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Are cost-increasing production practices in agriculture's future?

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Success in the business of producing agricultural commodities goes to those with the lowest production costs and highest volume, both of which are best achieved through specialization. The payoffs from getting big and specialized are not unique to farming. Frederick Taylor's principles of scientific management in the early twentieth century accompanied vast changes in the way that goods were manufactured. Henry Ford's new assembly plants dramatically increased labor productivity by having each worker become adept at a single task. The payoff from increased specialization and control over the work environment allowed both corporate profits and worker pay to increase while simultaneously dropping the price of manufactured goods enough so that most working families could buy them.

Increased specialization and control in farming (particularly in the livestock sector) has come to be characterized by opponents as factory farming. This characterization has stuck because, at least for livestock production, it is an apt description. Animals are considered protein-producing machines. The objective of the farm is to make these machines run as homogeneously and as smoothly as possible, and to fit as many of the machines onto one site as possible so that the returns to management are maximized.

The resulting productivity increases in agriculture have been spectacular. In 1950, broilers were processed at 128 days weighing 3.75 pounds. It took about 16 pounds of feed to grow a bird to market weight.

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Handbook Updates

For those of you subscribing to the *Ag Decision Maker Handbook*, the following updates are included.

Historic County Cropland Rental Rates — File C2-11 (5 pages)

Commodity Programs for Crops — File A1-32 (6 pages)

Please add these files to your handbook and remove the out-of-date material.

Inside . . .

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In 1994, broilers were still processed at 3.75 pounds, but it took only 6.3 pounds of feed per bird. For hogs, the last 20 years have seen feed efficiencies drop from 5.5 to less than 3 pounds of feed per hog.

Who Benefits from Lower Costs?

The ultimate beneficiaries of this inexorable drive for efficiency are consumers through lower food costs. Most of us know that U.S. consumers spend a lower proportion of their income on food —10.7 percent in 1997—than do consumers in any other country (German consumers spent around 19 percent while Mexican consumers spent 28 percent). Some attribute this low percentage to U.S. agricultural policies that help keep food prices down by expanding supplies. But the primary reason why this percentage keeps dropping (it was 13.9 percent in 1970) is a combination of continued growth in agricultural productivity along with increased disposable income. Growth in productivity is more important than agricultural policy in helping to keep prices down, and growth in incomes means that consumers can afford improvements in food consumption while spending a greater proportion of their income on other items, such as housing and automobiles.

Economists characterize the demand for food as being "income inelastic." This simply means that when consumers obtain, say, a 10 percent increase in income, they will increase their food purchases by less than 10 percent. Furthermore, the composition of food expenditures will change. A greater proportion of food expenditures will occur away from home, in restaurants. A greater proportion will be spent on higher-quality (more expensive) food, and a greater proportion will be spent on processed products that reduce the amount of food preparation time.

These realities of food consumption when combined with growth in agricultural productivity, which holds down prices received by farmers, is the primary reason why farmers' share of food expenditures continues to drop. But these realities could also hold the key to reversing the never-ending race to adopt low-cost, high-volume business methods.

An alternate path?

When we think of a food connoisseur, we usually picture a wealthy person with enough time and money and enough of an inclination to invest in knowledge about quality food (and wine). These folks can typically rattle off the differences in goat cheeses made in different valleys of the Pyrenees. They can comment on the attributes of arugula grown in California and France. They know the nuances of single malt scotches, and can have an erudite discussion of the finer points of French versus Australian red wines.

And food connoisseurs are likely to hold a firm belief that there is a fundamental trade-off between food quality and cost. They know that in order to obtain high-quality meat, vegetables, bread, cheese, and beverages, they will have to spend more money.

Most of U.S. agriculture is not in the business of relating to gourmet diners. Rather, U.S. agriculture is geared toward providing products of uniform quality at the lowest cost and the highest volume. That is, what food connoisseurs demand simply cannot be obtained from today's mainstream agriculture.

High-quality food typically requires more labor to produce (Parmigiano-Reggiano is made using methods that are seven centuries old) and more care to process. In other words, high-cost production methods are used to create the kinds of foods that are sought by our typical food connoisseur.

What does this have to do with life as we know it in rural America? As a nation, we have experienced significant income growth over the last 20 years. This income growth has allowed us to spend less on food and more on luxury items, such as cars, houses, vacations, and clothes. Such items are income elastic, in that a 10 percent increase in income will lead to a greater than 10 percent increase in purchases. Other consumer items that are income elastic are luxury food items, such as those purchased by food connoisseurs.

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If income growth over the next 15 years continues as it has over the past 15 years, then we should see the market for upscale food items grow rapidly. Who will supply these food items? Many of the items will be supplied by producers who reject the low-cost, high-volume business model that leads to success in a commodity business in favor of a higher-cost, consumer-oriented business model that emphasizes product quality and diversity.

