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The Economist and Farm People
in a Rapidly Changing World

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ECONOMISTS ON ACTIVE SERVICE¹

SHERMAN E. JOHNSON

U.S.A., Past President

I HAVE been wondering what I could say this morning that has not already been said. There is no need to go over most of the ground that has been covered but when I recall the general theme for the Conference I feel that something more might be said about the responsibility of the economist in serving farm people.

We have heard much discussion of prospective changes, of population growth, and of economic development, but perhaps too little about the impacts on the welfare of farm people; also not enough about the responsibilities of economists in analysing alternative programmes, an helping to bring about *changes* that will improve the welfare of farm people—*all farm people*, not only the owners and managers of farms? How can we help prevent undesirable changes? And how can we help people who are disadvantaged by changes that spell eventual progress?

What kinds of changes do we envisage ten years hence, or by 1980, or 1985? At my age I am much more interested in events of the next decade than in the year 2000.

What changes will take place in the more-developed countries such as Australia? In the less-developed countries in Asia, Africa, and Latin America? Will the gaps in technology, productivity, and incomes between the two groups of countries narrow with accelerated growth in the less-developed countries? Or will they widen even further, partly because of continued rapid increase in population? Will food and population imbalances then exert even greater drags on progress and income improvement than over the last decade? We have not reached a consensus on these questions.

Even with a much higher rate of economic growth in the less-developed countries than in the more-developed, the income gap is likely to widen. Food production in the less-developed countries will have to be greatly accelerated if the income gap is to be narrowed, or even maintained at present levels. One estimate of the needed compound annual increase in food production is 4 per cent a year between 1965/6 and 1985/6.² If these estimates are accepted, food production in the less-developed countries would have to more than double in the next two decades.

¹ Notes for discussion at the International Conference of Agricultural Economists, Sydney, Australia, 1967. The title was suggested by the book *On Active Service in Peace and War*, by Henry Lewis Stimson and McGeorge Bundy; Harper & Brothers, New York, 1948, which reports on Stimson's public service career.

² See *The World Food Problem*, a report of the President's Science Advisory Committee, vol. i, Report of the Panel on the World Food Supply, p. 22.

Will the income disparities that will persist despite rapid growth be tolerated in the less-developed countries? And, will the food-population problem remain on centre stage as the chief obstacle to lessening of economic disparities between countries? If so, agricultural economists in all countries will necessarily be involved in grappling with this problem.

In my opinion the food-population balance in the less-developed countries will be the central problem for agricultural economists in the next two decades, and I shall discuss our responsibilities largely in that context.

In the less-developed food-deficit countries, economists will be primarily concerned with the twin problems of population and food supplies. Some economists will explore ways of increasing food production, or earning foreign exchange for commercial imports of food. Others will be working on programmes to retard population growth.

In the more-developed countries, whether food importers or exporters, economists will be concerned with the deficits in the less-developed countries—for humanitarian as well as for economic and security reasons. The markets for farm products will inevitably be affected by food needs in the less-developed food-deficit countries.

I am quite aware of the distinction between nutritional needs and market demands, but the needs are important, for economic growth and governmental stability. The volume of production, adequacy of reserves, and price policy will be greatly influenced by what happens in the less-developed food-deficit countries. Agricultural policies in the more-developed countries, therefore, will necessarily be concerned with food supplies.

The narrow margin between over abundance and relative scarcity, even in food-exporting countries, has not been sufficiently recognized. Large contingency reserves of storable food will be needed to provide relative stability in food supplies and prices. Farmers will need adequate compensation for providing food enough for all contingencies, and they will need to be protected against price collapse in years of over abundance.

The papers at this Conference and other recent reports have given us a range of viewpoints concerning food-population prospects. If I interpret them correctly, the papers by Borrie, Bawden, and Kristensen do not give us an alarmist view of the next two decades. Neither do they present a comfortable food-population balance. The authors are aware of the many obstacles to be overcome, but they do not despair of improvement.

The U.S. report entitled *The World Food Problem*, emphasizes that the world food problem must be solved within the next two decades, and that to do this 'will require capital and technical involvement of developed and developing nations alike on a scale unparalleled in the peacetime history of man'.¹

It is difficult to reconcile this statement with some of the optimistic appraisals of food and population prospects in the less-developed food-deficit countries, which have been presented here, especially the papers by

¹ *The World Food Problem*, vol. i, p. 22.

