

Adventures in Pasture-based Agriculture: Opportunities, Obstacles and Outlook

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Abstract: Dispersing animals on the landscape through pasture-based agriculture potentially enhances economic, social, ecological, health and aesthetic benefits to rural and urban-influenced communities. This paper examines the current state of the supply chain for pasture-based products in Michigan, with an eye towards identifying opportunities and barriers to increasing the role of pasturing in our food system. We explore this through a series of interviews with agents from various links in the supply chain, supplemented with findings from a recent conference dedicated to pasture-based agriculture.

It begins with an overview of likely benefits of pasture-based agriculture, and analysis of the current situation. It continues by relating agents' experiences; emphasizing promotional approaches, relationships with consumers and neighbors, and production and land use issues, as well as opportunities and barriers confronted. It continues with a discussion of approaches for de-commoditizing animal agriculture, highlighting private firm strategy, public policy and scholarship needs.

Introduction

Pasture-based agriculture is currently a niche that supports many small and mid-sized family farms throughout the nation but has the potential to foster revitalization of rural areas and bring a wide array of benefits to rural and urban-influenced communities. This paper examines the current state of the supply chain for differentiated pasture-raised animal products in Michigan, with an eye towards expanding and enhancing the markets for these products.

Pasture-based livestock production differs from more common confinement/grain-based methods in at least two key ways: where the animals live and what they eat. There is no current definition or clear boundary between pasture- and grain-based. In this paper, pasture-based refers to management systems that rely on animals harvesting much of their own feed, and where animals spend the majority of their lifetimes outside.

This paper begins with a review of literature, outlining key economic issues of pasture-based agriculture (PBA). It continues with a discussion of methods used to understand the current situation, and identify opportunities, constraints and research needs. It then outlines findings of the interviews, emphasizing common themes of experiences of a set of farmers, processors, distributors and buyers, to discuss strategies to expand the role of PBA in our food system without re-creating a commodity-based system. It concludes with limitations and future research directions.

Selected Literature

This section will discuss research concerning the issues surrounding pasture-based agriculture (PBA) faced by consumers and farmers, as well as the implications for the sustainability of rural communities. It will demonstrate that: PBA increases consumer choice and provides product attributes for which consumers are willing to pay a premium; raising animals on pasture is a viable alternative for small to medium sized farmers; small/medium farms bring broad social and economic benefits to rural communities; the current commodity markets do not serve pasture-based producers well.

PBA offers product attributes that consumers may have trouble finding in confinement-based products commonly found in mainstream markets. Many consumers are concerned with the use of hormones and sub-therapeutic antibiotics, which are commonly used in the confinement model of production (Hutchins, 2001; Mellon et al, 2001). Pasture-based products are usually lower in fat and have higher ratios of certain beneficial nutrients (Auld, 2004).

Buying pasture-based products also gives some consumers the opportunity to support a system of agriculture that matches their values, internalizing some of the external costs associated with, and offering an alternative to, large scale confinement operations. Many environmental groups (for example, Sierra Club) oppose Concentrated Animal Feeding Operations (CAFOs), linking them with polluted groundwater and other ecological hazards. The concentration of animal wastes can also lead to nuisances such as flies and odors; opposition to CAFOs has led to “not in my backyard” efforts in many communities. CAFOs have also been linked to declining property values (Kilpatrick, 2001) and farm worker health problems (Donham, 1990).

PBA is also widely seen as being more respectful of animal welfare than the confinement model. The Humane Society of the United States (2005), for example, recommends buying pasture-based products as a way to support humane farming methods.

Numerous studies have shown that consumers are willing to pay a premium for attributes similar to those of pasture-based products. Pirog (2004) found that about 10% of consumers in four Midwest regions already buy organic beef or dairy products. A majority was aware of perceived benefits of pasture raised products, and about 10% were willing to pay premiums of 30% or more for locally produced natural milk. Armagh and Kennedy (2000), Hurley and Kliebenstein (1998), Grannis and Thilmany (1999) and the Kerr Center report consumer willingness to pay premiums for pork products described with the terms “pasture-raised,” “environmentally sustainable,” “natural” and “all natural” respectively. A study by the Food Processing Center (2004) finds large percentages of consumers willing to pay a premium for pastured poultry.

