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A New Approach to Cattle Production
in Hungary

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Dear Peter:

Analysts of Hungarian agriculture often mention Hungary's "closed production systems" as a factor contributing to the technical progress of its farms during the past 15 years. According to a recent publication by the Hungarian Ministry of Agriculture and Food, there were 75 "production systems" in Hungary in 1980, ranging from very large ones in corn and wheat to small ones that organize the production of pigeons or mushrooms. In 1980 there were 1,469 large-scale (cooperative and state) farms, and all but 350 of them belonged to at least one production system.

These systems seem to combine some of the functions of American farm supply cooperatives with some of the functions of extension services in the U.S. Some systems are connected with state farms, others are joint ventures of several cooperatives, and still others are operated by agricultural universities. The first production systems started at the State Farm of Babolna in the early 1960's, to organize first poultry production and then corn. Crop production systems developed fastest; these are quite rigid, requiring a member farm to follow exactly a set of detailed specifications about planting, cultivating and harvesting the crop. The production system collects a basic fee for its advisory and technical services, and receives a percentage of any increase in yield that the member farm realizes after it starts to use the system. Livestock production systems began to develop later, in the 1970's and tend to be less rigid.

One of the largest production systems for beef and dairy cattle is Taurina, a system that was started by four farms in 1971 and now includes 335 cooperatives, 15 state farms, and about one-quarter of the cattle in Hungary. Last week at

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Taurina's new headquarters office in Budaors, a village on the western edge of Budapest, Mr. Balazs Nemet, head of the dairy branch of Taurina, described some of the technical and organizational elements of the Taurina system. Taurina's member farms are shareholders in the system, and they participate in the profits. They pay 130,000 forints (roughly \$3,000) to join Taurina, and can then make use of Taurina's advisory, technical and commercial services, paying for what they use. The technical service generates the largest part of Taurina's profits and employs half of the firm's 400 employees to service milking machines and other equipment on the member farms. The advisory service helps these farms implement the Taurina beef cattle and dairy systems, and the commercial service supplies feed concentrates and other supplies.

Taurina's beef production system combines a breeding and a fattening program. The basis of the breeding program is the traditional Hungarian Red-and-White breed. The Taurina system cross-breeds the Red-and-White with Limousin for the first generation, then crosses with Charolais for the second generation. The third generation is entirely sold for slaughter, and the process begins again. Recently they've begun experimenting with a new breed, Blond Aquitaine, as a substitute for Charolais.

Traditionally Hungarian farms fatten beef cattle in barns, but this new system keeps most of the herd outside. Very little fenced pasture exists in Hungary, so Taurina's member farms use portable electric fences, powered by batteries or solar power when power lines are not available. These fences are moved to allow the cattle to graze over cultivated pastures or harvested corn fields one section at a time, with water and other kinds of feed supplied by portable units on trucks.

The "Uj Elet" (New Life) Cooperative Farm in Martonvasar, 30 kilometers west of Taurina's headquarters in Budaors, uses this production system for its beef cattle. Until 1975 the Uj Elet Cooperative's herd of Red-and-White type cattle produced both beef and milk. In 1975 Taurina persuaded them to split the herd into a beef branch and a dairy branch, and the cows with inferior milk yields became the breed stock for the beef herd. The cooperative now produces about 240 cattle for slaughter every year.

Mr. Arpad Zarubay, regional technical advisor for Taurina, and Mr. Peter Hajdu, the head of the cooperative's dairy branch, met us at the cooperative's headquarters in Martonvasar to demonstrate how Taurina's beef production system is applied on-farm. At this time of year the cooperative's barns and cattle pens house the young bulls fattening to slaughter weight and the Charolais and Blond Aquitaine bulls the cooperative uses for breeding. Although the

bulls are kept in semi-enclosed barns and the heifer barns (used in the winter months) are completely enclosed, in the future this cooperative doesn't plan to build any more enclosed housing. Instead it will follow the latest recommendation of Taurina's animal scientists, to go to a complete open-air system.

