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PROCEEDINGS OF THE
TENTH
INTERNATIONAL CONFERENCE
OF
AGRICULTURAL ECONOMISTS

HELD AT THE
LALITHA MAHAL, MYSORE
INDIA

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AGRICULTURE
AND ITS TERMS OF TRADE

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THE THEME OF THE CONFERENCE AGRICULTURE AND ITS TERMS OF TRADE

ADDRESSES OF WELCOME

HIS HIGHNESS MAHARAJA SRI JAYA CHAMARAJA
WADIYAR BAHADUR, G.C.B., G.C.S.I.

Governor of Mysore

I HAVE very great pleasure in welcoming the distinguished delegates and visitors to the Tenth Session of the International Conference of Agricultural Economists. It is a matter of special gratification to us in this country to welcome the Conference on the first occasion on which it is being held in Asia. There is perhaps a peculiar appropriateness in the Conference holding its meeting in this part of the world in which the large majority of the population has throughout history subsisted directly on agriculture and which is yet in need today of the greatest measure of research on every aspect of the agricultural way of life. May I also look on this as a recognition of the earnest and increasing efforts of the Indian Society of Agricultural Economics? In the twenty years of its existence the Society has achieved an impressive record of research studies and publications bearing on the social and economic problems of rural India.

Many economic and social ills from the inadequacy of agricultural production and its failure to keep pace with the growth of population. In several countries the progress that has been made so far has not gone much beyond the provision of food for the ever-increasing population at the same old levels of quantity and quality. Procurement of food for the people still continues to be a preoccupation of governments. Foreign exchange resources have to be diverted to food imports at a time when other sectors in the national economy have an urgent need for capital goods.

As part of our effort to achieve many-sided economic development by means of our Five-Year Plans, we in this country have been striving to improve agriculture by means of policies and programmes based on a systematic study of our resources and our agro-economic conditions. We have been trying to achieve a proper balance between the interdependent demands of agricultural development and industrialization. Technical advance in agriculture can hardly be achieved

without industrial progress while in the last analysis agricultural output is the primary basis for industrialization.

The task is arduous. Improvement of farming technique, reclamation, conservation, irrigation, transport, price and profit, marketing and trade, food supply, nutrition—all aspects of the problem have simultaneously to receive attention. Our Community Development Programme, which is an integral and important part of our plans, has been proving an increasingly powerful force for the regeneration of the countryside.

Like other nations in Asia we are now in a critical period in which development has to proceed with the greatest rapidity. For a large part of the world the achievements in the conquest of space have to be matched by similar achievements in the conquest of time. In this task of agricultural and economic regeneration the talent and experience of more advanced countries are of the greatest assistance to us. International co-operation is the best guarantee for the achievement of quick and satisfactory results in the rehabilitation of backward economies on which depends the peace and stability of the world as a whole.

The participation of as many as seventy nations in the labours of this session is a happy indication of the enthusiasm available for the promotion of schemes of world welfare. If only some way could be found without delay for the elimination of war and threats of war, international policies could then be directed, with peace and goodwill, solely and effectively towards the improvement of the health, comfort, and cultural well-being of every region in the globe.

The people of India are proud and happy that in this great task we are led and represented by our beloved Prime Minister who stands out as an inspired and tireless worker in the cause of peace, justice, and friendliness among nations.

If I may say so, I feel personally very happy that you are now meeting in Mysore City. I hope you will like the aspect of the place, its equable weather, its peace and quiet, its synthesis of the rural and the urban, and the mountains and rivers and the flora and fauna of its neighbourhood.

I offer you a cordial welcome. I wish you a pleasant sojourn in our country and all success in your deliberations.

MANILAL B. NANAVATI

Indian Society of Agricultural Economics

ON behalf of the Indian Society of Agricultural Economics I extend a very hearty welcome to this Conference. Since 1947 some of us have been attending your sessions and have been very

much impressed by the variety and comprehensiveness of the subjects selected and the high level of discussion that took place. For a long time we have been wanting to invite you to India.

In 1952 your President, Dr. Elmhirst, was in India and we discussed various methods by which the study of agricultural economics could be promoted. We then approached Shri Chintaman Deshmukh, at that time Finance Minister, and suggested that the Conference should be invited to meet in India and that the Government of India should extend financial support for the purpose. This was agreed to and my friend, Dr. Sen, the Economic and Statistical Adviser to the Ministry of Food and Agriculture, took up the matter with his Ministry. As a result a joint invitation was issued in Michigan in 1952 but we were too late. However, in 1955 at Helsinki the invitation was renewed and accepted and here you are amongst us.

Until now your meetings have been held in America and Europe and naturally the subjects discussed have referred mainly to problems of economically well-developed countries. But we wanted the leading agricultural economists of the world to pay at least equal attention to agrarian problems of the less well-developed countries which are now struggling hard to raise the living standards of their people. They need your advice and help.

I want to bring to your notice the enthusiastic help your President has been giving to us in the promotion of studies in agricultural economics. It may not be known to many of you that he was responsible for starting the Indian Society of Agricultural Economics. He happened to be in India in 1939 and called a meeting in Delhi of some government officials and a few economists. The foundation of the Society was then laid. For the first three years it held annual conferences at different centres where papers were read. These papers were then published in an annual number. In 1941 it was decided that the activities of the Society should be expanded into a full-time research institute in agricultural economics. You will see the progress it has made from the *Retrospect* published by the Society, copies of which are available to you.

However, one of the most important contributions that your President has made to India was in helping Maharshi Ravindranath Tagore to establish Shriniketan, a rural institution, as an adjunct to the Shantiniketan—now converted into Visva-Bharati University. It was your President's magnificent financial assistance that gave it a start and maintained it for a number of years.

Our Society was anxious that the study of agricultural economics should be pursued more energetically as the country has to face and

try to solve the most difficult problems of population and poverty. As a Society, we were anxious to see more centres for research. With that objective, we invited the late Professor Ashby of Oxford University to attend our annual conference at Madras and then to make a tour of some of the universities and other research centres. In his report he examined the position of teaching and research and wrote: 'Having regard to (a) the area of agricultural land, (b) the size of the agricultural population, (c) the importance of agriculture in the national economy—its actual and potential contributions to national wealth—I am appalled at the small provisions made for investigation and research in agricultural economics.' He added, 'even recognizing that India is a relatively poor country, it is still true that in comparison with other applied sciences of agriculture, agricultural economics has been starved'.

