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Winrock International

Improving Lives and Livelihoods Worldwide

## Expanding Grass-Based Animal Agriculture in the Midwest: The Pasture Project



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## PART ONE: INTRODUCTION

The purpose of the Pasture Project is to reduce the impact of agriculture on water quality in the Mississippi River Watershed by addressing barriers to the expansion of grass-based systems of beef and dairy production in the Midwest.

Harmful algal bloom and subsequent hypoxia conditions in the Gulf of Mexico have largely been attributed to non-point source pollution from agriculture, specifically corn and bean production, as well as confined animal feeding operations. High levels of nutrient runoff from conventional farming practices are finding their way into surface water in the Upper Midwest (Minnesota, Wisconsin, Iowa and Illinois), and are making their way down the Mississippi River and contributing to increased algal growth. Agricultural nutrient applications and their surface runoff can be reduced by expanding alternative farming and ranching practices in the Mississippi River watershed. In particular, transitioning land to productive pasture management is very effective at reducing both the need for nutrient applications and reducing nutrient loss from the system.

The grass-fed meat industry is part of a growing market in the United States, accounting for an estimated 3% of total beef consumption, and expanding at 20% annually.<sup>1</sup> Double digit growth has been predicted in the demand for ground meat from grass-fed beef, as hamburger chains vie for consumers that prefer the taste and health profile of grass-fed meats.<sup>2</sup> According to a study by USDA's Economic Research Service, grass-based meat production is on the rise in the Upper Midwest. For example, Thousand Hills Cattle Company markets 1,300 cattle annually from 40 producers located in Minnesota, Wisconsin, Iowa and South Dakota.<sup>3</sup> This same study estimates there are 25,000 beef ranchers in Minnesota alone engaged in some aspect of production.<sup>4</sup> Wisconsin boasts several large dairy operations that have significant or solely grass-based operations. A visit to most farmers markets in the Upper Midwest will usually find multiple producers selling meat from grass-fed animals. Many are engaged only in direct marketing but are looking at options for expansion into wholesale. On the other hand, branded programs such as Thousand Hills cannot find enough product to meet demand. This gap between supply and demand represents both a problem and an opportunity.

In 2011, with support from the Walton Family Foundation, the Wallace Center at Winrock International led a planning process that assessed trends in supply and demand, and barriers and opportunities along the supply chain to the increased production and consumption of grass-based beef production in the watershed. A 13-member Planning Committee comprised of leading industry figures, agency representatives and supply chain experts (see Appendix 1) provided direction to the project that has resulted in a comprehensive Implementation Plan, detailed in the final section of this report.

The Planning Committee was led by Alan Williams, PhD, an animal science professional and longtime champion of grass-based agriculture and other sustainable production systems, and Warren King, Principal of Wellspring Management, an experienced supply chain professional and regional food systems champion in the Upper Midwest. John Fisk, PhD, Director of the Wallace Center, has worked

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<sup>1</sup> King, P. (2010, June 10). Ordering Up Beef That Roamed The Range. *Wall Street Journal*

<sup>2</sup> Nation, A. (2010, July 15). Expensive Grassfed Burgers are the New Buzz. Retrieved July 25, 2010 from the Stockman Grass Farmer: [http://wincustomersusa.com/stockman/index.php?option=com\\_content&task=view&id=411&Itemid=9](http://wincustomersusa.com/stockman/index.php?option=com_content&task=view&id=411&Itemid=9)

<sup>3</sup> King, Robert P., Michael S. Hand, Gigi DiGiacomo, Kate Clancy, Miguel I. Gomez, Shermain D. Hardesty, Larry Lev, and Edward W. McLaughlin. (2010, June). Comparing the Structure, Size, and Performance of Local and Mainstream Food Supply Chains, ERS-99, U.S. Dept. of Agr., Econ. Res. Serv.

<sup>4</sup> Ibid

directly with Williams and King to help manage and direct the project. The Planning Committee, a group with extensive experience and commitment, have been highly engaged throughout the planning and assessment process.

This planning and assessment work has proceeded in four phases, culminating in a set of Recommendations and an Implementation Plan:

*PHASE ONE: Initial supply chain analysis:* A SWOT (strengths, weaknesses, opportunities, threats) of the grass-fed market was done to confirm an understanding of the challenges, barriers and opportunities that exist for pasture-raised products before moving forward with further research. Analysis of survey and phone interview data of three segments of the supply chain (producers, processors and distributors-buyers-marketers) yielded a better understanding of the more in-depth research needed in the next phase of the project.

*PHASE TWO: Articulation of theory of change:* As a result of the SWOT analysis, a working theory of change was developed that would unify and guide further research and analysis. The theory of change maps out which actors have to do what in order to achieve and sustain a vision of success, and identifies the major linkages between them.

*PHASE THREE: Establishment of research subcommittees:* Three subcommittees were formed to carry out the more in-depth research indicated by the SWOT analysis: 1) Farm Enterprise; 2) Distributor-Buyer; and 3) Marketing and Communications. The subcommittees gathered the following baseline research data: 1) a survey of direct marketers of beef; 2) a market-channel analysis (distributor, retail, wholesale and food service); 3) a supply and demand analysis; and 4) a regional processing analysis. Additional research at both the regional and national level included: 1) a literature review of benefits of pasture-raised cattle; and 2) a series of field interviews (the basis for an eventual case study series) on successful transitions to grass-fed beef production and marketing.

*PHASE FOUR: Development of implementation plan and recommendations:* Informed by the body of research described above, the Planning Team has outlined a series of Recommendations and a comprehensive Implementation Plan designed to act on the theory of change.

## **PART TWO: INITIAL SURVEY OF SUPPLY CHAIN**

### **Purpose**

By surveying and assessing the major segments of the existing grass-fed beef market, the Planning Committee (PC) hoped to confirm its initial understanding of market dynamics and inform planning for additional research needs.

### **Method**

Surveys were sent to three segments of the beef cattle supply chain: producers, processors and distributors-buyers-marketers.

#### *§ Producers*

An online survey was sent to a list of 150 farmers and ranchers provided by members of the PC. The survey group included farmers and ranchers from a wide demographic range in terms of size of operations and number of animals. The survey group was primarily from the Upper Midwest, though

additional farmers and ranchers outside the area were selected for the uniqueness of their operations. The survey gathered data on practices, challenges and future plans, particularly around operations; land and animal management practices; processing capability and cost; and marketing-sales practices. The survey gathered both qualitative and quantitative data, and invited producers to engage in future one-on-one conversations as the project developed.

### *§ Processors*

The processor survey was sent to 75 companies. The list represented a sub-group of state and federally inspected processors in Wisconsin that were known to be processing cattle from local and regional sources and processors outside the state that had business relationships with a Planning Team member. A mix of phone interviews and electronic data gathering were used. The surveys focused on plant capacity, services, certifications and future plans.

### *§ Distributors-Marketers-Buyers*

The survey of distributors-marketers and buyers was designed to capture information about sources of meat product by type of supplier; types of meat product (natural, organic, grass-fed); pricing differences between products; and expectations for future product demand by type. These surveys were conducted by telephone.

## Results & Analysis

### *§ Producers*

#### Results

- Response rate: 30% (44 of 145 responded)
- Majority of respondents are from the Upper Midwest (27)
- Mean head count is 122 on cow/calf operations and 91 for finishing operations
- 90% of respondents are using rotational or managed intensive grazing systems
- 48% routinely vaccinate livestock (annually) and only 23% are using growth stimulants
- 41% sell cattle at local auction and 52% are marketing beef directly to consumers
- 60% believe their current processor has adequate capacity to meet their needs
- Only 9% indicated that they are marketing to branded programs, while 59% are marketing a portion of their cattle through natural, organic or grass-fed beef channels, primarily through direct marketing (locker beef, farmers markets, community supported agriculture (CSAs) etc.)
  - Nearly 70% would market through direct market and branded program channels if demand increased
- 43% have plans to expand their herds and 25% plan to expand acreage

#### Analysis

Despite small sample size, the survey indicates several positive trends for the industry:

- **High usage of advanced grazing techniques.** This means more producers are exposed to and applying grazing, and that there may be a good pool of “mentor producers” available to provide technical assistance to others.
- **Low usage of growth stimulants.** This indicates that producers are getting adequate weight gain results on pasture without growth stimulants. Non-usage of growth stimulants is also a key requirement for grass-fed certification.

- **Adequate processing capacity.** Most see processing as at least adequate. There were no real barriers mentioned on the processing side.
- **Room for expansion into branded programs.** Branded programs in natural, organic and grass-fed meats dominate the retail, wholesale and food service channels. Since nearly 60% are already selling some cattle into these channels, growth potential is encouraging. It is clear from responders that most producers are not currently marketing all of their annual production into these channels. The product that is not going into the natural, organic or grass-fed sector is being marketed conventionally. Transitioning all of their production into the grass-fed sector could substantially increase available supply in a short time.
- **High numbers intending to expand herds and acreage, counter to trends.** This may be related to the high percentage of direct marketers that responded, since they are getting well above commodity prices for their beef.

### *§ Processors*

#### Results

- Response rate: 17% (13 of 75 responded); seven respondents are from the Upper Midwest
- Based on responses, the largest are all USDA inspected (6) and the smallest are all state inspected (4)
- Eight of the respondents process multi-species
- Most of the smaller plants (4 of 5) do not have the capacity to fabricate (break down carcasses into individual primals and cuts) their daily slaughter
- There were limited responses to questions about packing capability, though in general, the larger the plant, the more capability
- However, small processors are generally doing business with producers only
- The one USDA defined “large processor” that responded to the survey processes a large percent (45%) of cattle that they own
- Eight of the respondents are third-party certified; certifications included USDA, other organic, animal welfare-related, and process certifications such as Halal
- Only one plant indicated that they had plans for expansion

#### Analysis

The low response rate may be due to processors’ disinclination to share specific information for purposes other than state and federal inspection. Even with the limited survey size, there are still conclusions we can make about Upper Midwest processing capabilities:

- **Large numbers of small and very small processors in the Upper Midwest (based on USDA data, definitions).** Processors of this size tend to have less fabrication and packaging capability. This is important for retail and wholesale markets as these buyers want most of their beef cut, ground and packaged at delivery.
- **Large numbers of state-inspected processing plants in the Upper Midwest.** Unless states enter into agreement with USDA, state-inspected meats cannot be sold interstate. Wisconsin is currently the only Upper Midwest state working on an agreement with USDA.
- **The majority of available USDA-inspected processing is in small and very small plants.** The capabilities to slaughter and fabricate through these plants is limited, but any grass-fed beef sold outside of direct market channels must be USDA inspected to be sold interstate.
- **The “large” respondent to the survey, with a capacity to slaughter and fabricate 2,100 head of cattle, is processing 95% of those as commodity beef.** Although this does not mean that the

processor would not consider animals with other types of certifications, the numbers on any given day would have to increase dramatically.

- **Only one of the small plants has plans to expand.** This *could* be an indication that the others have capacity and room to grow, though it is not possible to tell from survey results.

