Vol IV
No. 1

ISSN 0019-5014

MARCH
1949

INDIAN JOURNAL OF AGRICULTURAL ECONOMICS

INDIAN SOCIETY OF
AGRICULTURAL ECONOMICS,
BOMBAY

we all know the question of agricutural economics would not have assumed such wide-spread recognition.

I regret to note that Prof. Ashby could not be present at this Conference, owing to ill-health. All the same, we are thankful to him for having accepted our invitation and agreed to give us the benefit of his experience and knowledge.

Under the guidance of Sir S. V. Ramamurthy, and with the distinguished array of economists assembled here I am quite confident that the Conference this year would go a long way in giving a lead towards the solution of the various problems that face us today.

In the end I must add the sincere apologies of the Reception Committee for the deficiencies in the arrangements for the Conference, which are inevitable under the present conditions, particularly as the time at our disposal was so short. I can assure you that the will to do our best and to look after your comforts has not been lacking. We count upon your generosity, realists though you are as economists, not to judge us in this respect too harshly by the standard of material results but by our good intentions.

PRESIDENTIAL ADDRESS

by

SIR S. V. RAMAMURTY. K.C.I.E., I.C.S. (Retd.)

Let me first thank the Indian Society of Agricultural Economics for the honour it has done me in inviting me to preside over this Conference. I have been interested in the work of this Society since the president of this Society, Sir Manilal Nanavati and myself worked as colleagues in the Famine Enquiry Commission. He brought to the work of the Commission the results of his wide, careful and painstaking studies of the rural problem. My own equipment as a practical administrator in charge of agriculture and economic development generally was considerably strengthened by my contact with the scientific approach of Sir Manilal and together we were able to make a useful contribution to the work of the Commission.

We have been accustomed till recently to look on agriculture as an art and a way of life. India had a bountiful supply of food through her natural resources, a tropical climate, an intelligent and industrious peasantry and a well knit social organisation in villages. The rural civilisation of India was the stable and basic part of Indian civilisation. Indian villages were as prosperous and as cultured, as well calculated to provide

good life for their people as anywhere in the world. The political instability of India was due to her kings rather than her teachers and peasants, her artists and craftsmen and merchants. Kings came and went. They made new cities and new empires. But the village life flowed evenly and peacefully with a spiritual rather than a material tempo.

The contact of India with Europe two hundred years ago upset the orientation and balance of Indian life. Science and the organisation it made possible placed the emphasis on a centralised direction of life and administration and urban life overshadowed rural life. Today, India is better off in the amenities of life in towns than it was in pre-European days. But villages have steadily deteriorated and it is sadly true that the slums of India are not urban but rural. Intelligence has been drained from villages to towns to the clerical and other subordinate tasks required of Indians by their new masters. The use of science was in the main applied to the needs of towns and the imperial masters who made and maintained them. Food was less important than industrial raw materials. Tanks and canals were less important than roads and railways to take to the coasts products for export.

The last war was a turning point in many ways. It ended the political empire of England in India. It ended colonialism in Indian economic life. It ended the cultural subordination of India. It has released the social energy of India. India has regained her freedom of spirit under the leadership of Gandhiji. Today the problems of India are the problems of her recovered freedom. But these problems India approaches with a new richness and strength of the spirit, thanks to her very tutelage under England. The three elements of her gains from England are law, science and democracy. The maintenance of law and order under masters who as between their subjects were impartial and firm has given to India a stabler floor of life than for instance our great neighbour China has been able to achieve under her own national guidance. India too has been able to imbibe more of the spirit and results of science through an orderly flow from a well intentioned administration by England than has been the case in fellow countries in Asia. The sense of freedom which India developed in the spiritual domain has been strengthened by the method and content of political freedom which England developed for herself and imparted to India. While in material fields, there have been clashes between English and Indian interests, spiritually there has been kinship which has grown with close association to mutual benefit. It is good that India has shaken off English tutelage. It is equally good that they should remain friends, co-ordinating their life and joining in common service to the world.