Naturally, we were not satisfied with the situation revealed by these findings. With the help of your President we suggested to the Finance Minister, who was also a member of the Planning Commission, that he should invite a leading agricultural economist from America, where the study of this subject is very highly developed, to come to India and advise us. This question was taken up by Dr. Sen with his Ministry. Professor Schultz was first selected but he was preoccupied with other work. The invitation was extended to Professor J. D. Black and he visited India in 1954 with Dr. H. L. Stewart from the U.S. Department of Agriculture. They remained with us for nearly three months, toured all over the country, and submitted a report suggesting that the Indian Council of Agricultural Research, a premier governmental institute dealing with technical problems of agriculture, should have a section dealing with economics. The section was soon opened and is now functioning. They also suggested a number of topics on which research might be undertaken.

After the attainment of independence by India in 1947, and the formulation of a Constitution in 1950, the Government has been trying to develop the economy. With that objective they established a national Planning Commission. In 1954 the Commission established a Research Programmes Committee composed of leading Indian economists and sociologists with the primary objects of stimulating research in universities and other institutions, of training research workers in modern techniques of study, and of evaluating the problems that the Planning Commission were dealing with. During your stay here you will be able to see the nature of the subjects dealt with and the published results.

At the same time the Reserve Bank of India expanded its Agricultural Credit Department. It is constantly engaged in the study of the structure, organization, and working of rural credit agencies. In 1954 the Reserve Bank published a comprehensive report in three volumes on the results of the survey of rural credit in India. The report, apart from its recommendations, contains valuable data on almost all aspects of the rural economy of India. You will receive copies of the report which you may peruse at your leisure. The Reserve Bank also established a special Division of Rural Economics in 1945, in the Department of Research and Statistics.

The Directorate of Economics and Statistics of the Ministry of Food and Agriculture, under the able guidance of my friend, Dr. Sen, is materially contributing to the study of rural problems by continuously assessing the results of legislative measures and by publishing a periodical giving complete agricultural statistics. It has made liberal provision for the setting up of agro-economic research units at four university centres. We in this Society are benefiting from this policy. In order to illustrate the nature of the problems we have to face and the studies made thereon, we have prepared a special souvenir volume containing studies by some of our research institutions on important aspects of the Indian national economy.

In order that your presence may be beneficial to the country and also that you may get some idea of our agricultural problems, we have invited to this Conference with the permission of your President nearly sixty of our leading economists representing our universities and other institutions. We are sure that this contact will be for our mutual benefit and will further the understanding of the magnitude of the task that faces India in the development of her economy.

I know what admirable work your President has been doing in the promotion and the development of the Conference. He is indefatigable in his efforts, running from one continent to another, creating interest in governments and universities in this subject of fundamental importance to humanity. During the last few years he has seen the need for extending your sphere of operation to underdeveloped countries. Recently, he has secured from the Ford Foundation \$40,000 to make it possible for members to come to this Conference from Europe and Asia. We do hope that more and more men from these countries will join the Conference and ultimately make it a real international organization. We also hope to benefit from your wider experiences. With this objective we have arranged for you to visit some of the rural areas in the country and to see institutions

such as the Community Projects and National Extension Service Blocks, agricultural research stations and hydro-electric projects.

It was the wish of your President that we meet in typical Indian surroundings rather than in a big metropolitan city. With full-hearted co-operation from the Mysore State, we have done our best to make you comfortable and we do hope that your stay amongst us will be pleasant as well as instructive.

Again, on behalf of my colleagues and myself, I extend you a very hearty welcome.

A. P. JAIN

Minister for Food and Agriculture, Government of India

I AM very happy to be here this afternoon and to take part in the Tenth International Conference of Agricultural Economists. My assignment is a most pleasing one, to request our Prime Minister to inaugurate the Conference. We could hardly have considered anyone other than the Prime Minister to perform this function, for he symbolizes the spirit of India on the move, dynamic, eager to imbibe new ideas and techniques but at the same time not breaking violently with the past. That in spite of his many preoccupations he should respond to our invitation is a testimony alike to his broad sympathies and his abiding interest in scientific pursuits. The object of this Conference is precisely to promote scientific studies and research in a field where, I feel, much leeway has still to be made good.

In a country like India, where the economy is predominantly agricultural, the importance of studies and research in agricultural economics can hardly be over-emphasized. But I must admit that it has not been receiving the attention it deserves. The Government, however, has been trying to foster agro-economic research. The central Ministry of Food and Agriculture has set up four regional research centres for continuous research in these problems—at the Delhi School of Economics in the north, at the University of Madras in the south, at the Viswa-Bharati University in the east, and at the Gokhale Institute of Politics and Economics in the west. It is proposed to set up two further centres to cover other regions. For guidance in framing and operating research projects, the Government a few years ago invited two eminent agricultural economists from the United States of America, Dr. John D. Black and Mr. H. L. Stewart, to make a study of the various problems in the research, teaching, and public administration of the economics of agriculture

in this country. The Indian Council of Agricultural Research in the central Ministry of Food and Agriculture have set up an Agricultural Economics Committee which has drawn up a broad programme of research in the light of the report of Black and Stewart and has been encouraging investigations on subjects within this broad programme. In view of the importance of farm management studies, both for extension work and for policy making, the Ministry has also initiated farm management studies. The investigations at the first six centres have been completed while three new centres have been inaugurated. At the same time, steps are being taken to improve the standard of teaching and research in agricultural economics in agricultural colleges. Thus, there is an increasing awareness of the need to build up a sound basis of research and advisory work in the subject.

