Future Links between U.S. Agriculture and the World Food Economy

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The world food economy has been on a roller coaster during the 1980s. Weather, macro-economics, and agricultural policies have changed quickly and unpredictably. In 1985, for example, Barbara Insel concluded: "There are almost no policy scenarios—for any of the major exporters—that allow one to escape certain inevitable conclusions. World grain production will continue to grow, export competition will increase, and price levels will continue to fall." Yet just four years later, in 1989, Lester Brown asserted that "world reserves of grain...will have plummeted from the highest level ever to the lowest since the years immediately following World War II...overall food security is being threatened...[and] Meeting adequate food needs during the nineties and beyond will require more attention of political leaders...than ever before."

Quite clearly, both statements cannot be correct assessments of the future; yet the resolution of these views is of fundamental importance both to agronomists and economists. Whatever else may divide these two groups, both have learned that the economic conditions of the world food economy, i.e., cereal prices, are vital in conditioning the background for their research.

THEMES

The real price of cereals is a critical variable influencing the amount and type of research done by agricultural scientists. Specifically, if real cereal prices are high or rising, there are pressures on agronomists, economists, and others to develop technologies, delivery systems, and policies that will increase yields per acre and productivity more generally. On the other hand, if real prices are low or falling, the pressures are much more likely to result in research on alternative (nonfood) end-uses, on schemes for dumping agricultural products abroad, and on systems with lower levels of input use. In short, real prices of cereals matter, and they matter to agricultural researchers as well as to consumers and producers of food.

For the 1990s, as in the 1980s, cereal prices will be determined by supply, demand, and government policy. On the supply side, issues of technical change and the environment probably will predominate. With respect to demand, population increases and global economic growth will be central. And the policies of many nations, especially as they relate to trade issues, will affect both conditions of the future; yet the resolution of these views is of fundamental importance both to agronomists and economists. Whatever else may divide these two groups, both have learned that the economic conditions of the world food economy, i.e., cereal prices, are vital in conditioning the background for their research.

prices of staples begin to rise on a consistent basis. The experience of the last 100 years shows that a decline in prices. Will there be a reversal in 1988-89 prices resemble the commodity price bubble of the mid-1970s? The answer cannot be determined largely by events outside the USA (increasingly in the Third World) and by public policy, not typically thought of as being "agricultural" in character.

TECHNICAL CHANGE AND THE ENVIRONMENT

Technical change, especially in the USA, has proved Malthus wrong during this century. It is not the latter-day heroes of plant breeders, agronomists, and other agricultural scientists. If, however, supply curves for agricultural products are outward, ever more productive techniques are created and adopted. A fundamental question is whether cereal prices, then, is whether continued price increases will be determined largely by events outside the USA (increasingly in the Third World) and by public policy, not typically thought of as being "agricultural" in character.

The development and adoption of improved technologies between 1965 and 1985 were unprecedented and are unlikely to be repeated. In the USA, rice, corn, and wheat technologies are excellent, but the results were noth-