Extension's Response to Understanding Evolving Livestock Market Signals: Iowa's Experience[1]

John D. Lawrence
Extension Livestock Economist and Director, Iowa Beef Center
Iowa State University

I joined Iowa State University in July 1991 just as things were getting interesting in the hog industry. My schizophrenic appointment allowed me to work in both the cattle and hog sectors, comparing and contrasting these sectors and their producers for nearly a decade. In Iowa many farms produce both cattle and hogs, but the farmers often exhibit a split personality when it comes to the two enterprises—particularly the marketing. Until mid-1998 when I became director of the Iowa Beef Center, the bulk of my efforts was on hog issues. Since then, most of my attention has been focused on the cattle sector, but I still try to keep abreast of changes in the hog industry.

Our program to cattle and hog producers at Iowa State has evolved with the needs of our clients. Like all educators, we hope to aim slightly ahead of the duck to keep at least the early adopters apprised of significant market changes. In retrospect there have been two general thrusts to our programs: 1) the changing market and 2) changes in marketing. Extension programs addressing the former are to help clientele understand the external forces shaping the industry and the resulting implications. Educational efforts on the latter focus on how the individual can evaluate opportunities and risks the changes present and how best to profit from them.

The Changing Market

I first approached the changing market in March 1992 by putting the topic in the broad context of "The Changing Structure of the U.S. Pork Industry."[2] Iowa producers were hearing of expansion in North Carolina, but didn't get too excited. Iowa still had counties with more hogs than the entire state of North Carolina. Technologies that would dominate the industry and redefine how and where hogs are raised were on the radar screen of very few hog producers in Iowa. Production contracts were relatively rare and socially unacceptable, and marketing contracts were inconceivable. Until the early 1990s all hogs were created equal, were sold on the average, and the market report on the radio could summarize the day's trade in a $1/cwt range. Iowa was the center of the pork universe and price discovery. Then things began to change.

Tangible changes began to occur in Iowa. The first and most noticeable change was that packers began to buy hogs on a carcass merit or value-based system. Producers took home a check and a kill sheet that set them apart from others. Second, new 1,000 head or larger contract finishing facilities of two to three buildings per site began to spring up in parts of the state. If you drove by one of these facilities on the way to town, rumor suddenly became reality. The change was upon us, but few understood why.

---

[1] Paper prepared for presentation at the Organized Symposium, *Price Discovery in Livestock Markets: What is the Role of Public Universities?,* Western Agricultural Economics Association Annual Meeting, Vancouver, B.C., June 30, 2000.

[2] I borrowed some of the concepts and materials from others from 3-5 years earlier.

Our extension programs focused on “awareness” of the change and “driving forces” behind the change. We focused our attention on market forces rather than a quest for a policy culprit or a policy cure. The foundation of my extension program was a change in the pork marketing channel (Figure 1) borrowed from Hudson’s description of the beef market channel. With this model we discussed changing consumers and changing demands of consumers and thus a need for improved communication, opportunities for branded products, and risk management throughout the channel.

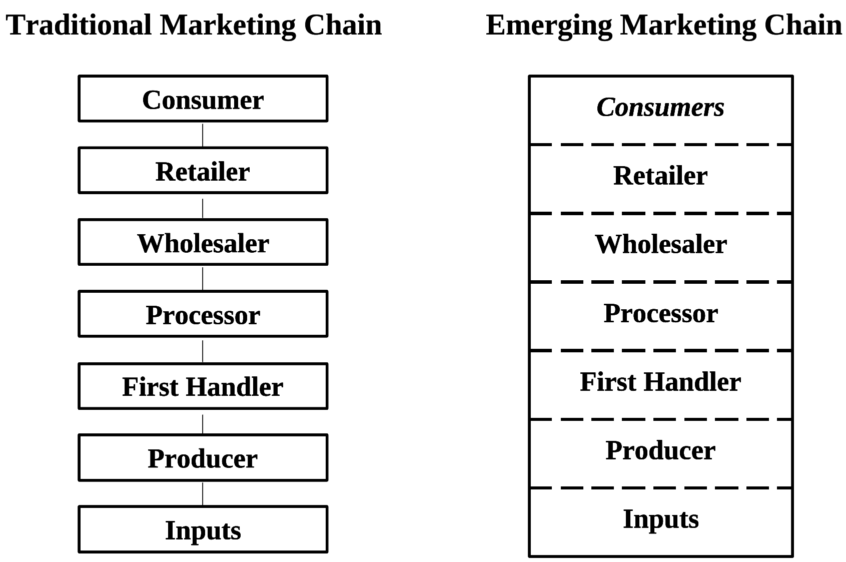

Figure 1.

I used this model to explain value-based marketing (improved communication), the move to Pork Quality Assurance (food safety, HACCP, brand liability), and marketing contracts (improved communication, supply risk management, quality control). The model helped explain vertical integration versus vertical coordination, but few outside academics appreciated the difference. Likewise, the model provided a vehicle to discuss the difference between concentration and integration. The producers' equivalent to this difference was to know the license number of the truck that ran over them. Finally, we augmented this model with discussions about cost curves and emerging technologies that may increase fixed cost but reduce variable costs, and the resulting implications for late adopters.