### *§ Distributors-Buyers-Marketers*

Attempts to elicit survey responses were relatively unsuccessful. Despite numerous attempts to connect with survey targets, particularly those in branded programs, these efforts yielded little success. In the end, there were a total of four respondents, two of whom were large food service management companies.

The survey attempted to get key information related to the demand for grass-fed beef; pricing differentials with other types of meats; and opinions about the future viability of the grass-fed beef market. And while the opinions of buyers are important, it is likely that an understanding of their approach to grass-fed meats can be gauged just as well by their actions in the marketplace as by their survey responses. Thus, continued research will focus on the use of secondary data for more information on these market channels.

### *§ Conclusions*

Grass-fed producers are quickly adopting methods of intensive and rotational grazing. Intensive grazing promotes faster weight gains, reduces winter feeding costs through the haying of more grass and allows for more animals to be raised on the same number of acres than more traditional grazing methods. Intensive and “mob” grazing techniques have also been shown to stimulate grass production and help grasses yield through heat and drought stress. As more farmers learn and use these techniques, it increases the chances that others will adopt them. Though most grass-fed beef producers are focused on direct marketing, many have plans for expansion and have significant interest in working with branded programs when demand for their product increases.

The fact that available processors are small, have limited fabrication and cold storage space and have no plans for expansion is an area of concern. The grass-fed market needs processing capacity to grow, which likely means that producers need to be connected to larger plants, and those plants need to see more animals committed to daily harvest to be interested.

This preliminary assessment of the strengths and weaknesses of the grass-fed beef industry in the Upper Midwest provided insight into areas across the supply chain that need additional research and assessment. For example, we learned that it will be important to understand:

- What are the triggers that will encourage producers to adopt practices that grass-fed market protocols/standards?
- How can producers effectively shift from marketing traditional practices to marketing grass-fed practices?
- How are processing constraints (for example, distance to plants, USDA inspection, processing and cold storage capabilities, processing costs) impacting producer ability to expand grass-based production and marketing?
- What infrastructure is needed for growth of the branded program marketing sector?
- Is there access to needed capital, both public and private, for planned expansions?

From this initial assessment we developed an operating theory of change and subsequently conducted additional research and assessment that ultimately contributed to our Recommendations.

## PART THREE: THEORY OF CHANGE

### Background

Keystone, a UK-based not for profit that works to develop better ways to plan, measure and report on social change, describes a theory of change as “an explicit presentation of the assumptions about how changes are expected to happen within any particular context and in relation to a particular intervention. A theory of change maps out which actors have to do what in order to achieve and sustain a vision of success, and identifies the major linkages between them.”<sup>5</sup>

The Planning Committee developed a theory of how change might occur in the cattle industry, to unify the work of each of the subcommittees and keep focus on the overall project goals. In the context of making changes in the conventional ways in which cattle are raised, sold and marketed, it is important to clearly define assumptions, and to continually check that chosen actions move the work toward an established vision. A theory of change also promotes an understanding of key actors that make change possible, what their roles are, and how they are connected.

### Vision

The vision toward which our theory of change works is a growth in pasture-based animal agriculture that will:

- Provide opportunity for producers, processors and buyers;
- Offer healthy products to consumers;
- Increase the number of acres in sustainable management; and
- Result in cleaner surface and groundwater systems.

### Pasture Project Theory of Change

***Producers in the Midwest are the key actor that will need to change in order for expansion of grass based agriculture to expand. In order to do so they will require “compelling arguments” that lead to more farmers and ranchers transitioning operations*** to pasture-based animal agriculture and exploration of viable alternatives to reliance on nitrogen and phosphorus based chemical fertilizers. This includes providing options to row crop farmers, such as strategic rotations into pasture-based animal agriculture and use of biological matter, which would lower costs, build soil organic matter, restore soil microbial activity, increase yields, and enhance revenues. An important assumption in our theory of change is that with increased production and a more even supply of grass-fed cattle, others in the value chain will respond positively: branded programs will seek out these cattle; processors will be willing to accommodate the new business knowing that they can count on the supply; and buyers will expand

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<sup>5</sup> [www.keystoneaccountability.org/glossary](http://www.keystoneaccountability.org/glossary)

their client offerings knowing they can meet the demand they stimulate. But without increased and more consistent supply, other actors in the value chain will not be in a position to act.

To this end the team will:

- Use field interviews, existing research, peer-to-peer knowledge sharing, and technical assistance to develop the economic, business and environmental arguments for change.
- Assist producers and marketers in establishing relationships along the values-based supply chain and in understanding the needs of distributors-buyers for pasture-raised products in areas such as certification, labeling, processing and branding.
- Develop marketing and communication strategies to support the goal of increasing the numbers of animals raised on pasture in the Upper Midwest.
- Incorporate the latest science, point out current public policies that hamper our goals, and suggest new policies that would support our efforts.
- Look for opportunities to create public, private and foundation partnerships to support the project.

## PART FOUR: EXPLORING STRATEGIC ISSUES

### Background

The key action within our Theory of Change is ***the transition of existing cattle producers from conventional to pasture-raised methods.***

In working toward this key action, we have identified a number strategic issues to guide our research and eventual implementation. These strategic issues address 1) changes that producers will need to make in their own operations; and 2) areas of operation of others along the supply chain that producers must better understand in order to successfully transition.

For example, in the conventional cattle market, the majority of producers are operating cow-calf operations. Producers typically sell weaned calves to a stocker operation that continues to add weight on grass or to a backgrounding operation, which places calves in a “backgrounding” feed yard where they consume a high roughage diet supplemented with grain and other concentrates. Cow-calf producers usually sell whenever the calves are ready for weaning. They are not typically worried about the productivity of their grass related to forage finishing of cattle or about the attributes of the meat beyond the genetics of the sires and dams. Stocker operators, on the other hand, must be concerned about grass production for lean muscle growth, since their job is to take cattle from 400 lbs to 700+ lbs, but do not concentrate on forage quality needed for actually finishing cattle. However, they are free to use herbicides, pesticides and chemical fertilizers to promote “mono-cultures” of grass, and to use antibiotics and growth stimulants to promote faster weight gains.

When producing for grass-fed markets, all of this changes. Most grass-fed protocols prohibit chemical fertilizers, herbicides and pesticides. Nearly all prohibit the use of sub-therapeutic antibiotics, with most even prohibiting the use of therapeutic antibiotics. All programs ban the use of growth stimulants.

Additionally, the production of finished grass-fed beef requires that farmers and ranchers seeking to transition from conventional beef production will need to learn new skills to improve grass production and nutrient quality, animal weight gain, and health care. They may also need to learn marketing skills if they decide to develop or join branded programs, and may have to contend with processing if they decide to finish cattle and bring them to market as primal or finished cuts of meat. However, with the historical price premiums running an average of \$20-\$30/cwt above the commodity markets, there is incentive to transition production systems.

These are the sorts of strategic issues that have guided the additional research presented below, ultimately facilitating the creation of Recommendations and an Implementation Plan that work toward the key action of our Theory of Change – *the transition of existing cattle producers from conventional to pasture-raised methods.*

## Strategic Issues

- **Lessons from operations in transition.** Conducting field research (for eventual development into a series of case studies) on farming and ranching operations that have successfully transitioned operations will provide the opportunity to identify and share thematic lessons and barriers in transitioning. The producers featured will represent a range of sizes, operating styles and phases of transition (i.e. just beginning, in the midst of transition, etc).
- **Knowledge base of characteristics of grass-fed beef.** The characteristics of grass-fed beef go beyond its USDA grade; producers must learn what these characteristics are, and why they matter. For example, they must know the differences between certification standards and buyer protocols; whether or not antibiotics can be used on sick animals and still be sold as “certified grass-fed”; or whether or not fertilizer or herbicides can be used on pasture and how long cattle may be penned, even during emergencies.
- **Knowledge of processing and fabrication options.** For producers that decide to finish cattle and develop a brand, working with a processor and fabricator is critical, especially with one that has the appropriate skills. Finding a processor that can fabricate the cuts as well as package and label the value-added products required for each market channel is important, as is finding a processor that can slaughter animals at a volume and price that meets the producers’ needs.
- **Data on the market dynamics for grass-fed beef.** Producers need better information about grass-fed beef market trends and what they can expect in the future. Unlike the conventional cattle market, there is no USDA data collected on the numbers, prices or consumption of grass-fed beef. The anecdotal evidence is that demand exceeds supply, and could be growing at a rate 30-40% per year. Studies point to consumer preference for beef coming from animals that are local or regional, and humanely treated.
- **Understanding of health and environmental impacts of grass feeding.** Related to consumer preferences are the benefits to animals, humans and the environment, of raising cattle on grass. There are questions of carbon sequestration, resource use and greenhouse gas (GHG) emissions that are being hotly debated between advocates of conventional and pasture-raised production systems. While business economics will likely be the primary decision driver for producers, it is important that a project promoting grass feeding be able to speak with producers on both sides of the issues.

These five strategic issues drove the project’s research agenda, resulting in the following broad areas of inquiry: Field research of operations in transition; Survey of direct marketers of beef; Market channel

analysis; Regional processing analysis; Benefit analysis of grass-fed and pasture-raised beef and dairy; and policy barriers to adopting managed grazing. The results of this research are presented below, followed by the Recommendations and Implementation Plan drawn from the research.

## PART FIVE: RESEARCH AND DATA GATHERING TO INFORM STRATEGIC ISSUES

### Producer Field Research

Field research was conducted to examine key decision and transition steps for farms and ranches that have moved from more conventional agricultural production methods to sustainable, grass-based production systems.

Key transition focus areas included:

- Transition from conventional livestock production to 100% grass-fed livestock production
- In-transition from conventional livestock production to grass-fed livestock production
- Transition from row crop farming to grass-fed livestock production
- New producer adoption of grass-fed livestock production

Six individual producers, producer cooperatives or networks were selected for field research subjects, representing a minimum of 1-2 examples of each type of transition. Each set of producer interviews covered historical development, current dynamics, keys to success, and future dynamics. The results of this field research will eventually be developed into a series of case studies and learning modules for producer education.

#### *§ Field Research Participants*

**Wayne Rasmussen, Cattle rancher and row crop farmer in north central Nebraska:** Farms several thousand acres. Transitioned from conventional row crop farmer and cattle and hog producer, to grass fed-beef producer. Direct markets small number of finished cattle annually and sells majority of finished cattle to several branded programs. Founding member of Grass Fed Exchange producer network and conference.

**Greg Judy, cattle and sheep rancher in North Central Missouri:** Transitioned from conventional producer to management intensive grazer to high stock density (mob) grazer. Grass finishes beef and lamb. Markets majority of product direct to consumer, sells excess to branded programs. Has written two popular books on grazing and soil management. Considered “guru” of mob grazing.

**Tom Wrochota, cattle and sheep rancher and poultry producer in central Wisconsin:** Originally a businessman and economics professor with no prior agriculture experience. Transitioned from non-agriculture business world to full-time farmer. Direct markets all product through direct to individual sales, farmers markets, CSAs, food co-ops, and local restaurants.