I need not stress how important it is that there should be the closest collaboration between agricultural economists and other specialists to improve the efficiency of all sectors of agriculture. Such collaboration is all the more needed in this country where low farming efficiency has been hindering development. Many of the stresses and strains which have developed in the Indian economy of late have been due partly to the lag in agricultural production. Increasing agricultural productivity has played a crucial role in the economic development of many countries and it is particularly important to countries in this region with their relatively dense populations. The broad theme of the Conference, *Agriculture and its terms of trade*, comprises a varied and rich fare including the shifting fortunes of agriculture, technical peculiarities of agricultural supply and lack of flexibility in agriculture, support measures, interdependent development of agriculture and other industries, and population movements. We are interested to discover what it is which has provided the 'take off' for sustained development. We in this country have launched a programme of development, the *tempo* of which is dependent increasingly on a sustained growth in agricultural productivity. This is the challenge we have to face. As Toynbee has remarked, creativity requires a challenge and a response. The challenge is there, I hope the response will not be weak. In meeting the challenge we would like to profit by the experience of the agricultural economists of international repute who have gathered here. Can they lay bare those causative factors which have sustained economic growth?

I hope your deliberations will stimulate a greater interest in the subject of agricultural economics, and I have great pleasure in requesting the Prime Minister to inaugurate the Conference.

JAWAHARLAL NEHRU

Prime Minister of India

IT was a year ago that Dr. Elmhirst invited me to attend this Conference and inaugurate it. It seemed to me rather odd that he should mention this matter to me so far ahead. But as you know, he does look ahead and with his usual foresight he tried to tie me down to this engagement before there was any possibility of my saying that I was too busy. But in any event I would have gladly accepted his invitation, partly because of my deep interest in the subjects which you discuss, and partly because Dr. Elmhirst is an old friend and India owes a great deal to him. So, now that I am here, I am glad of it, and may I congratulate whoever may be responsible for choosing this gracious and attractive city of Mysore for this Conference.

I need not tell you that I am not an expert in the subjects which you are discussing. In fact I am not an expert in any subject that I know of. Far from being an expert, I am not even a modest farmer. But force of circumstances brought me into touch long years ago with some of the problems of peasantry. In those days—not now, happily—there used to be in various parts of the country and notably in my own State vast landed estates with tenants—often tenants at will—working there. When about forty years ago I came into rather intimate touch with these people a tremendous ferment was created in my mind. That ferment has not subsided yet and, for me, India has always appeared, in the final analysis, as that poor peasant. Even in India there are various kinds of farmers and peasants, some relatively prosperous, some not so prosperous, and some excessively poor. The picture that usually comes to my mind is of these last, because I came in contact with them a little more than with the more prosperous farmers. So when I think of them there is a deep ferment and sometimes even some anguish and some kind of passion to be able to help in raising the level of these people. Also I have a deep faith in them, and because of this passionate desire on my part to be able to do something worthwhile for them perhaps I have a place in this Conference. Your expert knowledge I do not possess. But I do possess an extreme and passionate desire that something should be done about these people as rapidly as possible. Yet I have had many heart-breaks seeing how slowly things move especially in the agricultural field and especially when hundreds of millions of people are involved. Perhaps one has to adapt oneself, even though one does not like it, to this relatively slow movement. As you know, ever since we attained independence, what I would call the real problems

of the country have faced us. By real problems I mean the social and above all the economic problems, the raising of the level of living of these people, hundreds of millions of them. And not merely that, but making life worthwhile for them, making them self-reliant—not to be kicked about and crushed by misfortunes but allowed to some extent to mould their own destiny. When I say being kicked and crushed, I should like to add another picture of them which is equally important, and that is that in spite of their misfortunes and poverty they have never forgotten nor given up the way to sing and dance and laugh. That, I think, is some virtue. Sometimes people are surprised when they visit some village of ours and see the conditions of extreme poverty and yet find the men, women, and children laughing and playing, and not allowing themselves to be submerged by circumstances, even by their daily miseries. Anyhow they became our immediate problem and, naturally, a very intricate one, made much more difficult because of the vast masses of humanity involved. I have tried to think of them not as statistical numbers, although no doubt statistics are important, but rather as individuals. I remember once when I was asked how many problems I had to face in India, I said 360 million problems. They all appear to me as living individual entities to be helped, to be looked after and to be co-operated with. We are here as fellow travellers moving in one direction; we are all going together and so we thought of appointing a Planning Commission.

Our resources are obviously limited and unless we use them to the best advantage, part of them may be wasted in wrong effort. We have in fact to harness the labour and the efforts of vast numbers of human beings to achieve the planned results, or at any rate to go in that direction. Well, we appointed the Planning Commission and it conferred with all manner of experts and drew up our first Five-Year Plan. In point of fact there was not much planning in it; it was our first attempt. We did not have enough data or statistics and we were naturally bound down by many things that we were already doing. We could not start with a clean slate. Nevertheless, the stress in that first Plan was on the improvement of agriculture. We have a number of river valley schemes, huge efforts which would give irrigation facilities to large tracts of the country. We also naturally provided for some industrial development. Then it so happened that we had some good fortune with our monsoons and our harvests, and as usual we became rather complacent. Our production increased and we said we would become self-sufficient before long. Remember, one of the effects of the partition of India was to take away parts of

what was India previously, especially parts which were rather rich in wheat and other cereal production. That is one of our problems, but we said we would get over all of them. Naturally too we felt that industrial development was essential and inevitable if we were to go ahead and raise the levels of our people. So, while we continued to attach great importance to agriculture, we began to think more and more of industrial development. Industrial development in turn made us think rather of the basic industries, the mother industries, out of which would arise other industries, and so we planned the second Five-Year Plan. There again we laid stress on agriculture, of course, but we thought a little more about industrial development. We were ambitious to plan four huge new iron and steel plants. We thought of machine-building plants and of many other things of that kind. We thought of basic industries because we realized that unless we laid proper foundations, our industrial progress would be slow and would be forced to depend on external factors. Then came a jolt. The two good harvests were succeeded by atrocious ones, an extraordinary run of bad luck which knocked us on the head and, much more, on the poor peasant's head. Of course India is a big country and even when bad harvests come they do not spread all over it. All the same, vast areas were involved. For the last two years we have passed through terrible ordeals. It has upset all our planning, agricultural and industrial, because our resources which were limited enough had to be diverted to the import of food grains—heavy imports because we could not allow our people to lack food. Also prices tended to rise and, in a country like India where the main price-determining factor is food grains, if their prices rise it upsets other things. We were anxious to avoid this, not only because we did not want the prices of food grains to rise, but because we did not want inflationary tendencies to come in. We did not want all the estimates of the second Five-Year Plan to be upset as they would be if prices rose. All these difficulties pursue us but I am not going into them now. I merely want to draw your attention to the background, the recent background. We realized as never before that the basis even of our industrial advance was a stable agriculture. Agriculture is very important for us because 80 per cent. of our people are engaged in it. It is obviously important to have enough food for every one; but even from the point of view of industrial advance it is essential that there should be adequate agricultural production so that even if bad seasons come, if monsoons fail and if floods occur, we can survive without too much difficulty and without prices rising too far. We want our farmers to have good prices, and I have no doubt that most

