in the world, scope for further tightening of the belt is limited. Policy has therefore to aim not so much at further cutting down of existing standards as at preventing accretions to the output from being appropriated for consumption at the grower's level. Insofar as the cultivator has escaped till now his due share of the burden of development, relatively sterner calls for sacrifice may indeed now be made on him. The instrument of the land tax has to be pressed into service for this.

While stock-building at the levels of the grower or of the trader may be a factor of some importance in the current Indian context it would be wrong to think that stocks can continue to be added to indefinitely. The present position may, to a certain extent, be regarded as a corrective of the past when the cultivator with little bargaining power had to dispose of the bulk of harvest soon after it was ready. The basic problem of inadequate surpluses is the absolute shortage of supply in relation to demand. Within a given physical situation of demand and supply, all that policy and institutional reform may aim at is to make the most of the available real resources, to prevent any section of the community from having an undue advantage in a situation of scarcity, and for the community as a whole to manage with lower inventories. Structural changes in agrarian, credit or marketing organisation or improvements in transport and storage facilities are but aids to greater mobility of stocks through space and time, but these by themselves cannot remedy a situation of absolute scarcity. It is important to remember, therefore, that creation rather than mobilisation of surpluses is the prime need of the situation. In a free society, the scope of mobilisation efforts is, thus, limited to effective readjustments within the distributive machinery and not to changing the economic structure itself, which at any rate, is not a problem of "mobilisation."

PROBLEMS OF MARKETABLE SURPLUS IN INDIAN AGRICULTURE

A. S. KAHLON

Professor of Agricultural Economics

Government College, Ludhiana

and

CHARLES E. REED

Research Associate, Kansas State University

On the basis of a past study by the Directorate of Marketing and Inspection, 25 per cent may be taken as the average marketing margin for all surplus foods in India. The Indian Council of Agriculture's Research Memorandum has estimated that 30 per cent of the foodgrain produced within the country is marketed. These estimates, however, do not include that part of farm produce which is exchanged in the village of origin, although it is a knowledgeable fact that such sales occur for almost all the crops. The Bench Mark Survey Report on Bhadrak Block mentioned for example, the sale of paddy by small cultivators on the threshing floor itself. The Report on the Marketing of Rice in India stated that large proportions of the grain tended to be disposed of in the village where it was pro-

duced. The quantity of rice sold locally was not estimated and the report conceded that it was almost impossible to do so. In view of the fact that such local sales are typical of Indian rural marketing and apply to almost all crops, relatively accurate estimates of the quantities involved would contribute much to agricultural planning and provide new dimensions to the total of India's marketable surplus.

Estimates of arrivals in unregulated markets are not assessed methodically. Spot inquiries of the arrivals at only a few selected markets serve as the basis for making estimations and these are related to production in the area surrounding the chosen centre. The result is an inadequate sample and unreliable estimates of the population parameters. Moreover, arrivals are not separated by year of production. In the cases where arrivals include production from both the previous and the current crop year, estimates are in error to the extent that they contain the previous year's production. In addition, large quantities from a particular crop year move from a market of first sale to another market for resale and the transactions are recorded twice giving, as a consequence, an inflated figure of the quantities marketed. All these inadequacies conduce to erratic, unreliable estimates of marketable surplus.

At least statistically valid estimates of marketable surplus may be obtained through the random sampling technique. Correctly used, the method secures a close approximation to population characteristics from only a fraction of the universe being measured. Stratified random sampling may be applied at unregulated markets to determine the surplus attributable to that part of the marketing area. To the figure so derived could be added data collected in regard to arrivals at regulated markets. The result would be more reliable estimates of the total surplus moving through the different marketing channels.

Cognizance must be taken of the fact that the marketing year and the production year differ in the case of "*Rabi*" crops. To quote an example, arrivals of *Rabi* foodgrains during the 1959-60 (April-March) marketing year would be largely from the crop raised during the 1958-59 production year. It is quite possible, however, that some of the arrivals belong to the 1957-58 crop year. In order that estimates of marketable surplus of *Rabi* foodgrains for the year 1959-60 be relatively correct, arrivals originating from the old crop year need to be separated out.

In the case of *Kharif* foodgrains, the marketing year and the production year coincide. Arrivals during the marketing year 1956-57 (October-September) would, therefore, be predominantly from the 1956-57 production year. Small quantities from old crops, however, may arrive as releases out of wholesale stocks or from government holdings under open market operations conducted under price support policy programmes. These also should be separated from arrivals out of the new crop to obtain a correct estimate of the marketable surplus.

Since the demand for agricultural products is relatively inelastic, the appearance of a small surplus has a disproportionately depressing effect on prices of the farm products. Particularly prices in under-developed economies are highly sensitive to changes in supply relative to demand. Even a slight supply deficiency causes an excessive upward price movement and a small surplus results in a sharp

price decline.¹ As a result, surplus in foodgrains, though marginal in nature, has a significant effect on the general price level.

Some recent shrinkages in India's marketable surplus have been observed and are attributable, largely, to the increased consumption of producers resulting from high marginal propensity to consume. And although overall increases in agricultural production have been effected, such shrinkages in marketable surplus have been sufficient to influence prices upward. These developments emphasise the need to adjust supply to demand through orderly marketing as a means to prevent undue price fluctuations. A pre-requisite for achieving that goal is the reliable measurement of the size of marketable surplus.

