

Lord Curzon Lecture :

Increasing Agricultural Production *

by

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Part III. THE SITUATION IN INDIA

The situation in India is exactly similar to what has been seen in the world picture. Insufficient land area, low productivity and an increasing population are the contributing causes. India is no better nor worse than many other countries, although her large population makes one feel apprehensive. A review of the figures available for the last ten years on agricultural production, does show that India has maintained progress. The index numbers of agricultural production substantiate this.

India's real problem has been an abnormally alarming increase in population. From 250 millions in 1901, it has reached 440 millions in 1960-'61, an increase of nearly 90 per cent. Her population has doubled itself in 60 years but agricultural production has registered an increase of only 10 to 30 per cent in different crops during the same period.

I. Irrigation : A start has been made on correct lines to provide one of the measures needed for increasing production, namely, irrigation. The work, however, will take time for full utilisation. Even in advanced countries like the U. S. A., it has taken two to twenty years for the irrigation potential created to be fully utilised. In India, several irrigation projects constructed 30 or 40 years ago have still 30 to 50 per cent of their potential to be utilised. From experience in many countries and in India from the earlier projects, certain features seem to be operative factors for non-utilisation or partial utilisation of irrigation projects. On the engineering side, the construction of the canal, the sluices and the field channels, take much longer than the main works. On the agricultural side, farmers are not ready with knowledge of new crops and practices. The Government is also not fully equipped to deal with the new situation like the supply of seeds, fertilisers and provision of markets. The mistake lies in the fact that agricultural research started only after the project construction was finished. The correct thing will be to start research much earlier, accumulate knowledge and material and be ready to switch over to new conditions as soon as water is available. There must, therefore, be an Agricultural Research Station associated with every project and its work and findings must be coeval with construction on the engineering side and its progress. For large projects, even

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* Third part of the Lord Curzon Endowment Lecture delivered by Professor M. R. Balakrishnan under the auspices of the University of Madras.

more than one Research Station may be needed. The Thungabhadra was the only project started on the correct lines, with an Agricultural Research Station at Siruguppa, which was started four or five years before the project work began.

Apart from these major irrigation projects, the utilisation of underground water has had much attention during the last decade, particularly in Madras. In many parts of Madras State, the sinking of wells has proved a great boon to the farmer. The old methods of lifting water by the *Picottah* and the *mhote* are being replaced by the electric power, in the development of which Madras has taken a foremost place.

The installation of filter points and tube wells to tap the underground supply of water is another fruitful line of exploration. This has to be preceded by a survey of ground water level and supply. In Tanjore delta where this scheme is to operate this year, Government has done the initial survey and sanctioned the scheme of installation. The results will be worth watching, but there is no doubt that it will be a success. If it is, the scheme must be extended to other areas, of course preceded by a survey and after correcting mistakes that may be found in working the scheme in Tanjore delta.

We must have both Major Irrigation Projects and Small Irrigation Schemes. The former have a long range vision and take quite some time to get fully utilised. The latter have a short range effect and targets are easier to reach, which is important because, we have to get quick results at the present time, while building up our potential at the same time. Tanks, wells, filter points and tube wells have a greater chance of success at the present moment, than huge irrigation projects because of the lesser cost of initial investment and time and energy spent. There is one great advantage in rice production under these minor irrigation schemes. There will be economic use of water and there will be no fear of over-irrigation, flooding and problems of drainage. Thus, in Israel considerable progress has been made not by big irrigation projects but by the tapping of underground water.

II. Fertilisers: The application of fertilisers to increase production has made remarkable progress in India during the last ten years. Investigation on the response of different crops to different kinds of fertilizers, their optimum doses, the time and methods of application and their reaction under different soil conditions, has been carried out in Madras State. Almost all crops have figured in the trials, but special attention has been paid to rice, sugarcane, *ragi*, cotton and potato. Different kinds of fertilisers, nitrogenous, phosphatic and potassic, as also organic manures have been studied. Ammonium sulphate, nitrate of soda, calcium cyanamide and urea among the nitrogenous; rock phosphate, super phosphate, and several proprietary compounds supplying phosphorus in a soluble form, among the phosphatic; muriate and sulphate of potash, among the potassic, have, all received attention in these investigations.