In a small valley two or three kilometers south of the cattle barns we saw the rest of the herd, the heifers and cows with calves, grazing on cultivated pasture. Progressive stages of innovation have simplified the methods for keeping and feeding the cattle so that the "system" is reduced to what we see today, cows standing in a field. The pastoral scene is completed by a row of small vineyards on the far side of the valley, and the sharply pitched roofs of "week-end houses" dotting the hillside above the vineyards. The simplicity of this is a bit deceptive, though, because its essential element, the nearly invisible single wire of the portable electric fence within which the cows are grazing, is indeed an innovation for Hungary.

Before seeing the on-farm application of the milk production system at another cooperative, we returned to Martonvasar for a typical Hungarian (pork) lunch at the "Postakocsi" (Post-Coach) Restaurant. (Unfortunately we always seem to be in Martonvasar on a Wednesday, when the restaurant of the Kukorica Hotel is closed: unfortunate not because the food is supposed to be better there, but because one has so few chances to eat at a place called the "Corn Hotel".) The "Postakocsi", in addition to being a charming Eighteenth Century post-house, is a good illustration of a problem that plagues state and cooperative enterprises in Hungary, inefficient use of labor. The "Postakocsi" has benefited from part of Hungary's economic reform program. Until last year the state operated this restaurant at a loss, with a Director, two Deputy Directors, an Administrative Director, and fifteen cooks and waiters. Now it is operated by four people who rent it from the state and share the work of cooking and serving. The prices are a little higher, but the quality and the service have improved, and the restaurant is now profitable.

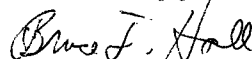
The dairy farm of the Seregelyes "Alkotas" (Creation) Cooperative Farm, where we headed after lunch to look at the Taurina dairy system, could probably reduce its labor force similarly if it were rented out. The Taurina system is supposed to reduce labor requirements in milk production by about one-third, by leaving the cows free to move around in open stalls and milking them in special milking parlors. But the Alkotas farm has a ratio of workers to cows milked of about 1 to 10, not much different from the Uj Elet cooperative, which uses the Taurina system only for beef and not for milk. The Alkotas farm is still using barns with confinement stalls for half its dairy cows, and it can only use the

Taurina system for the other half of the herd. So the labor inputs can't be expected to decline greatly, but one would expect to see more impact of the system on labor use than is apparent on this farm.

Most of the elements of the Taurina dairy system are fairly standard on progressive Hungarian farms, including the recently rediscovered technique of individually isolating young calves after weaning. The principal unique feature of the Taurina system that is visible on the Alkotas dairy farm is a new type of milking machine they have imported on the advice of the Holstein-Friesian Association in the U.S. Thus while the Taurina beef production system is an innovative system in Hungary, the milk production system is not a particularly advanced technology for this country. Apparently the main objective of Taurina's management with respect to the milk system is to secure foreign trading rights and sell the system to other countries that have large-scale farms and less advanced agricultural technologies, especially the other socialist countries and some Middle Eastern countries like Turkey. This follows the well-established East European principle that when something isn't too good, you can always sell it a little farther east. Rather than pushing its innovative beef system in Hungary, Taurina seems to be willing to let the technical service part of the operation pay the bills, while management dreams of big dollars from abroad.

Production systems in general have had a positive impact on Hungarian agriculture, but they are facing a difficult time now. Very often their early successes came from capitalizing on technical innovations in the West. They imported specialized livestock breeds, crop varieties, and sophisticated techniques of modern capitalist agriculture. Now they're faced with the need to innovate on their own, and it's not clear that they'll be able to do so. A second and equally serious problem is that cooperatives are willing to pay for new ideas, but after they've used a system for a year or two and mastered the ideas, they don't want to keep paying. Unless the production systems can solve these two problems, they may lose their role as information suppliers and end up wholesaling imported ear tags and servicing milking machines.

Sincerely,



Bruce F. Hall