As for production, few studies have compared the economics of pasture versus confinement methods, but data available indicate that PBA may be a more viable option for small and medium sized farms. For example, Dartt (1998), Kriegl and Frank (2004), and Ostrom and Jackson-Smith (2000) find that higher net profit per animal is achieved by rotational grazing dairies compared to confinement operations, often due to lower production costs. Studies by Honeyman (1991 and 1996) infer that transition to alternative hog production can result in lower fixed costs, lower than expected labor costs and, in general, presents opportunity for beginning, part-time or risk-averse farmers because it allows for expansion with less investment. Ostrom and Jackson-Smith (2000) find lower debt loads associated with grazing dairies. Methods needing less capital

investment and resulting in lower debt provide alternatives to new, smaller and/or diversifying farms which often lack access to credit or may be unwilling to assume the risk of a large debt load.

The studies above indicate that pasture-based management can be a viable strategy for small and mid-sized farms. Improving the viability of smaller scale farms holds great promise for the social and economic well-being of rural communities. Numerous studies (Goldschmidt, 1978; MacCannell, 1988; Lobao, 1990; Durrenberger and Thu, 1996; Welsh and Lyson, 2001; Lyson, et al., 2001) indicate that the existence of small and mid-sized farms is vital to healthy societies in rural communities. Along the same lines, there is a clear link between smaller, more numerous farms and positive contributions to local economies (Chism and Levins, 1994; Abeles-Allison and Connor, 1990; Foltz et al., 2002; Lawrence et al., 1997; Marousek, 1997; Ikerd, 1994; Gomez and Zhang, 2000).

Commodity channels do not generally serve pasture-based farmers well. PBA usually implies relatively small herd sizes, compared to confinement operations. It is difficult to earn a livable income on low volume, given the increasingly small margins commodity markets bring (Duffy, 1998). More than half of commodity beef is added after it leaves the producer; this system is also not well-suited for smaller, less uniform lots common to PBA (Earles and Fanatico, 2000). Grading standards favor the heavy marbling common to feedlot grain-fed beef.

Many articles in the popular press (e.g., Kevin, 2004; Doering, 2004) have stated that demand for organic meats is greater than supply. The rise of popularity of organic foods has been attributed to their increased availability on supermarket shelves (Dmitri and Richman, 2002), but many producers of natural meats have difficulties accessing these markets (Grannis and Thilmany, 2002), especially acting on their own. One possible solution is the development of value chains, partnerships between farmers, processors, distributors, etc., which bring fair prices to all partners and communicate attributes (including good ecological and animal stewardship) of the product to end consumers (Value Chains Partners for Sustainable Agriculture).

PBA provides attributes that many consumers demand and are willing to pay for; this system can provide livelihood for small and mid-sized farms and bring benefits to the rural communities. These products are currently largely available through niche markets, often direct market transactions. Understanding this supply chain as it currently is, with an eye toward expanding it to bring pasture-based products to wider consumer segments, is the focus of the remainder of this paper. The following section outlines the methods used to gather information about the current situation and identify opportunities and constraints to expansion.

Methods

The information on the supply chain for pasture-base animal products discussed below came from interviews with 16 farmers or farm families engaged in PBA and selling differentiated products to local markets; 8 processors used by these farmers; and 6 “buyers”, people that buy or sell these products, including 2 distributors/brokers, 2 chefs and 2 people in retail meat sales. The farmers were selected from a variety of sources: recommendations from the Chair of Michigan State University Extension’s Forage/Grazing/Pasture Area of Expertise Team; members of the Michigan Hay and

Grazing Council; farms listed on eatwild.com, a website promoting pasture-raised meat; peers of previously interviewed farmers. They were chosen in a way to ensure a diversity of responses: farmers were selected based on size of farm, number of years in operation, geographic location in Michigan, animal species raised, age and gender of farmers, market channels utilized, etc. Three farmers who use pasture sparingly but who fully support the confinement model of production were also sought out for interview. Farmers were asked for the names of the processors they used; a sample of these processors, plus a handful of others were chosen for interviews. Buyers and distributors known to sell pasture-raised products were contacted for interview requests. While the sample of actors can not be construed as representative of any larger group, such “purposeful sampling” (Maxwell, 1996) can bring both the diversity and depth of data needed to understand the question at hand.

