

## Food Security and Poverty<sup>1</sup>

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It is a matter of great privilege and pleasure for me to be invited to deliver Dr. Rajendra Prasad Memorial Lecture at the 51st Annual Conference of the Indian Society of Agricultural Statistics. The Indian Society of Agricultural Statistics is one of the oldest professional bodies. It was founded in the year of Indian independence 1947. Over this half a century it has distinguished itself by raising stimulating debate in agricultural statistics and making valuable contributions to the studies and research in statistics and its application to agriculture and allied fields.

Dr. Rajendra Prasad was the founder President of the Society and he continued to guide the Society for 16 years even after becoming the President of India. It is indeed a great honour to be delivering a lecture in memory of Dr. Rajendra Prasad, such a great statesman and eminent social thinker. He had great interest in rural India and in the development of agriculture. It is only appropriate that my eminent predecessors who have delivered this memorial lecture have mostly chosen to speak on topics related to food and agriculture and rural development. In keeping with that tradition, I choose to speak on food security and poverty, as I still perceive it to be one of the most important concerns which should be informing the Indian development strategy at least through the earlier part of the 21st Century.

In a manner of saying we have achieved self-sufficiency in food production. Our import dependence has been reduced to negligible levels. Average food availability has increased. Food basket is more diversified now. The last that we had seen a severe famine was in mid sixties. Chronic hunger too has been banished. We now appear to be capable of keeping on increasing our food production to meet the growing needs of population. But we should not forget that this self-sufficiency exists along with the existence of around one-third of the population below poverty line. As people rise above poverty line, their food requirements increase. Even this relative self-sufficiency is very delicately balanced. One bad drought sends us running in search of food grains.

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<sup>1</sup> Dr. Rajendra Prasad Memorial Lecture at the 51st Annual Conference of the Indian Society of Agricultural Statistics at Rajkot on 6th December, 1997.

Even a 2 per cent shortage at the margin means 4 million tonnes, enough to heat up the world market. We are far from establishing food security on unshakeable foundations.

Food security and poverty are very intimately and directly related. Our historical experience at least over the last 50 years, for which we have more or less reliable data, shows that the level of poverty has waned and waxed with changes in the food situation.

Let us consider the poverty situation first. There has been a considerable amount of debate on Indian Poverty numbers in the last few years. The debate has largely been focussed on methodological issues. Planning Commission had been conventionally estimating poverty following a method recommended by the Task Force on Projection of Minimum Needs and Effective Consumption Demand in 1979. This method required an upward adjustment of the data of household consumption obtained through the National Sample Survey (NSS). This adjustment was recommended in order to bring parity between the "Sum Total of Household Consumption" (STHC) as estimated from the Survey data and the estimates of "National Private Consumption Expenditure" (NPCE) as per National Accounts Statistics. The Task Force had recommended closing the gap between STHC and NPCE by raising the STHC (and its entire distribution by expenditure groups) in the same proportion to match the NPCE. When the Task Force had made this recommendation in 1979, the difference between the two was of the order of 10-11 per cent. Over the years, the gap has gone on increasing and stands now in the range of 35-40 per cent. It has been generally felt that this adjustment was uncalled for. When the data obtained from a field survey requires such large adjustment, then either the survey is questionable or the benchmark for adjustment (in this case NPCE) is questionable or, what is more likely is that we are comparing two uncomparables. This and a number of other issues had cropped up in respect of poverty estimates. In order to look into the methodology for estimating poverty at national and State levels and also to go into the question of redefining the poverty line with reference to indices for updating the poverty line, the Planning Commission in 1989 constituted an Expert Group on Estimation of Proportion and Number of Poor.

The report of the Expert Group (1993), while accepting the definition of poverty line used by the Task Force, recommended changes in methodology of estimation and provided estimates of poverty at national and State levels using State specific poverty lines. The Expert Group made estimates of poverty based on quinquennial rounds of NSS for the years 1973-74, 1977-78, 1983

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and 1987-88. Estimates based on the same method are also available now for the year 1993-94.

