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POLAND'S AGRICULTURE
It Could Make The Critical Difference

Michael Lomperski

➢ The events unfolding in Poland are truly historic, unthinkable only a few years ago, and occurring at an unimaginable pace. Politics and economics are intertwined, and food and agriculture are playing a central role. Political stability, supported by patience of the Polish people in enduring further hardship is critical for a successful transition to a market oriented economy.

by J. B. Penn

The political and economic changes now sweeping the Soviet Union and the Eastern Bloc are unprecedented, and nowhere are they more rapid and challenging than in Poland. A noncommunist government, the first in over 40 years, was installed in August and pledged to transform the centrally-planned socialist system to capitalism without delay.

The stakes in this process are tremendous for the world, as well as for the United States. The government's success will have a profound effect, not only on Poland, but also on other countries as well, where attempts at change are being made. If, on the other hand, Polish efforts to move to a market-oriented system fail, opportunities for Eastern European countries to embrace capitalism could be set back—perhaps for decades.

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Economic conditions have been worsening for almost ten years, and now the nation's economic system is near collapse. After four decades of a command economy, accumulated resource misallocations and economic distortions are enormous. The standard of living is sharply below the levels of just a decade ago. The economy is immobilized by crushing external debt, hyperinflation (over 1,000 percent annual rate), and a greatly overvalued currency (the parallel market rate is fivefold the official rate). Sporadic strikes and extensive absenteeism in the workplace, shortages of consumer goods of all types, widespread food hoarding, and long queues at those shops with supplies of goods are all commonplace.

As a result, the people are thoroughly demoralized. The attitude "Why work when there is nothing to buy?" is widespread. The absence of consumer goods and services, along with the rapidly eroding value of the zloty, undermines any willingness to sacrifice or to work to produce goods essential to arresting the deterioration of the economy and to transforming it into a market system. Even as these conditions are worsening, the Polish people are being asked to accept more hardship and austerity. Their willingness to do so will be crucial to the economic reform program.

Markets are an integral component of the new government's approach. Their effectiveness in facilitating the availability and distribution of consumer goods will affect allegiance to the new government, and therefore its stability. At the same time, political stability is an essential condition for market mechanisms to take hold.

Political Economy of Food

The challenge of achieving political reform, development of markets, and an availability of consumer goods is appearing first, and most critically, in the area of food and agriculture. This is not unusual in Polish politics. In fact, scarcity of food and related high prices precipitated the collapse of three previous governments in 1956, 1970, and 1980. Food is no less central today and, if anything, is the element most critical to the success of the economic transformation now beginning.

Food occupies a prominent political role for several reasons. The severe shortages and deprivations that twice in this century were experienced by Polish people during harsh wartime conditions are fundamental. In addition, as in many low-performance economies, food is practically a preoccupation in everyday life. Small home refrigeration capacity and poor packaging require frequent shopping, and considerable time and attention, and this creates high sensitivity to prices and to price changes. Moreover, even before the August 1 freeing of most food prices, food purchases required a very large proportion of consumers' disposable income, estimated as high as 65 percent. Since then prices for many items have increased substantially. Finally, steadily increasing consumer food subsidies have accounted for a significant part of state expenditures—over 20 percent in 1988. These expenditures attract widespread political debate because of their significant effects on macroeconomic conditions, especially exacerbated inflation.

Food is the element most critical to the success of the economic transformation now beginning.

Most Are Well Fed

The ubiquitous queues around food shops now are familiar to everyone. But, the Polish people generally are neither hungry nor malnourished. Average per capita caloric intake is much greater than that of developing nations, and compares favorably with the developed Western European countries (table 1).

The prominent food queues are only slightly related to total food availability. The 1989 harvest was abundant, a record 27 million tons of grain and 1.5 million tons of rapeseed. The potato and sugarbeet crops were large, as were the outputs of other feed and food crops, fruits and vegetables. Livestock numbers have been declining for several years, but that trend is beginning to reverse. While pork production this year will be below the 1988 level, total meat and poultry output likely will be sufficient for consumption to be near the 1988 level of 66.7 kilograms. In total, overall quantities of domestically produced foods are only slightly less this year than last.

