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PROCEEDINGS OF THE  
THIRTEENTH  
INTERNATIONAL CONFERENCE  
OF AGRICULTURAL  
ECONOMISTS

*held at the University of Sydney  
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The Economist and Farm People  
in a Rapidly Changing World

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1969

## *The Main Theme of the Conference*

# THE ECONOMIST AND FARM PEOPLE IN A RAPIDLY CHANGING WORLD

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## ADDRESS OF WELCOME

*HIS EXCELLENCY, LORD CASEY*

*Governor-General of the Commonwealth of Australia*

PROFESSOR WESTERMARCK, President of the International Association of Agricultural Economists—Professor Campbell, Chairman of the Organizing Committee of the Conference—Mr. Adermann—Mr. Chaffey—Office bearers and members of the Association—Visiting delegates—Ladies and gentlemen. I am glad indeed to have the privilege of speaking at the opening of this International Conference of Agricultural Economists, the first of its kind to be held in Australia, and indeed the first to be held in the Southern Hemisphere, and only the second to be held outside Europe or North America.

The Australian Government is most glad to welcome the very many distinguished individuals from many countries who are attending this Conference. The attendance both in numbers and in distinction is remarkable. It is felt to be a compliment to the high professional status of Australian agricultural economists that you have agreed to hold your Conference in Australia, particularly by reason of the fact that Australia is a relative newcomer to the young discipline of agricultural economics. The Australian Agricultural Economics Society itself was formed only ten years ago, and organized research in this field may be said to have been developed in Australia only in the post-war period.

Indeed I notice that your own International Association is only thirty-eight years old so that this geographically remote Australia of ours is not so far behind.

This Conference will provide a wonderful opportunity for Australians working in this field to benefit from close contact with leading agricultural economists from many countries. At the same time we hope that our visitors from overseas will be able to get a better appreciation of the problems—and I hope I may say the accomplishments—of Australian rural industry.

The general theme of the Conference—‘The Economist and Farm People in a Rapidly Changing World’—is an appropriate one. The

middle of the twentieth century is a time of rapid change in practically all forms of human activity.

Agricultural economists in this country, and indeed largely elsewhere in the world, normally keep themselves aware of what their colleagues are doing and thinking by means of the printed word. Such a Conference as this provides opportunity for the much more fruitful means of so doing—by personal contact and discussion, which, in all walks of life, is a very much more effective medium than writing and reading.

The rapid and frightening increase in the population of the world brings into sharp perspective the importance of your professional interests, by reason of the dramatic race between population and agricultural production, particularly in the developing countries. I need not give you the figures to support this which are well known to you all.

The problem of over-riding world importance—that of population growth versus foodstuffs production—is most intense where it is of most importance that it should be solved. It has been demonstrated that most physical problems can be solved by a concentration of brains and resources. But the population-foodstuffs problem in developing countries does not appear to show signs of being solved, maybe because it is a combination of physical, political, economic, and social problems.

I have always remembered the wise advice given by Mr. Nyerere, President of Tanganyika, to his countrymen soon after the independence of his country some years ago, when he said—‘We must remember that, with Independence, the mangoes will not grow any faster on the mango trees.’

So far as Australia is concerned, it is as you know a very large country with a relatively small population. Its economic beginnings were farming and pastoral, which indeed have gathered momentum over the generations, and in recent times have seen strong competition from industry and mining, which begins to enable us to say that we are advancing towards a balanced economy.

One of the geographical features of Australia is that we have very large areas of arid and semi-arid country, the problems of which we are still a very long way from having solved from the economic point of view, although we are not alone in this regard.

We have a wide climate range from north to south. We have to accept the burden of the recurrent occurrence of drought. By reason of the size of Australia we have the built-in problem of distance, which brings with it the problem of communications. And, politically, we are a Federation which is not the easiest form of government for a developing country.

Still, in spite of some disabilities, we like to think that we have not made a bad job of our primary production, which I think the figures reflect. We hope that you gentlemen from other countries will be able to see at least some parts of our rural areas for yourselves, after your Conference is over.

Primary production in Australia is the concern of a great many individuals, companies, and associations, as well as the Federal and State Governments. If you were to guess that this means that the business was

not devoid of politics, you would not be far wrong, although this will not concern you, except for its economic resultant.

A great deal of research is carried out in the physical problems that beset the industry, both by Federal and State instrumentalities. On the educational side there are many agricultural colleges, as well as degree courses in agricultural science, in many of our universities.