Our awareness-raising program was broad-based. In addition to about three waves of producers (early adopters, late adopters, and those who still don't get it), we spoke to lenders, agribusinesses, chamber of commerce groups, and decision makers. The dramatic changes in the pork industry have been earth shaking in Iowa. From farms to rural communities to the state legislature, there was a need for education, as well as fires to put out and services to perform. One of the most important audiences was internal. In addition to needing to understand the changes, our extension staff watched as the bulk of our traditional clientele struggled with traditional programs that weren't helping. The conflict of science with differing opinions coming from campus didn't help either.

The Changes in Marketing

While explaining the macro-marketing picture, our extension program also focused simultaneously on the micro-level decisions producers could make in their operations to adjust to the changing market. These programs were developed for the most part in conjunction with animal scientists and veterinarians who addressed genetics, nutrition, facilities, and herd health. Producers receiving discounts on their take-home check were eager to discuss price discovery, transparency, and price incentives as market signals. Typically, these producers were more comfortable learning from the animal side (genetics, backfat, average daily gain) rather than the economic side, but the programs did provide an opportunity to talk about "optimum" rather than "maximum."

A significant change in marketing was the rapid adoption of marketing contracts by packers and producers. Our extension program was to make people aware of these contracts, how they operated, how to evaluate them, and possible implications of the resulting thin markets. Research based on 1993, 1997, 1998, and 1999 marketing practices provided tangible evidence of the changes that were occurring. More importantly, we made a decision to get our hands dirty. We simulated the results of the various packer contracts that were available and, while not in writing, we identified which packer offered which contracts and the evolution of the contracting over time (a lesson in oligopsony behavior). In addition, our simulation models served producers one-on-one by helping them evaluate the contracts that were offered to them. It had a direct impact on the producer served, and it provided at least limited access to the otherwise proprietary contracts. Packers obviously knew that we had seen these contracts and even approached us for help in developing their own contracts. As concerns have grown about thin markets used as the basis for these contracts, we have evaluated alternative price formulas for both parties.

Pork v. Beef

As noted earlier, I have had the opportunity of watching both the pork and beef sectors see-saw through the evolution in changing market structure and marketing practices. Iowa was the largest cattle feeding state 30 years ago and saw its market share decline as newly adopted technology helped grow the feedlot industry in the High Plains. That example was useful in discussing the risks of resting on regional laurels with pork producers. Likewise, the move to value-based marketing and genetic improvement in hogs has provided a clear and recent reminder to cattle producers about market signals and information transfer. The pork industry is also frequently used as the 2x4 between the eyes of cattle producers. They can’t agree on much, but most agree that they do not want the beef business to follow the path of pork. In some regards it already has.

Extension programs to beef producers have followed the pork model in some regards. We started educational programs on valued-based marketing in 1995 and have built that program to include on-farm demonstration projects, cost share on data collection, maintenance of databases, development of “grid analysis” software that simulated packer grids, and initiation of producer alliances that provide marketing services. We are assisting producers entering a joint venture with a major packer in developing a members-only grid for a producer-owned harvesting facility. We are assisting a second group of producers considering the purchase of a small fabrication and wholesale company by providing technical evaluation and economic analysis of the vertically integrated producer-owned company. In both cases, the biggest issue is transfer pricing.

What Have We Learned?

Decisions facing producers are dynamic and more complex than ever before. We have told them that agriculture is evolving from that of a commodity orientation to one of a product orientation. Even though this shift is outside the comfort zone of many of us traditional extension economists, these producers are still our clients and they continue to look to us for advice. If they don’t look to us, we are no longer needed.

The move to differentiated products implies that we can no longer provide “commodity” education and services. What we provide clients must be tailored to ***their*** demands, not ***our*** supply of information. It also implies changes in what and how we measure success. Although some may consider our high input extension programs to be narrowly focused because they educate and serve relatively fewer individuals, the potentially high impact for clients and high profile for extension is important.

Considering the degree of complexity, level of investment, and the profile of this type of program, the need for a sound research foundation has never been greater. Specifically, areas of research and extension education that need to be strengthen include:

- Supply chain management: what does this term mean and, more importantly, what does it imply for producers and the other participants in the chain.
- Value discovery: if we move beyond external markets to establish internal transfer prices within a coordinated supply network, how do they establish the appropriate "price," reward value, and distribute returns to participants.
- Risk management in coordinated systems: what risks are producers exposed to in supply networks, how do these differ from traditional commodity enterprise risks, is there a "vertical hedge" between production and processing, and what is the appropriate framework to evaluate risk-reward trade-offs.
- Contract development and evaluation: as the use of contractual linkages increases producers will need help in evaluating terms and returns of contracts and assistance in simplifying the process such as standardized contract forms much like is used for land leases.

Because these relevant issues are often foreign territory for many of us, we must proceed cautiously. However, the rate of change prevents a more formal research path through proposal applications, advising graduate thesis, and peer review journal publications. This time-tested process is important, but must keep pace with the needs of clients it hopes to serve. We must work faster because the duck is already on the fly.

References:

Hudson, Michael A., Bruce J. Sherrick, and Darin R. Gregg. "Linkages Between Packers and Retailers: Motivations, Perspectives, and Implications to Producers," Chapter 3 in <u>Structural Change in Livestock: Causes, Implications, Alternatives,</u> Wayne Purcell, Editor. Research Institute on Livestock Pricing. Blacksburg, VA February 1990.