The interviews utilized open-ended questions. The questions were created after an extensive review of literature resulting in a White Paper (Conner and Hamm, 2005) and several preliminary interviews with key informants.

Interviewees were told the general purpose of the study, why they had been chosen for interview, then asked to sign a consent form describing their rights as research subjects. The interview questions were systematic but still conversational (Patton, 1982), ensuring that previously identified topics were covered while still leaving room for new topics to be explored. Probes and follow-ups were used to specify depth and subject matter as well as encouraging conversation, evidence, examples, narratives, etc. (Rubin and Rubin, 1995). Interviews continued until they reach a saturation point (when no new data emerges).

With three exceptions (one each farm family, processor and buyer), the interviews were taped and transcribed. Data were preliminarily analyzed, as recommended by many quantitative methodologists (Rubin and Rubin, 1995; Miles and Huberman, 1994; Maxwell, 1996). This preliminary analysis guided modest changes in interview questions or follow-up emphases.

Inductive analysis was used to uncover common and repeating responses and patterns of behavior and motivation by the agents. This process let agents describe their behaviors in their own words and terms and use induction to explain the patterns, to “let the data tell its own story,” (Patton, 2002, page 457).

Results from Interviews

Farmer Interviews

These farmers are entrepreneurs, utilizing face to face market channels where they can sell differentiated products and communicate the values they and their products embody: sustainability and respect for nature and its creatures. The farmers describe good relations with non-farming neighbors but suspicion from conventional farmers, despite insistence on not preaching or trying to convert those with different viewpoints. They are able to earn a living and enjoy high quality of life despite the high cost of land and pressure from sprawl.

All of the farmers use direct markets in one way or another. The three supporters of the conventional model use them in the most limited fashion, selling a few freezer¹ cattle or lambs, or breeding stock and selling the rest through conventional commodity markets. The remaining farmers have worked hard to establish a client base and promote and differentiate their products. They sell from a variety of venues: farmers markets, on-farm stands or stores, home delivery and freezer sales. Most emphasize word of mouth promotion from satisfied and repeat customers, although the eatwild.com website is an important tool for many. Newsletters are often used to alert consumers of upcoming purchase opportunities.

The farmers used a variety of terms to describe their products. Grass-fed and pasture-raised were two of the most common; they often referred to themselves as “grass farmers”, a “grass based operation” or emphasized that “without pasture, we don’t have a farm.” A handful called themselves 100% grass-fed, emphasizing that their cows never eat grain. Others use grain sparingly, some only in the winter. Almost all believed they would qualify as organic, but only one is actually certified.

Many of the farmers discussed religion or spirituality as a guiding factor to being pasture-based farmers. “God created ruminant to eat forage, not grain”; pasture is “as God intended.” Others expressed desire to respect the design of nature, “working with nature instead of conquering her.”

The farmers are very concerned about the welfare of the animals and take steps to ensure it is as stress free as possible. In turn, animal welfare is an attribute that many of their customers want. “It’s up to my conscience to keep them as well tended as I can, to give them a good life before they meet their destiny,” says one beef farmer. In contrast, one of the confinement model advocates discussed animal welfare purely in economic terms: that the animal should be well-cared for because abuse costs money. He admits that animals are probably happier in pasture than confinement, but that the confined animal “doesn’t know any different” and so doesn’t know what it misses, similar to how an inner city child does not miss seeing trees or nature.

The farmers believe that consumers want “happy beasts”, “knowing the animal wasn’t raised in a prison, that it was a happy animal it was allowed to walk around.” Minimizing stress and humane treatment are keys to raising quality products in the eyes of these farmers. Raising high quality, healthy, safe products is a key motivation: many emphasize that they feed their families and friends, so quality, health and safety are especially important. “We can’t find food that is as good as we raise.” These motivations are more important than getting rich. Prices are generally set at a level that supports the farm family and business, but low enough to be widely affordable. One farm family describes that “the way we set our prices, we set an ideal of what this farm could support, and then what we would need to have a fair family wage, without being greedy.”