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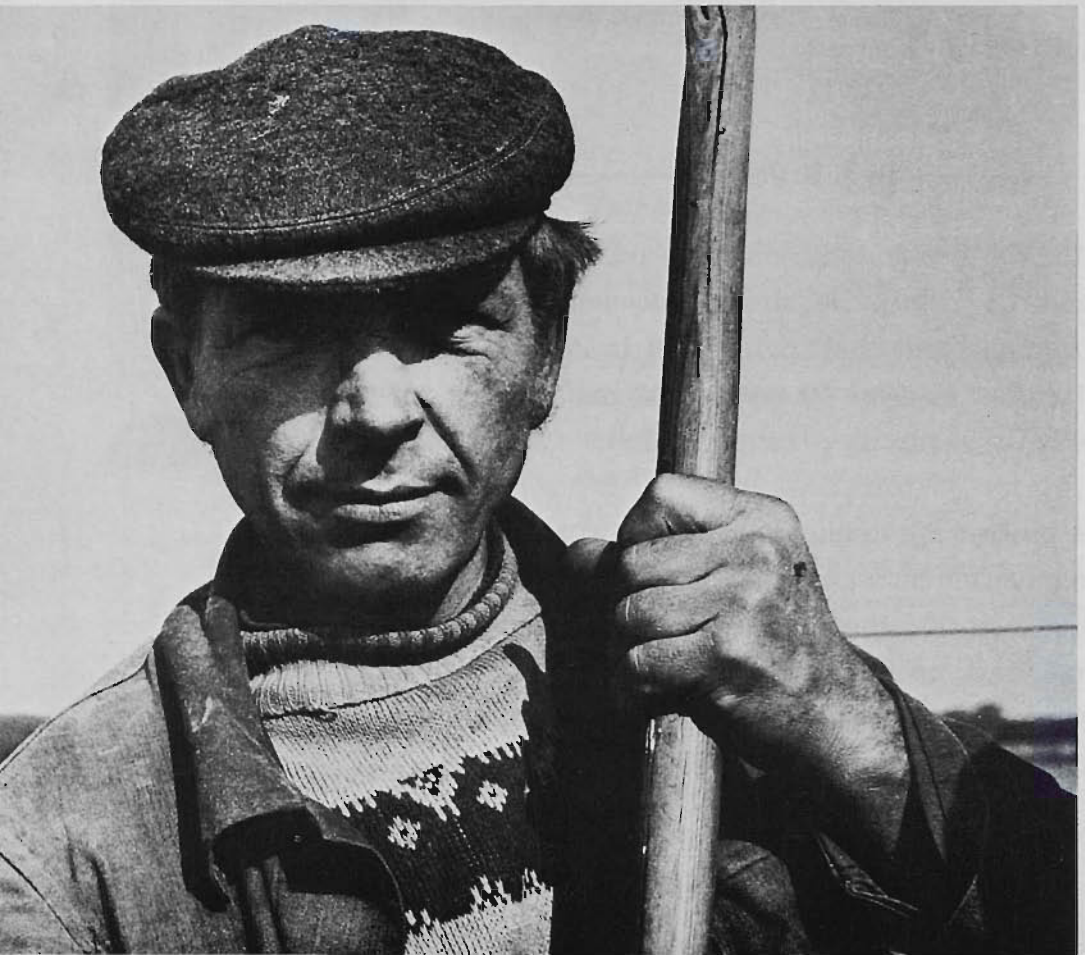
Edward Smolinski, Worsaw



The Distribution Problem

The current appearance of shortages has resulted from difficulties fundamental to the Polish system of food distribution. Endemic problems have been exacerbated by heightened political tensions, first the June elections, then the August 1 deregulation of food and most farm prices (and elimination of meat rationing), and, finally the dramatic formation of a new government in which the Communists relinquished considerable control. These uncertainties caused panic buying, widespread hording by consumers and withholding by farmers of some products from the market. Farm

prices were highly volatile as state-set procurement prices were scrapped and state enterprises were forced to negotiate prices with farmers. The very high rate of inflation (estimated to have been 50 percent in September alone) encouraged conversion of currency into any tangible good, including food, with a better prospect of holding its value than the zloty.

All of this created an atypical demand surge. At the same time, the end of the state procurement and distribution monopoly disrupted product flows and many state stores soon found their shelves bare. People behaved rationally under the circumstances, but that behavior (hoarding food, not going to work, etc.) seriously disrupted normal functioning of the economy including the marketing and distribution of farm and food products.