The real significance of having exact estimates of marketable surplus may be better appreciated in the context of a price support policy. Minimum guaranteed prices are becoming an integral part of agricultural policy for stimulating agricultural production with almost all governments of the world. The success of a suitable price support programme, however, depends upon the correct estimates of open market operations which, in turn, are related with the marketable surplus of a commodity. Not only must estimates of marketable surplus be correct, but in the interest of an effective, continuing price support programme, they must be so maintained year after year.

The farm sectors' marketable surplus determines, very largely, the volume of non-farm employment. Since India's development plans are employment oriented, correctly estimating marketable surplus will help to determine the volume of non-farm employment under the plan to the extent given by the value of the consumption multiplier.

Factors Determining the Size of Marketable Surplus

The extent of the marketable surplus of a commodity depends very largely on the consumption habits of the people within a producing area, the nature of the crop, relative price levels of different farm products and the economic status of the farm population.

Table I which presents information collected on arrivals in the regulated markets of the Punjab and Pepsu States² for the year 1954-55 illustrates the relationship between consuming habits and marketable surplus.

TABLE I—MARKETABLE SURPLUS OF IMPORTANT FOODGRAINS IN THE PUNJAB (I) AND PEPSU: 1954-55

State	Commodity	Arrivals (in mds.)	Total production (000 tons)	Marketable surplus as percent- age of total production
Punjab	Wheat	90,03,956	1,299	24.8
Pepsu	Wheat	35,27,000	436	28.9
Punjab	Gram	55,85,000	990	20.15
Punjab	Jowar	2,41,000	48	17.94
Pepsu	Jowar	55,212	7	28.0
Pepsu	Rice	2,38,590	116	53.3

1. Second Five-Year Plan, p. 40.

2. The Punjab and Pepsu States have been integrated. The year 1954-55 was selected only for the purpose of illustration.

As will be seen from Table I, marketable surplus for the year 1954-55 was 24.8 per cent, 20.15 per cent and 17.94 per cent for wheat, gram and jowar respectively for the Punjab, and 28.9 per cent, 28 per cent and 53.3 per cent for wheat, jowar and rice respectively for the Pepsu States.

The surplus was low for a commodity such as wheat because it forms a staple food in that area. It was high for a commodity such as rice, because of little rice consumption by the people in this area. The Bench Mark Survey of Batala Community Project supported this thesis. Whereas the proportion of wheat marketed was 9.4 per cent, it was as high as 70 per cent in the case of paddy because of local consumption habits. The marketable surplus was as high as 90 per cent in the case of the *Toria* crop because it is a cash crop and the farmer grows cash crops primarily for the market.

That the marketable surplus is low for foodgrains that form the staple food in different parts of the country and is high in case of cash crops, is also supported from a marketable surplus estimate for Hyderabad State.³ Table II presents information for the year 1954-55.

Table II shows that marketable surplus was 66.6 per cent of the total product in case of wheat because of the low wheat consumption habits of the people. The surplus for rice and *jowar*, the staple items of food consumption in the area, was as little as 33.8 per cent and 20.5 per cent of the total production respectively. It was as high as 82.8 per cent and 93.7 per cent in case of the oilseeds and the cotton lint cash crops that are grown primarily for the internal market and for export abroad.

TABLE II—MARKETABLE SURPLUS IN HYDERABAD STATE: 1954-55

Commodity	Estimated production (000 tons)	Total marketable surplus (000 tons)	Marketable surplus as percentage of total production
Rice	590	200	33.8
Jowar	1,460	300	20.5
Wheat	90	60	66.6
Gram	140	80	57.1
Oilseeds	960	795	82.8
Cotton (Lint)	80	75	93.7

Impact of Relative Price Level on Marketable Surplus

Marketable surplus of a commodity is not only related to total production and price level of that commodity, but is also related to the supply and price level of its competitive and complementary goods. In the case of wheat, for instance, the chief *Rabi* foodgrains which influence the marketable surplus of that cereal, are grams and barley. The relative supply and price level of *Kharif* crops such as maize, rice, bajra and jowar may also affect the marketable surplus of wheat and other *Rabi* foodgrain crops. When the relative price level of a bumper *Kharif* crop such as bajra, jowar or maize, etc., is low and that of a *Rabi* crop such as wheat

3. Hyderabad State has been integrated. Table II was selected for the purpose of illustration and a contrast with Table I.

is expected to be fairly high, the farmer may consume more coarse foodgrains and sell more wheat, thus increasing the marketable surplus of the latter and diminishing that of the former.

How to Absorb Marketable Surplus

Expansion of the marketing outlets is, to a great extent a necessary accompaniment of the process of economic planning. The accelerated pace of general economic development and the expansion of social and economic overheads should reduce institutional difficulties and bring about a balanced growth of towns, urban marketing centres, village and rural marketing centres. This will forge new links in the marketing system. Production, processing and all levels of selling should become highly co-ordinated units of a single market system. The development of a single market system should expand the demand for farm products and provide the farmer an easy access to the organized market. This will induce the farmer to produce more and to sell more in the regulated market. "The Government of India (P. E. O.) Bench Mark Survey report on the evaluation of Batala Community Project shows that cultivators in those villages did not dispose of their marketable surplus in the village because all these villages were situated within the radius of five to seven miles from Batala Market Centre." These developments, it is hoped, will help to expand marketable surplus and at the same time extend the area of orderly marketing to absorb surpluses when they occur without resulting in a steep fall in the farm prices. This should be possible because farm surpluses in India are marginal and manageable. It should not be difficult to dam up the marginal surpluses through Co-operative Development and Warehousing Board and feed them into the market gradually so as to stabilize the price structure and leave little to be done through the price policy.