The most important points of departure between the Expert Group recommendations and the Task Force methodology were:

- (i) The Expert Group recommended giving up adjustments of the NSS data on the basis of the estimate of private consumption expenditure given in the National Accounts Statistics (NAS)
- (ii) The Expert Group recommended State specific poverty lines as against an All India poverty line for rural and urban areas
- (iii) The Expert Group suggested use of State specific cost of living indices separately for rural and urban areas for up-dating the poverty line separately for rural and urban areas, as against only the All India index which was used both for rural and urban areas. The Expert Group recommended taking consumer price index for agricultural labourers for up-dating the rural poverty line and a simple average of weighted commodity indices of Consumer Price Index for Industrial Workers and Consumer Price Index for Urban Non-Manual Employees for up-dating the urban poverty line.

The Planning Commission accepted the Expert Group methodology in March, 1997. However, in a slight simplification of the Expert Group method, the Planning Commission decided to use only the "Consumer Price Index for Industrial Workers" for estimating and up-dating the urban poverty line.

[The estimates of poverty as per the Expert Group methodology for the years 1973-74, 1977-78, 1983, 1987-88 and 1993-94 are presented in Table 1.]

**Table 1: Number and Percentage of Population below Poverty Line**

(Number in million)

	RURAL		URBAN		COMBINED	
	Number	Percentage	Number	Percentage	Number	Percentage
1973-74	261.3	56.4	60.0	49.0	321.3	54.9
1977-78	264.3	53.0	64.6	45.2	328.9	51.3
1983	252.0	45.7	70.9	40.8	332.9	44.5
1987-88	231.9	39.1	75.2	38.2	307.1	38.9
1993-94	244.0	37.3	76.3	32.4	320.3	36.0

Source : Planning Commission, Govt. of India, Press Release dated 11th March, 1997.

Over the 20 year period 1973-74 to 1993-94, it can be seen that poverty ratio (i.e., percentage of poor in the total population) has declined from 55% to 36%. However, due to the increase in population, the number of poor in the country remains more or less the same. There were 321 million poor persons in 1973-74 and there were 320 million poor persons even in the year, 1993-94. The number of urban poor has, in fact, increased from 60 million to 76 million over this period. Number of rural poor has declined from 261 million to 244 million. One test of adequacy in the rate of decline of the percentage of the poor should be that it should result in the decline in the absolute number of poor persistently. On this test, our efforts or the effectiveness of our efforts appear to be inadequate even though, the poverty alleviation programmes have been strengthened and expanded in Plan after Plan.

World Bank have recently come out with a study of Indian poverty. They have utilised all the NSS Rounds on consumer expenditure available since 1951-52 and have produced a long series of poverty estimates. They have broadly followed the Expert Group method in the measurement of poverty with one mean difference. They have made adjustments in the all India consumer price index for agricultural labours for the rural sector. The adjustment was for the price of firewood. For the benchmark year for which both the estimates are available, i.e. Expert Group estimates and the World Bank estimates, the World Bank estimates of poverty are lowered on the average by about one percentage point. [These estimates are presented in Table 2]. The World Bank

**Table 2 : Incidence of Poverty (Headcount ratio)**

	Modified Expert Group Estimates (1)	World Bank Estimates (2)
May 53 – March 54		56.1
March 57 – May 58		56.2
Feb 63 – Jan 64		47.9
July 67 – June 68		61.6
Oct 73 – Jun 74	54.9	54.1
July 77 – Jun 78	51.3	48.4
Jan 83 – Dec 83	44.5	43.0
July 87 – Jan 88	38.9	38.5
July 93 – Jun 94	36.0	35.0

*Sources:*

- (1) *Report of the Expert Group on Estimation of Proportion and Number of Poor* PPD, Planning Commission, Govt. of India, July 1993 and Estimates released by Planning Commission in March, 1997.
- (2) *India- Achievements and Challenges in Reducing Poverty*, A World Bank Country Study, 1997.

have also worked out the poverty gap index and squared poverty gap index. But it is interesting to note that the different indicators of poverty in India tell almost the same story. When a significant poverty alleviation takes place, it takes place along all the expenditure groups and the poverty depth varies almost in the same proportion as the head count ratio. Our income distribution has not changed significantly. This could be due to peculiar production and employment structure that we have. Head count ratio, therefore, in our case, is a good robust indicator of poverty.