Of course, U.S. consumers may opt to purchase imported products to fill this demand. If U.S. agriculture cannot or chooses not to produce the types of high-quality products demanded by upscale consumers, then the next 15 years could see a surge in the demand for imported food.

Translation of demand into return on investment

Already we are seeing individual producers and groups of producers using their higher costs to meet growing consumer demands. Vermont Cheddar Cheese producers have successfully moved upscale by emphasizing the unique flavor of their product and its regional nature. Pasture-raised hogs in Iowa are being sold to Niman Ranch for processing into upscale cuts for West Coast restaurants. But a large problem for most of U.S. agriculture is that the current commodity marketing system is not capable of compensating producers who increase the quality of their product, so there is no incentive for them to adopt costly quality-increasing production methods.

There are two ways around this problem. If every producer adopts quality-increasing practices, then consumers will be presented with a new product of uniformly higher quality. This method works best for products that are produced in a small geographic area where organization and monitoring costs are low. Alternatively, a separate marketing channel can be developed to allow source-identified products for those consumers who are willing to pay more for quality. Examples of both are occurring now.

Government mandate

One method for getting all producers to adopt higher-cost production systems is to simply outlaw low-cost production methods in the name of meeting consumer demand. This is what the European Union has done in trying to phase out cages for laying hens. Current E.U. law requires that all caged laying hens have at least 111 square inches of space after the year 2012. This contrasts with current U.S. practices that give each hen 53 square inches. As a result, the European Union will have happier chickens, higher egg prices, and, for those consumers who support animal welfare, a product that meets consumer demands.
Many U.S. groups advocate a complete ban of organophosphate and carbamate insecticides in U.S. crop production. If passed, this regulation can be viewed as a government regulation in response to consumer demand. For certain crops, the resulting higher costs will result in higher prices for farmers.

Of course, one downside of using government regulation to achieve higher prices is that import competition will increase if foreign producers are not subject to the cost-increasing regulation.

Corporate mandate

In response to growing demand for increased animal welfare standards (and political pressure by such groups as People for the Ethical Treatment of Animals), U.S. fast food restaurants have adopted animal welfare guidelines that will increase costs. Their huge size (McDonald's is the number one purchaser of beef and potatoes and the number two purchaser of poultry products in America) gives fast food corporations enormous leverage over their suppliers. For example, McDonald's now mandates that producers who supply eggs to them must increase the amount of cage space allocated to each hen to 72 square inches. If only a portion of producers decide to adopt these standards, then McDonald's will be purchasing eggs from a group of dedicated suppliers rather than on the open market.

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Niche market development

Development of a product with a trait sought after by high-end consumers is perhaps the most direct route to realizing increased returns. But getting the product to the customer through existing retail outlets in sufficient quantities is often a daunting task. MBA Poultry of Tecumseh, Nebraska, cools its freshly harvested birds in cold air instead of dunking them in a stream of chilled water. The cost of air chilling is greater but with this innovation, the meat does not absorb water and there is less spread of salmonella. After some marketing and production missteps, which included promising more product than could be delivered, MBA Poultry is now selling product in 1,400 midwestern stores.

Producer marketing orders

A federal marketing order allows producers to coordinate their decisions to enhance the returns from growing and selling some agricultural products. Marketing orders are often used to guarantee minimum quality standards, which can serve two purposes. The ostensible purpose is to increase quality to increase consumer acceptance and demand. An indirect effect of this control in quality is a control of quantity that can result in increased price. For example, domestic and export demands for California pistachios would grow if all California producers and processors were to adopt procedures that limit the growth of aflatoxin. One way to force producers to adopt such practices is to develop a marketing order for pistachios that would empower an administrative committee to enforce uniform quality standards for pistachios. A hearing to establish such a marketing order for pistachios was held in July of 2002. Adoption of the marketing order and safer production and handling practices would increase costs somewhat, but advocates of the marketing order argue that the resulting price increase would more than offset any increase in cost.

What is "efficient" agriculture?

The never-ending quest for low cost and efficiency has guided the structure of U.S. agriculture for the last one hundred years. But as incomes continue to rise, the definition of what constitutes an efficient production method may change to reflect increased willingness to pay for product quality. That is, once we can afford all the food we could possibly want to eat, we will then begin demanding more high-end food that often can only be produced using costly production practices. Once this occurs, agriculture must develop new market channels and market regulations to give producers who invest in product quality a chance to obtain a return on their investment. Only if these new markets are developed can there be a fundamental change for a significant portion of U.S. agriculture.

Country of origin labeling guidelines

by Gary May, extension program specialist, 515-294-8030, gmay@iastate.edu

USDA released the implementation guidelines for the Voluntary Country of Origin Guidelines (COOL) as mandated by the 2002 Farm Bill, effective October 11, 2002. The guidelines are an 18 page document available at http://www.ams.usda.gov/cool/.