One important aspect of the Madras work was the stress laid on the use of organic manures like farm yard manure, oil cakes, bone and fish meal and last but not least, different kinds of green manures. Recognising the insufficiency in the country of these organic manures, the Department has always been advising the use of fertilisers, in judicious combination with the organics. Apart from the immediate effect and response obtained by the fertilisers, the maintenance of soil fertility in the long run has been the main plank of departmental propaganda. With this object in view, they have been advocating a basal dressing of cattle manure or green manure before applying the fertiliser. In this connection, a number of green manure crops under different conditions have received special attention. The growing of green manure crops and ploughing them in, is a practice, peculiar to Madras which has acquired a reputation for the adoption of this practice in all double cropped wetlands.

Phosphatic fertilisers and their importance have also been kept in view. The manurial experiments have indicated that as in Thailand, Burma and other Asian countries, phosphoric acid is a limiting factor to production in certain areas. On laterites rich in iron, to avoid the risk of the soluble phosphate applied becoming fixed as insoluble ferric phosphate, the experiments have indicated that the incorporation of green manure and the application of lime will help to ward off the evil. As a result of these experiments, special formulae for fertilizer mixture have been worked out by the Government Agricultural Chemist. They are for different crops and for different soil regions. The formulae indicate the amounts of different nutrients-nitrogen, phosphorus and potash that have to be found in the mixture. The famous *Nanjanad mixture* for potatoes is an illustration of such formulae.

At the end of the last Great War, fertilizer mindedness and fertilizer application had become very ordinary features of the farmers' cultivation methods, for which, no propaganda was needed. Good wine needed no bush.

While this remarkable change can be solely attributed to the excellent technical work done by the researchers, to day, one is faced with the situation that the demand far exceeds the supply. The factories manufacturing fertilisers are not able to cope with the demand because they were started only recently and some of them have not gone into full production yet. Once again, it is a question of a late start and defective research.

By the end of the Fourth Plan, about 180 to 200 million acres are expected to come under irrigation. Assuming that this area will require fertilisers, we can expect our consumption to be about two to five million tons of nitrogenous and about three-fourths of that amount of phosphatics. Till now, our supply has been met by way of imports from the U. S. A. It is reported that a quarter of the nitrogen applied by the farmer comes from American sources, and American assistance. Hereafter, fertiliser manufacture within the country must be stepped up with foreign collaboration.

III. High yielding varieties and seed improvement: In the field of improving seed and evolving better strains, quite an amount of creditable work has been turndout in India. The most spectacular achievement of the Madras Agricultural Department as long as 20 to 25 years ago, and one which even the critics of the Department have paid encomiums about, is the one relating to the seed material of the several crops evolved by the Department. Better strains, with higher yielding power, more resistant to diseases, more economic response to fertilisers, incurring less expenditure and fetching higher value in the open market, have won for the Department a shower of praise on every hand. In fact, the agricultural depots become the popular meeting place for farmers who used to crowd round the demonstrator with demand for 'company' seed as the Department seed was called in those days. Incessant research is going on in this field and new strains are being added every year, as soon as there are indications that the old ones have lost their vigour or appeal for some reason or other.

IV. Control of Pests and Diseases: Entomological and mycological investigations have not lagged behind other branches of agricultural research during the last two decades. Control methods suggested by the Department and followed by the farmers have more than kept in check the ravages of insect pests and of diseases. In the earlier days, the control methods were mostly of a mechanical nature like hand picking, dragging ropes across the fields, digging ditches round them, cutting off affected parts and promoting conditions uncongenial for the development of insects and fungi. The insecticides of those days were lead arsenate and similar chemical compounds mixed with crude oil and fish oil emulsion with resin added as an adhesive. Tobacco decoction was also known as a remedy against sucking insects.