The farmers listed several institutions or publications that have been helpful in educating consumers and establishing demand for pasture-based products, including the Weston A. Price Foundation and its Wise Traditions chapters, the *Maker’s Diet* book, and the eatwild.com website. The farmers also commonly stated that many of their customers came to them for health reasons, often upon referral from their doctors: “our customers

¹ “Freezer” sales usually involve a whole, half or quarter animal, sold alive to consumers for their own personal use, who pay for slaughter and processing, often at a custom exempt facility. It does not come in selected cuts; it is often wrapped in brown paper and marked “not for resale.”

tend to be health conscious, where they've experienced a health issue"; "I have people coming who have basic health problems ...they cannot be exposed to antibiotics, chemicals or hormones." One farmer gets customers referred to them from a "diet conscious pediatrician." Another says, "we have quite a few customers who are cancer survivors and doctors."

Quality of life, doing enjoyable work and being able to spend time with family is a common theme for these farmers, "We're not making a lot of money doing this, we like what we're doing it and that's why we're doing it. I could bang nails and make infinitely more money, probably in the short term." Several of the young farmers home school their children and see the farm as an essential part: "there's education going on all the time here."

Few of these farmers began as conventional producers then transitioned to pasture-based production. Most came to farming with certain ecological or quality of life values and believed pasture-based best fit that mold. One farm that did transition did so largely for quality of life reasons. "We were sick of doing the same thing every day, every day of the year, all year long, year round, for the rest of our lives, being inside the barn, in the manure. We had old facilities and I wasn't about to build new facilities, just for that. So we said either grazing is going to work, or let's quit milking cows. That was 13 years ago, and the type of work we do has interested the whole family."

Community relation was another theme of these interviews. Unlike large scale confinement farms, which often rally community "Not In My Backyard" opposition from neighbors concerned about odors, flies, water and air pollution, these pasture-based farms are usually embraced by their neighbors. Not only do neighbors have no grounds for complaint, many are delighted by the sight of grazing animals. One farm family who recently moved to their present location said that at first, neighbors were "afraid" that an animal farm was moving in, but that they've had no complaints, and many people now stop along the road to look at the animals. Another farmer said that people "appreciate so much more, the pasture farm as their neighbor than the confinement farm across the road [that] has so much more flies."

For those that sell right from the farm, the attraction of a ride in the country followed by opportunity to see and even pet or feed the animals is perceived to be a key selling point. "It's more of an event to them to come to the farm and see the animals... we have a large number of people come into the store, and bringing their children to feed the animals." "Those pigs out there, they really look like they're having fun, and if you step into the pen with them, and go around with a bucket they'll follow you."

Many farmers drew a clear distinction between generally good relations with non-farmer neighbors, and being viewed with suspicion by nearby farmers. "Our neighbors that don't farm love us" but "I don't think I've had a warm reception from other farmers in the area." This suspicion is perceived by one farmer as due to the success of pasture-based farms and the failure of many conventional ones. "Everyone's been decrying the decline of farming for the past 50 years and it's because they're doing it the wrong way. It's not only bad for environment, it's not only bad for the animals, it's bad for them. They're all going broke."

Despite the contentiousness between competing paradigms, the pasture-based farmers do not try to convert either farmers or consumers to their views. Their consumers are those who have already made up their minds that they want pastured products. "It's

mostly just getting into contact with people who already want something, that already have it in their minds, they looked for it in the past, and they just don't know where to get it. It's not so much to convince people that this is the product for them."

The issue of land use came up often in these interviews. Many farmers, particularly those in southern Michigan or in tourist areas, mention the mounting threats of sprawl and increasing land costs. "We could make more money in the short term if put in a circle drive and sold 150 one acre lots with pond views. We could probably retire, with the price of land, but that's not an asset to the community."

In short, PBA provides these farmers with a decent livelihood and high quality of life. The farmers are good neighbors, forging ties with their consumers by offering quality products backed by their own personal integrity. They have succeeded, in many ways, in spite of a lack of help from public institutions. Finding ways to improve their farm management and marketing skills, while respecting the uniqueness of their approaches, is key to ensuring they continue to bring the social, economic and environmental benefits to their communities.