THE MARKETABLE SURPLUS OF AMAN PADDY IN EAST INDIAN VILLAGES

G. C. MANDAL

*Director (Offg.)
Agro-Economic Research Centre
Visva-Bharati University, Santiniketan*

Significance of Marketable Surplus

Marketable surplus in the agricultural sector of an under-developed economy is a crucial question from three points of view. First, marketable surplus in the agricultural sector would contribute to capital formation in the non-agricultural sector. Secondly, it would contribute to an improvement of the standard of living in the agricultural sector by making available to it the industrial consumer goods; thirdly, it would contribute to capital formation in the agricultural sector by fetching it the requisites of agricultural production.

Estimation of Marketable Surplus

Marketable surplus of foodgrains is arrived at by deducting from net output (net of rent in kind) received by the farmers, their consumption and disposals in the form of seeds, kind-loans and wage-payments in kind. The excess of receipts over sale is partly held for consumption, partly spent up in other disposals stated above and partly held in stock as a hoard potentially capable of further contribution to market supplies.

Speaking in general, the marketable surplus in the case of a household is the excess of net receipt of output over its own consumption and other disposals. What is actually marketed may fall short of this estimated surplus. The divergence of marketed and marketable surplus may be due to various factors. Households with very small holdings may not have surplus at all. But wherever the surplus emerges, the part of it which will be actually marketed would be affected by the general condition of the village in question—particularly the extent of market facilities open to it, the standard of living of the households and the investment opportunities within their reach. If the standard of living of the villagers is high they would be selling more of their produce to meet the financial requirements of a high standard of living. Similarly if the investment opportunities are wide and easily available sale of agricultural produce will be larger to meet larger demand of funds for investment.

Villages Surveyed

Data relating to receipts, sale, consumption and other disposals of chief agricultural products are collected by the Visva-Bharati Agro-Economic Research Centre in East Indian Villages through village surveys covering all households in the villages selected for investigation. The reference-period for these data is the year preceding the year of investigation. Since opening-stock of produce is rarely disclosed by a village farmer, quantities of net receipts are mostly exclusive of carry-over. This paper attempts an analysis of such data in respect of 'Aman' paddy collected in the 1957-58 round of surveys from eight villages.

Receipts and Sales

Turning to an examination of the data relating to receipts and sales of 'Aman' paddy, it is evident that the proportion of sale to receipt is lower in the case of lower holding groups and higher for the upper groups (Table I).

This is normally the case since the excess over consumption could be negligible in the case of poorer farmers and larger for the richer ones. In the villages of Orissa, however, excepting Kutra the proportion of sale in all groups is definitely and sharply smaller than in the villages of other States. In one village Gundrigora there is no sale. This may be explained by an extremely low standard of living of the Orissa villages. In the village Kansar the proportion of sale in the case of small holding groups is a little higher than for the corresponding groups of other villages. It is possible that the easy access of the village to market-opportunities bringing within its reach a variety of consumer goods has induced a larger sale of paddy even among the poorer farmers who badly wanted money for purchasing these goods. The proportion of sale to receipts among richer farmers in this village has, however, been smaller in comparison with other villages. This may be due to speculative hoarding which is larger in urban areas.

The analysis of data pertaining to the receipt and sale of 'Aman' paddy is carried one step further by probing into per capita surplus over sale of paddy in different holding groups (Table II). Thus it is evident that larger farms hold a larger per capita surplus over sale for consumption, other disposals and hoarding—even after selling a larger proportion of their produce in comparison with the smaller farms.

Rate of Consumption and Other Disposals

Data relating to per capita consumption of rice (converted into annual quantity of paddy) and per capita other disposals are given in Table III. The limitation from which the consumption-data suffer is that they are based upon conversion of fortnightly figures into annual estimates irrespective of seasonal variation. Making allowance for some seasonal variation, these data, however, can be used for whatever they are worth in the present connection. It will be seen that consumption of rice is low in Bihar villages—Harnichak, Samahuta and Brahmsia—where it is supplemented by other cereals and millets. Rice-consumption in Gundrigora (Orissa) is also extremely low; this is because the people of this village are extremely poor, living mainly on inferior millets, e.g., 'Ragi', 'Kodo' and 'Khosla'. When consumption and other disposals are compared with excess of receipts over sale, it will be seen whether there is at all any absolute surplus in the hands of the farmers. This amount may be interpreted as hoarding.

Hoarding

The extent of hoarding defined above is also shown in Table III. It is evident that per capita hoarding varies from 2.65 mds. to 6.83 mds. in some villages, while there is also deficit to the order of 1.09 mds. and 2.68 mds. in two villages.

It is quite apparent that surplus with the bigger farms would be pretty large. On the liberal assumption that per capita "other disposals" in the case of bigger farmers would be four times as much as the average figure, per capita surplus for the holding-group 7.51-10.00 acres at Kansar can be estimated at 6.06 mds.; similarly the per capita surplus for the holding-group 10.01—15.00 acres would be as large as 19.05 mds. The corresponding figure for the holding-group 5.01-7.50 acres at Jungul and Harnichak would be 5 mds. and 10.72 mds. respectively; similar surpluses would be observable in other villages also for the higher holding groups.