I have said that agriculture was traditionally an art and a way of life in India. Today, it can no longer afford to continue as such. In the

present context of the world, agriculture in India needs to develop as a science and as a business if it is to sustain the growing population of India and establish the position due to her among the nations. It is for this reason that the study of agricultural economics has an important part to play in present day India. The tempo of the world has changed. Humanity is taking large strides both quantitatively and qualitatively. Science enables health to be maintained and death rates to be reduced. Science also yields a larger production of food so that population for a time can grow more rapidly than was possible in previous epochs. There is need to analyse the various factors affecting population, food production and nutrition so that in the orderly internal life that the country can provide, with the heightened social conscience that democracy produces, the maximum of progress and welfare may be achieved. Agriculture can no longer be left to be dealt with in crude and unstandardised forms. It has to be studied and built with the help of natural sciences and the science of economics.

The particular problem that I wish to deal with today is the problem of food for India. Before the War, its importance and urgency were hardly recognised. Famines were regarded as accidents due to seasonal failure of rains. Measures to deal with such emergencies were embodied in Famine Codes and kept ready. Hunger in normal times did not affect the vocal parts of the population. If there was no more food, it was regarded as due to unalterable conditions of nature. The war shook this complacency. War conditions produced deficits of food more severe than in famines. The maintenance of law and order needed measures to prevent starvation on a large scale. The Bengal Famine showed what a dangerous level poverty had reached in India. With a five per cent deficit of food supply and the large increase of prices which this produced in parts of Bengal through an inadequate administrative machinery there was death on a terrible scale and the country was roused to the seriousness of the food problem in India. A statistical study of the position was made. It was found that India which could provide an average cereal ration of 1½ pounds per person per diem at the beginning of the century could now provide no more than one pound. Bearing in mind that cereals provide 80% of the calories of an average diet, a pound of cereals indicates 2000 calories a day. It was found that for some 25 years the production of cereals was practically stationary while the population was growing and that the amount of cereals available per person has in fact gone down by 25% in the last 25 years. The area of cultivated land has become as low as 4/5ths of an acre per head. The average ration which could provide 2,500 calories at the beginning of the century could provide only 2,000 calories before the War. Efforts to grow more food were made during the war and since but their effect has been negligible. The population of India has been growing at the rate of one

per cent a year. If this rate of growth keeps up, then every year we need additional food for 3 million people in India or half a million tons of cereals at the rate of 1 lb. a day. The production of cereals in India is about 40 million tons a year. Our imports of rice before the War were about 2 million tons a year. During the War we were not able to get even a million tons. In 1946, we were able to get an allotment of 1½ million tons. This year, we have been able to get about 3 million tons. The position thus is that with an internal supply of about 40 million tons of cereals for 300 millions of people, we need to maintain our arrangements for rationing an import of about 3 million tons costing about Rs. 100 crores a year. Allowing for friction and leakage in procurement, the total supply available can provide a pound of cereals per adult a day but this may be reduced if seasonal conditions are adverse. In 1946, we felt we had been specially hit by drought and cyclone. Unfortunately, since then the season has been failing over large parts of North or South India and the tension of 1946 continues unabated. There is thus growing anxiety in the country over both the low ration which a statistical analysis has brought vividly to attention and the need for imports by the organised efforts of the Government instead of traders, at a time when the Government have to pay large sums to hard currency countries. Payment for food by the Government has retarded the purchase of capital goods for the development of industry.

Let me put together the elements of our food problem.

1. Fifty years ago, we had a daily average ration of 2,500 calories. Today, it is 2,000 calories. The quality of the food available is not nutritionally adequate.

2. Before the War, deficits due to a bad season could be made up to the necessary extent by imports of rice from Burma and Siam. This year, supplies from West Punjab and Sind are also cut off. We now get only what we are allotted by an International Council where big powers with their own colonies and protegees do not permit India to get what she needs. Before the partition of Burma and Pakistan, India was self-sufficient in rice and wheat. Burma's secession from India produced a dificit of 2 million tons of rice and Pakistan's separation nearly a million tons of wheat a year. It is these three million tons of rice and wheat that India now needs to import each year.