Participants started as conventional farmers/ranchers or in non-agriculture business. All participants now concentrate on the production of high quality food products that have an excellent flavor/taste profile, definable attributes, and are produced in a manner consistent with environmental improvement.

**Grassfed Livestock Alliance, an alliance of 15-20 members across Texas, Oklahoma and Arkansas:** One of the first grass-fed beef brands to be sold through Whole Foods. Today markets to all 22 stores in Whole Food's Southwest Region.

**Wisconsin Grass-fed Beef Producers Cooperative, a cooperative marketing "Wisconsin born and raised" cattle under the Wisconsin Meadows™ brand.** The co-op was formed in 2008 and sold its first meat in 2009. The brand can be found in restaurants, retail and food service, mostly in Wisconsin and southern Minnesota.

**American Grassfed Beef-Raincrow Ranch, a cattle ranch in Missouri:** Patti and Mark Whisnant founded the company and run a truly family owned and managed business. They operate their own slaughter plant and sell to restaurants and retail in the Midwest and on the East Coast. They manage all finishing of cattle to insure quality and consistency of the beef.

### *§ Key Preliminary Findings*

#### Historical Development

- Most started in a conventional manner and followed conventional wisdom from the land grant universities, Extension and industry.
- All started with high hopes of good profitability and growth potential.
- Most sold their livestock and other farm products in a conventional manner through the commodity markets.
- Most initially followed the high input, high yield model that is popular with conventional production.
- Several found that conventional production systems and methods were gradually eroding the productivity of the land, not increasing it.
- Early debt load combined with volatility of the commodity markets created moderate to severe financial stress, even to the point of bankruptcy.
- Some participants had little to no prior experience in agriculture prior to starting their farming operations.
- Formal education of the participants ranges from a high school education to advanced degrees. One participant was a former economics professor, another is a doctor of veterinary medicine.
- All have a love for the land and a desire to be good stewards.
- Early sources of information for shifting production methods from conventional to sustainable were predominantly from key individual contacts, as well as conferences, seminars, field days or workshops. Almost to a person, they all met one or more influential people who played a primary role in their transition.
- Almost all of the participants are now active as speakers, teachers, mentors and consultants to others who are seeking to transition.

#### Current Dynamics

- Participants started as conventional farmers/ranchers or in non-agriculture business. All participants now concentrate on the production of high quality food products that have an excellent flavor/taste profile, definable attributes, and are produced in a manner consistent with environmental improvement.

- Most agree that the consumer's eating experience is the key to building a strong, reliable customer base.
- Several have transitioned a portion of their row crop land into pasture and have been able to achieve net margins with the grass-fed livestock production that are equal to or greater than the row crop net margin.
- Grazing practices have shifted to intensively managed, rotational grazing systems that allow for adequate root and plant recovery before re-grazing. All utilize newer technologies in electric fencing to provide both permanent and temporary fencing solutions that are efficient and cost effective.
- Water quality, availability and runoff are key issues.
- Grazing practices have increased soil microbial activity; reduced or eliminated reliance on fertilizers; reduced reliance on stored forages (hay, haylage, silage) and other feedstuffs; improved plant growth and diversity; prolonged the grazing seasons; and encouraged greater wildlife population and diversity.
- All have focused on animal care, welfare and humane handling.
- All have developed effective direct markets or work closely with branded programs or alliances and co-ops that have developed markets.
- Selecting key value chain partners is important to each participant.
- Technical support comes primarily from knowledgeable industry consultants and key university, extension and NGO contacts.
- Financial support is sourced from lenders that have developed an understanding of the value added, value chain market. In several cases, the businesses are being cash flowed from operations.
- Most participants stated that the lending world is very hesitant to allow producers to try anything beyond the conventional, because that is all the lender knows. They stated that education aimed at key agriculture lenders is crucial to enabling young farmers to participate in grass-fed agriculture and alternative marketing.
- Most participants carefully monitor and account for all costs of production, both pre- and post-harvest. In the case of alliances and the cooperative, much of this is left to the individual producers.
- Most participants feel that their method or "system" of production is replicable and can be modeled.

#### Keys to Success

- Attitude adjustment: being open to new approaches, learning from others and being solutions-oriented
- Courage, conviction and discipline
- Relationships with key mentors, consultants or industry/university experts
- Building a knowledge base, skill set and professional network
- Knowing cost of production and setting reasonable expectations for net margin and return on investment
- Teaming with strategic value chain partners and working closely with them to develop and grow supply and markets
- Knowing their strengths and weaknesses
- Ability to access financial assistance
- Controlling quality from finishing through harvest to maintain beef quality

## Future Dynamics

- Growth in the grass-fed sector depends first on education of producers.
- Other key sectors of the value chain must be integrally involved in this growth, as additional processing, distribution and markets will be needed.
- Educating lenders and lending institutions, as well as possible investment sectors, is also a necessity for industry growth.
- Price point decisions have to be made based on true cost of production and return on investment.
- Challenges will come from retail price pressure within both the commodity and grass-fed sectors.
- Differentiating between grass-fed systems will become a growing issue, in terms of identifying which systems address consumer expectations in the areas of animal welfare, environmental benefits and human health.

## Survey of Direct Marketers of Beef

Many small and mid-sized beef producers are marketing directly to consumers through CSAs, farmers markets, and via the Internet. Websites such as *LocalHarvest* ([www.localharvest.org](http://www.localharvest.org)), *Eat Well Guide* ([www.eatwellguide.org](http://www.eatwellguide.org)) and *The Local Beet* ([www.thelocalbeet.com](http://www.thelocalbeet.com)) allow consumers to connect with meat producers throughout the country. A quick check of the *Illinois Farm Direct Farmer to Consumer Directory* ([www.illinoisfarmdirect.org](http://www.illinoisfarmdirect.org)) surfaced 73 farmers, butchers and meat lockers selling local meats within a 150-mile radius of downtown Chicago.

To better understand what type of beef these producers are raising and whether or not they would be interested in “scaling up” to meet the demand through wholesale and retail channels, a survey was designed, with the help of a team from the *Eat Well Guide*, and distributed to approximately 700 producers in Illinois, Indiana, Iowa, Minnesota, Missouri and Wisconsin. We targeted producers listed in the above guides and other sources, who advertised their farms as raising and marketing grass-fed beef. The survey was sent out to approximately 50% of the respondents via e-mail and 50% via direct mail.

The fact that over half of respondents have plans to increase herd size in the next 12-18 months points to the strength of the grass-fed beef market, especially as commodity herds are being liquidated.

The response rate was 18% (124 of 700 producers), with a high percentage of those producers indicating that they only market grass-finished beef.

- 80% of respondents are marketing grass fed beef (98). Of that total, about 90% are finishing entirely on grass (88).
- Survey responses cover Illinois (21), Indiana (7), Iowa (11), Minnesota (19), Missouri (22) and Wisconsin (43).
- For the six-state region, the average acres grazed is about 158; the average number of cattle raised on pasture is about 63.
- A total of 71 producers responded to the question of annual marketing. Total cattle marketed ranged from as few as one to three head, to as many as 200. The average per farm marketing is 22 head with a mean of 15 head.
- About 53% have no plans to expand herd size in the next 12-18 months; 47% have plans to expand herd size between 10-30%.

- About 86% have no plans to expand grazing acres; about 6% will expand between 10-20% and another 6% will expand acreage by 30% or more.
- About 74% are marketing whole carcasses, sides and quarters; 20% are marketing live animals; about 69% are also marketing retail cuts.
- About 15% are interested in joining some type of cooperative or network of growers; another 20% are either already in networks or have explored forming or joining one.

The fact that over half of respondents have plans to increase herd size in the next 12-18 months points to the strength of the grass-fed beef market, especially as commodity herds are being liquidated. Also encouraging is the fact that most of this herd expansion will take place without expanding acres. This is a direct indication that forage and grazing programs are being well managed, in keeping with the ultimate goal of minimizing harmful runoff.

The differences between the average number of animals per farm being marketed as grass-finished (22 head) and the average number being raised on pasture (63 head) presents an interesting opportunity. The numbers indicate that there are approximately 40 head being produced annually by these operations that are not currently going into a grass-fed program. There are several reasons for this. First, most producers who are direct marketing have their “plates full” with both the production and the marketing aspects of their programs. Many simply do not have time and energy needed to direct market more cattle than they currently market. Second, most are holding the cattle they finish for direct market for 24-30 months prior to marketing. This presents a cash flow problem that predicates the marketing of younger cattle into the commodity sector to satisfy cash flow needs in the interim. Third, holding all of their annual production of cattle until finished for market ties up acreage needed for the cow/calf herd. They simply do not have enough acreage to finish all the cattle they are producing annually. Finally, many of these direct marketers are not fully aware of the opportunities afforded by the existing grass-fed branded programs. With producer education in this area, these direct marketers could become an important supplier of cattle to grass-fed beef branded programs. Their options include selling weanlings or yearlings to custom grass finishers or directly to the branded programs, which would then finish the cattle for eventual harvest; retaining ownership of their excess cattle by forward contracting with a branded program and paying a custom finisher to take the cattle to harvest weight; leasing additional pasture needed to finish the excess cattle; or improving their own pastures through High Stock Density grazing management techniques.

Through producer education, many of these direct marketers could significantly increase their opportunity to capture additional market premiums. At the same time, they would become an important cog in the growth of the existing grass-fed beef branded programs and facilitate overall growth of the grass fed sector.

The survey respondents did indicate a familiarity and interest in participating in producer cooperatives, networks and alliances, a vital step toward participation in branded programs and overall sector growth. Supporting connections to existing groups such as the Wisconsin Grass-Fed Beef Cooperative would be a place good to start in the region.