Clark and Schultz. Clark visualizes larger exports of agricultural products (including food) from these countries. Schultz says 'the crisis in food confronting a number of major countries is already past its peak'. On the population side Schultz leans heavily on Bogue who predicts an accelerated slackening of population growth in the less-developed countries, and a virtual disappearance of 'the world population crises' by the end of the twentieth century.¹

On the food side, an eminent soil scientist, Charles Kellog, appraises the 'World Potentials of Arable Soils' and reaches the conclusion that the present area of arable soil could be more than doubled, and 'that we have the physical and biological potential for enormously more food'.²

We should note, however, that Bogue and Kellog are considering a longer time span than the two decades which are considered critical by the Panel on the World Food Supply. I assume that Clark and Schultz also are considering a longer time span. Kellog's appraisal is in terms of physical and biological potentialities, not in terms of economic feasibility within a given time period. We should also note that most of the potentially arable soil is not located in the densely populated food-deficit countries where food needs are most urgent. Expansion of food output in these countries will have to come largely from higher output per hectare.

Heady recently has presented 'A Recipe for Meeting the World Food Crisis'.³ The 'recipe' has the appearance of simplicity and leaves an optimistic first impression. Provide the proper mix of ingredients and presto, food output will expand. A careful reading of his report, however, reveals that Heady realizes some of the obstacles to rapid progress. He says, 'there are no examples of an overnight transformation of agriculture'.

What guidelines can economists glean from these and other appraisals of the prospective food-population balance? What lines of action are indicated?

The *first guideline* is adequate recognition that a more comfortable food balance can be achieved only with greatly accelerated increases in food output in the less-developed countries.

The *second guideline* is a clear differentiation between the *physical potentialities* for increased food production in the less-developed countries and the *economic feasibility* of rapid increase. I am using this term in a broad sense to include the social and political constraints mentioned by Bićanić. In other words, the difference between *can* and *will*.

In countries where little additional land for cultivation is available, output expansion must be achieved by increasing annual production per hectare. This will require *modernization of agriculture*. But modernization

¹ See, 'The Prospects for World Population Control', by Donald J. Bogue; paper delivered at conference on 'Alternatives for Balancing Future World Food Production and Needs', Iowa State University, Nov. 8-10, 1966.

² Article in *Soil Conservation*, vol. xxxii, no. 11, June 1967. Published by the Soil Conservation Service, U.S. Department of Agriculture.

³ C.A.E.D. Report 28, Centre for Agricultural and Economic Development, Iowa State University, Ames, Iowa, 1966.

cannot take place unless locally adapted combinations of output increasing techniques are available, such as combinations of higher-yielding plants, fertilizer, pest control, adequate tillage, and water management.

The question of whether the improved combination *will work* in a local area must be answered before a modernization programme is attempted. This is the natural science aspect that is covered in Bawden's paper. Many natural scientists, however, and even some economists, have implied that once this question is answered adoption is at least semi-automatic. But adoption *will not take place* unless farmers become convinced that they will benefit from the improved techniques, and unless they are provided with the inputs, services, and incentives needed for adoption. This is largely the economic question of *will it pay?* It is not only a question of whether it will pay the farmers to use the new techniques, but also whether it will pay the larger community to supply the inputs, the services, and the incentives essential for adoption.

As Bawden has indicated, the natural scientist may determine that it is possible to double or treble food production in an area, but the potentialities will not be realized unless the change is economically feasible.

Even when the profitableness to farmers and society at large is determined, the change is not automatic. Much time will be required to organize the technical assistance, other institutional services, and to provide the fertilizer and other inputs when and where needed by farmers. And although farmers do react to the profit motive it will take time to demonstrate how, and to what extent, they will benefit.

Our *third guideline*, therefore, is recognition of the *time span* required for output expansion and for establishment of a smoothly functioning system of food distribution. But food-deficit nations need more food now, and next year and the year after that. Economists can help to determine the most effective ways of organizing available resources to increase food supplies as rapidly as possible; and to plan for the greater increases in the future, when the physical potentialities can be more fully realized. The vagaries of weather and other growing conditions are such that programmes even in food-deficit countries should be designed to deal with local gluts in bountiful crop years, as well as the more serious shortages resulting from crop disasters.

How many agricultural economists are preparing themselves to work with natural scientists to help farm villagers with modernization of agriculture? The profitableness of new techniques must be analysed and demonstrated for local areas. Only those who know the language and the local culture can perform this task.

Food is produced by farm people. As agricultural economists, however, we are likely to emphasize national price policies on inputs and products, and the availability of essential inputs and services, and give insufficient attention to their impacts on farm people. All of these are essential in the mix of components for modernizing agriculture. But even when the proper mix is available in a local area we may still fail to convince the tiller of the soil that he will benefit from the new ways of farming.

Mosher stresses the central role of the farmer in modernization of agriculture.¹ He then outlines the 'essentials' for getting agriculture moving as (1) markets for farm products, (2) constantly changing technology, (3) local availability of supplies and equipment, (4) production incentives for farmers, and (5) transportation. He also recognizes other factors as 'accelerators' of development.

The cover on this excellent little book uses the wheel as a symbol of movement. We can carry the illustration somewhat further by designating Mosher's 'essentials' as the spokes of the wheel of progress in agriculture, and the farmer (or more inclusively farm people) as the hub of the wheel, A cartwheel will sometimes function with a missing spoke but not without a hub.