of you are in favour of that. But we have to remember the consequences: everything goes up; salaries go up; wages go up and all our estimates for planning are shaken to their foundations. So we realize more than ever, the utter necessity for concentrating on agricultural production—both food production and the commercial crops which bring us the much needed foreign exchange.

Now I should like you to look at another aspect of our problems. This is that we are a country which attained political freedom eleven years ago and which is economically under-developed or backward—call it what you like—a country without considerable resources. Potentially we have the resources; potentially, we have great wealth, and I have no doubt, we shall achieve it actually. But it will take time and hard work. The point is, we do not possess it now. So we gained political freedom and gave political consciousness to hundreds and millions of people while our resources were still limited. We gave adult franchise to everybody including those who might be called socially backward, tribal people—everybody. We had taken our people along with us and they quite rightly began to make demands upon us—very legitimate demands to improve their standards. But we did not have and do not have the resources to fulfil these demands. So this great difficulty faces us, a difficulty which is common to most of the countries of Asia and even of Africa,—a difficulty which did not come to the countries of Western Europe or America, because in those countries the economic advance took place over a long period of time. Great resources were built up before the political demand came. After all, even in a country like England, adult suffrage came quite recently. Throughout the nineteenth century suffrage in the West was very limited; democracy was a limited democracy and the demands from the people, who were not politically strong enough to push them forward in Parliament, could not be pressed with any strength. They were often ignored until economic advance had taken place. The material resources were built up in these countries before the political demands for them became too strong; so when the demands came, they could be met. In other words, the economic revolution took place before the political revolution in those countries. Here the process has been reversed. We have to face political revolutions everywhere, and the economic revolution is coming in and building up resources only at a slow pace. The problem always is, what to do at a particular moment when a legitimate demand is made which we agree with, but have not the resources to fulfil. Take any field, take education. Our Constitution lays down that within ten years there must be free

and compulsory education for every boy up to the age of fourteen. Well, eight years are passed. We have made very considerable progress in education, but not as fast as that. I do not know exactly how many boys and girls will be involved, but they run to hundreds and millions and we just have not the resources or the trained teachers. We go ahead, but not fast enough, because resources are not there. We are going in for fairly advanced social legislation side by side with industrial progress. But the fact of the matter is that our resources are not sufficient to bear the social legislation. We go ahead with it because of the political and social consciousness in the country, and so it becomes of the most urgent importance to add to our resources. The question always is, how much of our resources can we use, and how much should we invest for future advances. How much shall we spend on benefits today, which people want and which we want to give them? The more we give them, the less we can save for future advances. This is a complicated problem and it comes up all the time in our planning, and of course we try to find the right balance. Sometimes we fail. I venture to tell you this merely so that you may realize (I have no doubt you do realize) the various aspects of the problem as they present themselves to us. In all this variety the foremost problem, we believe, is agriculture and agricultural improvement—greater production. I have no shadow of doubt that production can be increased very greatly in India for two reasons. One is that our present yields per acre are very low; there is plenty of room for advance. The second is that wherever effort has been made—and efforts have been made in a large number of areas in this country—yields have gone up, twofold, threefold, and even fourfold. I do not say we can reach a fourfold increase all over India, but I have no doubt, we can increase to double. And if we do, it means that all our problems, even the problem of increasing population will be met, and there will be something left over for export. How long it will take I do not know, but I do not think that it will take us as long as people sometimes imagine. I am told that under the very best of circumstances, no country has shown a yield, an increasing yield, of more than 3 or 4 per cent. per annum. And, of course, the more you advance the less room there is for rapid advance.

Then there is another aspect. Some countries have made very remarkable progress in recent years in industrial development, education, health, and so on. But that rate of progress, so far as I know, has not been shown in agriculture. Agriculture has proved to be a tougher problem. It is not very difficult, given the resources,

to put up three or four steel plants. We pay for them and train some people, and the plants start working after three or four or five years. But it is much more difficult to deal with the large mass of agricultural population. Naturally they are tied to old customs, old grooves of thought, old methods of working, and it is difficult to pull them out. It is not impossible, in fact it is less difficult than I previously thought, provided the right approach is made, but they are not going to be hustled about it; they have to be convinced. They need a friendly approach; and nothing is more convincing than an example. But still the fact remains that one's enthusiasm, however great, suffers shocks when it comes up against this tremendous wall of humanity imbued with customary methods of working. What is more unfortunate is a certain lack of initiative resulting from poverty and from governmental habits which do not encourage initiative. The poor peasant looks to some governmental apparatus to work things for him when what he really needs is the spirit of self-reliance, the spirit of self-help, the spirit of co-operation. Obviously, government must help. But the way the British Government described itself to the common folk in India was that it was their father and mother; it did everything for them. Whether in fact it did everything or not, the peasants lost the initiative for doing anything for themselves. It is not the fault of the British Government itself, it is the fault of the system. Another thing has happened. Very rightly, I think, we put an end to the large landed estates. We gave them some compensation and took the land over and created peasant proprietors. Most of them are small. Now, the old landlord by custom and convention, and in his own interest, performed the social duty of looking after the wells and tanks in the villages for irrigating round about. When he ceased to be the landlord, the normal thing would have been for the village community to take charge of the wells and the tanks, but they did not. They were not used to it; they expected somebody else to do it. It may be our fault or it may be the fault of the local authority, but the result is the same. We suddenly discovered after a few years that thousands of wells had gone to pieces and could not be used properly. It will be an enormous labour to build them up again. But it is impossible to rely upon government apparatus to go about repairing every village tank; it is for the village community to do it. They can do it and will do it, but they need initiative and enterprise.