3. Agricultural production in India is low as it is carried on in very small units and on obsolete methods. The production of rice per acre is hardly half of that in other Asiatic countries. The results of scientific research are not readily adopted by cultivators. The application of water through large irrigation schemes needs 10 to 15 years for such schemes to become effective. Chemical manure which could appreciably increase pro-

duction at once is not available in any large quantities. Imports of such manure are rationed by an International Council. Machinery needed to improve methods of cultivation is similarly rationed. India cannot get either fertilisers or machinery which can increase production immediately. The land tenures of India are the result of social organisation for which short range remedies are difficult to apply. Nor are methods for such change yet worked out. Efficiency of agricultural production involves the lowering of the percentage of the population employed in agriculture as against industry and this cannot be achieved without social disturbance unless there is industrial development on a scale to absorb an appreciable part of the rural population.

Thus the food position of India is poor in regard to:—

(a) the area of food cultivation per head of the population;
(b) the production per acre of such area;
(c) the availability of water, chemical manure, and machinery for improvement of cultivation;
(d) the availability of imports;
(e) the high ratio of the population dependent on agriculture and
(f) the low standard of living of the people due to paucity of industrial employment.

Let me examine whether and how these difficulties could be met. The deficit of cereal production is at the present rates of consumption not more than 10% of the present production. Agricultural experts are confident that the deficit can be made up by reclamation of waste land, increased supply of water through schemes of irrigation—small and large—use of good seed, use of chemical manures, use of machinery to bring new or difficult land under cultivation, efficient use of methods to deal with pests, improved methods of storage, methods of maintenance of the health of peasants by anti-malaria measures and improvement in land tenures. These methods have been publicised for several years. Yet the position continues to be bad. Grow-More-Food schemes seem to produce no results. The organisation of measures recommended by agricultural scientists seems to yield no results. The efforts to combat malaria have not been sufficiently successful. We know our needs. We know the remedies. We have the material land human resources to apply the remedies to our needs. Yet we fail to do so. Scientists and economists, farmers and administrators are left with a sense of frustration and failure.

To suggest ways of meeting this situation, I fall back on my own experience. Before the War, I visited Italy and saw the magnificent work done by Mussolini in the battle of wheat and the reclamation of the Pontine marshes. The production of wheat was raised by 30% and the marshes which baffled efforts of reclamation for 500 years were converted into smiling

fields maintaining a proud and happy peasantry. I put it to Mussolini that in India we had as good scientific research as any I had seen in Italy and yet we could not get the results translated in peasant's practice. He replied that in Italy they found no such difficulty and that they attacked agricultural problems in a comprehensive manner. His reference was to what was called the "integral principle." Italy has a proverb that it is the hundredth solda that makes the lira or in Indian terms, it is the last pie that makes the rupee. Unless an effort is cent per cent complete, it cannot be successful. I applied this to the irrigation of land under the Mettur Reservoir on the Cauvery. The reservoir provided enough of water for 3 lakhs of acres. There was commanded area of such extent. Yet for ten years after the reservoir was ready, only 2 lakhs of acres were irrigated. The rest of the water was wasted and the commanded land remained waste. In the War period when we had need to increase food production, I turned to this absence of equation between needs and resources. I appointed a Committee of a Revenue Officer, an Engineer and an Agricultural Officer to examine each acre of the commanded but unirrigated land, find out what stood in the way of its being irrigated and remedy it. Was it because water did not reach the field? If so, channels should be dug. Was it difficulty of finding finance? If so, Government loans should be provided. Was it difficulty of finding labour? If so, arrangements to organise the import of labour should be made. Were there difficulties of tenure? If so, by conciliation and Government assistance, the differences between land-owner and cultivator should be resolved. I set a target of 40,000 acres for the first year. The member of the Board of Revenue did not believe that the target could be reached but offered to do his best. He was told that unless he had faith he could not succeed and that if he did not succeed, he would be considered unfit to be member of the Board of Revenue. At the end of the year, 60,000 acres were brought under cultivation. It was a great pleasure to me to see land which had been waste or covered by scrub converted into smiling fields of paddy. The land was not only cultivated but cultivated well with what the cultivators called the "London medicine." They meant by the term ammonium sulphate. An integral effort succeeded fully and in a short period as well as in Italy. The Indian cultivator living at the margin of subsistence dare not make experiments the results of which are doubtful. But he has intelligence and resource enough to try new methods if he is confident of their success. The use of chemical manure in the newly irrigated area was the result.