When the surplus is considered at the village level by taking into account the consumption requirements of the village population as a whole at the average consumption rates given in Table III, it is found to be dwindling except in the case of Samahuta, Brahmsia and Darlimunda. There is no doubt that the poor villagers having no land are subject to under-consumption.

Conclusion

The surplus stock in the hands of big farmers may be looked upon as potentially equivalent to an investible fund. If investment opportunities in the rural sector are widened, if the opportunities of technical innovation requiring capital investment are brought within the reach of the farmers and its prospects made known, if rewards of hoarding in the form of enhanced prices are curbed, it is likely that larger quantity of foodgrains would be flowing out of stock of the farms to find their way into active investment.

TABLE I.—PROPORTION OF SALES TO RECEIPTS OF AMAN PADDY BY HOLDING SIZE-GROUPS: 1956-57

Village	Kansar, West Bengal		Jungul, West Bengal		Harnichak, Bihar		Samahuta, Bihar		Brahmsia, Bihar		Kutra, Orissa		Darimunda, Orissa		Gundrigora, Orissa	
	Holding Size-Group (in acres)	Per cent of sale to receipts	Per cent of sale to receipts	Per cent of sale to receipts	Per cent of sale to receipts	Per cent of sale to receipts	Per cent of sale to receipts	Per cent of sale to receipts	Per cent of sale to receipts	Per cent of sale to receipts	Per cent of sale to receipts	Per cent of sale to receipts	Per cent of sale to receipts	Per cent of sale to receipts	Per cent of sale to receipts	Per cent of sale to receipts
1.	0.01—1.25	..	—	—	—	—	25.84	—	—	—	—	—	—	—	—	—
2.	1.26—2.50	..	9.09	2.17	2.54	—	—	—	—	—	—	—	—	—	—	—
3.	2.51—3.75	..	6.64	2.73	15.38	—	—	—	11.74	—	—	—	—	—	—	—
4.	3.76—5.00	..	25.29	21.05	—	—	—	—	30.00	—	—	—	—	—	—	—
5.	5.01—7.50	..	9.50	30.11	25.00	—	6.52	—	15.15	—	—	—	—	—	—	—
6.	7.51—10.00	..	11.40	33.83	—	—	2.98	—	56.15	—	—	—	—	—	—	—
7.	10.01—15.00	..	12.00	35.79	—	—	20.47	—	57.14	—	—	—	4.85	—	—	—
8.	15.01—20.00	..	—	—	—	—	19.44	—	—	—	—	—	—	—	—	—
9.	20.01—25.00	..	—	—	—	—	33.33	—	—	—	31.11	—	—	—	—	—
10.	25.01—30.00	..	—	—	—	—	11.43	—	—	—	30.43	—	—	—	—	—
11.	Above 30.00	..	—	—	—	—	28.37	—	—	—	—	—	12.46	—	—	—
Total (Average)			11.70	29.58	6.24	—	19.04	—	28.21	—	9.17	—	8.69	—	—	—

TABLE II—PER CAPITA SURPLUS OVER SALE OF AMAN PADDY BY HOLDING SIZE-GROUPS:
1956-57

(in Maunds)

Village	Kansar, West Bengal	Jungul, West Bengal	Harni- chak, Bihar	Sama- huta, Bihar	Brahm- sia, Bihar	Kutra, Orissa	Darli- munda, Orissa	Gundri- gora, Orissa
Total population	653	389	528	366	172	490	401	94
Holding Size-Group (in acres)	Per Capita Surplus	Per Capita Surplus	Per Capita Surplus	Per Capita Surplus	Per Capita Surplus	Per Capita Surplus	Per Capita Surplus	Per Capita Surplus
1. 0.01 — 1.25 ..	1.27	0.50	1.17	7.00	1.03	1.04	—	—
2. 1.26 — 2.50 ..	4.14	1.99	5.48	4.06	3.02	2.69	2.67	1.54
3. 2.51 — 3.75 ..	8.67	4.65	6.29	3.50	6.20	3.20	5.00	1.55
4. 3.76 — 5.00 ..	7.77	6.35	6.45	4.32	6.63	4.27	5.10	3.00
5. 5.01 — 7.50 ..	9.82	8.95	15.00	3.58	11.67	4.57	5.00	2.42
6. 7.51 — 10.00 ..	15.55	17.05	—	5.91	—	7.63	7.33	3.00
7. 10.01 — 15.00 ..	29.33	10.39	—	12.40	8.41	5.15	9.80	2.67
8. 15.01 — 20.00 ..	—	—	—	11.15	12.50	—	0.56	—
9. 20.01 — 25.00 ..	—	—	—	10.00	—	5.17	25.00	—
10. 25.01 — 30.00 ..	—	—	—	31.00	—	12.31	9.33	—
11. Above 30.00 ..	—	—	—	17.34	—	—	55.62	—
Total (Average) ..	9.45	6.33	5.22	7.70	6.29	5.36	13.74	2.27
Cultivating population ..	401	264	242	427	167	388	302	84

TABLE III—ANNUAL CONSUMPTION OF PADDY BY HOLDING SIZE-GROUPS AND PER CAPITA
SURPLUS: 1956-57

(in Maunds)