Figure 1: Herd size expansion plans

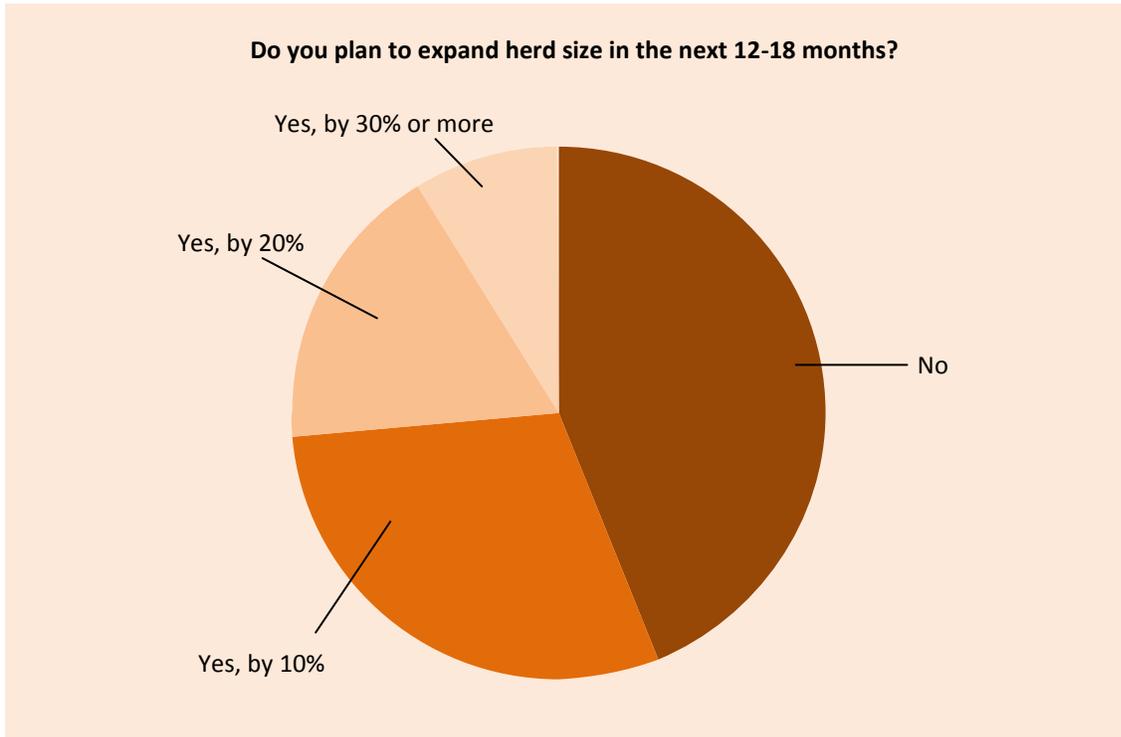
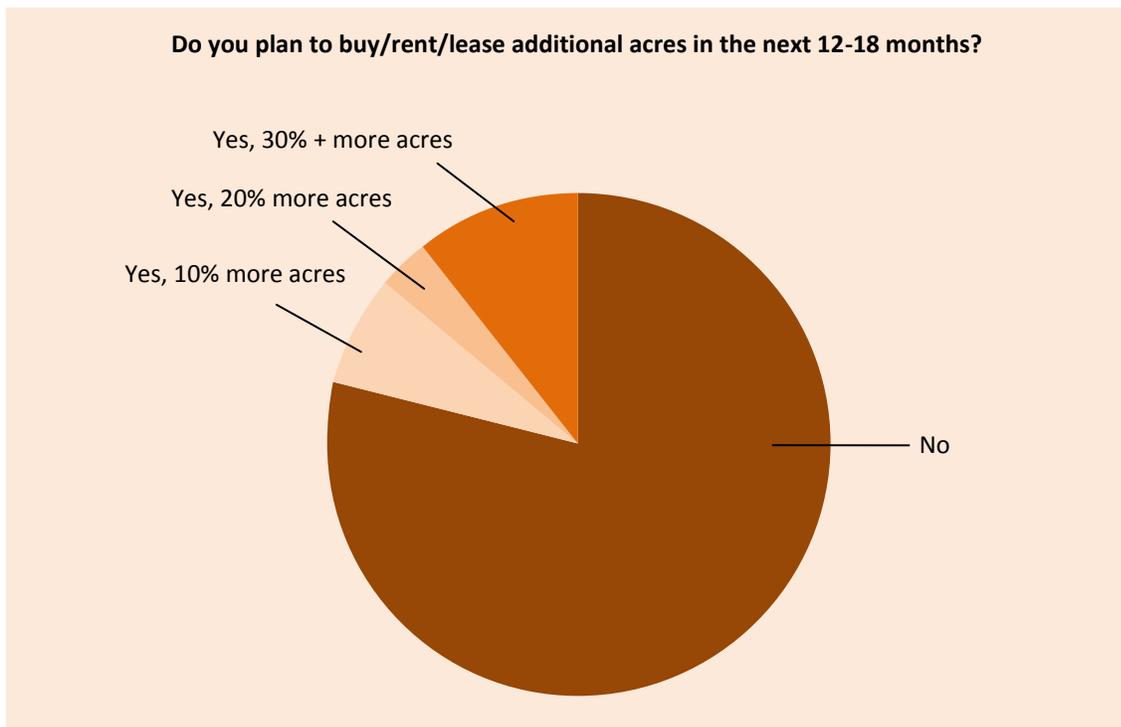


Figure 2: Acreage expansion plans



## Market Channel Analysis: Branded Programs, Retailers, Distributors, Wholesale and Food Service

For the purposes of this research, buyers were segmented into five market channels, to better understand the meat attributes that buyers of grass-fed beef are seeking: branded programs, retailers, distributors, wholesalers and food service. Additional information regarding the change in demand in these channels can be found in the next section, Grass-Fed Beef Category Growth and Demand.

### § Market Channel: Branded Programs

Branded beef programs are nothing new in the beef industry. All the major cattle producers and processors sell at least some of their products as branded, such as Tyson Foods' *Star Ranch Angus*®, Cargill's *Excel*® and *Sterling Silver*®, and JBS's *Swift Premium Black Angus*® and *American Reserve*®. Beef brands are used by producers and processors to differentiate between market channels, particularly retail and food service, establish customer loyalty, and offer various attributes or qualities at different price levels.

Grass-fed beef brands being marketed in the Upper Midwest are relatively new, most having started within the last five years. They have followed the development of natural, grain-fed brands and have become a niche in the industry.

Our research and field interviews indicate that the largest of these brands are slaughtering upwards of 100 animals on a weekly basis and the smallest are averaging less than 20. Not all of the animals slaughtered are being raised in the Upper Midwest, nor is all the meat sold going to Midwest consumers. Understanding these brands and the companies behind them is important however, as branded programs currently have the flexibility to expand production and commitments to other market channels. They have already established themselves as reliable meat suppliers and buyers of cattle, have developed the needed processing and distribution infrastructure and have created a "brand image" with consumers to pull their products through the supply chain. In essence, they are a ready market for cattle that are raised in pasture-based systems, offering smaller farmers and ranchers a competitive outlet without the need to establish direct or indirect marketing relationships themselves.

The following is a list of Midwest based beef brands that are selling "at scale" into various market channels:

- **American Grassfed Beef (MO):** [www.americangrassfed.com](http://www.americangrassfed.com)
- **Grass Run Farms (IA):** [www.grassrunfarm.com](http://www.grassrunfarm.com)
- **Seven Sons Meat Company (IN):** [www.sevensons.net](http://www.sevensons.net)
- **Tallgrass Beef Company (IL):** [www.tallgrassbeef.com](http://www.tallgrassbeef.com)
- **Thousand Hills Cattle Company (MN):** [www.thousandhillscattleco.com](http://www.thousandhillscattleco.com)
- **U.S. Wellness Meats' Grasslands Beef (MO):** [www.grasslandbeef.com](http://www.grasslandbeef.com)
- **Wisconsin Grassfed Beef Cooperative's Wisconsin Meadows™ (WI):** [www.wisconsingrassfedbeef.coop](http://www.wisconsingrassfedbeef.coop)

What is most important is to understand the similarities and differences between the beef offered through these brands, because raising beef to a common set of standards will give producers the most flexibility when offering finished cattle to branded grass-fed programs.

Each of these brands has a unique story and a “place-based” history key to its development. American Grassfed and Wisconsin Grassfed Beef Cooperative are featured in the field research presented as part of this report (see Appendix 2). All are selling through multiple channels, including direct to consumers via the Internet and one through a CSA program. The business structures of the Midwest-branded programs are quite different, ranging from an individually-owned marketing company to a producer cooperative with a highly engaged board of directors.

What is most important is to understand the similarities and differences about the beef offered through these brands, because raising beef to a common set of standards will give producers the most flexibility when offering finished cattle to branded grass-fed programs. The dominant features of grass-fed standards or protocols are in the areas of feeding, confinement and animal husbandry.

### Feeding

All the brands listed claim that cattle in their programs are “100% grass-fed”. Terms such as “graze freely”, “grass-finished”, “fed grass and plant forage” and “no grain” are indications that cattle have been raised in a pasture environment. Mineral and carbohydrate supplements are generally available to animals, with at least one protocol stipulating that supplements be “provided free choice”, meaning the cattle decide how much and which supplements they will eat. Feeding pastured hay forages and non-grain silage is allowable and necessary in most cases during the winter. There is a general practice of not using synthetic herbicides or fertilizers in pastures, though not all expressly forbid it. All brands are explicit that no animal or fish by-products and no genetically engineered plants be fed to cattle.

### Confinement

The USDA-Agricultural Marketing Service’s (AMS) Grass-Fed Marketing Claim states that “animals must have continuous access to pasture during the growing season”. The brands in our study go beyond the idea of “access” to pasture, and put into practice the intention of raising cattle on pasture and grasses. For example, Wisconsin Grassfed Beef Cooperative has a minimum of 120 days access to fresh pasture and a minimum of 30% fresh pasture intake annually. American Grassfed Beef, following the American Grassfed Association protocol, limits the time in confinement to 30 days annually and prohibits placement in pens or feedlots during pasture growing season. Claims by U.S. Wellness Meats that “animals graze freely throughout their lives” and by Tallgrass Beef that “we allow our cattle to spend their lives on open range or improved pasture,” are clear indications that it is important for these brands that cattle be raised for as long as possible on pasture.

### Animal Husbandry

None of the brands in the study allow for the sub-therapeutic or continual feeding of antibiotics, or the use of hormones, steroids or artificial growth stimulants. The use of antibiotics and parasitic treatments for sick animals is allowed, with the producer required to keep strict records. However, those animals are not allowed to be marketed under most of the feeding protocols, including Thousand Hills, American Grassfed and Wisconsin Meadows brands. Producers sign an affidavit either at the time of sale or when joining the brand, certifying that they have followed the protocols.

Additionally, the production of finished grass-fed beef requires that farmers and ranchers seeking to transition from conventional beef production will need to learn new skills to improve grass production, nutrient quality and animal weight gain, since the use of synthetic herbicides, pesticides and the feeding

of any grain are prohibited under most branded program protocols. Any genetically engineered substance, animal or fish by-products are also excluded as feeding options for producers.

#### Other Standards and Protocols

- **Breeds and Place of Origin:** Wisconsin Grassfed Beef Cooperative differentiates itself by marketing only cattle that are “Wisconsin born and raised”, and come from British breeds. Thousand Hills Cattle Company markets the same breed types, excludes “Brahman influenced” cattle and prefers to buy cattle from Minnesota. All brands are attempting to buy and process cattle of similar breeds to improve feed conversion, consistency of size, carcass yields and meat quality-consistency.
- **Humane Treatment:** All of the brands promote the humane treatment of animals, which is certified by third parties for producers selling to Thousand Hills Cattle Company and American Grassfed Beef. Humane treatment rests on the well-established definitions found in the “Five Freedoms”, first developed by the UK Farm Animal Welfare Council ([www.fawc.org.uk](http://www.fawc.org.uk)).
- **Certification:** Only two of the brands studied require third-party certification. Thousand Hills Cattle Company producers are certified by Food Alliance (<http://foodalliance.org/certification>) and American Grassfed Beef by the American Grassfed Association ([www.americangrassfed.org](http://www.americangrassfed.org)).