A later development was the biological control of pests, the most noted instance being the campaign against the coconut leaf eating caterpillar *Nephantes serenopa* by hymenopterous parasites and the extermination of the noxious prickly pear *Opuntia dillenii* by the cochineal insect.

It was not always easy in those days, to make farmers take easy control measures which were based on a knowledge of the life history and habits of the insects studied so laboriously and carefully by the Entomologist. Government legislation had to be sought in the form of Pests Acts as, when the cotton stem weevil *Pempheres affinis* and the hairy caterpillar *Amsacta* had to be tackled with the farmer's co-operation.

Today, very many chemical compounds have come into current use as insecticides. They are effective and successful, but great care and skill is required in using them and a lot of education has to be done before advocating their use.

As far as diseases are concerned, the earlier methods chiefly against *anthracnose* and mildew in Grapevine, the bleeding disease and bud rot in palms and the *Mahali* disease on *areca* consisted in the use of Bordeaux mixture sufficiently early, as an advance precaution and in promotion of conditions like

improving drainage, letting in sunshine into the fields, measures which are known to be unfavourable for the growth of fungi. Knowing that prevention is much better than cure, the Mycologist has always been advocating the pretreatment of seeds and cuttings for vegetative propagation, the materials being sulphur, ceresan, agrosan and some other compounds.

A modern development is the breeding of disease resistant varieties and the Crop Breeder and the Mycologist have joined hands for this fruitful purpose. This has yielded better results than the earlier method of merely spraying fungicides. Instances of success in this field are the Blast resistant rice varieties and the rust resistant wheat. With virus appearing in the field, the problem has become a little more difficult than before but, even here the researcher is proving his worth. Mosaic resistant varieties of sugarcane and other crops are now slowly replacing the old varieties and in fact, before releasing a new variety of sugarcane the sugarcane breeder makes sure of its resistance to mosaic. Very recently, a new visitor has arrived on the scene. He is the nematode who is carrying the war into the potato fields on the hills. His ravages have necessitated the appointment of a Nematologist who has started work to find ways of eradicating the menace. With the high standard of research associated with all the different branches of agricultural research, we may be confident that before long he will have added his valuable contribution to the achievements of this Department.

V. The Package Programme: Very often the farmer does not follow all the methods suggested by the Department either because he is unable to do so or unwilling to adopt them. He requires a certain amount of catalytic action to make him bestir himself. The package programme was this catalyst. By giving him all the methods in a package, so to say, Government are slowly helping him to change his practices. The object is to get an integrated benefit of all the advice and not only in one or two directions like irrigation and fertiliser application. The package programme was first tried in Tanjore delta in Madras and on rice. Farmers were assured of supply of irrigation water, fertilisers and improved seeds. The departmental officers laid special attention to improved agronomic practices like drainage, weeding and intercultivation, and also took steps to control pests and diseases. In spite of some adverse comments on the scheme, the general consensus has been that the scheme has been successful and some of the mistakes committed in the first trials are surely capable of being rectified. Anyway, the scheme has been extended to other areas and other crops, the latest being the Package Scheme on extending banana cultivation in North Arcot district.

VI. Land colonisation Scheme: *Poromboke* lands have been made available by the Government, to farmers who wish to settle there for permanent agriculture. This is reported to be quite a success in Salem and North Arcot districts. In the latter district, there has been a significant increase in the use of underground water for irrigation. The number of pumpsets in the district which was 6,800 in 1958 is now 44,000, a seven fold increase. The scheme for utilising underground water by filter points in Tanjore has been mentioned already.

VII. Farming Societies: The Government have also started a scheme for revitalising Farm Societies which have become dormant and defunct. In Madras, it is reported that there are 294 such societies under eight categories and stress is being laid on consolidating them. Simultaneously, more farming societies are envisaged in the Fourth Plan.