The rapid rise in food prices has had its most serious impact on people living on fixed incomes, and those whose wages have not kept pace with food prices. Wages have been adjusted for many industrial workers, but these adjustments are unlikely to be sufficient to have offset the price hikes. Persons with fixed incomes, such as retirees, have seen their purchasing power eroded severely.

Almost one-half of all farms are smaller than 5 hectares. *Edward Smolinski, Warsaw*

Delicate Role of Food Aid

The international food assistance efforts, being coordinated by the EC Commission on behalf of 24 Western nations, relate as much to political objectives as to nutritional needs. They are intended to have important psychological impacts on the public, by making food items visible on store shelves, and to signal western support for the new government. If these developments instill the public's confidence in the new government, thereby making it possible to avoid riots and strikes, it is hoped that the resulting political stability will allow the time needed to implement new market mechanisms.

Ironically, the offers of large quantities of grains, meats and other livestock products present a formidable challenge to the new government, as well as to the donor countries—how to move the foodstuffs into the newly emerging market system without producing severe adverse impacts on producer prices. This problem, always present with food donations, is even more pronounced in Poland today.

A major argument for freeing food and farm prices is the need to improve incentives to farmers, so they will produce more by using their resources more efficiently. Larger production would mean lower food prices eventually, perhaps as early as next season. However, the sudden appearance of substantial quantities of foodstuffs, especially meats, could seriously undercut current prices, discourage increased production and raise, not lower, 1990 prices. The new markets are only beginning to emerge and are fragile. For example, the first livestock auction in the postwar period was held only in September.

The situation is all the more complicated by the dominant position of the large-scale state monopolies in the food processing and distribution system. For example, a huge international shipment of meat to one of the large processing plants could meet its requirements for a week and take that plant completely out of the hog market. Since the plant is currently the primary, if not the only, hog buyer in the region, prices would plummet inflicting losses on large numbers of farmers.

Therefore, great care must be taken in moving food commodities into the system. Monetizing commodities and involving the nascent private sector in their distribution and sale to the extent feasible would seem desirable. The resulting funds then could be available to stimulate private enterprises.

Beyond the hazards of the effects of donated food commodities on prices, there are concerns about the ability of the farm sector to respond with increased production quickly.

Table 1

Average Daily Caloric Intake, 1984-86

Country	Total	Animal Products	Vegetable Products
Germany, FR	3,475	1,295	2,180
Poland	3,298	1,081	2,217
USA	3,642	1,228	2,414
USSR	3,395	911	2,484

Source: Food and Agriculture Organization.

Small Farms

In sharp contrast to the other Eastern Bloc countries, Communist governments never were fully able to collectivize Polish agriculture even though the rest of the food system (industrial input production and food processing and distribution) was incorporated into central planning. As a result, the private farms control three fourths of the agricultural land with the rest operated by the large social sector enterprises (state, cooperative, and collective farms). The share of annual output from the private and socialized sectors is

commensurate with the share of the land each manages.

Today, 40 percent of the population resides in rural Poland and 28 percent live on farms. The land to labor ratio has changed little in two decades, and labor productivity consequently has remained low relative to most Western European countries. Although there is a large proportion of small farms (almost one-half are 1 to 5 hectares), some consolidation is occurring (in the 5 to 15 hectare size group) and the number of commercial size farms is increasing. The largest farms (over 15 hectares) still are less than 10 percent of all farms in number but operate one-fourth of the agricultural land. Facilitating this consolidation into more efficient sizes will be a primary focus of future agricultural policy.

Gross Inefficiencies

While most of Poland's farmers are already private, their efficiency has been impeded severely by the gross inefficiencies of the overall system. However, characterizing agriculture as private is somewhat misleading. Until only very recently, for example, the land market has been severely regulated, and intergenerational transfers have been difficult. Most land was transferred to the State Land Fund for reallocation, and politics often played a major role in who was allowed to purchase it.

Also, while private markets have existed for some commodities, most markets were relatively "thin" with small volume. In turn, prices did not vary significantly from the state-set procurement prices. The exceptions were fruit and vegetable markets which have never been regulated by the state and, incidentally, typically have abundant supplies.