#### *§ Market Channel: Retail*

Our research and knowledge of buyers in the Upper Midwest has led to a listing of nearly one hundred retailers that are carrying branded grass-fed meats. From “high end” retailers such as Kowalski’s Market (with nine stores in Minneapolis and surrounding suburbs) to regional supermarkets such as Kroger’s, retailers are connecting with consumers that want grass-fed meats as part of their offering. Retailers are by and large allowing the branded programs to set the “standards” for grass-fed meats, with some positioning it next to organic grain-fed meat.

A check of the Lund’s-Byerly’s website (<http://mywebgrocer.com>), an upscale retailer also located in the Minneapolis/St. Paul market, found Organic Prairie brand ground beef retailing for \$9.99 per lb., selling alongside Thousand Hills grass-fed ground beef at \$9.49 per lb. A call to Sendik’s Food Markets, a neighborhood grocer with nine stores in suburban Milwaukee, found Pasture Premium Farms brand grass-fed ground beef selling for only \$5.99 per lb. This price variation is not atypical in the retail sector and is primarily a reflection of the retailer margin applied at the store level. The price differences are also influenced by store location and the fact that Pasture Premium Farms is likely a private label brand, priced to compete with lean, ground commodity beef.

Despite retailer interest in grass-fed meat, there is little online promotion of the brands. The occasional reference that “we proudly feature” a particular grass-fed brand (<http://holzkopfsmeatmarket.com>) is the only indicator, if any. However there are some exceptions. The Wedge Natural Food Co-op ([www.wedge.coop/meat-seafood/meat](http://www.wedge.coop/meat-seafood/meat)) and Kowalski’s Market (<http://kowalskis.com>) are examples of retailers that are actively promoting their grass-fed meat brands to consumers. Kowalski’s goes so far as to name Thousand Hills Cattle Company as one of its “local partners”.

Of particular note is Whole Foods Market's announcement<sup>6</sup> that it is implementing a tiered, colored-coded guide to inform consumers of the animal welfare conditions under which cattle, chickens, hogs and turkeys were produced. The protocol, known as the Global Animal Partnership (GAP) 5-Step™ Animal Welfare Standard ([www.globalanimalpartner.org](http://www.globalanimalpartner.org)) will give consumers the opportunity to buy meat, likely at a price differential, based on levels of animal welfare; Step 5 represents the scale's highest level of animal welfare. Accompanying the announcement of the GAP launch, a Whole Foods spokesperson indicated that in the Atlanta store that has rolled out the program, a grain-fed rib eye rated Step 1 was priced at \$14.99 per lb., and a locally grown grass-fed rib eye rated Step 4 retailed for \$15.99 per lb.<sup>7</sup> While there is a good deal of disagreement as to whether or not the standard will improve animal welfare, there seems to be no doubt that the GAP sees grass feeding of animals as beneficial to welfare. And since Whole Foods is seen as a leader among natural and organic retailers, there may be others that follow and adopt the GAP standard.

### § Market Channel: Food Service

This channel includes institutions such as restaurants and “food chains”, corporate cafeterias and college dining halls. In particular, white table cloth restaurants such as Harry Caray's in Chicago, and establishments serving “pub burgers” are the driving force behind the grass-fed beef industry, as these actors tend to aggressively market the beef's distinct attributes, including the brands and producers, to their own customers.

*Food service management companies are feeling the “pull” toward sustainability by their customers and are doing all they can to show that they are listening.*

The Chicago Green Restaurant Co-op (CGRC) is a great example of how restaurants are promoting grass-fed beef. The CGRC has developed a guide for its members to help them understand when they are truly buying meat from animals raised on pasture. *The Glossary of Meat and Agricultural Terms* explains the differences between such terms as grain-finished, grass-fed, pasture-raised and grass-finished. It also points out what terms are certified-verified and by which agency. At its 2010 State of the Plate Conference ([www.stateoftheplate2010.com](http://www.stateoftheplate2010.com)), the CGRC hosted a one-day session on current and future actions needed to develop a supply of sustainably raised meats in the Midwest; for beef, the focus was on increasing the supply of grass-fed meat.

Food service companies such as Aramark, Bon Appétit (a sponsor of the State of the Plate Conference) and Sodexo are making commitments to buy more sustainably-produced food products. Like restaurants, food service companies are making changes in what they purchase because their customers are demanding it. In the case of food service, many of those customers are college students that get the majority of their food from the campus dining halls managed by these companies. Bon Appétit's Farm to Fork initiative is working to identify 1,000 local and regional farmers to supply its restaurants and food service operations ([www.bamco.com/sustainable-food-service/farmtofork](http://www.bamco.com/sustainable-food-service/farmtofork)), last year extending the program to mid-sized livestock producers and requiring third-party certification for the humane treatment of animals. Sodexo's *Better Tomorrow Plan* calls for the company to “source local, seasonal or sustainably grown or raised products” and “increase the products purchased from fairly and responsibly certified sources ([www.sodexousa.com/us/en/citizenship/thebettertomorrowplan/thebettertomorrowplan.asp](http://www.sodexousa.com/us/en/citizenship/thebettertomorrowplan/thebettertomorrowplan.asp)).

<sup>6</sup> Eng, Monica. Chicago Tribune. Nov 15 2010. New Animal Welfare Rating System to Roll Out at Whole Foods. [http://articles.chicagotribune.com/2010-11-15/business/ct-biz-1114-meat-ranking-20101115\\_1\\_animal-welfare-rating-system-highest-rating](http://articles.chicagotribune.com/2010-11-15/business/ct-biz-1114-meat-ranking-20101115_1_animal-welfare-rating-system-highest-rating)

<sup>7</sup> Ibid.

### *§ Market Channel: Wholesalers and Distributors*

Participants in this channel are vital to grass-fed producers and brands. Distributors and wholesalers facilitate movement of meat products to restaurants, retail and food service customers on time, and protect the cold chain to insure meats retain their quality after leaving the processing plant. While the terms “distributors” and “wholesalers” are used synonymously, there are differences in the services that each typically provide to branded meat programs.

Distributors typically take ownership of product from the branded program. After determining level of demand from their customer(s) for the products, they list the brand as being available through their distribution centers. They work with the brand or producer-vendor to set up price promotions or specials, and determine when and if a new product can be offered to their customers. Distributors usually have their own sales force, relationship managers and customer service representatives to handle customer orders and promote the products. Distributors will typically add 25-40% mark-up to the price from the vendor in order to cover their costs and make a margin. When working with or through a distributor, the producer-vendor gives up the direct relationship with the customer. In return, they gain the opportunity to sell products to the distributor’s customers, ship product to fewer destinations, and consolidate invoicing. The risk is that the distributor may find a similar product and decide to replace a producer-vendor with little or no warning, or discontinue the product if sales volume or margin cannot be maintained.

In contrast, wholesalers typically do not take ownership or “position” product in their warehouses. Instead, they have sales and customer service staffs to take orders from customers, and then place orders to brands and producer-vendors for delivery. The wholesaler provides the producer-vendor with expanded market access, but, in most cases, the producer-vendor maintains the customer relationship. Wholesalers typically have a lower overhead cost than distributors, so mark-ups to the end customer are lower. Since wholesalers may be smaller or more regional in nature, it can be easier for producer-vendors and brands to work with them.

Companies such as U.S. Wellness Meats ([www.grasslandbeef.com](http://www.grasslandbeef.com)) and North Dakota Natural Beef ([www.nabison.com/dakota/](http://www.nabison.com/dakota/)) are brands, marketers and distributors of their own products. As is confirmed by the field research (see Appendix 2), it is not uncommon for grass-fed beef brands to have developed in this way. It allows them to control critical parts of the supply chain and maintain close relationships with the customer.

### *§ Market Channel Analysis: Summary and Conclusions*

The documented premiums being paid for grass-fed cattle over conventionally raised animals are largely driven by consumer belief that the animals are being treated differently, with access to pasture, a diet free of genetically engineered grains, and ethical treatment during their lifetimes.<sup>8</sup>

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<sup>8</sup> Eng, Monica. Chicago Tribune. Nov 15 2010. New Animal Welfare Rating System to Roll Out at Whole Foods. [http://articles.chicagotribune.com/2010-11-15/business/ct-biz-1114-meat-ranking-20101115\\_1\\_animal-welfare-rating-system-highest-rating](http://articles.chicagotribune.com/2010-11-15/business/ct-biz-1114-meat-ranking-20101115_1_animal-welfare-rating-system-highest-rating)

It's no surprise, then, that these brands have very similar standards for raising cattle, since brands are built on trust and consistency. Without a government standard that encompasses all the attributes that consumers of grass-fed beef expect, branded programs are using third-party certifications such as USDA's Grass-Fed Beef Process Verified Program, rancher affidavits and production protocols to provide the transparency needed in a verifiable system.

While there are exceptions such as Whole Food Markets, ([www.wholefoodsmarket.com/grassfedbeef/ranchers.php](http://www.wholefoodsmarket.com/grassfedbeef/ranchers.php)), retailers in general are doing little to directly promote grass-fed beef products. Regional brands are doing the work through their websites and in-store promotions, aimed at getting consumers to try grass-fed products by educating them about the taste-flavor profile and the environmental, animal and human health benefits of grass-fed meats. There can be reluctance on the retailer's part to more aggressively market grass-fed, to avoid promoting one beef product over another. Many want to carry a grass-fed product, but not as their exclusive beef offering. There are long standing relationships between meat department managers and the major packers and distributors; these relationships include inside deals related to promotions and marketing that fledgling grass-fed branded programs simply cannot match. In addition, retailers are aware that consumers want a choice in their beef products, that not all consumers are aware of grass-fed beef or its benefits, and that many favor grain-fed beef at this time. There appear to be definite opportunities for branded grass-fed programs to more closely partner with selected retailers who want to differentiate more aggressively in promoting products to consumers. But more information is needed to determine which retailers fit this category and what the actual concerns are among the larger group of retailers who shy away from such differentiation.

There appear to be definite opportunities for branded grass-fed programs to more closely partner with selected retailers who want to differentiate more aggressively in promoting products to consumers. But more information is needed to determine which retailers fit this category and what the actual concerns are among the larger group of retailers who shy away from such differentiation.

Food service buyers using grass-fed products, especially restaurants, are actively promoting them and educating customers about the differences between conventionally raised and grass-fed meats. There is clear evidence that restaurants and chefs are putting more grass-fed beef on their menus, that there is an emphasis on local, and that an increasing number of food chains are featuring grass-fed hamburgers. This is an important trend for grass-fed producers and brands throughout the U.S., since the ground meat is typically the most difficult to sell and comprises about 40% of carcass.

Food service management companies are feeling the "pull" toward sustainability by their customers and are doing all they can to show that they are listening. In this highly competitive environment, it is good business practice to offer such products, although it seems the companies studied are also sincere in their efforts toward sustainability. Although company literature does not explicitly mention buying more grass-fed or pasture-raised meat, it only makes sense if food service management companies are setting meat purchasing standards based on certifiably sustainable and humane practices.