Village	Kansar, West Bengal	Jungul, West Bengal	Harni- chak, Bihar	Sama- huta, Bihar	Brahm- sia, Bihar	Kutra, Orissa	Darli- munda, Orissa	Gundri- gora, Orissa
Holding Size-Group (in acres)								
1. 1.01 — 2.25 ..	11.76	4.97	3.66	1.50	1.22	5.91	—	—
2. 1.26 — 2.50 ..	5.20	6.28	3.84	1.87	2.06	9.66	5.06	1.78
3. 2.51 — 3.75 ..	6.14	6.66	4.59	1.50	2.44	8.63	5.81	2.16
4. 3.76 — 5.00 ..	5.11	7.31	2.81	1.59	1.78	7.50	4.78	0.94
5. 5.01 — 7.50 ..	6.60	7.03	3.56	2.06	2.44	6.09	4.22	1.88
6. 7.51 — 10.00 ..	7.71	7.78	—	1.87	—	7.88	7.03	1.88
7. 10.01 — 15.00 ..	9.00	6.56	—	2.63	2.72	7.97	6.56	0.66
8. 15.01 — 20.00 ..	—	—	—	2.81	2.34	—	2.06	—
9. 20.01 — 25.00 ..	—	—	—	1.31	—	18.09	9.38	—
10. 25.01 — 30.00 ..	—	—	—	1.89	—	1.13	7.50	—
11. Above 30.00 ..	—	—	—	2.15	—	—	5.90	—
Total (Average) ..	6.48	6.47	3.65	1.97	2.25	7.59	5.44	1.78
Per capita other disposals (average) ..	0.32	0.95	0.18	0.01	—	0.45	1.47	—
Per capita surplus of Aman paddy in the hands of farmers over sales, consumption and other disposals ..	+2.65	-1.09	+1.39	+5.72	+4.04	-2.68	+6.83	+0.49

PROBLEMS OF MARKETABLE SURPLUS IN INDIAN AGRICULTURE

B. NATARAJAN

Director

National Council of Applied Economic Research, New Delhi

In a developing economy like India marketable surplus of agricultural products has an extremely significant role to play. The rate at which agricultural production expands, affording an increasing supply of food and raw materials, largely determines the pace of economic development. What is even more important than a mere increase in production is the actual quantity of marketable surplus available from such an increase. In fact, one of the most significant indices of economic development is the quality and quantity of marketable surplus found in the economic system. It is this feature which distinguishes a highly developed economy from an under-developed economy.

By and large, under normal conditions, a producer would market that portion of his produce which is over and above his consumption requirements. Since he is free to arrive at this quantity, it constitutes his real surplus. On the other hand, if the amount of produce which the farmer sells is not solely determined by his own needs, but also by some other compelling economic factors, then his marketable surplus is not a free variant, but a forced surplus. The general presumption is that the element of forced surplus is more predominant in the less developed economies like India.

IMPORTANCE OF MOBILISING THE SURPLUS

The pace and flow of marketable surplus will play a very important role in the next few years for two basic reasons: (i) increase in the country's population; (ii) expanding food needs of the urban areas as the tempo of development and urbanisation increases. The rate of growth of the industrial sector and of non-agricultural employment depends, to a great extent, on the success with which we are able to transfer the increased production of food and raw materials to the urban/industrial sector. If the quantity of food required to sustain a given increase in industrial employment is not forthcoming, either industrial development will be slowed down or inflationary pressures will develop in the economy. Part of the increased employment will take place in the investment sector. Hence the mobilisation of agricultural surplus is ultimately a part of the problem of augmenting the investible surplus or savings in the economy.

Creating a marketable surplus poses no great problems in the case of commercial crops since most of the production is anyway intended for the market. In the case of foodgrains, however, the consumption demands of the agricultural population are large relatively to total production. Since population is increasing and since the majority of farmers are at a near subsistence level, an increase in the output of foodgrains tends to be absorbed by increased consumption. Since the rate of growth in non-agricultural employment depends to a large extent, on the magnitude of transfer of food to the urban sector, means have to be devised

to transfer a part of the increased production of foodgrains if this is not brought about by the automatic working of the market forces.

There are three aspects to the problem of indentifying and mobilising agricultural surplus in the economy:

- (a) the transfer of produce from the rural to the urban sector;
- (b) inter-State transfers;
- (c) creating a surplus within the country for exports.

The most popular and the most widely treated issue relates to the rural-urban transfers of agricultural produce. Agriculture being the backbone of our economy with over 70 per cent of the population depending on it for their daily bread, it is of vital importance to gain a full understanding of the limitations of the Indian farmer and also, the behaviour of his market supplies in relation to price. It is in the context of these factors that effective solutions ought to be suggested.

The basic problems which confront the Indian farmer spring mainly from the inherent rigidities of the rural economy. The physical productivity of the farm being low, the marketable produce seldom exceeds the requirements of the village or some adjoining areas. Cultivation on small and fragmented plots of land with a disproportionately large population yields but a negligible amount of marketable surplus. Another striking feature is the total lack of participation in the produce market. Absence of complete monetization of the rural economy, lack of proper storage facilities on the farm and the seasonal nature of the production of farm products, etc., have been mainly responsible for this.