By reason of the importance of the farming and pastoral industries to individual producers and to the economy generally, there is a very considerable literature both academic and practical.

I have to remind myself that it is not my function to speak to you about Australia in particular. There are many of my countrymen here today who are well equipped professionally to do so, which I am not. And, in any event, your agenda contains a very wide range of subjects of which those of Australian origin and content inevitably represent only a small part.

Indeed the world is your field—and your professional interests are as wide as the agenda for this Conference reflects, which is to me almost frighteningly sophisticated and complex.

Many years ago in India I had the privilege of contact with your Founder-President, Dr. Leonard Elmhirst, who I am very glad to see is here today. My only complaint about him is that this is his first visit to Australia.

Mr. President, I have said enough. I am grateful to you for the privilege of speaking to you. I am now glad to declare open the 13th International Conference of Agricultural Economists.

*His Excellency then rang the Cow Bell.*

L. K. ELMHIRST

*The Founder-President*

MR. PRESIDENT, your Excellency, Ladies and Gentlemen, and fellow Agricultural Economists. It is with profound pleasure that I respond to an invitation from your President, and from Professor Keith Campbell who is responsible for the arrangements today, to offer this word of thanks to His Excellency, the Governor-General, for ringing that Cow Bell and for starting this, the thirteenth of our Conferences. If you divide the world vertically, this is only the second time that this cow bell has been sounded in this hemisphere. The last time was by Pandit Nehru at the beginning of our meeting in Mysore in 1958.

It is just forty years ago that a little group, consisting of Carl Ladd and George Warren of Cornell, John Maxton of Oxford, and Jock Currie of Dartington, sat down to plan for the first International Conference ever of Agricultural Economists. It is twenty-five years ago that I first met His Excellency, the Governor-General, when we were both in Cairo. For those of you who know your old Testament well—he was a kind of Pharaoh, with a very large empire to look after. He had, among other things, to guarantee the food ration for the whole population between Istanbul and Khartoum.

I was a member of a little International Mission of Agricultural Economists: three of us, one Scot, one Yorkshireman, and one American from Louisiana—Ben Thibodeaux. The three of us were asked to visit every country in the Middle East and to beg each one to prepare for what might easily become famine conditions. Now Dick Casey, as we knew him then, had a Chief-of-Staff, also from what some people rudely call 'down-under'. His name was Commander Robert Jackson. He is now Commander Sir Robert Jackson. We knew him as Jacko. He married later on and we tried very hard to get Lady Jackson, better known today, perhaps, as Barbara Ward, to speak at this conference.

I had a serious problem in Cairo. My colleague Ben came from America, a baseball-playing country, and Dick Casey and Jacko, coming from a cricketing country, used in committee a slightly different language. After one of these meetings Ben came out and said to me; 'There's something I don't understand about the lingo.' 'What's your trouble?' I asked. 'Well', he said, 'when Jacko says "we will hit Mr. So and So for six" what does he mean?' 'Well', I said, 'it's not unlike hitting a home run off him.' 'Then', he added, 'they seem to do funny things to maidens in Australia.' 'What about them?' 'Jacko will suddenly say he's bowled a maiden over.' 'How do they bowl a maiden over in Australia?' And then, he added, looking very worried, 'and why do they have such an interest in cremation in Australia?' 'Jacko's always talking about retaining his ashes.'

Although I didn't see very much of our Minister of State at the time, I came to know him as a man who was accustomed, whenever things seemed to get tied up in red tape, to bring out a very sharp pair of scissors and cut the tape. Whenever anybody came to him and said—'Oh sir, but this will be against all precedent', his hackles used to rise. This was very encouraging to me, and I enjoyed seeing him use his imagination in emergencies.

A few months after I returned to London, in 1943, there came a letter asking whether I would go and see somebody at the India Office. I went there not knowing what was afoot. 'We have just had a cable from the new Governor of Bengal, Richard Casey, asking whether you would go out and advise him on agricultural matters', the official said. 'Actually', he continued, 'he's quite out of order. There is no precedent for this kind of thing. Are you ready to go?' I said, 'Yes, I am.'

I shall never forget my first meeting in Calcutta, with Dick Casey, by this time, His Excellency, the Governor of Bengal. In the middle of that great palace that once had been Vice-Regal Lodge for the Viceroys of India, Dick Casey turned to me and said 'I've got two files here for you to study. The people of Calcutta are suddenly short of fish and what fish they get, they say, stinks. See what you can do about it,' he added, 'It looks as though we are going to be short of potatoes—no potato seed, what's your advice?' You'll understand why, after that, in official circles I was greeted as 'Mr. Fish and Chips'.