Poverty in India remained more or less at the same level during the three decades of fifties, sixties and seventies. There were periodical fluctuations. There were years when the head count ratio went up to 62%, and in some years it declined to a little less than 50%. Poverty started declining from early eighties and since then the decline has been persistent.

A number of things happened since the beginning of the decade of eighties. Economic growth rate climbed up to higher path. From an average of 3½ per cent growth, we climbed up to over 5½ percent growth, and the growth rate has even improved since then. After allowing for population growth and growth in saving during the first three decades after independence, private per capita consumption could grow only at the rate of about one per cent per annum. After eighties, private per capita consumption has been growing at the rate of about 3½ per cent per annum, which is a big jump from barely 1 per cent. This obviously had implications for levels of living and poverty.

Agricultural growth also improved significantly after 1980-81. Agricultural GDP growth was 2.58% during the period 1950-51 to 1964-65, and 2.24% during 1964-65 to 1980-81. It improved to 3.29% during the period 1980-81 to 1994-95. The Green Revolution had taken firm roots in North West by the middle of seventies and then it started spreading. Agricultural growth has direct beneficial impact on poverty alleviation. When agriculture changes from low productivity—low intensity to high productivity—high intensity, it generates lot of new employment and wages improve. It benefits large number of people, particularly those who are below the poverty line. This is, perhaps the reason why rate of poverty alleviation has been higher in rural areas than in urban areas.

The food situation also improved significantly since the beginning of eighties (Table 3). The per capita per day food grains availability went up from 442 grams on an average during 1971-80 and even lower levels earlier to 456 grams during 1981-85 and more later. Even the lower availability in the earlier decades was significantly dependent on imports. The proportion of net imports to net availability was 4.68 during 1951-55, going up to 8.83 during 1966-70.

**Table 3: Foodgrains Availability**

	Net Imports as Proportion of Net Availability (Percentage)	Per-capita Per day Net Availability (Grams)
1951-55	4.68	418.8
1956-60	6.09	440.9
1961-65	7.51	461.1
1966-70	8.83	434.0
1971-75	4.24	442.6
1976-80	-0.17	441.8
1981-85	1.52	456.1
1986-90	0.41	473.9
1991-96	0.02	486.5

Source: Economic Survey, 1996-97.

Note: Net Availability = Net production + Net imports + Changes in Govt. Stocks, where Net production = 87.5% of Gross production, 12.5% being provided for seeds, feed and waste.

The dependence on imports was over during the period 1976-80 and thereafter net import as a component of net availability has been very marginal or negligible. It needs to be further noted that the food basket has also been diversifying over the period and there is much more improved availability of the other items of food. For example, sugar availability increased from 5 kg per capita in 1955-56 to 14.1 kg in 1995-96. Availability of edible oil and vanaspati went up from 3.2 kg per capita in 1955-56 to 8.2 kg in 1995-96. There has been an improved availability of fruits and vegetables and animal products as well. However, food grains still matter the most and particularly for the poor.

Food security as reflected in food grain availability is thus very directly correlated with poverty. This is not to deny the importance of growth in general and employment generation in particular because it is through this process that purchasing power is transferred to the poor. But in the absence of food availability food inflation is very high and the available purchasing power becomes inadequate. This may happen even in the case of large stocks of food grains, as was the experience in 1992. We were carrying very large buffer stocks and yet during that year food availability became very low because people's real purchasing power was curtailed by very large increases in food grains prices. That was the year when poverty also went up to over 41 per cent. Since the net availability is defined as net of addition to stocks, it more

or less reflects the purchasing ability of the people. Thus, food prices become an important component of food security. Income generation to make purchasing power available is yet another important component. However, at the base of all this is our capacity to produce food. It is only when this capacity was increased since mid 70s that we were able to have reasonable alignment of food prices and wage increases. In the absence of adequate production and dependence on imports this alignment would have been severely disturbed.

The Working Group on Demand and Supply Projections of Agricultural Commodities for the Ninth Plan projected that food requirements in terms of production capabilities during the terminal year of the Ninth Plan will have to reach 216.5 million tonnes. This projection perhaps under-estimate requirements of food grain by industries and for livestock consumption, etc. Demand for these will be growing at a faster rate than has been observed in the past. However, taking into account our projections of production capabilities, keeping in view the necessary contribution which agriculture will have to make towards growth and employment, the food grain production in the year 2002 is projected at a level between 228 to 230 million tonnes. This will also allow a margin for exports as well.