MARKETABLE SURPLUS AND ITS BEHAVIOUR IN THE MARKET

The conclusions of the various commissions appointed during the last decade to make a study of the issue, all point to a narrow margin of the marketable surplus in India. According to a recent Report,¹ "By far the largest portion—over 75 per cent — of India's foodgrain production is never marketed. . . . The total marketable surplus represents less than 25 per cent of total foodgrain production in an average year." And, this includes both the quantity sold in the villages to meet local needs and the quantity brought to the assembling markets to meet the urban needs. Even according to the most liberal estimates, the marketable surplus in foodgrains is only one-third of the total production. Cereal-wise, it is 32 per cent for rice, 35 per cent for wheat and 25 per cent for millets. The marketable surplus is, however, very large in the case of commercial crops where the margin is as big as 90 or 95 per cent of total production. Since only a small portion of the total foodgrains production enters the market, the variations in the marketed surplus of this commodity sharply affects the supply available for non-agricultural sectors.

But the extent of variation in quantity marketed varies directly with the prevailing price-level and the expectations entertained at that time about future prices. Increased production is not always reflected in the market because of the existence of a chain of intermediaries who control the flow of stocks to the

1. Ministry of Food and Agriculture (Ford Foundation) : Report on India's Food Crisis and Steps to Meet It, Part I, Ch. III, p. 98.

market. Stock holding is, no doubt, necessary in trading, but unhealthy speculation in wholesale trading leading to inflationary pressure, and instability in price-level has an adverse effect on the economy. It is mainly to check this evil that the Food Grains Enquiry Committee stressed the need for social control in wholesale trading. Operations in this direction should be concentrated mostly in the villages as the bulk of the marketed surplus is usually sold in the village. According to the All-India Rural Credit Survey (1955) nearly 65 per cent of the total sales of crops are effected within the village limits, the proportions varying among the different crops and different regions.

Owing to the dearth of statistical information, it is very hazardous to equate variations in production with variations in market supplies. "On *a priori* grounds it may be said that if production increases and prices fall, marketed surplus will increase more than proportionately, owing to the tendency of de-hoarding initiated thereby. Similarly, if the production falls and prices rise, marketed surplus will increase more than proportionately owing to the stimulus to greater hoarding imparted thereby. But a situation may arise with prices and production moving in the same direction, when marketed surplus may behave quite erratically."²

For instance, during the latter half of 1955-56 and the first half of 1956-57, despite a general rise in the price-level, market arrivals did either decline or fail to increase proportionately. This could have been due to the following reasons: (i) The producers consumed more than before; (ii) A tendency for holding grains for a longer period than usual developed because (a) an increase in the availability of credit significantly enhance the cultivator's holding power, (b) the tendency to invest in stocks of grains became more marked and (c) the cultivators anticipated a further rise in prices; (iii) The producer's cash needs could be met with smaller sales.

Contrary as it seems to normal producer's response, the above instance is very representative of the situation likely to occur in a country where the surplus is at best a marginal one for most of the producers. In other words, "in the economist's jargon, the income effect of a change in price on consumption tends to be stronger than the substitution effect."³

Experience of Other Countries in Mobilising Marketable Surplus

A glance at the Chinese method of building resources for industrialisation would prove useful. During 1950-58, the Gross National Product (GNP) in India did not rise beyond 30 per cent, while foodgrains production rose by 37 per cent (Base: 1950). In China, on the other hand, according to calculations made by Prof. Malenbaum, there was a 100 per cent increase in foodgrains production during 1950-58 (from 122.7 million tons to 225 million tons). Industrial output also doubled between 1952 and 1958. As a result, gross investment as a percentage of GNP increased more than two-fold, from 9.7 in 1950 to 22 in 1958; in India gross investment showed only a 50 per cent increase, from 9.3 to 13.5.⁴

2. Report of the Foodgrains Enquiry Committee, 1957.

3. *Ibid.*

4. See Wilfred Malenbaum, "India and China: Contrasts in Development Performance," *American Economic Review* June, 1959, pp. 287 and 292.

Naturally China could pay for her imports by exporting foodgrains, and finance her investment programmes from domestic savings out of the current income. This success is largely accounted for by the larger investment in agriculture and industry than that devoted to services. No doubt, the Plans in India have laid special emphasis on the need for investing in both these sectors. Direct taxes on agriculture still account for less than 10 per cent of the total tax revenue. The magnitude of tax burden on the rural sector is relatively small in India. Hence we have not been able to tap fully our agricultural resources. The crucial role of mobilising agricultural surpluses in economic development is also illustrated by the experience of such countries such as Soviet Russia, Japan and Poland.

In Russia, the increase in the flow of marketable surplus was achieved by collective farming and by the setting up of large scale State farms which acted as agencies for channelling a larger percentage of the surplus to the urban sector. The system of compulsory delivery contracts at fixed prices not only provided the non-agricultural sector with a guaranteed supply of agricultural produce, but also put pressure on the farmers to maximise their produce.

In Japan, the increased use of fertilizers and adoption of improved techniques resulted in a considerable expansion of domestic output which outstripped population growth. But a large part of the agricultural surplus was siphoned off by the Government for capital formation in industry by heavy land taxes. The latter compelled the farmers to part with a larger proportion of their produce, and this solved the problem of feeding the urban population.

In Poland, the creation of small farms combined with exaggerated emphasis on industrialisation and output of capital goods, left little attraction for the farmer to increase his production. It also reduced his capacity to get consumer goods in exchange for his produce. Hence, the Polish Government had to offer special incentives in the form of credit facilities, etc., to increase the flow of market supplies.