If you went back to Bengal tomorrow you would find in being a number of what I would call permanent monuments to Dick Casey's governorship of that Province, not perhaps talked about very much, but there they are.

We were terribly short of technicians in 1944. You could always count on Governor Casey having some bright suggestion up his sleeve. We tried to get Indians; we tried to get Britishers away from Britain; but everybody there was mobilized for war. 'Draft a cable', he would say, 'to the Prime Minister of New Zealand and tell him the kind of man we need.' We got two good dairy experts, and a skilled poultryman from New Zealand. Thanks to those two dairymen Calcutta hospitals began to know what it was to have cold, clean, pure bottled milk.

Again we were short of an engineer. 'Draft a cable to President Roosevelt', he said. It was drafted. Word came back from an official in Delhi. 'There's no precedent for such a request, it's out of order.' We got the engineer and his plan was one of the first to be implemented by Pandit Nehru, after he became Prime Minister, as the Damodar Valley Corporation.

It was that flexibility of imagination in the face of emergency, his never losing sight of the distant horizon, that made him—entitled him to be called from my point of view—a Statesman.

I have no hesitation in asking you now to join me in thanking him for once more breaking all precedents. I doubt whether anyone ever asked the Governor-General of Australia to come to Sydney, and to open a Conference by ringing a Cow Bell.

KEITH O. CAMPBELL

*Chairman, Australian Organizing Committee*

It is my duty and privilege, as Chairman of the Australian Organizing Committee, to extend a very cordial welcome to participants in this Thirteenth International Conference of Agricultural Economists. We are honoured by the presence of so many distinguished visitors representing the academic and research institutions of over sixty countries. In the unavoidable absence of the Vice-Chancellor of the University of Sydney, which is serving as the ultimate host for the Conference, I should like to link the name of the university in these words of welcome.

Indeed, Mr. President, it seems to me that the motto which the founding fathers saw fit to incorporate in the coat of arms of this university a century ago might well epitomize what the Australian profession would like to say to its visiting colleagues, coming as most of them do from the Northern Hemisphere. The Latin motto which in 1857 these optimistic pioneers of higher education in Australia chose for the university is, as you may have already noticed, 'Sidere mens eadem mutato', which may be freely translated 'Though constellations may change, the mind remains the same'. It may also interest you to know that this sentiment is expressed in the university's coat of arms, which incorporates the lion from insignia of the University of Cambridge, the open book from the armorial emblem of the University of Oxford together with the stars of the Southern Cross.

The agricultural economics profession in Australia is comparatively young. The first state research organization in the field dates from 1941, the Bureau of Agricultural Economics in the federal sphere was established in 1946 and the first full-time appointment of an agricultural economist to the staff of an Australian university was made in 1951. The Australian Agricultural Economics Society, our local professional organization, is entering only its second decade. Yet as the President has said, in 1958, in the second year of its existence, this society issued the invitation to the International Association to hold a meeting in this country. In recent years Australian membership in the International Association has been exceeded only by that of the United States.

Though we, the members of the Australian profession, are proud of this record of the growth and development of our discipline—a rapid growth which I would suggest a perusal of our Journal will indicate has not been at the expense of quality—we recognize that we have not achieved this by our own merits.

We owe a tremendous debt to our mentors located at various centres of learning in the Northern Hemisphere, who have trained and are training young Australians in the best traditions of the profession. The representatives of the Universities of Iowa, of London, of Harvard, of Oxford, and of Chicago, to name but a few, who are present in Australia for this Conference will, if they look around, see something of what their former students have wrought and will, I hope, not be disappointed. Thus this Conference in a sense provides an opportunity for the representatives of the older centres of learning to see something of what 'pump priming' can accomplish in the intellectual sphere. The 200 Australian participants here present look forward to further intellectual stimulus through participation in the discussions of the next few days.

I would like to take the opportunity, while the two ministers are with us, to say how much the Australian Organizing Committee owes to the financial and other help which has been extended to us in staging this Conference by the Commonwealth Government and the Governments of the various States, and especially the Government of New South Wales. Without this generous basic support this Conference could never have been held. I hope that Mr. Adermann and Mr. Chaffey will convey to their colleagues on the Australian Agricultural Council the thanks of the Organizing Committee and of the Conference.