To bring about closer contact between farmers and agricultural workers, Government have initiated steps to have demonstrations organised by the crop breeders and other specialists in several branches, in the country, on the holdings of farmers, near their institutions. The minimum area for such demonstrations would be one hectare and in the beginning, emphasis will be laid on high yielding strains and improved practices and restricted to cereals like rice, wheat, *jowar*, *cumbu*, *ragi* and hybrid maize. This decision follows the demonstrations held already with *Japanica-Indica* rice cross in Tanjore, which is reported to be a phenomenal success.

Farmers in Chingleput district in Madras and in Rajamundry in Andhra, have formed what are known as target clubs. Each member agrees to adopt all technical measures as advised by the Department and produce a maximum yield from an acre of land. The Chingleput farmers have fixed two tons of paddy per acre as their target and have enrolled themselves as members of the two ton club. Rajamundry farmers with more favourable conditions of soil and climate have put a higher target and have formed three ton clubs. The present average yield of paddy is less than one ton per acre. If every farmer reaches two tons and three tons targets, our troubles will be buried in the limbo of the memory of the past. The picture is really bright.

These are some of the measures and many more can be quoted of the same kind. The Government is taking all steps to see that the results of research reach the farmers and are being followed by them in practice. In former days, it used to be one of the criticisms against the research sections of the Department, that while the work turned out by them was admittedly of a high quality, their methods were not being followed by the farmers and that there was a wide gap between research and practice. No longer is this criticism true. Not only the Government but the farmers have taken to improved methods everywhere, and there is a new epoch in agriculture which has arisen in India. The progress attained by the country's farmers and administrators has received praise from foreign visitors including a technical mission from the U. S. A. which recently visited India to correctly assess the results achieved. It was the good report of this mission that has induced the U. S. President, Mr. Johnson to immediately order the shipment of 15 million tons after a talk with our Food Minister, Mr. C. Subramaniam. That we are proceeding on the correct lines is now an universally accepted fact.

There is adequate technical talent, administrators of vision to draw the necessary plans, and farmers are quite willing and eager to change their ways and take to scientific methods of farming. All the elements necessary for planned

and successful development, are there. But, our performance falls short of our expectations, and our food situation is giving us anxiety. Why is this so? Why is it, that we are not able to translate all our acknowledged potential into maximum utility? Let us be frank and forthright in our examination of the causes and in the measures we have to take for improving the situation.

The most important reason, and one to which all contributing factors can be traced, is, that our work and our efficiency is at a low level. We, as a nation, have developed a tendency to take things easy, and do not bring in that amount of application which a plan for agricultural development requires and deserves at every stage. Against this background of laziness and inertia, has grown a tradition of complacency, which makes us assert that sufficient unto the day is the work thereof, when the question that we must honestly put to ourselves should be 'Is this all that I can do'.

Redtapism in administration had led again to a combination of circumstances, where a technical expert specially engaged for the execution of technical programmes, is unable, or finds it impossible to pay personal attention to all the *details* of the programme. He diverts his natural talents to administration, loses himself in the coils of redtape, with the result that the original plan lacks the personal drive of the expert. Many of our well conceived schemes, the Community Projects, the Package Scheme, the Scheme for the Intensive Cultivation of Vegetables in home gardens and many others would have produced much more startling results, than they have produced, but for this administrative redtapism, which has been responsible for causing bottlenecks and delays in the execution of admittedly sound plans. Redtapism may be all right and even necessary in other walks of life, but so far as agriculture and agricultural production is concerned, it is not only unnecessary, but even a hindrance to progress. Let us realise that agriculture is done on the field and not at the office table.