Commodities which are used directly by other farmers without processing (such as feed grains and feeder pigs) or consumed directly were traded in free markets. But most farm output requires processing and most processing facilities (sugarbeet factories, grain mills, rapeseed crushing, livestock slaughter and meat processing, dairy processing, etc.) are controlled by state monopolies. In practice, farmers have had little alternative but to sell to the highly inefficient monopoly enterprises. The availability of production inputs (e.g., animal feeds, coal) has been tied to such sales, as was the amount of farmers' entitlements under the state pension scheme. Consequently until now, 90 percent of the agricultural output has been forced through the official procurement system, to the disadvantage of farmers.

The resulting inefficiency of the Polish food system is reflected in comparisons of the Polish farm sector with that of other European countries (table 2). While Poland ranks near the top in total production of most crops among the Eastern Bloc countries, its yields are surprisingly low even though it has an outstanding cadre of research specialists (many trained in the West) and, among Eastern Bloc countries, the most extensive contact with the world scientific community. The reasons for the low crop yields probably lie less with the science base than with the extension system and the unavailability of production inputs.

Table 2

Polish Crop Yields Are Low

Country	All Grain	Wheat	Rye	Barley	Potatoes	Sugar-beets	Rape-seed
	—Tons / hectare—						
Bulgaria	3.9	4.1	1.7	3.7	11.0	10.0	—
Czechoslovakia	4.7	5.4	3.5	4.1	17.2	3.6	2.9
GDR	4.1	5.1	2.8	4.2	25.8	2.3	2.6
Hungary	5.2	5.4	2.1	3.9	15.4	3.8	2.0
Poland	2.9	3.4	2.4	3.3	18.6	3.4	2.4
Romania	4.8	3.6	2.0	3.3	22.3	2.5	0.6
Yugoslavia	3.6	4.2	1.9	2.8	7.1	3.5	1.5
FRG	5.7	6.8	4.2	5.2	31.7	4.8	3.1

Source: U.S. Department of Agriculture. Data are for 1988.

The prominent food queues are only slightly related to total food availability.

Polish agriculture also produces little high protein feed. This means that imports must be relied upon for its substantial livestock sector, and when they are unavailable or in short supply, as during the 1980s, feed utilization efficiency is very low. Because of the short growing season, there is little successful production of corn grain, and no commercial soybean production. Production of low erucic acid varieties of rapeseed, whose high protein meal is suitable for livestock production, is expanding. It reached 1.5 million tons this season, a very minor amount relative to needs. Moreover, there is capacity to crush only about one-half of that. There is some production of a corn cob mix, utilizing the plant and the immature ear, but this too is limited by a shortage of appropriate grinding machines.

Polish farmers, starved for fertilizers and pesticides, have practiced low input farming for years. Most private farmers use sophisticated rotations, a wide diversity of grains, legumes, and grasses, and fully utilize animal manures. The rotation system is supported with a solid science base as well. The Polish farmers might well have lessons to share with their counterparts in the West.

Although Poland exports a substantial volume of agricultural products, direct and indirect subsidies are pervasive. Because of price, exchange rate and other distortions, it is difficult to assess the sector's comparative advantage. Its competitiveness in foreign markets will become clearer as the subsidies are removed at all levels and farm-gate prices begin to reflect true costs.

Potential, But Limitations

Polish agriculture could produce much more than it does today.

Although the science base is high, there are too many research units, and they are overstaffed. Responsibilities are ill-defined and overlap, and the divisions of research labor between the Ministry of Agriculture and the Academy of Sciences is not clear.

Research is not sufficiently integrated to address specific crops or farm problems. For example, no place or procedure exists for concentrating research on particular crops—weed control, disease control, fertilizer responses—in order to obtain improved yields. There also is need for greater attention to production economics, farm management, and environmentally related research.

Much of the agricultural research that is developed never gets disseminated effectively, especially to smaller private farms. The extension and research systems are not linked, and the extension shortcomings are severe. Offices are frequently overstaffed, with poorly trained people. Resources—training materials, vehicles, petrol—are scarce. Small and part-time farmers are neglected. The socialist environment leads extension workers to emphasize maximization of output rather than profit. Overall, an inadequate extension service is seen as the weakest link in the production agriculture system.

A basic distrust of the government also hampers the adoption of new technology by farmers. This attitude is understandable because policies have been biased against agricul-

ture in favor of industry. Private farmers have been discriminated against in favor of socialized agriculture. Since the system has been unable to follow through on past commitments, there is widespread skepticism about any new schemes proposed for productivity improvement. Farmers are reluctant to give up their present farming practices and adopt new methods, if they involve greater dependence upon government-provided inputs or technologies.