Before concluding my remarks, Mr. President, I wish to place on record Australia's debt to one who has not lived to see an International Conference in this country, though, in a sense, I believe he lived for that day. I refer to our late esteemed colleague, Jock Currie, first secretary-treasurer of the Association, perhaps, after Dr. Elmhirst, its most enthusiastic supporter and first harbinger of the Association to Australia. It was a hot summer day in 1954, that I was told that a man called Currie wanted to speak to me on the telephone. Jock asked me to get together a group of agricultural economists in Sydney—not an easy task in this city in the month of January—a group to whom he could preach the gospel of the International



Conference of Agricultural Economists, as it then was. Needless to say a small group of us did meet, in a room in the Commonwealth Bank, and I believe we all came away converted.

Thanks in no small measure to Jock's continued enthusiasm and support in later years, we are holding this Conference thirteen years later in the very same city. We salute a great man and we regret he is not here to see one of the fruits of his labours.

On a more practical plane, may I say that the Organizing Committee has endeavoured to make as satisfactory provision on a material and social level for our visitors as we could. If there are any deficiencies, we would appreciate it if you would bring them to the attention of one of the Conference officials. We trust that you will find the next sixteen days both enjoyable and professionally satisfying.

Mr. President, you will recall that in Lyon in 1964 the Chairman of the French Organizing Committee, Denis Bergmann, presented you with a very large cow bell, symbolizing, if I remember correctly, the increasing numbers which now attend the conferences of this Association. On this occasion, I wish to present you with a very small bell—a sheep bell—to serve as a reminder of this country's greatest rural industry. I must explain, however, that we have no need for this kind of gadgetry in our sheep husbandry. This we hope to demonstrate next Sunday morning. I must also admit that the bell was not even made in Australia, but came from the mountains of Greece—and thus once again serves as a symbol of the international outlook of this Conference.

## PRESIDENT'S ADDRESS

NILS WESTERMARCK

WHEN we assemble today for our Thirteenth International Conference of Agricultural Economists we are, in a way, forging the last link in our global chain of conferences. I trust our hosts in Australia will not consider me discourteous when I say that it is only natural that Australia should form the last link of the chain, since in respect of seniority Australia is the youngest, the last discovered, continent. Even we agricultural economists must respect the chronological order of geographical discoveries.

The great majority of us non-Australians are visiting here for the first time, and our esteemed hosts can be assured of our great interest and eager anticipations upon landing on this vast island. We place a great value upon the honour bestowed on us by His Excellency Lord Casey, Governor-General of the Commonwealth of Australia, in responding to our request to open our Congress. We see in this an indication of the value accorded in the highest administrative ranks in Australia to the activities of agricultural economists on the national as well as the international level. We also extend our thanks to Professor Campbell for his warm words of welcome.

Three years have passed since we met in Lyon for our Twelfth Conference. In the meantime a number of members of our organization have paid the debt of nature.

Ladies and Gentlemen, we will stand for a minute of silence in honour of their memory.

But life passes on with its sorrows and joys, its lights and shades.

When we survey the world we live in, we observe that there are essentially three phenomena that in recent years have brought international co-operation into a new light. The first is the economic integration that has taken place, and is still proceeding, through the formation of large new marketing areas. The second phenomenon is the entry of numerous new states into the arena, and the third—which is closely connected with the second—is the topical question of the problems of the less-developed and developing countries.

There was a time when it was possible for deficiency and abundance to coexist in the world without causing noteworthy disturbance, politically or economically. People's ignorance of conditions prevailing elsewhere made this possible. Now, in contrast, the radio, television, constantly increasing literature, airplanes, better roads, and so on, mean that knowledge of the conditions of existence of other nations comes closer to everyone. Advanced countries have become increasingly aware of the deficiencies and distress prevailing in other parts of the world; the populations of poor countries have observed that their condition is not hopeless and that improvement in their position is possible.

It is perhaps understandable that the basic attitude in the matter of international co-operation is a utilitarian one and that the question posed at the very beginning is: 'Do we ourselves derive any benefit from international co-operation and if so, what is our gain?' Emphasis on benefit alone represents an extremely narrow outlook; there is every reason to consider also what we can give to others.