Our present situation is also due to the fact that we have woken up rather late. The schemes and plans we are putting into operation today, should have been initiated fifteen or twenty years ago. Rome was not built in a day, nor can agricultural miracle be brought overnight. A sense of urgency and fits of impatience to attain quick results, has led to disappointment and a mood of pessimism, which has further damped our will to work and makes it slipshod. The remedy is not submission in despair but a redoubled effort to meet the challenge, created by the lapses of a previous generation and by our own fault-our inherent desire to escape work.

Low efficiency of work, administrative redtapism, too many holidays, a late start particularly with our irrigation projects with a consequential dependence on the monsoon, and an increasing population to control which, measures are being thought of only now-these have been the contributing factors for our present situation. It is surprising that in spite of these we have been making progress since we attained independence nearly eighteen years ago. An impartial

examination of data during this period indicates *how much more* can be done, if we only make a determined resolve to shed our complexes and resolve to put in more hours of work for the nation. The following table will illustrate this.

Year	Production of Cereals in Million Tons		Area under Cereals in Million Acres		Percentage increase in area and production (cereals) every three years from 1947-'48.	
	Production	Percentage increase over 1947 figure	Area	Percentage increase over 1947 figure	Area increase	Production increase
1947-'48	43.7		172			
1948-'49	43.3		186			
1949-'50	46.0	5	195	13	13	5
1950-'51	41.7		193			
1951-'52	42.9		193			
1952-'53	49.2	12	203	18	18	12
1953-'54	58.3		215			
1954-'55	56.2		212			
1955-'56	54.9	25	215	24	24	25
1956-'57	57.3		215			
1957-'58	53.9		214			
1958-'59	63.2	42	223	29	29	42
1959-'60	63.2		222			
1960-'61	66.8	50	222	29	29	50

A look at this table reveals some interesting points. During the first few years after Independence, there has not been much increase in area or in production. And the increase in production is much less than what the increase in area should warrant. For example, the increases in area in 1949-'50 and in 1952-'53 were 13 and 18 per cent, but the increases in production were only five and 12 per cent. From 1955-'56, there is an upward trend in production, the percentage increase in production being nearly double the percentage increase in area. This is because, it was only after that, what is termed as scientific methods of farming have been followed. Irrigation, where facilities exist, fertiliser application, the use of improved seeds and the control of pests and diseases have slowly come into vogue in agriculture. In a sense, we are now in a stage of transition from the old methods to modern ways of farming. Our acre yields of rice are slowly improving. For example, the average yield per acre of cleaned rice, during the years 1947 to 1954, was only 692 pounds, but during the next seven years it rose to 820 pounds. Today it is near 900 pounds per acre for the

whole of India. Among the individual states, Kerala, Mysore, Madras and Bengal all produced over 1,000 pounds per acre on average during 1960-'61, and in 1964-'65 the figures are still higher for these states. This is not much when we remember countries like Spain and Japan which produce over 2,500 pounds per acre, but the figures indicate that the present crisis is only a temporary one and need not cause undue alarm. With farmers inaugurating 2-ton and 3-ton Target Clubs, our 222 million acres under cereals would easily produce in the course of the next five years, over 100 million tons, if not more.

Some of our difficulties are due to defects in distribution and the consequent non-availability of food grains, chiefly rice. So far as production is concerned, there does not seem to be any difficulty. For example, if we take the figures of population and production for 1960-'61, we had a total production of 67 million tons of grains as seen in Table 11.

TABLE 11.

Production of Cereals, Million Tons, 1960-61.

Cereal	Production	Percentage to Total
Rice	33.7	50.0
Wheat	10.6	16.0
Jowar	9.1	14.0
Maize	3.9	6.0
Bajra	3.1	4.5
Ragi	1.6	2.5
Small Millets	2.0	3.0
Barley	2.7	4.0
Total	66.7	

It may be noted that the production of rice is exactly half of that of the total cereals. If this is divided equally among the population (440 Millions in 1961), each individual will get 169 pounds of rice, 54 pounds of wheat, and 112 pounds of other cereals per year, making a total of 333 pounds of cereals ratio. This is quite adequate, considering that not all the 440 millions are eating cereals, since there will be at least 20 per cent of children who will not require a full cereal quota.