Those farmers which direct market their meat products generally have good relationships with the processors they use. They see the butchers as partners, having an important role in satisfying customers. "I work with the butcher, we're friends, they want to see me do good, I want to see them do good, they're very cooperative and accommodating." On the other hand, a farmer that sells primarily to commodity markets has a different relationship with packers. "It's more an adversarial thing...packers trying to buy ... as cheap as they can buy them and we're trying to get as much out of them as we possibly can, and its one side against the other." Partnerships between farmers and processors seem to be essential for production of high quality products. The next section will discuss processors' experiences and perceptions about providing butchering services for small and mid-sized farms.

Processor Interviews

The processors interviewed for this project of the scale typically used by farmers who wish to merchandise their own meats; they process meat from grain as well as pastured animals. These processors either have continued a multi-generational family business, or in some cases, entered this business because they are committed to animal agriculture and saw a need for their services. They generally see farmers as partners and share their commitment to humane and stress free handling. For the most part, they have favorable views of USDA and the inspection process. They have noticed increased consumer concern for how and where animals are raised. Attracting and retaining labor is a major challenge to their businesses.

Owning and operating a processing business is difficult and stressful: margins are low, risks are high. Compliance with regulation is at best, very time consuming. Many feel they are one piece of bad publicity from being out of business. Survival is their principal long term goal. This is a very vulnerable but vital link in the supply chain.

Processors work with farmers to ensure the animals they bring in to sell in high quality products, especially when the meat will be sold at the processor's own business. "We know the farmers we do business with. We can tell you what their barns look like on the inside. We do need to know what type of animal they have, how they're feed. We just don't go out and say yes we'll buy it. We need to know its breeding, care, the farm area

it's been living, age, we're very picky." Another says, "In the meat industry trust is everything."

Many processors expressed concern for the welfare of the animals and a wish to reduce stress as much as possible. "Most animals have never come off the farm they have been born and raised on so they're upset. So we ask the farmer to bring in the day before. And we have certain pens that each animal would go into. That way the animal settles down and becomes accustomed to its arrangements." "We're also certified humanely raised and handled by the Humane Farm Animal Care Group and also the American Humane Association."

The processors generally feel USDA inspection adds value to their product, but that the public is not always aware of the extra safety assurance that USDA inspections brings. Many cite the fact they eat products from their business and sell them to family and friends as offering further assurance. They take pride in offering safe and well-inspected products.

The most common difficulty the processors discussed was finding, training and retaining labor. This is a labor-intensive business. One estimated that a new employee cost the company for six months, and took a year to begin to make it money. The disappearance of meat cutters in supermarkets (most grocery stores buy pre-cut meat, not whole sides) eliminated a possible source of meat cutter labor. There is no vocational training, just "on the job." Attracting and retaining employees is difficult because the work is difficult, involves being on your feet all day, lifting heavy loads and bending over.

It is difficult for small businesses to offer benefits; small margins prohibit high wages. Two processors mentioned paying benefits, or high wages, to retain a functional work force. "Do you pay people part time wages to be here basically one day a week, two days a week to kill and process? And then be fighting huge turnover and you've always got an educational curve....Minimum wage doesn't work, and the quality of people you get with minimum wage doesn't work... one of the things that I built into [our business plan] was that we would have a solidified labor force. That costs money."

The current seasonality of production adds to the difficulty of retaining labor. Many processors discuss being at full capacity only in the late summer and fall. "By the time you've got somebody trained, you've moved out of the busy season and you're into the slow time and you can't afford them. So you're understaffed all the time." This also constrains the ability of processors to buy from local farmers to supply wholesale accounts.

Many processors have noticed an increase in consumer demand for locally produced meats. "It goes in cycles. There for a while people weren't putting meat in their freezers, they were eating out, or buying out of the stores and stuff. Since 9/11 and now the BSE scare and the different things that we've got – I think people want to know, how [farmer's name] raises his animals, they don't put hormones in them... they know where the animal's coming from. They get it processed by a local processor like myself, they pick it up here, they take it home and it's in their freezer, they know where their meat's coming from, they know what it's been fed and things like that. I think there's more and more people concerned with that and there's an awareness of that type of thing. They want to know at least where their pork and their beef is coming from."

Partnerships between farmers and processors can ensure safe, high quality products not available through other outlets. The next section will discuss the experiences of buyers and distributors.