Another problem arises through the institutional framework of agriculture. I have told you that so far as big landlords were concerned that system ended. By and large it ended all over India. We

believe in the removal of intermediaries between the man who works and the State, and we are trying to achieve that. But the average holding in India is pitifully small, and when we share out all the land to the people who want it, it will be even smaller. The problem is different in countries where the ratio of land to population is different or where the relative importance of industry and agriculture is different. What are we to do with the pitiably small, uneconomic holding on which you cannot expect any progressive methods to be employed? The poor peasant has no chance. It seems to me that the only possibility is to have co-operative efforts, to have co-operation develop so that the peasants may profit by their joint efforts. The State will help, no doubt, but again I am terribly anxious to root out this habit, ingrained in many of our people during British times, of not developing their own initiative but relying on somebody else to do things for them. It is, of course, the habit of poverty—the poor man, the old tenant of a big landlord—if the poor tenant worked hard and increased the yield from the land the landlord immediately translated it into a demand for a higher rent. With the removal of the landlord that idea will go, no doubt. I was talking about the co-operatives. The State of course ought to help in every way but I am anxious that the co-operatives should be the business of co-operators and not State co-operatives imposed on the farmers and run by State officials. I do not want State officials to cover the whole land with State apparatus and reduce the initiative of the peasant. I believe that real co-operative effort among our peasantry will lead to what may be called small co-operatives—a village co-operative or, may be, two or three small villages together. The point is that the members of the co-operative should be more or less known to each other. If they know who is the good man and who is not so good, whom they can trust and whom they cannot trust, even if they make a hundred mistakes they will get on with it. The small co-operative has very few resources, of course, but you can join a number of them into bigger federations—call them what you like.

These are real problems which you may or may not discuss, but which face us in India. As you know, any problem involving human beings is difficult. We have to find the right balance or our Plan may go to pieces. Progress becomes slower than we thought and sometimes a little frustrating. Why can't we go faster? Then we remember that we are on the march and that we are not marching alone. We are a large brotherhood of 360 million people on the march and we must go together. We must all help each other. In this process I do believe that the initial difficulties have been got over. The pace will



PRIME MINISTER NEHRU INAUGURATES THE TENTH INTERNATIONAL CONFERENCE OF AGRICULTURAL ECONOMISTS
(Dr. Elmhirst, Founder-President of the Conference, watching)

become faster because, as I said, I have a tremendous faith in the innate good sense of our people, of our peasantry.

Then, there is the question of population. We have a very big population and it is growing, though it often surprises people to know that the rate of growth is not so rapid as some people have imagined. But whatever the rate may be, if 360 million people grow, the numbers become bigger and bigger. I believe that our birth-rate is slowly going down and will go down, but faster than the birth-rate, the death-rate goes down as a result of better health. All kinds of estimates are made of our future population. I do not profess to know what is going to happen in forty or even twenty years except that presumably we shall be more in number than we are now. On the one hand I hope we shall be able to restrict the numbers, and on the other that we shall be able to look after them better. In any event the restricting of the population growth takes time; it cannot be quick and sudden. The process has started in India and is yielding results and will go on yielding results. But we must not wait for the future. Our present task is to increase our capacity to deal with our existing and growing population here now, tomorrow, and the day after.

So here we are. We in India are one-sixth or one-seventh of the human race—a large number. Fortunately, the people are peacefully inclined; sometimes some of them may misbehave as some of us do but, broadly speaking, peacefully inclined, with no aggressive intentions against anybody, living at peace with themselves and with others. Ultimately, however, they depend, as all the world depends, on many uncertain and unknown factors in the future. All that we can do is to work our hardest on every plane; on the plane of production, on the plane of equitable distribution, so that we may build up a society where every person has an even chance, where every person has the necessities of life, where the State is more or less a 'welfare State', and where cultural and spiritual matters can flourish, for without them all this material progress may lead perhaps in wrong directions.

I will now inaugurate the Conference by ringing the cowbell!

B. D. JATTI

Chief Minister, Government of Mysore

I AM happy and proud to have the privilege of proposing a vote of thanks to our beloved Prime Minister for inaugurating the Conference. In doing so, I must first say how grateful and happy all of

us in Mysore State are that Mysore has been chosen for the venue of this great Conference. It is for us the most memorable occasion. For us, in this part of the world, agriculture is tremendously important. The two Five-year Plans bear ample evidence of the immense importance we attach to secure the maximum possible increase of agricultural production. But in the attainment of this as well as of other ends, we have striven to be particular about the means employed. In every one of the projects we have undertaken, emphasis has been laid upon the willing and enthusiastic co-operation of the people, and this co-operation, I am happy to say, is forthcoming in abundant measure. We firmly believe that Indian agriculture will not for long remain backward. Our agricultural scientists have been busy and our extension workers are now geared to a supreme effort. The role of agricultural economists is indeed vital in this context. A sober economic assessment of our endeavour is indeed an indispensable necessity for purposeful agricultural planning. We in Mysore are trying to forge ahead with our programme for food production, intensifying efforts where necessary and bringing in fresh lands under cultivation wherever possible. As a result of the fervent appeal by our Prime Minister who is concerned with an insight into our agricultural problems which are too well known to need repetition, the Government of India have asked the States to carry out a drive for increased food production in the next *rabi* season. We have drawn our plans and work is already under way towards the implementation of this special programme. The holding of this Conference in this city will encourage and help us in our efforts.

Ladies and Gentlemen, I should not wish to detain you any longer except to say on behalf of you all and on behalf of myself that we are most deeply indebted to Shri Jawaharlal Nehru for having found time amidst his pre-occupations of State to come to Mysore and to inaugurate this Conference. The valuable and thought-provoking ideas he has put before us in his illuminating address will, I am sure, serve to guide and inspire the deliberations of this Conference.

PRESIDENT'S ADDRESS

L. K. ELMHIRST

AFTER thirty years of happy labour on behalf of the International Conference of Agricultural Economists nothing gives me more pleasure in this, my last year of office as President, than the fact that for the first time we are holding our meeting in Asia, and that this our tenth Conference is being held here in India.