Distributors and wholesalers are important, allowing grass-fed brands and producer-vendors to access markets and customers that they might not otherwise be able to reach. They can also help streamline sales, promotion and deliveries, giving brands more time to focus on production, quality and marketing. However, they can disrupt relationships with customers by being in the "middle" and not always carrying branded names forward, and they can increase prices beyond what restaurants and food service customers can afford to pay.

## Grass-Fed Beef Category Growth and Demand

### *§ Introduction*

The Grass-Fed Beef category in the U.S. has been growing significantly since the late 1990s. In examining the growth of this new sector, it has become apparent that there are a number of similarities that parallel the growth of the All Natural Beef sector. Thus, it is important to understand the growth parameters and signals in the natural sector in order to develop a sense for potential in the grass-fed sector.

The development of the Natural Beef sector started in earnest in the 1970s. Niman Ranch was one of the first significant branded programs in this category; Niman started production and marketing of natural beef in 1974. They were followed by a number of other significant operations: 1) Coleman Natural Beef in 1979; 2) Laura's Lean Beef and Maverick Ranch in 1985; 3) Country Natural Beef in 1987; 4) Meyer Natural Angus, Brandt Beef and Painted Hills Beef in 1990; 5) Creekstone Natural Beef in the late 1990s; 6) and Cargill, Tyson, National and JBS Swift in the 2000s.

Laura's Lean Beef markets to over 7000 retailers in 47 states, while Coleman Natural Beef is marketed in supermarkets, natural food stores, club stores and restaurants in 41 states and the District of Columbia. Coleman has over 700 family ranch partners in 17 states. Country Natural Beef harvests over 60,000 head of cattle annually and supplies retail, restaurant and food service markets in every region of the U.S.; they have over 200 family ranch partners. Maverick Ranch, a Denver-based family operation, supplies natural beef to more than 2,000 stores nationwide.

### *§ Natural Beef Market Historical Development*

There was rapid and significant growth in this category, but growing supply was a critical issue. The ability to shift the required percentage of cattle from commodity production to natural production was an early issue and required the establishment of significant premiums and incentives to encourage beef producers to change management practices accordingly. At the same time, producers were considering whether to participate in an established branded company or create a brand of their own. However, it is quite expensive to create, develop and establish market presence for a new brand.

One of the first areas that needed to be developed was a working definition of "natural" that the consumer would understand and appreciate. According to the USDA Food Safety Inspection Service (FSIS), all fresh meat qualifies as natural, but those labeled "natural" cannot contain any artificial flavor or flavoring, coloring ingredient, chemical preservative or any other artificial or synthetic ingredient; in addition, the product and its ingredients must not be more than minimally processed (ground, frozen or smoked, for example). Some packers market their natural products under this rather loose definition. However, the majority of "natural" branded programs market and promote stricter standards that appeal to the consumer. These standards include the cattle not being exposed to antibiotics or hormones, not being fed animal by-products, and most include source and age verification of the cattle.

Sales estimates for 2011 indicate that grass-fed beef sales will top \$1.5 billion and are expected to exceed \$2 billion in 2012.

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Compounded Annual Growth Rate (CAGR) shows that the Natural and Organic Meat sectors have expanded an average of 15-20% over the past several years, while the commodity meat sector has experienced annual growth of only 3% on average.

Some also include claims related to animals being totally raised on a range instead of being "finished" in a feedlot and having been sourced from family farms and ranches.

A number of claims can be made on the label, but these label claims must be approved by the USDA FSIS and AMS, are regulated by FDA, and must be verifiable through an audit should these claims be challenged. A challenge could come from competitors or consumer watchdog groups as well as FDA. There is precedent in the courts regarding such challenges, and operators of branded programs have suffered severe penalties for being in violation of their label claims.

Other challenges that faced by the natural beef sector included the issue of larger, competitive players tending to exert downward price influence on these products, making the sector act more like a commodity than a differentiated product. The primary response to this downward price influence, as well as label liability, was to engage with certification systems that offered third-party guarantee of authenticity. This allowed for better marketing and promotion efforts and assured the consumer of product verification and viability.

In the early years of natural beef market development, mainstream beef producers looked at natural and organic beef as the black sheep of the beef market. They dismissed this new product development as a fad that would soon disappear. They also viewed it as potential competition for their conventional beef products; pioneers in natural and organic beef were labeled "outsiders" and "troublemakers". However, time has shown that these innovative producers were actually doing the industry a favor by broadening beef's appeal, and bringing in big numbers of underserved consumers willing to pay more for beef qualities they consider important. Those qualities include no, or limited use of, hormones and antibiotics, and documented animal welfare practices.

This paradigm shift in beef production started more than three decades ago when a Colorado cattleman went with an "innate feeling" and launched a company to give consumers variety, innovation and choice in beef. The firm, Coleman Natural Meats, became the first true natural-beef label.

Today, many companies sell natural beef, including Nolan Ryan Guaranteed Tender Meats, Creekstone Natural, Laura's Lean Beef, Meyer Natural Angus, Harris Ranch, Maverick Ranch, Dakota Beef, Davis Mountains, and even Certified Angus Beef (CAB). In addition, all the major beef packers have now introduced a natural beef product, including National, Tyson Foods, Cargill and JBS Swift.

It is evident that a growing number of consumers are turning to the natural and organic category because it answers this question: "What have you done for me lately in terms of innovation, variety and choice?"

Commodity beef has done a decent job in answering that question through new product development. This has been a key focus of the Cattlemen's Beef Board check-off program in recent years, with more than 2,000 new beef products entering the market between 1996 and 2005. However, consumers are looking beyond just the packaging and cuts and want new attributes that address concerns about health, animal care, environment and food safety. Natural and organic labels have focused on bundling convenience and taste characteristics with information on production practices and animal welfare claims. This bundle provides a discrete segment of consumers with the complete shopping experience they seek.

Coleman in particular has done a good job of providing bundling models for innovative marketing by offering the entire product line in a single location in the meat case, so consumers save time by shopping for beef, pork and poultry with one stop of the cart. They have expanded the company's fresh-beef product line with value-added natural beef products and deli meats that carry a label detailing the production information they require. This one characteristic is the most important driver of new customer interest to the natural and organic category, including grass-fed beef. This is something the commodity sector does not offer on a per package basis.

### *§ Consumer Research*

Kansas State University research indicates that consumers tend to associate natural beef with local, family farms and perceive an increased value from that attribute. Research shows certain consumers are willing to pay more for natural beef. The National Cattlemen's Beef Association (NCBA) monitors retail beef sales through scanner data at the retail level. Natural and organic beef sales have trended upward, ranging from 1.1% in 2003 to 4.2 % during the first quarter of 2011.

Retail supermarket prices, during the first quarter of 2011, averaged \$3.78 per pound for commodity beef prices compared with \$5.48 per pound for natural and organic beef products. This supports numerous research data that indicate consumers are willing to pay some sort of premium for natural and organic beef.

Knowing where their beef comes from is becoming more important to consumers.

In an article in Stagnito's New Products Magazine, Jack Gridley, meat and seafood director at Dorothy Lane Market, a Dayton, Ohio-based operator of three grocery stores that only carry antibiotic-free and hormone-free beef, pork, poultry and lamb, attributes the popularity of natural beef to its perceived health benefits: "Interest still is increasing, even though the category has been growing for fifteen years." This indicates that "natural" labels do have brand value and relate to selling the "food with a face" concept, giving a tacit assurance that consumers find reassuring. In addition, the USDA's Economic Research Service (ERS) indicates that increased sales of organic and natural food products are being driven by health-conscious consumers.<sup>9</sup>

A survey conducted by Whole Foods Markets (2006), the global leader in retailing natural and organic food, showed that 65% of Americans want a guarantee that all meat and poultry products are free of added growth hormones and antibiotics, and that animals are humanely raised; 61% say it is important to read the labels to verify such guarantees; and 59% would purchase more natural and grass-fed beef if it came from trusted sources and was raised naturally (without antibiotics or synthetic growth hormones).

Natural, organic and grass-fed products are getting more attention because of their relative novelty. This publicity and increased consumer awareness has led supermarkets, distributors, restaurants and food service to believe they should take advantage of what has the potential to be a growth trend. At the retail level, meat cases are a destination category that draw consumers into the store. Meat market managers monitor natural, organic and grass-fed products because they comprise a rapidly growing category.

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<sup>9</sup> Natural Beef Profile. Ag Marketing Resource Center. USDA and Iowa State University. 2011.

A recent review of meat and poultry sales through natural foods retailers shows the natural and organic sector, including grass-fed beef, growing at a much stronger rate than conventional meat and poultry sales. For example, between 2008 and 2010, nationwide red meat sales increased 1.7% whereas natural and organic red meat sales increased by 15%.<sup>10</sup>

Coleman Natural Beef's consumer profile describes a highly educated consumer of natural beef who stays informed about world events. Whenever global headlines mention Bovine Spongiform Encephalopathy (BSE, commonly known as "mad cow disease") or pathogens, Coleman contends natural meat consumers seek more information about production practices of their favorite foods. And they don't hesitate to pay premium prices for natural and organic labels to get this information. The same holds true for grass fed-beef.

"We're reaching baby boomers who want to eat better than in the past; young mothers who want more nutritious food for their kids; and younger, highly educated couples whose beliefs are generated by their knowledge," the company explains. "These groups want organic produce and natural beef."

Coleman Natural Beef doesn't see this as a zero-sum game between commodity beef and natural and organic beef. They know that commodity beef will never go away, and are making sure their product is a perennial winner, too. That's why the firm's vision has shifted from convincing consumers to consider natural beef, to continuing to satisfy them through constant innovation, choice and variety. This is the same strategy that is currently being applied in the grass-fed sector and is working equally well as in the more established natural and organic sectors.<sup>11</sup>

Food and drink industry intelligence firm Mintel revealed that the hottest buzzwords in the food industry are organic, all natural, locally or regionally sourced, fair trade, and carbon footprint. Growth in the organic and natural foods sector is expected to average between 26-28% for 2010-2012. Growth in the farmers market sector has helped fuel this increase, with more than 31% of U.S. consumers now frequenting markets. Mintel also reports that 65% of consumers purchase natural and organic foods from conventional supermarkets, and 9% make online purchases of natural and organic foods.

Approximately 40% of all U.S. households purchase organic foods products, while 50% purchase natural food products. In spite of the current economic uncertainty, the organic and natural meat and seafood categories remain popular, with 47% of households buying products from these categories without decreasing purchase volumes and with 25-32% buying more than the previous year. Among buyers of organic and natural meat and seafood products, good health is the primary influencer. A full 68% of purchasers cite health as a major factor, while 59% cite wanting their children to eat well as a major purchase influencer. Better nutrition is cited in 49% of the respondents and 43% cite environmental concerns (sustainable farming, harmful chemicals, runoff and water quality concerns, etc).