Buyer interviews

In this context, “buyer” is being used to represent a wide array of actors in the supply chain: brokers, retail meat counter managers, butcher shop owners, chefs, etc. These people serve as intermediaries, procuring meat and providing it, directly or indirectly to consumers. They have important roles of interfacing with consumers and ensuring the quality of the product. They were chosen because they currently market pasture-raised products or specialize in high quality gourmet products.

Interviews with these buyers indicate a clear segmentation of the market for and consumer attitudes about pasture-based products. These buyers generally liked the idea of sourcing from local farmers, but have experienced problems when trying to do so. Brokers, dedicated to connecting farmers with markets, will play a vital role if pasture-based products are to gain wider availability.

Based on these buyers’ experiences, consumers can be divided into two clear categories: those who have favorable perceptions of pasture-based agriculture, and buy the product because of the attributes it has (like those mentioned previously, e.g., animal and environmental stewardship, favorable health perceptions, etc.); and those who prefer the attributes of conventional meats: low price; more marbled and tender, less strong tasting meat. One butcher shop owner has carried grass fed beef for four years but is considering discontinuing this product. He says that grass fed meat is “only embraced by those who want it regardless of taste.” He says that “loyal 20 year customers” tried it and told him to stop selling it, saying it “tastes bad.” Another problem is that consumers only want steaks and chops, and the meat arrives as a half carcass; all other portions, plus those that do not pass a taste and tenderness test, are ground and sold at a lesser, unprofitable price. On the other hand, two brokers have begun successful businesses selling to specialized markets like restaurants, health food cooperatives, etc. One describes a market niche as those demanding “extremely local and that they’re coming from small farms and that they’re the freshest eggs they can get on the market.” Another specializes in hard to find heritage breeds of animals. While the market for these specialty items appears to be growing, neither broker has penetrated mainstream markets.

The physical quality of the meat poses both opportunities and barriers. The “grassy” taste is seen by some as reflecting unique subtleties of place; others who have not “acquired” this taste prefer the more common feedlot taste. The leanness limits the time it can be aged, but increases its freezer shelf life.

Retail buyers were interested in sourcing from local farmers, but often found the barriers too great. One, who works for a retail chain, says sourcing decisions are made at the corporate level; independently owned shops seem to have more leeway in these decisions. Consumers at health food stores are increasingly concerned about the environmental and animal welfare impacts of their purchases; brochures at point of purchase are used to inform consumers about these issues and promote products with favorable attributes.

Chefs are perhaps the most likely and attractive market at this time: they often have more flexibility on price, and the cooking expertise to ensure good flavor and proper

uses of various cuts. They are able to buy half carcasses, for example, and offer specials based on different cuts for a week. These chefs are very interested in supporting local farms: they believe that local products add value to their menus, as the chefs promote their fare as representing a unique sense of place and partnership with farmers.

The role of the broker is critical: to provide services –sourcing/marketing and accounting– for which chefs and farmers often have little time or desire. Each instance cited above involves a person forging new relationships to get products into coolers or on tables. In the best cases, the farmer, processor, broker and retailer or chef all communicate and coordinate to ensure the product is of the correct quality and portion. The “face” and story of the farmer, and how the food was produced, is communicated throughout the chain. One broker emphasizes placing pictures of animals rather than meat cuts in promotional materials: the connection to the animal, its breed and its care, is central to communicating the value of the product.

Seasonality will continue to be an obstacle. Grass fed meat is best, and most economically raised, when the animal is eating fresh, high quality forage. Over-wintering on hay decreases both meat quality and profitability. This means slaughtering in summer and fall. Yet slaughtering and processing animals at these times lead to bottlenecks for processors, who face time and labor shortages then. Product must be frozen and stored for later use: premium meats are usually bought fresh.

Discussion : Opportunities, Obstacles, Outlook

Opportunities: The Value is in the Values

The greatest opportunity in PBA lies in its attributes, including those of the product and the whole farm. PBA can bundle attributes very desirable to a broad group of consumers: farmers interviewed for this project emphasize a variety of attributes: animal and environmental stewardship, “natural” product (no hormones or antibiotics); local or family farm. Another potential selling point is to emphasize that the farmers are eating the food, and feeding their families and friends: relationship-based, rather than regulatory food safety. The community friendliness of pasture farms can also be emphasized: cute animals, no odors. Given the competition in media for consumer attention, research is needed to ensure that promotional messages about pasture-base agriculture be carefully framed and consistent (e.g, using the same terms, having the same look and feel) so as to maximize their effectiveness.