In a country where most of the farm people are illiterate and tradition bound capable leadership is required to motivate changes and to teach the new skills. Kusum Nair brings us up short by citing actual cases of lack of motivation for improvement where other components in the mix seemed to be available.² The cure for lack of motivation is knowledge of opportunity for improvement, incentives for action, and hope of achievement; also access to the means to carry out a practical improvement programme.

Here is a relatively unmet challenge to agricultural economists to participate in outlining practical and profitable improvement programmes that will appeal to farm people. Are agricultural economists prepared to volunteer for active service in the war on hunger, poverty, ignorance, and despair wherever these afflictions occur? Much of this war will be fought in rural areas.

The 1959 report on India's Food Crisis pointed out that 'if the food problem is to be solved the work must be placed on a war footing', and 'the steps necessary to mobilize the nation for action must be clearly outlined'.³

The steps necessary for mobilization of food production include analyses and action at both the micro and the macro levels. In fact, what is needed is a *seamless web* of analysis, information, and programme activity from farm and village to marketing and processing; and from national programmes of research, education, price support, credit, and supplies such as fertilizer, seed, and pesticides back to the village and the farm.

A *fourth guideline*, therefore, must be followed for effective mobilization, of the war on hunger; namely, *strong and capable leadership at national, state, and local levels*—leadership with determination to take the actions necessary to carry out an agricultural modernization programme. The

¹ *Getting Agriculture Moving*, by A. T. Mosher; published for the Agricultural Development Council by Frederick A. Praeger, New York, 1966.

² See *Blossoms in the Dust*, Gerald Duckworth & Co. Ltd., London 1961.

³ See p. 14 of *India's Food Crisis and Steps to Meet it*, by Agricultural Production Team Sponsored by the Ford Foundation. Issued by the Government of India, April 1959.

less-developed countries that have experienced the most rapid growth in recent years have exhibited a will to do the needful—to organize available resources for effective attack on obstacles to improvement.¹

Economists can serve in the war on hunger in various capacities depending upon their training and aptitudes, and upon the administrative organization of agriculture in different countries.

With reference to the need for background analyses, I am impressed by the number of well trained economists in some developing countries. They are capable of carrying out highly sophisticated studies. But I am troubled about the paucity of reliable data and the lack of knowledge of conditions in the rural villages. Adequate design of data collection, for both macro and micro studies, is dependent upon firsthand knowledge of farm problems. So, an understanding of problems of farm people is essential for reliable research. Relatively simple studies by researchers willing to do the hard digging for an understanding of the situation may provide more useful results than large-scale studies involving data collection by poorly trained enumerators, and machine computation supervised by workers unacquainted with actual conditions.

Many economists are needed for planning and policy work at national and local levels, and for the development of operating programmes to expand food production. Others will be employed in universities to teach the coming generation how to work more effectively. Here is an opportunity to devise effective techniques for using limited resources to analyse proposals for modernization of farming in local areas. Training of personnel to work on food problems, in the villages, the markets, and in government agencies, provides an opportunity for inspiring students to make commitments for service to farm people and the nation. The need is great. The challenge is tremendous in a country facing a food crisis.

Analyses and plans must materialize into effective operating programmes in order to meet the food crisis. As already indicated, courageous leadership is needed for programme activity. There is a crying need for economists who are willing to serve in whatever capacity they are needed. Many assignments will be frustrating, and some will be tempted to pick up their papers and walk off the job. But the unsolved problems will remain.

Food-surplus countries may be faced with questions directly opposite to those found in countries short of food. Natural scientists and agricultural economists in my own country have concentrated on development of output increasing technology to the extreme neglect of the welfare of *all farm people*. Consequently, farmers in the less-productive areas, and hired farm workers (especially migrants), have received little consideration. The resulting migration to cities of disadvantaged rural people, who have little education and are ill prepared for urban life, has contributed to urban unrest. A change in emphasis to greater concentration on the welfare of *all rural people* is badly needed.

¹ See, pp. 118–21 of *Changes in Agriculture in 26 Developing Nations*, Foreign Agricultural Economic Report No. 27, Economic Research Service, U.S. Department of Agriculture, 1965.

All of us are interested in achieving status in our profession, and in obtaining personal and financial security. But in addition we try to fulfill a purpose in life. This requires dedication to a higher goal than personal advancement—a step beyond a good name and adequate income for ourselves. Dedication to service of rural people—all rural people—may require some sacrifice in position and salary (security); passing up an opportunity to write a learned paper in order to help solve a tough production or marketing problem (sacrifice of status); but achieving the satisfaction of service to others.

I am convinced that the less-developed food-deficit countries *can* achieve a more comfortable food-population balance, but I am also convinced that if they are to double food production within the next two decades, economists in all countries will need to dedicate themselves to active service in the war on hunger, poverty, ignorance, and despair.