At some point the situation could erupt into food riots and strikes, with demands for a different approach.

Unavailability of inputs and an antiquated processing and distribution system also hamper the contributions of agriculture to Poland's economy. Inputs are centrally allocated, highly subsidized and distributed through large state monopolies. Typically, state farms have been given preferential access to available supplies. Private farmers have encountered inadequate supplies and those that were available were of poor quality. Moreover, production of many inputs such as tractors and implements, dictated by Central Planning officials, has been geared to the needs of large state farms. When large machines are employed on private farms, they require farmers to overinvest and create gross inefficiencies. Overall, the input system has contributed to inefficient input use, distorted production patterns, lower farm output, and lower farm income. Structural change and competition are sorely needed.

Processing and distribution of farm products are also very inefficient systems. Food processing capacity generally is too small, and the inadequacies of the handling, storage, and transport systems cause substantial post-harvest losses and low quality in delivered products. Existing facilities are antiquated, with processing and packaging technologies long discarded in the West. There is no competition among the state enterprises involved in these activities. The inefficiencies are tremendous and many of these enterprises are able to remain in operation only because of the substantial central government direct and indirect subsidies.

The problems in both the input and processing sectors are well known, and "privatization" and "demonopolization" are on the reform agenda of the new government. But the necessary measures are extremely complex and implementing them is difficult. Increased competition will mean construction of more, smaller processing plants, for example, by private entrepreneurs. This will require capital—convertible currency capital—if modern technology is to be obtained. There are still no functioning capital markets to mobilize the savings and no banks that lend long-term investment capital directly to individuals or groups. Under the Communist government, all investment capital was centrally allocated.

Formation of a stock market is a first priority of the new government, and the country has enacted a favorable joint venture law that could attract hard currency participation in projects. Considerable time will be required to bring about extensive competition in these sectors.

The Challenge

Poland's present economic system is barely functional at best. Market institutions for guiding production, distribution and consumption, in many cases, do not exist. Yet the pressures for their development and for them to "deliver" increasing supplies of consumption goods at "reasonable" prices are enormous. Currently, food supplies are uneven, prices are extremely high, and the hardships on many Poles are enormous. At some point the situation could erupt into food riots and strikes, with demands for a different approach.

Food assistance from the West, if handled appropriately, can ameliorate the hardships, provide a psychological boost, and signal strong Western support for the anticipated reforms. But, food assistance could be counterproductive if it is permitted to undermine price incentives for Polish farmers to increase farm products.

Assuming that short-term food assistance does not unduly depress farm product prices, Polish farmers will respond with greater production in 1990 if production inputs are available. Those most needed include high protein feeds for livestock and fertilizers, pesticides, machinery and spare parts to enable farmers to produce more fruit, vegetables, food grains and the feed grains to support further increases in livestock output.

Development of agriculture and the food system beyond next year will require continued substantial reforms throughout, but concurrent with overall national economic reforms. Support for research must be continued, and the extension service revitalized. Policies and institutions that facilitate greater competition in both the inputs and processing sectors are essential if Polish consumers are to enjoy a more diverse, higher quality, lower cost, and continually abundant food supply. C

The thrust of this article is consistent with the World Bank's Agriculture Sector Study and two assessments of Polish agriculture by teams of international specialists led by Nobel Laureate Dr. Norman E. Borlaug. The second Borlaug mission in August of this year (the first was in 1982) concluded that the genetic potential of the crop varieties and livestock breeds was high, but that farmers now were achieving only 50 to 70 percent of that potential. Again, distorted economic incentives, poor management practices, and inadequate production inputs were cited as major limiting factors. Copies of these two assessment reports are available by writing to the American Trust for Agriculture in Poland, 6708 Whittier Avenue, McLean, VA 22101.

The report of the first Borlaug mission under the auspices of the Rockefeller Foundation and Rockefeller Brothers Fund, eventually led to the creation of the Foundation for the Development of Polish Agriculture in Warsaw. This Foundation, self-sustaining through commercial ventures, sponsored the second Borlaug mission.

Polish countryside scene reflects both the opportunities and the challenges ahead. Michael Lomperski