In China, the organisation of agrarian co-operatives resulted in a substantial increase in agricultural production and made possible the transfer of a large part of it to the Central Government at fixed prices. The Government's declared policy in China is to restrict purchase of foodgrains to 80 per cent of the surplus, leaving the farmers free to dispose of the balance.

In India, however, these methods may have only limited applicability because of various political and institutional factors. Besides, some of the problems which our economy faces are peculiar to India. Therefore, the ways and means of mobilisation of marketable surplus should be preceded by an understanding of difficulties in the structure of our market mechanism.

WAYS AND MEANS OF MOBILISING AND REGULATING AGRICULTURAL MARKETABLE SURPLUS

(a) *Increased monetization and inducement to increase production:* The most important means of effecting the transfer of agricultural surpluses is the price mechanism itself. Whatever is transferred through the normal price mechanism is in the nature of a voluntary transfer. Increased monetization of the rural

economy will not only bring a greater proportion of the output into the mechanism of the market, but will also induce the farmers to produce more. For, contact with the market forces changes the outlook of the producers and reveals to them the scope for earning profits by producing even for distant markets. Also, increased production often springs from a desire to acquire consumer goods brought to the notice of the farmers by the spread of the monetized section of the market. Establishment of adequate means of communication in rural areas is an important method of speeding up the extension of market and the monetization of the economy.

(b) *Taxation*: Not all of the transfer of agricultural surplus can be paid for in the form of consumer goods required by the farmers. This is because part of the surplus goes to support the workers in investment goods industries which do not immediately and directly produce goods for consumption. This part of the surplus must therefore be transferred in the form of saving, voluntary or forced. The role of agricultural taxation must be viewed in this light. Taxes on commodities generally consumed by the agricultural population offer the most "painless" way of extracting some forced saving from the agriculturists. But indirect taxation must be supplemented by increased direct taxation of the more well-to-do farmers. A progressive surcharge on land revenue seems to be a suitable method of raising the level of direct taxation. The poorer farmer can of course be exempted from the surcharge. It would be realistic to assume that at least 25 per cent of the extra surplus needed should be mobilised through the mechanism of taxation.

(c) *Control of trade links*: It has been noted that what is marketed by the farmers does not often reach the ultimate consumers because of the activities of the intermediaries. A more direct and close relationship should be established between the producers and the ultimate consumers. Improvement in marketing arrangements has already been taken on hand, and efforts in this direction will do doubt continue. However, what is ultimately needed is the establishment of co-operative marketing societies of farmers which will establish direct links with consumer co-operatives in towns. This will ensure a social control of the flow of surplus to urban consumers, and at the same time eliminate artificial scarcities engineered by anti-social elements. In all, the country has now about 15 State Marketing Societies, about 2,000 Marketing Unions and nearly 10,000 Primary Marketing Societies. And it is estimated that by the end of the Second Plan, Co-operative agencies may be able to handle about 10 per cent of the marketable surplus. It should be our aim to raise the proportion to at least 30 per cent by the end of the Third Plan.

(i) *Regulated markets*: In the interest of the primary producer, regulating markets and market practices needs more emphasis. Regulated markets promote fair market practices and save the cultivator sellers from the arbitrary deductions and other malpractices. It has been proved by experience that wherever markets have been regulated, the farmer has felt encouraged to take his grain to them in preference to unregulated markets. Regulated markets should be concentrated more in areas with large agricultural marketable surpluses, and areas within bullock-cart distance from the cultivator's field.

(ii) *Co-operative farming*: Co-operative farming societies are the most potent instruments for mobilising agricultural surpluses. For one thing, the little

surpluses emerging on a number of small farms, which may otherwise be frittered away, are brought together to form a sizeable pool in the co-operative farm. Secondly, it becomes easier to identify and take count of the surplus when the units of production are large and organised. Thirdly, co-operative farms will be more amenable to social control and it will be more easy for the organs of the Government to establish contacts with the representatives of the farmers to the mutual benefit of the farmers and the sections of the population. Above all, co-operative farming will make possible improvements in technique and raise productivity and thereby raise the level of the potential surplus.

(iii) *State trading*: Since the formation of co-operative farming societies has to proceed on a voluntary basis, it is doubtful whether they will become widespread in the near future. Even if co-operative farming is to be the ultimate goal in the coming few years, we have to think of other means of establishing control over the distribution of agricultural products in the economy. The importance of State trading arises from this fact. State trading must be designed to supplement the normal activities of the market.

(d) *Farm credit*: Another way of augmenting the marketable surplus in the rural areas would be to link the supply of credit with the sale of agricultural produce. In the Community Project areas, special efforts may be made to make the farmer market-conscious, encourage him to sell more of his produce in exchange for industrial goods and thus ensure that increased production in these areas is reflected in the marketable surplus. Attention should also be given to create storage and warehousing facilities in every village.

(e) *Price policy*: A well-defined price policy is essential for maintaining a regular flow of marketable surplus. Since a large majority of our farmers live in a non-market oriented economy, special efforts have to be taken to bring the rural sector within the influence of price incentives. The agriculturists suffer from too much competition among themselves. The introduction of measures of control over supply will help to reduce the sharp fluctuations in prices and fall in incomes. Some element of monopoly trading is necessary in order to save the agriculturists from the bad effects of ineffective competition and lack of command over supply and prices. This would make agriculture more productive in the long run.