It was some forty-three years ago that I first arrived in India, straight from Cambridge University, and was immediately struck by the problems and possibilities of her village communities. Two years later, convalescent from the war in Iraq, I offered my services as secretary to Dr. Higginbotham at his Agricultural Institute at Naini, Allahabad, and received under him my first introduction to Indian agricultural economics. I left India in 1918 and on release from the British Army I went to America to study agriculture. My first attempt to put into practice something of what I then learnt at the New York State College of Agriculture at Cornell was in 1922 when, at the invitation of Rabindranath Tagore, I went to help him to found his Institute of Rural Reconstruction in West Bengal, today known as Sriniketan.

I well remember in 1938 visiting Mr. Nehru in Almora and asking him whether, once India were free, specialists would still be welcome from abroad. He answered that although India must train and produce her own civil servants, there would be openings for foreign specialists for some years to come. It has been my happy experience to be summoned back to India from time to time as a specialist, since India won her freedom in 1947, but I can truthfully say I always learned more than ever I managed to impart. No one could enjoy the privilege of direct contact with men like Gandhi, Tagore, and your Prime Minister here, without radically altering many of those fixed attitudes of mind that are still too common in the West.

In 1922, while travelling together to this State of Mysore, Rabindranath Tagore and I attended the Durbar of His Highness's uncle. We were then trying to arouse interest in, and to raise funds for, Tagore's school and university at Santiniketan. I am glad to say we had some success. What impressed me most deeply at that time was the progress that this Indian State had made in the realm of agricultural development and general welfare under its own princely house and its own Indian Chief Ministers. This was progress of a kind that I was not accustomed to find in what was then called British India.

For Tagore, both Mysore and Baroda, under their Indian Princes, symbolized, in the days of British rule, the struggle he was himself making to prove that Indians could and must preserve and develop the essential qualities of an Indian culture in spite of foreign domination.

When I first met Tagore in New York, early in 1921, I had heard of him only as the poet-author of *Gitanjali*, as the philosopher in his publications *Sadhana* and *Poems of Kabir*, and as a teacher with some revolutionary ideas on education. On my arrival at his school in West Bengal, I found that he was a man of many other gifts—a singer, a composer of songs, an actor, a playwright, and a novelist. But behind all this wealth of capacities, I soon realized, lay his deep and abiding concern for the humble people of the Indian village, for the Indian cultivator and his family, for the village craftsman and the landless labourer. From his early years, when sent by his father to manage the family estate in East Bengal, he had dreamt of a revival of some of the essential elements of that ancient village culture, described so often in India's literature and art as flourishing much more than two thousand years ago in clearings in the forest and in the ashrams of saints and scholars. Tagore had complained to me in New York that so many of the villages immediately around his own institution seemed, culturally, economically, and socially to be in a state of decay. Could I help him to discover why? I make no apology for quoting here from his own words:

We must so endeavour that a power from within the villages may be working alongside us, albeit undiscernible by us. . . . If I can free only one or two villages from the bonds of ignorance and weakness, there will be built, on a tiny scale, an ideal for the whole of India. . . . Our aim must be to give these villagers complete freedom, education for all, the winds of joy blowing across the village, music and recitation going on, as in the old days. Fulfil this ideal in a few villages only, and I will say that these few villages are my India. And only if that is done will India be truly ours.

By the end of four years' collaboration with Tagore, the last spent in our travelling together in China, Japan, Argentina, and Italy, I came to know him as a man with a profound mind, with a power of vision far beyond the immediate horizon, and yet with a unique sense of humour and a most fertile imagination. My debt to India for that friendship and experience I can never hope to repay.

But assembled here I see many other of my Indian friends and colleagues, men whom I have come to know in the intimacy of collaboration over a wide variety of enterprises. I shall mention only two here: Sir Manilal Nanavati, President and godfather from its

earliest days of the Indian Society of Agricultural Economics, and Dr. S. R. Sen of the Ministry of Food and Agriculture in Delhi. Had it not been for their considerable effort and labour, and for the material support from the Government of India, we should never have overcome the many obstacles we met in trying to bring together in Mysore such a gathering as we see here today. You come from the four corners of the world. Every continent is represented.

But to arrive is only the first step. Your officers share this opening platform with the Prime Minister of India, Pandit Nehru, and, alongside him, His Highness the Governor of Mysore State, who is also her hereditary Prince. Thus we are given a send-off of a most heartening kind. We shall, I am sure, soon accustom ourselves to our new surroundings, to new foods, new customs, new plants, new trees, birds, and animals and, more than that, to a very ancient culture and to a people free at last to carve out their own destiny. This will be an exciting and challenging experience in itself, but we have also come here for a specific purpose, and as your President my duty is to restate it.

The object of this Conference is, I quote from our Constitution, 'that of fostering development of the science of agricultural economics and of furthering the application of the results of economic investigation of agricultural processes and agricultural organization in the improvement of economic and social conditions relating to agriculture and rural life'. That is something of a mouthful. At any rate, you will realize that this task is neither an easy nor a simple one, but that the aim is broadly conceived. In the minds of those who agreed it (and there are people here who will vividly recall, as the result of our first gathering at Dartington Hall in 1929, the drafting of this Constitution at our second Conference, at Cornell in 1930) there was both an inspiration and a conviction. This remains true today. Our conviction is that, in the balancing of rural with urban culture and in the study of rural economics there shall be no secrets, that as social scientists we shall keep in proper perspective both social and economic problems, and that we shall share all the findings of our experience and research until we are able to draw upon information, experience, and wisdom from the whole world for the benefit of its people everywhere.

As agricultural economists our first and chief concern is with the individual farm and with the farmer earning his living from it. Is a farmer efficient? Has he the land, the equipment, the money and credit, the marketing techniques, and the energy he needs to do a good job? We try to measure his efficiency in every way we can with

the help of costings, of surveys, and of statistics. Of recent years, however, we have come to appreciate that unless we look more deeply into his whole environment we may mislead him and blind ourselves. The farmer is a family man, his wife and children are also farmers. Without defining quite what they mean, people often talk of farming 'as a way of life'. A farm home can, without doubt, be an ideal place for the raising of a family. But the farmer and his wife are also citizens of their nation and of the wide world. They market their products today on a world market. In this way they serve humanity at large and so deserve service in return.