Since 1960-'61, our production has gone on increasing and two years ago our production touched the 80 million mark. During 1966, about 76 millions of tons are estimated to be produced. During the last four years, our population has also been increasing, but there is no cause for alarm, because we can manage

to get on very well if *every one takes one half rice and the other half* as other cereals in his ration, the proportion in which they are produced. But every one wants his pound of flesh and insists on rice being supplied. This creates a marginal deficit in our production of *rice*; there will be no problem if our food habits follow the pattern of our crop production, one half rice and one half other cereals. It is true that our food habits have changed during the last few years, but the change has been in the direction of changing over to rice in place of other cereals. We must switch over in the other direction, so that other cereals also find a place in our diet as they did several years ago, at least among the rural population.

It is this marginal deficit of rice production that creates all the difficulties for us. Confused thinking about food production and food distribution is produced. While production plans may reach the targets, defective distribution may lead to a shortage in certain localities and to a scare all round. Unsocial elements, small and big hoarders, self centred individuals, who by tradition and custom and a desire to show off, will waste food rather than make it available to others who need it, all add their quota in creating this shortage. These small hoarders or wasters, are unaware of the damage they are causing to the national interest. They are not hoarding actually, but keeping by a certain amount, against a rainy day, frightened by rumours of a shortfall in *production*. How much they can contribute to the general scare can be illustrated by a simple calculation. Suppose every one of the 440 and odd millions of our population keeps by only *15 pounds of rice per year*, the total so kept out of circulation will amount to 3 million tons, which is 7 to 8 per cent of our production, an amount sufficient to magnify the deficit already existing.

Further, while the overall production for the whole country may be an encouraging picture, certain states of deficit production and some deficit districts in surplus states, create pockets of shortage, which worsen the situation, because it is in these pockets that distribution becomes more difficult. This will be evident by a reference to Table 12, which shows how much of cereal is available to every individual, *if the demand is to be met only from the production within the State*. It will be seen that three states, Bengal, Orissa and Kerala, are entirely rice growing areas only, while other states produce other cereals also like wheat, *bajra*, maize, *jowar* and *ragi*. These states, therefore, are able to make up their quota, of nearly 300 pounds of cereal per year, from the production within the state itself. Of the states which produce only rice, Bengal with 345 and Orissa with 477 pounds of rice per individual per year, are not in need of other cereals for increasing their ration. But Kerala, with only 129 pounds per head and with no other cereals produced within the state, (although it produces over 1,500 million tons of tapioca, which is 80 per cent of India's production), requires another 200 pounds of rice or other cereals, to make up its need on a *level with other states*. It is here that the problem becomes acute and raises its ugly head. For, a wrong and defective distribution of cereals in this state is likely to engender a psychological feeling that discrimination is made.

TABLE 12

Cereals available in pounds, per head, per year from production within states.

State	Rice	Wheat	Other Cereals	Total Cereals	Remarks, Other cereals grown
Andhra	224	...	158	382	Jowar, Millets
Assam	300	...	...	300	Wheat, a little millet
Bihar	230	21	58	309	Wheat, Millets
Gujerat	160	30	128	318	Wheat, Millets
Kashmir	128	54	128	312	Wheat, Millets
Kerala	129	...	...	129	Only Rice
Madhya Pradesh	238	14	168	420	Wheat, Millets
Madras	240	...	107	347	Millets, a little wheat
Maharashtra	75	132	270	477	Only Rice
Mysore	112	8	142	262	Millets (<i>Ragi</i>)
Orissa	477	...	...	477	Only Rice
Punjab	44	268	121	433	Wheat, Millet.
Rajasthan	6	104	230	340	Wheat, Millets
Uttar Pradesh	89	110	103	102	Wheat, Millets, Barley
W. Bengal	345	...	...	...	Rice only, a little Maize
INDIA	173	44	112	339	

TABLE 13

Yield in Pounds per acre of Rice (Cleaned) and Density of Population in the various States 1960—'61.