Among households purchasing organic or natural food products, a total of 57% purchase red meat products. The age categories making the greatest purchases are the 25-34 year old group at 67%, followed by the 35-44 age group at 59%. This is encouraging as it indicates strong potential for ongoing purchases in the near future and generational growth as their children assume similar eating habits.<sup>12</sup>

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<sup>10</sup> Center for Environmental Farming Systems, NC State, Univ. 2010; Organic Food and Drinks Retail Report, Mintel 2010.

<sup>11</sup> Serving the Underserved. [www.BEEFmagazine.com](http://www.BEEFmagazine.com). 2006.

<sup>12</sup> Natural and Organic Food and Drink Retailing Report. Mintel Reports. 2009.

Independent studies designed to evaluate grass-fed beef demand indicate that, with sufficient supply of high quality end product, consumer demand could be as high as 20-22% of U.S. households and reach \$15-17 billion in annual retail sales. Two primary areas of identified growth potential for grass-fed beef are: 1) Non-Beef Eaters: This group refrains from beef purchases out of a number of concerns, all of which are addressed with grass-fed beef. These concerns include the health aspects of beef, environmental concerns, sustainability concerns, animal care and welfare, food safety, and local or regional production; 2) Food Allergy Sufferers: This group suffers from food allergies related to corn and gluten residue in their beef; they are able to consume grass-fed beef without suffering any ill effects. The food allergy market has already grown to over \$3.9 billion annually.<sup>13</sup>

The grass-fed beef market has grown exponentially since the late 1990s. In 1998, there were just over 100 serious grass-fed beef producers in the U.S.; in 2010, there were over 2,000 beef producers participating in grass-fed beef production at some level. Retail sales of grass-fed beef in the U.S. in 1998 were just under \$5 million; in 2010, retail sales of domestic grass-fed beef were approximately \$350 million, with over \$1 billion in total retail sales including imported product.<sup>14</sup>

### *§ Industry Statistics*

Beef cattle farms represent the single largest sector of American agriculture. In 2007, 31% of farms were classified as beef cattle operations, with slightly more than 1 million cattle farmers and ranchers. 97% of cattle farms and ranches are family owned and operated.

On January 1, 2009, there were 94.5 million head of cattle in the U.S. Approximately 34.4 million head were harvested for beef production, with over 660,000 cattle harvested every week in the U.S. This cattle harvest results in over 26 billion pounds of beef being produced annually.

Consumer spending on beef has averaged between \$76 billion and \$80 billion over the past 5 years, from 2006 through 2010, resulting in market growth since 1999 of \$29 billion. Per capita spending for beef in retail and food service was approximately \$249 in 2008 which is a \$50 increase since 2001. Per capita consumption of beef in 2008 was 59.9 lbs compared to 59.2 lbs for chicken.

In the retail sector, beef is still the dominant meat sold at retail, accounting for 52% of all dollars spent on meat. Chicken accounts for 22% of all dollars spent at retail on meat. Sales growth has averaged 2.2% with a 2.0% volume growth. In 2008, beef accounted for 39.3% of all meat retail sales in volume. Ground beef represents the largest volume share of beef purchases at just over 60% in both food service and consumer home purchases. Steak is the second most popular item.

The makeup of the typical U.S. consumer has continued to evolve with several trends emerging: 1) A growing and aging population, with Baby Boomers looking for healthy food choices; 2) An emerging and strengthening millennial population just now entering their formative child-rearing years; 3) An increase in small households; 4) An increase in ethnic diversity.<sup>15</sup>

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<sup>13</sup> Demand Consulting. Quantitative Concept Test for Grass Fed Beef. 2006.

<sup>14</sup> Grass Fed Beef Demand Analysis. LMC, LLC. 2010.

<sup>15</sup> Beef Market at a Glance: Fact Sheet. Cattlemen's Beef Board and National Cattlemen's Association. 2009.

### § Natural/Organic Sector Overview

According to the National Cattlemen's Beef Association, the value and volume of natural/organic beef sales during the first quarter of 2010 declined from retail sales during the first quarter of 2009. The market share of natural/organic beef was 2.5% during the first quarter of 2010. The price of natural/organic beef averaged \$5.42 in the first quarter of 2010, with consumers paying a premium of \$2.00

As demand for organic products increased, more land in the U.S. was converted to organic production. As of 2008, the U.S. had 4.1 million acres used for organic production; of that amount, 1.6 million acres were planted to organic crops and 1.8 million acres were organic pastureland/rangeland. Texas accounted for 13% of U.S. organic pasture, followed by (in order): California, Montana, New Mexico and South Dakota. The total value of organic livestock and poultry sales in 2008 was \$316.5 million, and the total value of organic livestock and poultry product sales that year was \$906.2 million.<sup>16</sup>

The number of beef cows certified organic grew 428% between 1997 and 2002, but growth in certified organic beef cows slowed between 2002 and 2005. By 2005, 36,113 beef cows were certified organic and by the end of 2008, 43,782 beef cows were certified organic. The top five states producing certified organic beef cows in 2008 and the total number produced that year were (in order): California (5,081 head); Wyoming (4,615 head); Wisconsin (2,943 head); Idaho (2,447 head); South Dakota (2,391 head).

Sourcing of cattle that qualify for the “grass-fed” designation has been an ongoing issue. Several in the industry have questioned the availability of cattle for this category. However, this same issue was present in the early stages of the “natural” beef branded program development. Many in the industry questioned where the cattle would come from to supply this growing sector. Admittedly, there have been and will continue to be supply “hiccups”, but these have been solved each and every time by structuring premiums and incentives to shift more cattle into the natural production program from the conventional production model. In the natural sector, branded programs have had to forward contract cattle with producers to assure adequate pipeline supplies. By having at least a critical mass of cattle that met specification contracted for future delivery, the natural sector was able to minimize pipeline interruptions and effectively ramp up production to allow significant growth.

These same principles and business tactics must be applied to the grass-fed sector if an adequate finished cattle supply is to be secured and future growth achieved. The total U.S. Cattle Inventory stands at 92.6 million head, with an average of 32 to 34 million head harvested annually for beef production. To satisfy a market demand for approximately 22% of the population and a retail value of grass-fed beef of \$12 billion annually, the grass-fed sector would need approximately 6 million head of cattle yearly. Currently, this sector is harvesting between 150,000 and 170,000 head annually. U.S. Cattle Inventory numbers show that the cattle needed for significant expansion and growth exist. The question is can the grass-fed sector capture their share of the available supply? The answer lies in the

By having at least a critical mass of cattle that met specification contracted for future delivery, the natural sector was able to minimize pipeline interruptions and effectively ramp up production to allow significant growth. These same principles and business tactics must be applied to the grass-fed sector if an adequate finished cattle supply is to be secured and future growth achieved.

<sup>16</sup> 2008 Organic Production Survey

ability of the industry to design production systems and pricing parameters that will be attractive to sufficient numbers of beef cattle producers.

### *§ Grass-Fed Beef Market Growth Strategy*

Market research has indicated that grass-fed beef demand has grown significantly in the last 12-15 years. Data presented in the Consumer Research portion of this document shows that U.S. sales of grass-fed beef have increased from just under \$5 million in 1998 to over \$1 billion in 2010. Sales estimates for 2011 indicate that grass-fed beef sales will top \$1.5 billion and are expected to exceed \$2 billion in 2012. Domestic production of grass-fed beef provides about \$300-\$350 million of this total, with the balance coming from imported product derived from Australia, New Zealand and South America.

Mintel reports that the Natural and Organic Foods sector has experienced annual sales in excess of \$31 billion with continued growth anticipated through the next several years. Compounded Annual Growth Rate (CAGR) data from Datamonitor shows that the Natural and Organic Meat sectors have expanded an average of 15-20% over the past several years, while the commodity meat sector has experienced annual growth of only 3% on average. Consumer demand exists for products such as grass-fed beef and their preference for these kinds of foods is increasing, in spite of continued economic struggles.

### *§ Available Acreage for Grass-Fed Production*

Since the basic aim of this report is to study the market-based implications of transitioning existing conventional livestock producers to pasture based feeding systems, and row crop producers to include rotational grazing, it is important to have a perspective on the current amount of land in the target region in use for various purposes.

The 2007 Census of Agriculture provides a baseline for land use in the region:

	IL	IN	IA	MN	MO	WI	Total
Cropland used for pasture	308,259	282,017	829,784	725,403	1,858,684	391,728	4,395,875
Percentage of Total Cropland	1.3%	2.2%	3.1%	3.3%	11.3%	3.9%	-----
Permanent Pasture	887,274	542,941	1,914,924	1,469,816	6,864,391	1,065,814	12,745,160
Percent of Total Cropland	3.7%	4.2%	7.3%	6.7%	4.2%	10.5%	-----
Total Acres CRP*	885,837	365,321	2,050,714	1,929,007	1,691,694	654,486	7,577,059
Percent of Total Cropland	3.7%	2.9%	7.8%	8.8%	10.3%	6.5%	-----
Total Cropland (not farm acreage)	23,707,699	12,716,037	26,316,332	21,948,603	16,405,595	10,116,279	111,210,545

Source: 2007 Census of Agriculture, USDA NASS (December 2009) / \*CRP: Conservation Reserve Program

The USDA Acreage report for principal crops released in June 2011 shows little change over the last three years for our target region. The following table shows planted acreage as:

	IL	IN	IA	MN	MO	WI	Total
2011	22,777	12,270	24,628	19,756	13,553	7,943	102,938
2010	22,716	12,190	24,595	19,783	13,140	7,864	102,298
2009	22,945	12,155	24,648	19,595	13,556	8,160	103,068

Source: Acreage June 2011, USDA NASS

Given the consistency of planting over the past three years, the discrepancies with the 2007 Census report is likely a function of differing definitions of the types of cropland, how the data are collected and the interpretations of the survey questions by respondents. What is more important for this study is understanding where opportunities may exist to impact cropping practices, particularly the use of nitrogen(N) and phosphates(P) because of their impact on water quality, and where acreage may be subject to moving out of permanent pasture or the Conservation Reserve Program (CRP), back into row crop production.