Raising public awareness of the importance of supporting local farmers, especially those using sustainable methods like pasture-based or organic management, was a need discussed by several farmers. One farmer wished for a “source of telling consumers about us, or telling us how to find them, to get our name to them.” Another advocated “creating some kind of literature, some kind of program where people are taught why they should look at local or organically produced, what’s in it for them.” Both farmers felt they themselves lacked the time and resources to do so, but wished others would take on this task.

Many potential consumers may be reached by forming alliances with doctors. The farmers mention doctor referrals as a customer source. Finding doctors favoring PBA products and linking them with farmers would help both parties.

Obstacles: Convenience, Connection, Consistency

Pasture-based agriculture may not yet be ready for mass markets; many buyers believe that the average American consumer lacks both the taste and skill to buy and prepare these products. Many people are also deterred by their lack of availability in places they shop. Convenience is a hallmark of the American consumer. However, there are many ways in which niche markets can be improved and expanded, to set the stage for broader availability of pastured products. Important lessons should be gleaned from how the market for organic product grew: once organic could be found only in farmers markets and health food stores. Gaining entry into mainstream grocery stores was vital to maintaining the solid growth in sales.

The major barrier lies in connecting farmers wanting to market and buyers wanting to source these products. The solution lies in developing partnerships to solve coordination problems between farmers and end users. Restaurants and independent natural foods retailers are the most obvious targets. Critical issues, most critically governance of these partnerships, remain unanswered.

Another critical obstacle is product quality and consistency. Solutions to the seasonality constraints are also priorities. These would help address processors' labor allocation problems, and permit access to wider markets. Processors might also benefit from increased training in meat cutting (e.g., in trade schools).

Conclusions: De-commoditizing Animal Agriculture

PBA is a market with great potential to grow, but not quite ready for the mainstream. Direct markets will continue to be the most important outlet; the roles they play introducing the product to consumers and connecting consumers with farmers, are vital.

The key to long term growth, however, lies in making the products more accessible, more convenient to consumers, but avoids the race to the bottom of a commodity system. The greatest need appears to be for brokers, middlemen, who will connect farmers with restaurants and retailers while maintaining traceability, transparency and trust.

One major public policy consideration is whether to bring back state meat inspection in Michigan, which abandoned meat inspection in 1981 and poultry in 1971. One farmer opined: "I really wish that the state would go back to a Michigan meat inspection. It was always cleaner, it encouraged small businesses in rural places to offer legally processed meat to the community."

Another policy issue is that of PBA standards. The similarities between pasture-based and organic agriculture were touched upon above. Organics began as a movement growing products and guided by shared values, then turned into a commodity industry marked by entrance of firms motivated by profit opportunity (Conner, 2004). A key event in the history of organics was the implementation of USDA organic standards. While these unified federal standards certainly raised awareness of organic products and increased consumer certainty of the term's meaning, many farmers and other observers believe the movement was "hijacked" or co-opted by USDA. This experience informs many questions about pasture-based agriculture.

Should a set of grass-based or pasture-based standards be implemented? Should they include third party verification? Should it be done by public (e.g., USDA) or private parties? How exactly would these terms be defined? Is there a similar danger of co-option

or creation of a commodity market for pasture-based? How can this be avoided? Certainly, the farmers interviewed here would be very suspicious of a labeling program, as discussed above: they would be among the likely losers if the market of PBA followed the path of organics. It would be unjust for the people who did the hard work and assumed the risk of building this movement were shut out of the benefits. On the other hand, standards could raise awareness of and add legitimacy to the products.

Future research should focus improving promotion, though better framing of the positive attributes PBA brings. Other research needs include creating and governing relationships among agents, and improving production practices. The concept of values-based value chains is very promising, but much more research is needed on how these partnerships would work. Animal science research is needed to improve product quality and consistency, production efficiency, and seasonality issues.

While every attempt was made to draw interviewees from diverse geographical, farm size, species and marketing strategies, and the processors and buyers they work with, the responses here are limited to a small number of interviewees. A quantitative study, measuring themes that emerged from this study and sampling large numbers of agents from Michigan, is planned as a continuation of this work.

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