The more inquisitive scholars among the human species have searched from earliest times for universal, catholic ideas that bridge race, place, and language. A natural topic is man’s food supply—its origin, enhancement, and distribution. Beliefs about the topic have ranged from superstition to sophisticated science. Historically, our era of attention to food begins with the Middle Ages, when restless Europeans, having thrown back the invading Arabic culture, broke out into an unprecedented intellectual and economic expansion. A new dimension was added to the quest for food in the ensuing exploratory experience of 5 centuries. It was the notion of progress, growth, and development. We are not satisfied even in our day to stick with inherited systems of providing our food. We want innovation and improvement. It is only a small overstatement that we now seek universal principles for making progress in the technology and economics of food production and distribution, that is to say, of agriculture.

It is appropriate in such a contemporary setting to direct this session to “international agricultural development.” Let me digress to remind that “international” includes us. It is not a case of “us” relative to “them.” We sometimes lapse into suggesting we here stand in line to get other countries along, especially the under- or less-developed ones, the so-called third world. That attitude is a mistake.

I tell students in my classroom that principles of agricultural development are truly universal. I add at once, though, that each nation finds itself in specifically defined circumstances at a given period. Differences are partly a matter of time, of stage in history, but even more so a matter of resources, culture, and even accidental events. The principles are universal but the circumstances are unique.

Guard against simplistic doctrine

I now warn against over-simplified, doctrinaire ideas, having opened with this testament to universality. In doing so I am motivated by a newly published book and by an account of the pulling and hauling now going on in the U.S. government as the ideology of the Reagan Administration is introduced into our overseas technical aid programs.

The book, titled Shifting Involvements: Private Interests and Public Action, is written by Albert O. Hirschman. The following remarks are from a review by Lewis Coser. Hirschman accepts no neat, all-encompassing explanations in addressing the tribulations of poorer countries. He rejects “Marxist dependency theories,” “imperial exploitation, and the popular “conventional theorizing which blames underdevelopment on lack of managerial ability, uncommercial value systems or the lack of natural resources.” He does not deny that each of these forces can be at work. What he does deny is single theses: “. . . any monicausal explanation is bound to be wrong.” The reviewer emphasizes Hirschman’s warning that “the quest for the all-encompassing solution to problems of development is apt to be an obstacle to any realistic strategy.”

Instead, both in Shifting Involvements and in previous writing, Hirschman has “argued for an emphasis on incremental gains and problem-solving strategies, instead of pursuing the will-o’-the-wisp of total and comprehensive reform.” Hirschman has approached problems in his work in Latin America with a “pragmatic, problem-solving cast of mind. . . .” (1, p. 40).

My sympathy with Hirschman’s intellectual stand may arise less from a concurring dogma than from my own experiences when working in less-developed countries. I have found myself refuting the high-flying policies of many American advisers and helping to search for more prosaic, workable approaches. Nor am I quick to deny what Hirschman calls incremental gains, even though no heretics attend them. I heard U.S. theorists in 1967 deplore the ineffectiveness of U.S. help to Peruvian agriculture. Yet, a Peruvian technician told me, “Maybe so, but Indian farmers on the altiplano stand in line to get U.S. seed potatoes.”

Perhaps that’s what I want most to see: ordinary farmers adopting relatively simple practices they can apply in their everyday operations. I do not deny the place for more sophisticated technology and assistance, but it is easy to accentuate the latter and neglect the former.

This basic choice has entered into U.S. policy for technical aid to agriculture. It has generated debates and alternating policies for a generation. A decade ago, the U.S. Congress, smarting under criticism that our aid programs were almost confined to high technology that only big and rich farmers could use, decreed that henceforth our help would be directed more to the world’s smaller farmers including those in drier areas—who constitute, in fact, a majority of the world’s farmers. “The intent of that policy was that U.S. aid programs should benefit the ‘poor majority’ in developing countries, not the wealthy elite.” There developed a “set of AID programs that emphasized direct aid to small farmers, for example, rather than construction of dams or highways or the financing of factories.” The intent was to meet basic human needs rather than try “to create instant capitalistic societies in poor lands” (2, p. 960).

The Reagan Administration is not entirely supportive of that Congressional declaration of purpose. Hence, our federal technical assistance policy is again in something of a quandry. The tendency is to use more of AID’s funds to finance private-sector investment and less for distributing seed potatoes to Peru’s indigenous farmers.

Economic factors

Thus far I have developed the thesis that technical aid to agriculture is not to be seen as devising elaborate packages of technology for delivery with aplomb to well-established farmers of U.S., Mexico, or Madagascar. Rather, it is more flexible, pragmatic, and often not at all flashy or pretentious. And most gains to be striven for, as Hirschman says, are incremental.