Before entering into a further extension of these thoughts I shall refer to some views expressed by the British diplomat and politician C. M. Woodhouse in his excellent outlook-broadening book, *The New Concert of Nations*. Two principles govern international relations today. First, it is held to be wrong for a nation or an individual to be made subject to another against his will. This is the principle of anti-colonialism. The second principle is that of assistance to developing countries, the wealthy nations must help the poorer nations to attain a tolerable level of living. These two principles may, of course, be in conflict; developing countries may wish to receive aid in order to attain a higher standard of living, but at the same time they want to avoid outside influence.

We have now reached a critical period in the history of the developing countries. These countries have a constant and growing feeling of disappointment because the numerous efforts to improve their economic conditions have not led to the desired result. In many countries there is an impending risk that the levels of living of the common people will drop lower and that this may lead to radical changes in their form of government and political system.

The entering of new independent states into the international arena creates problems by increasing the geographical scope of the activities of international organizations, causing difficulties in their administration. While a great interest is felt in global co-operation, increasingly forceful demands are being presented simultaneously for regional unions, mainly for practical reasons.

The participation of new nations in international co-operation also brings a language problem, since countries that have gained their independence emphasize the position of their own language. It is, however, wrong to believe that the new states in general would be ethnologically of one nationality. From the aspect of international contact this is fortunate in one respect for many of the new states have, for purely practical reasons, retained English or French as the official language. These languages are, in a way, a lingua franca, without which the different constituent sub-states or tribes would be unable to understand each other.

There may be reason in this connection to correct the widely fostered opinion that to achieve an economic upswing in the less-developed countries would primarily require industrialization. It is of conclusive importance to develop agriculture concurrently with industry, since a shortage of food is an alarming circumstance for an economy.

At the World Food Congress held some years ago in Washington, the well-known Swedish economist Gunnar Myrdal criticized brilliantly and

with striking pointedness the forms of international co-operation practiced so far. He made the statement that one of the many mistakes of which less-developed countries have been guilty is to stare blindly at industrialization as the one and only remedy, while at the same time neglecting measures for raising their country's agricultural output. It serves no useful purpose to promote the migration of people from under-employment areas to the ranks of the urban unemployed in city slums. Myrdal further stated that the temptation to promote industry at the expense of agriculture is particularly great because it is easier to build factories than to change the life rhythm of a farming population of millions of persons who stubbornly adhere to their traditional ways.

It is my personal opinion that imbalance in food production and population, and the accompanying constant state of unrest in less-developed countries, is ultimately a result of illiteracy, the inability to read and write, in other words to the fact that two-fifths of the adult population of the world live, figuratively speaking, in darkness. Only when this basic problem has been solved can we expect a definite improvement in the direction of both birth control and food production. A change should also be made in the attitude of developed countries concerning aid, so that the goal will not be activity *for* the less-developed countries but rather work *with* them.

A small incident may be cited here illustrating what it is to work with people in the less-developed countries. It has been related to me that at the end of a several weeks' seminar arranged by the F.A.O. in a less-developed country the participants were asked what the most lasting memory would be for each of them. The majority placed foremost the fact that the director of the seminar had shaken hands with the participants. This is human nature. Evidently the handshake had the effect of raising their self-respect. Doreen Warriner in her book *Economics of Peasant Farming* writes as follows: 'So I hope that in under-developed countries young people will not waste time discussing the peasant or sit in offices computing the size of their surplus populations, but will *walk* through the villages and *see* farms and *talk* to farmers to learn what can be done about farm poverty.'

Organizations of numerous kinds are active in international work today. The membership of some of them consists of either governmental or national organizations and their events are usually attended by official representatives. Participation in these conferences is at the discretion of the government or the organization, respectively. However, there are also international organizations of another kind, whose membership roll is made up of individuals personally interested in a particular field. The importance of international organizations that represent governments and national organizations is undoubtedly great. But side by side with them the non-governmental international organizations with a membership of individuals thoroughly justify their place. Our own association, I.A.A.E., is one of them.

In our I.A.A.E. conferences it is possible to express personal opinions

independently of the so-called official governmental standpoint of the member's home country. In the humanities and social science this liberty is of the highest significance, in the exact sciences the matter probably is not as vital.

It is, however, financially much more difficult to develop the activities of a free international organization, for its operations depend on the understanding and generosity of private foundations. It must be admitted frankly that the large American foundations have, on the whole, shown a much wider interest in international matters than the similar foundations in Europe and other continents.