There was another attempt I successfully made to increase food production. In the beginning of 1946, I had to go to U.K. and U.S.A. as a member of the Indian Food Mission. The central districts of Madras Province had suffered from intense drought. I visited them before leaving India so that I could speak with force abroad of what I had seen. I found that in the

desert of dried fields and tanks, there were green spots. Wherever there was a green spot, there was a well and where there was a well, there was a green spot round it. I visited many villages in the course of two days. I asked the villagers what help from the Government would make them dig wells. I told them that the Government had offered a quarter of the cost of digging a well and yet hardly any one made use of the offer. If the Government gave them the full cost, they would surely dig the wells. What fraction of the cost would make them dig wells? The answer everywhere promptly was that half the cost would make them dig wells. This answer was as ready as if they had been agricultural economists themselves. Only one man asked for a three-fourths grant. Yet when I told him that it was the people's money that would be given to the people who dug wells and would three-fourths grant be fair to the general public, he too asked for a half grant. In the week before I left India, I sanctioned as Adviser to the Governor a crore of rupees from the Madras Government finances; a crore was thereby secured from the Central Government. In six months, the people dug 60,000 new wells and repaired 30,000 old wells at a total cost of about 5 crores of rupees. All this was done by the villagers with their own technical resources and materials. I attribute the success of the effort to the fact that I gave the people what they felt they needed.

These two efforts show that for successful economic development on a large scale, we need both good government and self-government. The country needs rulers and administrators of capacity and character to serve the people according to their instincts. British administrators did not pay full heed to the interests of the people, their needs and their welfare. Under present administration, we have yet to provide an adequate number of Indian rulers and administrators who could act with vision, faith and drive in realising the potentialities of India. It was an Italian diplomat who told me before the War that it was easy to get power but asked, "Had we men to administer it when we got it?" I said then we had them. We have some men of as high a quality as anywhere in the world. But for the tasks of India, we have not enough of them at present. Given time and experience, I have every hope we shall have enough of them. With the assistance of such men, the remedies which technicians have evolved for increasing production, namely the use of good seed, of available manure, of good cultivation practices and disease prevention and of good storage methods can more than make up the present deficit of ten per cent of our cereal production which compels us to beg for rice and wheat abroad and yet pay a hundred crores of rupees a year for their import.

This however is not enough. We want more food, better food, and an increased standard of living. The long range method of achieving them is the execution of multi-purpose river schemes for the production of water

and power besides large schemes of land reclamation. India is a great country with a great future. To realise that future, we need to plan big and build big. We need to develop life in a multi-dimensional manner—econimically, politically and culturally. Not only do we need strong bricks of personality but also large girders of economic and political life. Of all the great natural resources of India—mountains and rivers, forests and mines, seas and winds—it is the rivers that embody best the dynamism of India. It was in the river valleys of India that the Sun filled the river beds with water and sustained the adventure in spirit of thinkers and seers. The rivers of India will again witness a phase of that adventure, the adventure in matter of technicians and statesmen. It is this belief that has sustained my efforts to build the Ramapadasagar Reservoir on the Godavary. Such schemes not only make more food but better food by stimulating horticulture and livestock production. Increased production of rice and wheat can release millets for livestock feeding.