(f) *Income-support programme*: Where the ceiling and floor prices are fixed in advance it is necessary to ensure that the prices do not fall below the fixed minimum. For, in that case, income support programmes should be instituted. But this may not be feasible on a large scale, because in a country where there are a large number of cultivators, it calls for a big financial commitment. The only alternative is to maintain buffer stocks.

(g) *Grain silos*: Facilities provided in the rural areas should be such that while the farmer is encouraged to part with his grain after the harvest, he should not be left high and dry in the lean part of the year. For this purpose, the setting up of grain silos (as done in Orissa) would be very useful. The emphasis should be on local grain collections by way of shares and deposits. The Government should also participate in it.

(h) In order to guide the farmer in the allocation of his resources so as to obtain the maximum benefit Pilot Farm Planning Projects are being initiated at important agricultural centres in the economy. But such projects should be started in all parts of the country. After all, agriculture is the largest private sector in the economy, and the future pace and volume of agricultural output and its marketable surplus depends on the decisions of the numerous farmers.

CONTROL OF THE MARKETABLE SURPLUS WITHIN A STATE

So far we have discussed the various issues connected with the problems of general mobilisation of marketable surplus. A further analysis of the issue is, however, possible in the light of inter-State transfers of agricultural produce. Because, in our country, the relative positions of various States regarding food production are not uniform.

Even with regard to foodgrains alone, a similar picture holds true. Kerala and Bihar, for instance, are among the principal deficit States in the country where the present gap in foodgrains is bound to assume serious dimensions as population increases and the process of industrialisation develops fresh demand for food production. It is in this light that the role of State trading, creation of food zones and buffer stocks assume great significance.

The ever-expanding demand for foodgrains in our country calls for a very even distribution of available supplies so that the relatively vulnerable sections of our economy are not distressed by an undue rise in prices. In order to keep an effective check on the flow of marketable surplus along proper channels, it is very essential to create more or less self-sufficient zones and cordon off heavily deficit areas or other important consuming centres where Government could release adequate stocks of foodgrains from the Central reserves. The creation of Southern Rice Zone, for instance has practically solved the problem of Kerala as the surplus of Andhra Pradesh can now meet the deficit of Kerala and the zone is, on the whole, surplus in rice. Similarly, the creation of three wheat zones have been very useful. For instance, Punjab's surplus wheat can now take care of the deficit of Delhi. The resulting stabilisation of prices at a reasonable level creates great confidence in the mind of the farmer who will naturally part with a larger part of his produce in the market.

Besides, by proper husbanding of available food supplies in each State and zone, it is possible to build up small stocks of foodgrains at focal points in the economy. This would not only relieve the shortage of market supplies on some occasions but will also have a salutary effect on the prices of foodgrains in the country and exercise an indirect check on the speculative hoarding of stocks.

If the maximum amount of marketable surplus is to be mobilised in every State, then, internal procurement of such surpluses at reasonable prices either by the State or Central Governments, would go a long way in helping to build up buffer stocks. This is particularly significant in such surplus rice areas as Orissa, Madhya Pradesh and Andhra Pradesh. However, in view of the limited market supplies of rice, it would be wise on the part of the State Governments to continue

the policy of conserving rice supplies and distribute wheat instead. If a completely satisfactory result is to be attained, it is necessary to make a thorough survey of the extent of marketable surplus (crop-wise) in every district of the various States. A regular machinery has to be instituted to work on it and strike a balance between the surplus and deficit areas. This is an important task, because with the increase in purchasing power and growing urbanisation, there is a gradual shift from the consumption of coarser foodgrains such as Jowar, Bajra, Barley, Ragi, etc., to superior grains like Rice and Wheat. It means, that in future more concentrated efforts have to be directed towards mobilising the marketable surplus in the case of superior grains.

CREATION OF AN EXPORTABLE SURPLUS

Yet another problem that we have to consider is the creation of a large exportable surplus in agricultural commodities which enter into export market. Since India is a net importer of foodgrains it would be idle to seek any surplus for export in that sphere. Whatever contribution there is will be in the form of cash crops or commercial crops. The problem of mobilisation of marketable surplus does not exist so much in the case of commercial crops, because once the internal needs are met, the rest of the produce are exported. There is, however, a great need to check the overall consumption of these items within the country and expand the export bag if possible. Increase in exportable surplus can be effected by (i) undertaking measures to increase production and productivity, and (ii) ear-marking a certain portion of the produce for exports. This may be done either in the case of raw materials or manufactured and semi-manufactured goods.

The importance of our exports arises from two basic factors. Firstly, our export items are traditionally honoured and secondly, they are very good foreign exchange earners. A larger export will naturally mean a better buying capacity on our side. Juxtaposed with the increasing magnitude of our import of foodgrains, the significant role of our exports in reducing our debt burden can hardly be over-emphasised.

CONCLUSIONS

To sum up, the approach to the problems of marketable surplus in Indian agriculture is three-pronged: (i) the rural-urban transfers, (ii) inter-State transfers and (iii) exportable surplus. This calls for a vigorous programme of mobilisation of surplus at various levels, right from the producing centre to the ultimate consumer. Equally vital is the need to step up production and raise productivity in the long run. It means that agriculture should become one of the most scientifically managed industries in the economy. Unless and until we undertake this twin responsibility it will not be possible either to reap the full benefits of increased marketable surplus or remove the spectre of shortage in agricultural commodities which will continue to remain a long-term phenomenon.