When we observe our own discipline, agricultural economics, we see that before any worthwhile contribution can be made it is necessary to select a limited sector within which we can develop studies in depth. This requires specialization, but simultaneously it involves a greater dependence on other researchers—either in different fields within agricultural economics or, perhaps, on those working in near-by disciplines, such as psychology, sociology, statistics, and mathematics. In gathering together the agricultural economists representing the different sectors, but who are interested in the same research matters, I.A.A.E. has a specially important task. The significance of mutual contacts has increased irrespective of whether they are kept up only through correspondence or if they lead to solid team work.

Three years ago in Lyon I had reason to draw attention to the regrettable fact that despite increased international contacts between agricultural economists there continues to be an unfortunate isolation, which was manifested in the fact that the works published in this field seldom contain references to scientific papers printed in other countries or in other languages than the author's own.

This is particularly true in agricultural economics for the large countries. Without wishing to enter upon the same theme once more, I would merely like to mention that an extensive work in English of over 600 pages, entitled *Studies in the Development of Agricultural Economics in Europe* was published this year in Sweden at the Swedish Agricultural College by Doctor of Agriculture Joosep Nöu. Dr. Nöu's volume is dedicated to the cause of international scientific co-operation in agricultural economics.

The main theme of this conference 'The economist and farm people in a rapidly changing world' reveals that the betterment of the conditions of the rural people is a very serious task for the agricultural economist in the rapid evolution which takes place in the society of today and tomorrow.

As many of you surely know, it is said of social or general economists that they are good at making autopsies but poor at therapeutics. Possibly this is also the case with us agricultural economists. Nevertheless, the agricultural economists have in the world of today an important mission to fulfil in the promotion of economic expansion in our respective countries. But alongside this great general goal we must not forget the human beings who are working in farming, the farmer and his world. It is one of the great ironies, a paradox the world over, that those who produce the

basic necessities of life—food and fibre—should be the lowest rewarded for their efforts. It is now generally recognized that little success will be achieved, even by the most elaborate schemes, if the farmer is not assisted in ways which are technologically constructive.

Economic growth, however, does not constitute a person's ultimate goal; it merely creates the pre-conditions for well-being and security. A member of the well-known Rothschild family bankers once said that economic prosperity makes no one happy, but it does give a certain degree of security for life.

The rate of economic progress cannot be explained solely as a result of capital and labour input, other factors and phenomena must also be considered. Various research results appear to provide grounds for concluding, even if quite summarily, that only one half of the rate of economic growth depends on the combined input of capital and labour, while the other half is accounted for by a group of factors to which various names have been given, such as technical improvements, level of knowledge and skill, more effective organization, and so on. 'A dear child has many names.'

It is obvious that the significance of the level of knowledge and skill for economic growth has changed with time and that it is different now from what it was, for example, before the Second World War. Edward Denison, the well-known American economist, has shown that while in the period 1909-29 the input of material capital had twice as great an impact as had the educational factor in the economic development of the United States, in the period 1927-57 the educational factor exceeded in importance the input of capital.

We shall probably never obtain a truly complete picture of what is comprised in knowledge and skill, for they are connected with so many factors, ranging from the economic policy of the government and the possibilities it creates for economic growth in general to the personal enterprising spirit of the entrepreneur. Behind these factors there lies in every case a determining factor—*the ability of the human being*.

And since human competence depends upon education, occupational skill, and the benefits of research work, it is probably correct to say that these are the factors that ultimately determine the rate of progress and thus also of economic growth in a progressive society. In action to strengthen the ability of farm people to cope with the changing world the agricultural economist has before him a tremendously important task.

I mentioned the concepts of education and research. The difference between research and education is, we know, that research creates new values, new methods, while it is the function of education to teach the new methods, relying in this work upon the achievements of science. Science, accordingly, produces new knowledge, while education disseminates the results of science and research and makes it possible for the achievements to serve practical purposes. By this process economic growth is brought about. Professor Thorkil Christensen, General Secretary of O.E.C.D., when opening a conference some years ago stated that research work in

the natural sciences has undergone a considerably more rapid development than has education, or, in other words, that the amount of knowledge available has increased much faster than the promulgation and utilization of knowledge. This has, in fact, led to the development of an entirely new discipline with the object of discovering how the achievements of science can best be brought to the knowledge of the pertinent population group for the purpose of application to practical use.

Ladies and Gentlemen! The destinies of nations and people of different levels of evolution are bound each to the other. The economic and cultural progress of the world is based on co-operation between nations and people and the selfish interests of the nations must be subordinated and directed to work for the benefit of mankind. Only a society that has freed itself from the fetters of poverty and ignorance can afford to have a humanitarian moral code.