We must therefore take a wider view of the farm in its relation to the world as well as to the national economy in which it operates. We have already begun to ask why the farmer does not respond more readily and more rapidly in a whole number of directions to new ideas, new techniques, new markets, new facilities, and to the new education and extension services held out to him everywhere by an expanding variety of agencies. What are the motives, conscious or unconscious, which lie behind a farmer's decisions to do or not to do, to accept or to refuse advice? Here the economist is brought into direct association with the sociologist and the psychologist. A whole new field and an important one opens before us, since public expenditure on education for farmers is always and must always be on the increase even though there may still seem to be a disappointing return for the money spent.

The theme of this Conference faces this very problem. The farmer offers a service to the community. He needs in return a full range of services from his market town, from industry, from his university, and from his Government. Does he yet receive a fair reward for all his labour and foresight? Society too, in granting this reward, will in turn demand from the farmer new and always changing kinds of response if the terms of trade for agriculture are to be in fair balance. What is a fair exchange between the farmer and those he serves? What sort of man do we expect him to be? Solely an economic unit, plus or minus, in our statistical appreciation and measurement and no more? Or do we want him to develop into a whole person, alive and sensitive in every part of his nature, in every aspect of his being? The individual personality can only achieve the fullest flowering of which it is capable in harmony with society. The responsibility is mutual—of the individual to contribute his utmost, and of society to offer him in return ample scope to develop. The whole purpose of a society is nothing less than to liberate the individual. To this end we need societies everywhere, large and small,

that will welcome the challenge of new ideas, that will prove ever more humane, more sensitive, more flexible and more courageous and so more free.

Today, thanks in no small measure to the effects of economists, we are liberating peasant communities and farm families, slowly but steadily, from a whole range of fears, terrors, catastrophes, drudgeries, and disasters that plagued their grandfathers. In so many ancient cultures and religions you find these once uncontrollable forces personified in demons or deities carved in wood or stone so that they may be placated one way or another.

Today, the world can offer the farmer, with the help of science and machines, new material freedoms of all kinds but not always that broader background and educational experience without which man's spiritual aspiration is not fired and his creative imagination not released.

The farmer's wife throughout history has also shared with her husband the work on the farm—making butter or the ghee and the cheese, and caring for the livestock and the crops as well as the household. In so-called advanced countries she no longer performs many of these ancient arts. Does she always put her new freedoms to the most creative use for herself, for her family, for her community? The problem is an ever-widening one, not only on the farm and in the home, but for every citizen and for every State. In preparation for or in pursuit of war, peoples used to be given the choice between butter and guns. All too often the choice made was for guns, not butter. We all hope for the day of fewer guns. But what shall we do with the extra butter? How spread it fairly between rural and urban folk? Are we to measure these new forms of wealth, humorously termed butter, solely in material terms? Or can we explore with their help a new range of spiritual values? Our investment in education for the spirit always seems to lag so far behind human need. For true education means the discovery of a creative use for all the new resources and kinds of freedom being showered upon us.

One of the great opportunities we have at this meeting, through the vision of Sir Manilal and the hospitality of his Government in bringing us here, is the chance to study what is happening to rural development in India. For in India as in China and South-East Asia and the Middle East it is the ancient rural community and not just the farm family which is the vital unit. From time immemorial this has been true in India. Great urban conglomerations—Bombay, Calcutta, and Delhi—tend as they grow to become impersonal and costly in their operation. In them the creative use of leisure declines.

Cities absorb so much time and energy in the competitive rush from home to work, or just in keeping clean. People are driven to buy entertainment and not to make it, as in the past, for themselves. Cities confer great benefits but they also cut people off from nature and from daily acquaintance with natural beauty.

If we are to welcome the services that cities perform as centres for government and for the exchange of goods and of ideas, if we are to build, as we must, sizable towns around the great industrial centres we need, we must see that in their own turn rural areas receive the roads, the water supplies, the transport and marketing facilities, and the services of education, health, and communication that they also need. In less fully developed countries the ambition to improve and service the rural areas immediately is a natural one, but a full range of improvements and services cannot be provided until the first, the second and perhaps the third five-year plans for industrial and urban development are completed. In rural areas something practical but limited can be done immediately. Meanwhile the research, survey, and organization that are needed before any great sums of capital are invested can and must go on. That is why at this moment of time we should take such a sympathetic look at the progress of India's second five-year plan for industrial development and at the more gradual progress in the development programme for her rural communities. It is vital in every country that these two plans, the urban and the rural, should bear a proper relation to one another. Here in India is our first chance as a Conference to take a look at first hand at the attempt of a government to keep the two programmes in some definite relation and partnership.

The problem of rural India is the under-employment of 75 per cent. of her manpower. Can the new industries and the services that go with them syphon off some of this unused potential? Can all rural areas be so linked with their appropriate urban centres that a new and two-way service may develop between them, so that a wider range of opportunity for agriculture and for the village community can emerge? We have come here to discuss such questions. As scientists, we need a detached assessment of the problems and of the results from all sources, whether positive or negative. The whole world awaits the answers.

How are the half-million rural communities in India, housing approximately 325 million people, to develop? Often they still lack services of even the most primitive kind. With the right kind of help, they can gain these services and find for themselves the road to an abundant life based on sound economics, a life that could yield far

more than merely a material return. In the West we have still to put on a sensible basis this idea of mutual service between an urban centre and the farms or rural settlements which depend upon it and which it serves. We have hardly begun.

In trying to work out the right balance between urban and rural development, there is one further problem that social scientists must face boldly and examine with care. This is the problem of relating a nation's population to its land resources in a world that, at the present rate, will about double its number of people by the end of this century.