On October 16, USDA hosted a conference call in which a USDA representative was available to answer questions regarding the details of the new system. This article reports on the published guidelines and the additional details that emerged in the conference call.

The voluntary system will be in effect until September 30, 2004, after which the law becomes mandatory. The law applies only to retail outlets with volume larger than $230 thousand dollars in gross sales of covered commodities.

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Exemptions include products sold through food service establishments, and products that are ingredients in a processed food item. Smaller butcher shops and other retail outlets are exempt from the legislation if they fall below minimum volume threshold.

Labels allowed

Meat products covered in the legislation qualify for a "product of the United States" label only if it was derived from an animal that was born, raised, and slaughtered in the United States. There was widespread disagreement in the industry regarding how to label feeder pigs and feeder cattle that were born in Canada or Mexico but raised and slaughtered in the United States. While the meat would not qualify for a US country of origin label, it would be misleading to label them as originating from the importing country as most of the production occurred in the United States. To address this issue, USDA created separate "Born In", "Raised In", or "Processed In" labels. For example, pork produced from Canadian feeder pigs that were raised and slaughtered in Iowa would bear the label "Born in Canada, Raised and Slaughtered in the United States."

Labeling requirements for ground beef and pork were also a controversial issue. Ground beef sold at retail is often blended from cattle originating in multiple countries. Therefore, the product as packaged cannot be accurately attributed to a single country. USDA addressed this issue by requiring the countries of origin to be listed in descending order of prominence by weight. Furthermore, USDA determined that cooked or cured products were exempt from labeling requirements. Consequently, ham, bacon, and ground sausage do not require country of origin labels.

Required record keeping

Another major issue in the implementation of COOL is the record keeping and documentation that will be required. The USDA guidelines state, "A verifiable record keeping audit trial shall be maintained." The records should be maintained by all participants in the production chain, kept "readily accessible," and remain on file for two years. The guidelines, however, do not specifically enumerate any acceptable record keeping standard. Rather, those interested in implementing the voluntary system are advised to contact USDA for further instructions. In the October 16 conference call, the USDA representative explained that self-certification (an affidavit stating that animals are of US origin) would not be sufficient.

Although the law forbids USDA from requiring an individual animal identification, the new labeling requirements may drive the industry into voluntarily developing such a system. Given the structure of the beef and pork industries, particularly with the commingling of cattle from different sources that occurs at feeder cattle auctions and feedlots, industry experts believe it would be difficult to develop a credible labeling system without individual identification.

A question that emerged from the teleconference is what happens to animals without country of origin documentation? Under the current guidelines, USDA did not create an "unknown origin" label. Consequently, meat products without country of origin documentation cannot be marketed through retail outlets. Rather, these products will likely be channeled to food service, additional processing, or some other exempt outlet. This issue may impact the heifers and young cows in the current breeding herd, as they will be culled after the mandatory system is in effect. If adequate birth records for these animals do not exist, they will not qualify for a "product of United States" label (and any accompanying benefits) when they are slaughtered.

Enforcement and accountability

Enforcement is another issue that is yet to be worked out. During the two-year voluntary phase, USDA does not anticipate taking any enforcement action. After the mandatory phase begins, each violation results in a $10,000 fine.

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Who will be responsible for violations? A substantial number of responses to the solicitation for public comments were from retailers that object to being held responsible for false information passed to them from suppliers. According to the USDA representative participating in the discussion, the first point of enforcement will be the retail level. However, if the retailer can document reasonable efforts to verify the accuracy of labeling information that turned out to be false, accountability can be passed on to suppliers. **Nevertheless, USDA does not expect to conduct random audits on the wholesale or farm level. Any audits at these segments of the production chain would be a result of complaints originating at the retail level.**

Implications to the industry

COOL may require packers to segregate animals both before and after slaughter, devoting specific shifts or production days to animals qualifying for a particular label. To minimize segregation costs, some speculation suggests packers may choose to exclusively slaughter animals that qualify for specific label. For example, a plant that currently slaughters relatively few hogs of Canadian birth may choose to accept only US born pigs once the system is implemented. If this were to happen, some finishers may find their packers will no longer buy their hogs. This mechanism could trigger discounts for non-US labeled products that many proponents had hoped for.

Livestock handlers such as auction barns may also need to implement segregation practices or some type of source verification system that allows the country of origin identity to be preserved.

Although the guidelines answered many questions, there is still a large amount of uncertainty regarding how COOL will impact the livestock industry. Based on the public comments after the release of the guidelines, there are a wide variety of opinions regarding the magnitude of the costs and benefits, along with how they are distributed thought the production chain.

What should producers do?

- Talk to packers about their plans for implementing COOL.
- Begin developing an on-farm record keeping system.
- Be able to match bill of sale, health papers, or birth records with inventory and sales.
- Ask for similar information on purchased animals.
- Explore documentation systems offered by suppliers or organizations.
- Stay tuned.

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