In order to see that this level of production materialises, we will have to strengthen our traditional support to agriculture, i.e. supply of irrigation, fertiliser, electricity, general improvement in rural infrastructure like roads as well as market support including price support. And above all we will have to strengthen our supports to agriculture by way of research and technological improvements. But we will also have to pay attention to two more elements in the strategy for supporting agriculture. One is the regional diversification of food grains production and surpluses and second will be providing special support to the small farmers in the wake of globalisation and other implications of WTO agreements.

The agricultural development strategies, during the Ninth Five Year Plan, would be centered around achieving the objectives of employment generation, food security, poverty eradication and sustainability. Efforts will be made to achieve a growth rate of 4.5 per cent per annum in agricultural output in order to make a significant impact on growth and poverty. Regionally differentiated strategies will be followed to realise the full potential of growth in every region. The emphasis will be on raising the capabilities of small peasants, promoting sustainable agricultural systems, conserving the resource base and maximising the value from scarce resources, i.e., land and water. Investment in minor irrigation will be encouraged. Efforts will be made at integrated approach to various development programmes being implemented by different Ministries

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in rural areas to see that overall infrastructural situation in rural areas improves. Electricity and village roads contribute significantly to agricultural productivity. The Rural Infrastructure Development Fund (RIDF) will be made available to cover projects which encourage group of small farmers, artisans and landless labourers to organise for skill upgradation, processing, transport infrastructure, etc.

The eastern region which has abundance of surface and ground water, can, with investments in tubewells, flood control and drainage system as well as investment in roads, become a much bigger granary of India. This will allow the north-west to diversify away from food grain production to more high value added crops and activities and thus maintain the growth in incomes. North-western region will have great export potential. The water scarce regions of the peninsular India require investment in water shed development, water harvesting and water conserving technologies. This will enable the region to produce more of oil seeds, pulses, horticultural crops, cotton, spices and also perhaps specialise in animal husbandry. Sectors like animal husbandry and fishery have great potential for growth in almost all the parts of the country and these will be high growth sub-sectors in agriculture.

Support to agricultural research will be enhanced and emphasis will be placed on bio-technology, microbiology, genetic improvement of crops and hybrid technology, genetic upgradation of animal resources, improvement of fish stock, post harvest technology, information dissemination and human resource development. A massive application of Science and Technology only can enable Indian agriculture to face the serious challenges of food security and global competition. Major scientific and technological support will be needed for agriculture in rainfed areas, especially the eastern part of the country and arid peninsular region.

As a major support to agriculture it is also necessary to strengthen the institutional framework for agricultural development, in particular the grassroots and the people's institutions. Institutional reforms should involve shifting the focus of supporting system to small land holders. We need to revitalise cooperative institutions. Cooperatives need to be made more autonomous and free from bureaucratic clutches. For this purpose legislative reforms are being considered. Traditionally the cooperatives have helped in credit and input disbursement. In future they have to play a larger role in marketing the products and in agro-processing. With large increases in outputs, marketing of products would become a crucial constraint. This year's potato glut is an example. More organised efforts are needed to solve this problem. Governments' price support operations cannot be extended to cover all the crops and therefore those

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operations will be confined to very crucial commodities particularly the major food grains. The farmers will have to deal with the market themselves and they can only do it effectively if they are organised. Cooperatives are only one form of organisation. There can be other forms like producers associations, self help groups etc. The Government will provide initial necessary support to the development of such institutions and will also encourage NGOs to take a lead in organising the farmers for such purposes.

Land reforms must form an integral part of the strategy of poverty eradication and agricultural development. The redistribution of the ceiling surplus land among the poor is required to be pursued with greater political and administrative commitment. At least 40 per cent of the ceiling surplus land should be distributed to eligible women while the remaining 60 per cent should be jointly owned by the husband and the wife. The recommendation of the Chief Ministers Conference held in 1992 should be implemented by the State Governments with immediate effect. Relaxation of ceilings on land for commercial farming is absolutely undesirable particularly when the opportunities for non farm employment for the landless are non-existent in any substantial sense.