It would, I believe, be wise for every nation or State to begin to work out for itself today a sound strategy of multiple land use before too much land is gobbled up for limited or unsuitable purposes or lost to use altogether by wind, fire, flood or overgrazing. Humanity must hold and husband the land surface of the globe in trust for future generations. Unless we accept this trust in our own day, whole areas may so deteriorate that they will be spoiled for all time from rendering the wide variety of service that will be needed by successive generations and expanding populations. How men will curse us if we fail to take conservation and preventive measures in time. There is a duty of trusteeship here that we cannot disregard.

For those of you who can spare the time, I would recommend a visit to the area of India serviced by the Damodar Valley Corporation where an attempt has been made to apply the principles of multiple land use and where whole villages have pooled their lands in a common interest of soil conservation, fertility improvement, controlled grazing and water storage protection. This Corporation was set up by the Prime Minister, Mr. Nehru, within a few months of India's achievement of her freedom. It is still one of the more comprehensive attempts anywhere to achieve a wise strategy of multiple land use.

We know that with an ever higher investment of capital in good land, whether by irrigation, by drainage, or by the application of appropriate machines and fertilizers, we can enormously step up the yield of foods and fibres. We also know, that as standards of living rise, food habits slowly change. Diets formerly composed mainly of starch in some form or another gradually come to include more of the so-called protective foods such as vegetables and fruits, and finally more protein—eggs, milk, fish, and meat—all in greater variety and produced at greater capital expense. But as the good land becomes more productive various new demands are also made upon the poorer lands. By wisdom and forethought and by limited capital

investment, they too can offer an ever-widening range of services, whether of timber, of fuel, of water-gathering and storage, of nature conservation, of holiday-making, or of easier contact for city folk with areas of great natural beauty. The ultimate interest of soil, of community and of individual is one. I suspect that experiment is needed until we find a variety of ways whereby the State can delegate its responsibilities to appropriate local boards, bodies or trusts, companies, co-operatives, collectives, corporations, or individuals, so that proper land use whether of field, woodland, or hillside is guaranteed without stifling individual initiative and enterprise.

New discoveries and inventions force upon us the need for continuous observation and research, for more flexibility in the use of land and for finding changing means for the meeting of ever-changing human ends. For example in the three short years since our last meeting, in Helsinki, automation has been sprung upon us and atomic energy is ready to serve us. In the realm of social science psychologists have penetrated still further into the hidden recesses of the human mind. Agricultural economists from early in this century have been pioneers in the social sciences. For years they have set up their listening posts in field, farm, and village, often far away from the academic enclosures of universities. There is still for them no shortage of field work. As problems emerge, sometimes foreseen ten or fifteen years ahead, they set to work to collect relevant material, to measure, to record, to survey, and then to digest in writing and in discussion, and finally to serve up their findings in usable form to farmers, to university students and even, if they will listen, to Ministers of Governments.

The problem of how to bring into some happier balance than at present the capacity to produce on the farm and the need to control an over-production of population is still an urgent one and one that we might raise again as a proper subject for our next conference. The necessity to relate people and their changing needs to the available land and resources is one to which we dare not shut our eyes.

It is our established practice to start thinking about the next meeting of this Conference before the current one ends. It was at Helsinki, three years ago, that the first step was taken in building the programme for the present Conference. The Executive Vice-President and I came away from Finland in 1955 knowing that our task was to devise a programme which would continue from there our study of the impact of technical development on the economies of agriculture and on the general and social welfare of rural peoples.

It took us some months after wide consultation to crystallize our

ideas into a preliminary outline programme. This was sent to all Conference Correspondents in April 1956, with the request that they should ask their Council Groups to discuss it carefully and pass on to Professor Thomas their considered suggestions for amendment. Again, it took many months for all these criticisms to come in. But, as on previous occasions, the waiting was well worth while, for the criticisms received from all parts of the world were invariably constructive. By June 1957 an agreed outline programme was in existence and invitations to possible readers of the main papers were then sent out.

Our theme, as you know, is *Agriculture and its Terms of Trade*. That is to say that our concern is with the role of agriculture in national economies as well as in a world economy; it is with the problems which arise and which will always continue to arise because of the ever changing nature of that role. Our sub-title, *A consideration of the problems of balance between agriculture and other activities in the process of the economic growth of States and in the development of a sound world economy*, makes this connotation clear.

The relevance of the theme to so much that is vital in current world policy needs no emphasis. It concerns every country at each successive stage in its economic evolution. That is why the theme is so appropriate to the first Conference we have ever held in Asia.

Different factors influence the parity position of agriculture. Some of these factors are local, some are world-wide; some act within agriculture itself and some act from outside; some arise from political or governmental decisions and developments; some from technical innovation or change; some come as a result of sociological or biological disturbance such as the growth or shift of populations, and others from the ever-changing preferences of human beings.

As a result of the operation of these various factors agriculture is subject to continuous variation in both the long and the short run in its terms of trade with other industries and other groups. This variation may exhibit considerable differences in particular regions from the overall or world-wide trends. The significance of such variation may be brought home to a particular country or region in either or both of two ways. It may be by changes in the general international trading position of the region concerned or it may be by new internal problems of an economic, social, or administrative character.

The subjects to be discussed therefore fall roughly into one of these two main groups though, by intent, the papers are not arranged in any special order in the programme. The first group examines

some of the more important of the factors which determine the changes which are forever occurring in agriculture's terms of trade. The second deals with the scope for national and international action if we are to deal with the actual or impending shifts in the fortunes of agriculture.

Arising out of our experience and in order to make ample time for discussion, we have tried this year to reduce still further the reading of papers. Our struggles to avoid being smothered under an avalanche of paper readings have meant that invitations have gone out to many here, not to read papers, but to make their contribution in discussion.

Our members this time come from not less than fifty-six countries. This should help us to draw new wisdom from almost every corner of the earth. Now that we have grown larger, it is sometimes difficult for new members easily to make contact and fully to contribute or to partake in discussion. We defined this problem in Finland and have welcomed a new plan and an experiment for this meeting, drawn up by Harry Trelogan from Washington and Joe Ackerman from Chicago, to establish and operate a series of discussion groups by what is called the workshop method. I beg each of you to welcome and to support this experiment to the full.

Many of us have come more than half-way around the world to get here, and we have been assisted in countless ways by countless friends and institutions. May we set to work to make the fullest use of the unique opportunity this gathering offers to us?