State	Yield per acre, Pounds	Density of Population per square mile
Andhra	1,143	339
Assam	851	155
Bihar	771	691
Gujerat	469	286
Kashmir	999	49
Kerala	1,238	1,127
Madras	1,344	629
Madhya Pradesh	747	189
Mysore	1,092	318

TABLE 12 (Contd.)

State	Yield per acre, Pounds	Density of Population per square mile
Maharashtra	930	333
Orissa	667	292
Punjab	882	430
Rajasthan	586	153
Uttar Pradesh	665	649
W. Bengal	1,056	1,032
INDIA	890	...

Orissa, with 477 pounds of rice per head, gets the highest place in the allotment of rice although its acre yield is low, only 880 pounds, Kerala gets the lowest figure of 129 pounds although its acre yield is quite high,—nearly 1238 pounds per acre of cleaned rice. It is a deficit State because of its high density of population, 1127, nearly *four* times that of Orissa, while its acre yield is only 40 per cent more than that of Orissa. What is the remedy?

On the lines of the dream of the ONE WORLD, with the several countries as components thereof, the other surplus states in India have rushed supplies to Kerala, even as U. S. A. rushed to India. Once again, redtapism is causing delay and bottlenecks and suggestions made for meeting the situation are only temporary. But, these are enough to cause cries of distress and create pockets of disaffection and protest. What is worse, a fear that the situation in Kerala may spread even to other surplus states, makes those states extra cautious in their allotments, and people begin to take their own measures of self preservation, with the creation of more fields for the operation of unsocial elements.

It is heartening to note that people in other surplus states like Madras and Andhra are tightening their belts and rushing supplies to Kerala, and this, in spite of the fact that they are themselves on the margin. Several volunteer organisations have started 'Save Rice for Kerala' campaigns in other states. This has created a feeling of *oneness among Indian citizens*, that we view the Food Problem as a National and not as an individual concern, a good training to make us world citizens. After all, the arrangements we are making will be for a temporary period, say, for three or four years at the most. Our big irrigation projects, which are all national concerns, and our production programmes will all begin to bear fruit by then and we will become a surplus country. Meanwhile, let us not allow *faulty methods of distribution*—in which redtapism again plays a leading role—hamper and impede and delay our programmes of *increasing agricultural production* which is well within our reach. Let not our attention be diverted by temporary occurrences.

Recently, our Food Minister, Mr. C. Subramaniam mentioned while addressing a meeting in Calcutta that 87 million acres remained uncultivated during 1964-'65, due to various causes, chief among which was the failure of rains. We can expect laziness or unwillingness to work also as another cause. Whatever it is, such factors will cease to exist, once the irrigation projects and other schemes for supplying water are made available. If Mr. C. Subramaniam's statement is correct, it means that 25 per cent of our cultivated area remained uncultivated in 1964-'65. That would also mean that 75 per cent of area had to meet the full demand of not only the 1963 population but the increase during the year. Our estimate under such conditions, that we will produce only 76 million tons in 1965-'66, need not discourage us in our efforts and resolves.

While the total cereal production may give us some satisfaction, it is the rice situation that is giving us more anxiety, for, it is this cereal which is in greater demand. Once again, the remedy will be to change our food habits and slowly develop a taste for other cereals like maize and *ragi*. This is not impossible, because, several years ago, wheat was not so common in South India as it was in the North, but today wheat and wheat preparations have become quite popular in Southern States. In the same way, all of us must make *sorghum*, *ragi*, *cumbu* and maize preparations common in all households, with a switch over on particular days of the week to the new introductions. Apart from the Government, social service organisations can do a lot of propaganda and effect changes in this matter.