I turn now to the nature and bearing of economic factors on the agricultural development of the world’s nations. Again, I stress universal principles, but by the same token economic considerations are dove-tailed with all the other influences that are brought to bear. Agricultural development requires not only economic resources of land, labor, and capital, but an institutional structure that includes a stable yet progressive government and innovative attitudes on the part of the populace. Moreover, lest we forget, agricultural development requires markets.

Unfortunately, it is popular in academic circles to minimize the importance of physical resources. Instead, academicians are fond of declaring that knowledge is the limiting factor in agricultural development. The posture is self-serving, inasmuch as academic scholars are in the business of vending knowledge. I do not deny the need for technical knowledge. But anyone who has traveled through Kenya in East Africa and then leaped to Iowa in our Corn Belt is struck piercingly by the difference in resources available. Our Mississippi-Missouri Valley area is truly one of the world’s Edens. No technology can come even close to closing the gap in food output per capita in Kenya relative to the United States. To make matters worse, the rate of population growth in Kenya is around 3% per year as compared to less than 1% in the United States.

The crucial role of productive land in agricultural development is so obvious that I will not elaborate. The pressure of population
on land is intense in many nations. No magic of technology will enable the people of Bangladesh or Indonesia to reach the nutritional level of diets that we enjoy in the United States.

There are 2 rejoinders to this point. First, modern farming utilizes many resources other than land. Iowa’s corn yields are attributable not just to the state’s rich loam soil but also to the chemical fertilizer, pesticides, fungicides, and other industrial inputs that are employed. The economics of food production in many countries is in part the economics of making those nonfarm inputs available at reasonable prices. It follows that the rising costs of those inputs are now an impediment, though not so severe a one in countries that have never relied on them as in some of the more developed countries that are dependent indeed.

My second caveat is that the consequence of differences in food-producing resources of various nations can be minimized by means of international trade. One often hears it said that henceforth nations of the world will have to be more nearly self-sufficient in their food supply. This is a dangerously false view. On the contrary, trade is essential. The ideal, in fact, is to keep trade as nearly free as possible. Let densely populated nations such as Indonesia turn to small manufactures, to be exchanged for the corn of Iowa or even for commercial fertilizer to be applied to their farmland. Several nations have indeed gone that route successfully. Taiwan and South Korea are examples, but Japan remains the shining light. We can ask why other overpopulated nations have not done likewise. I cannot answer that, but I add that international trade can perform its miracles only if trading nations keep trade channels open. Regrettably, the trend just now is toward restrictionism. The results can only be repressive and discouraging to poor countries.

Favorable national policies and local markets

I mention now 2 other economic constraints that are found all too often. First are policies of national governments that inhibit agricultural development. These may be price, credit, or tax policies, but even more often they are land tenure policies that impede progress and may even hold smaller farmers or farm workers in virtual servitude. This opens up the contentious policy issue of land reform. Land reform is extremely difficult to deal with. El Salvador is a current example.

I have already mentioned the negative factor of inadequate buying power of a nation’s consumers. There can be no hope of enhancing a country’s agriculture if its own people do not have the means, the purchasing power, required to buy its products at a price that adequately rewards producers. Countries that concentrate wealth in the hands of a privileged few cannot hope for a thriving agriculture. The latter by its nature is to a degree egalitarian, although the idea is not always found attractive.

A brief application to horticulture

Thus far, I have given no special attention to horticultural crops. My recounting of the seed potato incident in Peru suggests that I regard the horticultural role as promising. One thing is certain: two-thirds of the world’s population depend upon foods of plant origin for their subsistence. Meat, milk, and eggs are at best an occasional luxury for them. Almost equally certain is the right of horticultural people to sue the food grain people for alienation of nutritive appreciation. Man does not live by bread alone; he needs fruits and vegetables too. He especially needs them if he lives in a poor country.

Moreover, I confess my partiality for the Congressional dictum of 1973. We need few nurseries in which to produce shrubs for the rich of India and Egypt, but more and better vegetables and potatoes for the ordinary people of those and many other countries.

What are the economic constraints and opportunities in agricultural development world-wide? In principle, they are the same as those we have known in the United States throughout our history. They are the constraints of physical and human resources and of the institutional impediments we may create in our selfishness or blindness. The opportunities are those of applying the human brain to the development of the rich resources with which Spaceship Earth is endowed. If I am more lugubrious than some futurists about how easily we can address and resolve our problems, I am by no means defeated in advance. I do believe agricultural development from pole to pole will necessarily take into account economy in use of inputs such as energy. I believe we will have to get more of our food, including horticultural foods, from some of the more hospitable climes. And I am sure that the technology of New Jersey cannot be transplanted intact to Ecuador or Tanzania. Biologists and agronomists of our country have always responded to challenge and they will continue to do so, without regard to national boundary, for agricultural development by its nature is indifferent to man’s political differences. Its principles are truly universal.

Literature Cited