FOREWORD

In 1977 the International Food Policy Research Institute published projections to 1990 of the production and consumption of basic food staples. The People's Republic of China was not included in those projections because of the difficulty of using the data on China in a manner comparable to the way the data for other Third World countries was used. However, China's nearly 1 billion people and more than a quarter of a billion tons of grain seems an excessive omission. According to a recent statement from the People's Republic of China, there are in China some 200 million people with inadequate food intake. Thus the size of the food problem in China requires attention because it has direct implications for the welfare of large numbers of people and because it has indirect effects on the food and food production input availabilities for other countries. Even small imbalances in domestic supply and demand in China are magnified into substantial effects elsewhere in the world.

Because of the paucity of hard data and the controversial nature of the political system, there are considerable differences of opinion about food trends in China among analysts in noncommunist countries. IFPRI provides in this Research Report two contributions to thought in these areas. Each author began his analysis with different perceptions. Each author offers the data with which he has worked as the basis for alternative analyses and conclusions.

The first piece by Anthony Tang is a broad analysis of trends and projections for food and agriculture in China. In particular, Tang does what is necessary to understand agricultural development in any developing country. He places agricultural policy in the context of the broad set of objectives for the economy. He then examines the past record in detail and presents projections. In the process he provides an immense amount of carefully worked and analyzed data. His lucid and candid presentation is refreshing, stimulating, and important.

Bruce Stone concentrates on the foodgrain production targets for 1985 as stated by the government of the People's Republic of China, makes judgments about the potential for meeting those targets, and analyzes their consistency with various assumptions about demand. Stone's initial perceptions, the data he uses, and his view of the data differ from Tang's, but his major conclusions are strikingly similar.

The main papers by Tang and Stone have been the subject of three seminars held at the International Food Policy Research Institute during the past year. One seminar came at an early stage of Tang's paper and included a wide range of people concerned with development topics. Later a set of China specialists convened to discuss the data and analysis in detail. Finally, a small group discussed both the Tang and Stone papers from the point of view of their implications to development policy as well as to China. This last group included T. W. Schultz, Vernon Ruttan, Thomas Wiens, Radha Sinha, and members of the IFPRI staff. The papers reflect the comments made at these discussions.

In addition, Bruce Stone has developed an important set of tables on aspects of China's agriculture. These include many estimates illustrating the difficulties of selecting appropriate data and providing the range of what is available. His commentaries serve as a careful guide in appraising, selecting, and judging this data. This work is to be published as IFPRI Research Report No. 16.

At the risk of adding even a further set of numbers, I attempt in the following paragraphs to distill general conclusions.

China's post-1950 history of agriculture seems to divide into three periods. The first is the period of recovery from the incredible disruption of the decades before 1950. From then until 1957 reconstruction efforts caused agricultural production to return to earlier levels of productivity. Growth was rapid, but gradually declined. It averaged 5.8 percent for the period 1950 to 1957.

The second period is best measured from 1957 to 1971, which were both average years for weather and without major political disruption. In the years between, major disruptions resulted in short periods of fast growth, slow growth, and even declines of production. Attention was generally focused on industrial growth. There was little opportunity to expand cultivated area, although irrigated acreage grew moderately rapidly and the base of modern inputs was too small to allow even rapid

growth rates to affect overall output growth rates very much. The effect was a growth rate of about 2 percent. This just kept pace with population growth.

In the third period the production growth rate appears to have accelerated significantly for the comparable weather years of 1970 and 1975, when the growth rate is calculated to be 3¼ percent. Both years were good crop years, with the edge to 1975, and the spread of five years adds some credibility to the calculated rate. This high rate was achieved despite some apparent slowing of the growth rate of inorganic fertilizer availability and either slowing of or no increase in the growth rate for irrigated areas. But both were operating off much larger bases than before. Although it is not clear from such a short period the extent to which the accelerated growth is due to short-term factors or changed incentives, it would not be inconsistent with the information at hand to expect the growth rate to accelerate beyond 3 percent.

Looking ahead to 1985, it seems possible but not likely that the growth target will be reached. This conclusion is made partly on the assumption that 1975, the base year for the 10-year plan, was a normal year (and therefore an appropriate base for projections); that the effort to achieve growth was consistent from 1975 (growth in fertilizer availability is consistent with that view); that the three years following 1975 were poor weather years, thereby reducing growth below the long-term trend in the first years of the 10-year period; and hence that the appropriate growth rate implicit in the target is the 3½ percent needed to increase the output of foodgrains in 1975 to the target level in 1985. It should be recognized, of course, that the required rate is 50 percent higher than the long-term rate of the 1957-71 period.

The planned acceleration in growth of grain supplies is large enough to require significant coordination with demand. The difference between a 3 and a 3½ percent growth rate between 1975 and 1985 is 15 million metric tons. If the lower-income people are to benefit, provisions must be made to increase their real incomes. If the benefit is to be through livestock, then provision must be made to expand the livestock industry in the appropriate time and place. The latter may prove difficult in both the traditional sector and the large-scale hog and poultry farms.

Two caveats are in order. First, weather or major political disruption can affect production by as much as the difference between the 3 and 3½ percent growth rates spread over 10 years. Second, changes in trade can have an effect equal to a large part of such a difference.

For the longer run the picture is more difficult to estimate. It is obvious that the growth rate of the 1957-71 period is inadequate to meet the needs of the new economic policies. However, Tang's median projection for the increase of demand, 3 percent per year, is based on assumptions that appear to give a political position consistent with the past. In keeping with the preceding analysis, it seems feasible to match that with a sustained 3 percent growth rate in foodgrains production. It is notable that Tang's median output growth rate for foodgrains (which would be higher if he worked on the 1975 base rather than the 1977 base) is essentially the same as the demand growth rate. His estimate is based on the planned input levels and a reasonable, arbitrarily derived assumption about increases of factor productivity.

The inferences that follow about trade in foodgrains are that the gaps are so small that their existence depends on short-term weather and short-term and long-term political factors. If demand grows at about a 3½ percent rate and raises the real income of the lower fifth of the income distribution and of the more prosperous urban classes, and if production growth does not rise above 3 percent, then imports could grow an additional 15 million tons a year. That, however, seems unlikely. If the production increases to a 3½ percent rate, and the growth of livestock or urban income follows, then imports could halt. Right now it seems that these forces will push more toward maintaining net imports or increasing them modestly.

It is notable that Tang's approach relates the assumptions for demand and supply and that his high growth rate assumption for production assumes even greater acceleration in consumption, and hence, higher imports. That is consistent with a position which I mention for India and set forth in *The New Economics of Growth: A Strategy for India and the Developing World* (Ithaca, N.Y.: Cornell University Press, 1976).

Tang makes a major contribution in his discussion of the relation of agricultural policy to overall development strategy. The similarity of his discussion to my own writing on India, particularly with respect to

the Mahalanobis model, is striking. Tang approaches political questions that are inextricable from questions of development strategy. There are important lessons for other countries in these broader economic and political relationships.

Stone's analysis tries to develop the essence of what needs to be done if China's food targets are to be met and indicates how difficult and perhaps unlikely meeting them will be. His joint treatment of supply and demand forces demonstrates a great deal of value about the processes of agricultural development.

We at IFPRI hope these two different, careful analyses will settle a number of controversial questions and provide considerable light on some important development issues.

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