Agricultural tenancy has been abolished in most of the States, but concealed tenancy exists almost everywhere. Blanket ban on tenancy has not helped either the poor or the rich. Therefore agricultural tenancy should be recognised and regulated, at least within the ceiling limits.

Tribal lands have fallen in the hands of non-tribals in several areas due to various legal loopholes and administrative lapses. Legal provisions for prevention of alienation and restoration of tribal land should be extended to all areas and not just to notified scheduled areas.

Maintenance of upto date land records is crucial for effective implementation of land reforms. Special drive for recording land rights on the lines of Operation Barga in West Bengal need to be undertaken by various States. Updating the land records can be expedited through involvement of panchayati raj institutions and the local revenue functionaries.

India has been a member of General Agreement on Trade and Tariff (GATT) since its inception in 1948. The agreement is renewed from time to time. The GATT, 1994, now the World Trade Organisation (WTO), for the first time included trade in agriculture, service and technology, foreign direct investment and production of intellectual property rights within its ambit. The provisions have certain implications which we must take note of with a view to evolving a strategy for meeting the challenge of globalisation in about five

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years time from now. Fortunately for us, the provisions relating to reduction of export subsidies and market access opportunities do not effect us at present. On Trade Related Intellectual Property Rights (TRIPS), India has opted to protect its plant varieties by Sui Generis Legislation. We will have to enhance the allocation of public resources to agricultural research very substantially. Public institution have contributed a lot to agricultural research in the past. In future more will be expected of them to protect the interest of farmers, particularly the small peasants.

On quantitative restrictions and tariff ceiling bindings we need to have a clear strategy. It is binding on a country, not having balance of payments problem, to convert the quantitative restrictions into tariffs over the next five years. India is now in this category of countries. Out of 11,587 tariff lines in India, 2,710 are subject to quantitative restrictions. The implication is that if we have to maintain our production, we must be globally price-competitive. On the basis of the available information about prices (1994-1996) it appears that India is price-competitive at present in a number of major commodities like rice, wheat, tea, coffee, fruits and vegetables, etc. but is not so competitive in oilseeds and a number of other commodities.

Competitiveness is to be seen in a dynamic context in which everything is changing over time. The input prices are changing, the land productivity is changing, the transport costs are changing. Therefore, we need to do an exercise which does not just take the present prices but takes a view of the movement of various components of the price in the future. Even the commodities in which we appear to be competitive at present, we are competitive only at the margin and the biggest component of cost which favours us to be in this position is the wage rate which in India is very low. Even some of the developing countries have ten times higher wages than we have. As growth takes place and as we succeed in eradicating poverty over time, our wages will rise. Most of the developing countries which have developed fast have gone through this process. Cheap labour advantage and high growth cannot co-exist for long. The only long term elements which would help us in being competitive would be (a) the relative scale of production and (b) the productivity. Being a large country, we have advantage in the relative scale of production. In most of the important commodities we rank first, second and third in the scale of production in the world. In paddy, wheat, sugarcane, groundnut, onion, we are second. In jute and tea, of course, we are first. But even on this score we need not be complacent because some of our competitors may be close to us or have the capability of coming close to us even in the scale of production. For example, Indonesia is also a large rice producing

country, has comparative advantage in cost of production and is capable of extending cultivation to very extensive uncultivated areas.

It is in productivity that we rank very low. In paddy our rank in terms of productivity is 51 in the world. In wheat it is 43, in sugarcane it is 35, in groundnut it is 70 and in onion it is 78. Even in case of jute, we are 5th and in case of tea, we are 12th. The conclusion is unescapable unless we put in massive efforts in raising productivity of some of the selected crops, in which we have a good chance, we will not be able to face open trade with confidence. We have to make very careful choice of the crops on which we have to concentrate in the next few years.

It also needs to be noted that productive resources for agriculture are not as malleable as in case of industries. Land and agro climatic conditions are resources very specific to a limited range of activities and therefore our choice of crops and activities has to be such which gives chance to every region of the country for using its resources productively and for keeping the people employed. This is a challenge mainly to agricultural universities and agricultural research institutions and all those who can contribute through strategic thinking and research. I also believe that our people, our scientists and our institutions are capable of rising to the challenge.

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