India has a large area of culturable waste, estimated to be nearly a fourth of the total area of the country. The density of population in India is only 246 per square mile. This is lower than that in most European countries. Only America and Australia have vaster unused spaces than India. Land reclamation in India has great scope. But this needs mechanical aids to agriculture such as the ordinary Indian cultivator cannot provide himself with. Agricultural economists as well as statesmen have not yet decided whether communal farms, co-operative grouping of farms or economic holdings offer the best alternative to the very small units in which land is now held by individual peasants in India. The unit holding is on the average 5 acres in India, 20 acres in Europe and 150 acres in U.S.A. It is a question that is likely to arise in the near future whether cereals in 5 acre farms with the aid of human and bullock labour can stand competition with cereals produced in 150 acre farms with mechanical cultivation. Are we heading towards an Agricultural Revolution which may compare in scope and consequences with the Industrial Revolution? In the latter, small scale industry on obsolete methods was swamped by machine industry. In America and Australia, the agricultural potential was largely increased during the last war to meet the food needs of Europe and Asia. But as peace restores agriculture in Europe and Asia, there is arising a surplus cereal production in America and Australia for which markets have to be found. Can hand-made wheat and rice in India compete with imported machine made wheat and rice? Can India protect herself against a ruinous reduction in price through the availability of imported cereals, particularly in the coastal areas? Or will different price levels be maintained for internal production and for imports? Today, there is only one cottage industry alive in India. It is not hand-loom weaving. It is agriculture. Is this too to be

killed with other cottage industries? If it is, the social disturbance in India will truly be of the nature of a revolution.

To meet this prospect, how are we to re-arrange our methods of production? It seems to me that mechanical methods of cultivation are not necessarily more productive per acre but are less costly per unit of production. Perhaps the application of a co-operative method and measures to make holdings economic will be appropriate to our old cultivation and mechanical methods are appropriate for new cultivation. This is an issue on which the country needs a finding urgently from agricultural economists.

With more land brought under cultivation and under irrigation by land reclamation and river reservoir schemes, we need also the power provided by the latter to yield a more variegated economic life than a mainly agricultural economy. In India, 75% of the population are engaged in agriculture while the U.S.A. has 15% so engaged. In a balanced world, it seems to me that agriculture should be the base and industry the apex and not *vice versa*. 60% of the people could I think be a safe population for agriculture. The rest have to be arranged in layers of industry—cottage, small scale and large scale, with the learned and artistic professions at the top. For reaching such an industrial orientation, electricity is bound to play a great part. Large scale industry grew in Europe because coal yielded power in large units at centralised factories. Electricity can be applied in small units though produced in the mass. The spread of electric power can be as wide as the spread of population. The large potentialities of hydro-electric power in India are an augury for a strengthening of the economic life of India over the whole of its range. The needs of agriculture, industry, commerce and social life are all served conveniently by electricity. Fertilisers and agricultural machinery which we cannot get from the West, we can make for ourselves. The multi-purpose river schemes of India are thus of a multi-dimensional value in the growth of Indian life.

It seems to me that the challenges to India in regard to food production can be accepted and met. Our deficits can be wiped out and advances made both by short range and long range use of our human and natural resources. Commercial agreements with Burma, Siam and Pakistan can assure us of the present food deficits being met by imports from nations who are no more likely to be interested in a world war than we. The problems of agriculture are capable of agro-industrial solutions. The problems of economics are capable of politico-economic solutions. The cultural activities of India are even better adapted to international than national ends.

Today, India stands on her own legs, free to develop herself according to her instincts, needs and resources. With the power that freedom brings, India once again dons her world responsibility. She stands between the two contending ideologies of U.S.A. and U.S.S.R. and it is in the interests

of the world as her own that she should be able to reconcile the differences that threaten to submerge the world in a war more terrible than any before. Great rivers of life in the world are in flood. But one river cannot check other rivers. A synthesis of rivers can be provided only by the sea, absorbing rivers and lapping many shores. India's need is to be a sea of life. Only so can she save the world. If in addition, India is a sea not of brine but of milk, she is also the womb of a new creation. The world has need for the spirit of India.

The body of India is a function of the spirit of India. I believe that India occupies a place of destiny in the life of the world and that India will live because if the world is to live, it is necessary that India should live. Let us, economists and scientists, citizens and statesmen take up the task of food for India with care, energy and confidence.