The USDA National Agricultural Statistics Service (NASS) collects data from producers in 25 states as part of its Agricultural Chemical Use Program. The latest survey in fall 2010 reports average nitrogen and phosphate use by corn growers at 140lbs and 60lbs per acre respectively; for fall potato producers at 228lbs and 158lbs per acre; and for upland cotton at 77lbs and 41lbs per acre respectively. On average, producers are treating 99% of potato acreage with (N) and 96% with (P); cotton producers are treating 90% of acres with (N) and 62% with (P); and corn producers are treating 90% of planted with (N) and 70% with (P).<sup>17</sup>

The following table lists acreage by state in the target region:

2011 Planting Estimate	IL	IN	IA	MN	MO	WI	Total
Corn	12,500	5,900	14,200	8,100	3,250	4,150	48,100
Upland Cotton	0	0	0	0	340	0	340
Fall Potatoes (harvested acres)	0	0	0	46	0	62	108
Total	12,500	5,900	14,200	8,146	3,590	4,212	48,548

Sources: Acreage; USDA-NASS (June 2011). Vegetables and Melons Outlook; USDA-ERS (December 2011)

The funding for USDA conservation programs has been dramatically reduced in the budget for 2012. Conservation Stewardship Programs were cut by about 9%, which is estimated to reduce sign-ups by 38% and take over 700,000 acres out of conservation programs in fiscal year 2012. In addition, the budget for the Natural Resources Conservation Service (NRCS), which provides technical assistance to farmers and ranchers, was also reduced by \$44 million or about 5%.<sup>18</sup>

<sup>17</sup> Agricultural Chemical Use: Corn Upland Cotton and Fall Potatoes 2010. USDA-NASS(May 2011)

<sup>18</sup> National Sustainable Agricultural Coalition (December 15, 2011). <http://sustainableagriculture.net/blog/fy-2012-ag-appropriations/>

Given the relatively small percentage of cropland being used for grazing in the region, there is an opportunity to work with row crop farmers to increase rotational cropland use for pasture, lower their cost for nutrient inputs and add revenues from grazing. Given the total amount of acres planted to corn in the region and the necessary nutrient inputs, these would be the most logical areas of focus for a campaign to increase rotational grazing on cropland.

In addition, decreasing budgets for conservation programs would make owners of these more vulnerable acres targets for market-based approaches that convert this land to permanent pasture which can be hayed or grazed and at some point in the future to earn revenues for providing ecosystem services.

### *§ Incentives to Grass-fed Production*

Continued growth in the domestic supply of grass-fed beef hinges on the number of farmers that shift production practices from conventional beef production, row crop farming or other more traditional production scenarios to include more grass-fed beef production and finishing. Catalyzing this shift requires two primary inputs: 1) Economic incentives; and 2) Producer education.

Economic incentives can take a variety of forms; first and foremost is the price paid for grass-finished cattle compared to commodity market prices. Currently, the majority of branded grass-fed beef programs offer premiums for grass-finished cattle based on the following schemes:

- Week prior USDA 5 Area Weighted Average Price for Live Cattle, plus \$20 - \$25/cwt premium for All Natural Grass Finished Cattle; **OR**
- Week prior USDA 5 Area Weighted Average Price for Dressed Weight, plus \$20 - \$25/cwt premium for All Natural Grass Finished Cattle; **OR**
- Near Term CME Futures Price for Live Cattle, plus \$20-\$25/cwt premium for All Natural Grass Finished Cattle; **OR**
- Forward Contract at set price for Dressed Weight (Hanging weight, Rail Weight) averaging \$2.25 - \$2.35/lb currently.

*Source: Personal Interviews with several major branded programs, 2011.*

These premiums are significant, and have been effective in encouraging an increasing number of farmers/ranchers to shift at least some portion of their production to grass-fed. Other economic incentives include management techniques that allow for lower input costs; proper grazing and rotation management can significantly reduce reliance on purchased chemical fertilizers. As previous research and our own field research bears out, intensively managed grazing methods can double stocking rates; increased stocking rates, in turn, lower the per unit cost of production and increase the income from the same acreage without additional land lease/purchase costs (including taxes, insurance or interest).

With proposed changes in federal policy regarding harmful runoff allowances, conservation banking, and carbon credits, environmental incentives could eventually translate into economic incentives that further catalyze the shift to grass-fed production.

Still, most producers face a steep learning curve around grazing and forage management, either as part of the initial decision-making process or throughout the transition itself. For example, producers familiar with conventional production methods graze cattle until yearling age, when they are placed in feed yards for grain-based finishing. Grass-feeding, by contrast, requires producers to understand and manage the process of carrying cattle through to finished weight. Proper finishing, which includes making sure cattle deposit adequate back fat, seam fat and intramuscular fat and a profitable dressing percentage, is just one element of producer education critical to a successful and financially sustainable transition.

The environmental benefits of grass-fed production are emerging as an incentive category as well. Innovative rotational grazing strategies have been shown to significantly reduce water runoff; build plant ground litter; build soil organic matter; and encourage dramatic increases in favorable soil microbial populations, earthworm populations, wildlife populations, and pollinating insect populations. In addition, well managed grazing significantly increases annual per acre carbon sequestration and provides wildlife and insect habitat for conservation banking purposes. And with proposed changes in federal policy regarding harmful runoff allowances, conservation banking, and carbon credits, these environmental incentives could eventually translate into economic incentives that further catalyze the shift to grass-fed production.

### *§ Regional Grass-Fed Cattle Supply*

On a regional basis, the six target states in our study have a total population of 39 million people, according to the 2010 U.S. Census. Based on the current per capita red meat consumption of 57.4 lbs, the region would need to produce approximately 500 million pounds of beef annually to supply all the potential demand for grass-fed products within the region.<sup>19</sup> That total would equal 800,000-1,000,000 head of cattle finished on grass within the region and harvested annually.

The table below represents cattle inventories within the region based on the 2007 Census figures.

	IL	IN	IA	MN	MO	WI	Total/Ave
All cattle (beef and dairy)	1,231,105	875,350	3,982,344	2,395,217	4,292,702	3,373,923	16,150,641
Cattle farms (beef and dairy)	14,753	12,668	20,809	14,410	51,289	14,775	128,704
Beef cattle	429,111	235,299	904,100	399,768	3,748,995	746,374	6,463,647
Average herd size	29	19	43	28	73	51	50
Beef cows and heifers that have calved	438,787	244,467	926,716	441,971	2,199,539	362,747	4,614,227
Average brood cow herd size	30	19	45	31	43	25	36

Source: 2007 Census of Agriculture – USDA/NASS (December 2009)

By comparison to the 2007 figures noted above (shaded), the Cattle Inventory Report issued in January of 2011 showed the following figures for beef and dairy cattle: Illinois: 1.1 million; Indiana: 850,000;

<sup>19</sup> Where's the Beef: US beef consumption in decline. Meredith Davis, December 22, 2011; [www.reuters.com](http://www.reuters.com)

Iowa: 3.4 million; Minnesota: 2.3 million; Missouri: 3.45 million; and Wisconsin: 3.45 million; for a total of 14.55 million cattle.

This 1.6 million cattle inventory decline is significant and consistent with the national trend of shrinking cattle inventories due to increasing input costs, severe drought conditions in several regions of the U.S., and declining per capita beef consumption. However, even this smaller inventory should be adequate to support an increasing supply of grass-fed cattle from the region. Using the average cattle herd size from the 2007 census, the region will need approximately 14,000-17,000 producers using grass-based methods, both new and transitioning, to meet the potential demand for grass-fed beef within the region.

### *§ Summary and Conclusions*

In the six-state area involved in this project we know that there are over 4.6 million head of beef cows and heifers currently in production. If we include dairy cattle, we have over 14 million head of cattle produced annually in the region. These numbers clearly indicate that the capacity for ongoing growth in grass-fed beef production is available. At the current per capita beef consumption for the area of 57.4 lbs, there would need to be approximately 800,000 – 1,000,000 head of cattle finished on grass annually to shift beef consumption to 22% grass fed beef. The numbers of acres, producers and animals needed currently exist to support the shift to grass-fed beef production in the region. To raise the number of animals the region requires on grass, a shift of approximately 1.5 million acres into a combination of permanent pasture and rotational grazing on crop land is needed. With technical assistance to improve managed grazing techniques, production efficiencies will increase, allowing for increased animal density and stocking rates on the same acreage. This will result in lower costs of production, better return on investment, significantly reduced water runoff and erosion, and a net increase in soil fertility and soil organic matter. In addition, these production efficiencies will allow for end product pricing that will be attractive and affordable to larger numbers of consumers.

Again, making significant shifts in production away from conventional to grass-fed requires a combination of economic incentives and producer education. Analysis of processing and distribution in the area (see the following section) shows that sufficient infrastructure already exists in both these vital service areas. These same cattle are already being finished, slaughtered and processed, and distributed to retail, restaurant, and institutional food service market channels. All that would happen is a shift of the production aspect to grass-finished vs. conventional grain-finished. The same existing services would still be employed. This is a tremendous advantage, allowing exponential growth to occur, as capital financing is not needed for building of processing, cold storage or distribution capacity for marketing of this nature.

### **Regional Processing Analysis**

Our initial survey pointed out that the majority of the processing for grass-fed cattle is being carried out by small and very small processing plants. In attempting to understand if processing capacity will be a future constraint, it is important to investigate the amount of total capacity that might be available in the region from plants of all types. Since USDA categorizes plant size by numbers of employees and not daily harvest capacity, we are forced to back into the answer to the capacity question by looking at the total cattle slaughter for the region.

Equally important is the amount of federally-inspected slaughter capacity, as opposed to state-inspected slaughter capacity. According to a recent report from USDA Economic Research Service, Wisconsin is the only state in the Upper Midwest that has applied to join the Cooperative Interstate Shipment Program<sup>20</sup>. The Program allows states to ship meat from state-inspected plants across state lines. The report acknowledges the importance of small and very small processors in the growth of grass-fed, natural and local markets. It also recognizes that access to large federally-inspected plants is limited for small producers. The report goes on to suggest that moving to federal inspection may be the best option for small and very small plants with customers that want to ship interstate.<sup>21</sup>

However, since state inspected plants are required to operate in a manner “at least equal to” the federal standard, it would seem that the policy of barring state-inspected meats from being sold interstate needs to be seriously reconsidered. Yet until there is a policy change related to this aspect of meat inspections, producers and branded programs will have to process cattle in federally-inspected plants.

The most recent USDA report on livestock slaughtered in federally-inspected (FI) facilities details the cattle harvest in the region for 2009 and 2010. Wisconsin has 19 FI plants in 2010, up from 16 in 2009. Total head harvested went up slightly to 1.702 million head from 1.635 million in 2009. Minnesota has 21 FI plants in 2010, compared to 23 in 2009. The numbers of animals harvested was up slightly in 2010 at 886,292 versus 811,153 in 2009.<sup>22</sup> Of the other states in our study region, only numbers for Indiana were reported. Illinois, Iowa and Missouri were aggregated with the regional totals to protect the confidentiality of the processors – which is another way of saying that there are so few FI cattle facilities in those states, that reported slaughter numbers could be tied back to individual plants. Numbers for Indiana were only reported for 2010: a total of 4 FI inspected plants and 2,347 head slaughtered.

Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin comprise Region 5 in the USDA report. By accounting for the states reported within the region for 2010, there were approximately a million cattle remaining that were slaughtered between Illinois and Ohio. Using the same logic for Region 7, the Iowa and Missouri slaughter in FI plants was approximately 700,000 head.<sup>23</sup> So there are somewhere in the range of 47-50 FI slaughter facilities in the region, which harvested approximately 3.8 million head of cattle in 2010.

The fact that FI plants are concentrated in Wisconsin and Minnesota would appear to be an issue for increased cattle numbers in southern Illinois, southwest Iowa, and Missouri. Producers in northern Illinois and northern Indiana have access to FI plants in Wisconsin; producers in southern Indiana and perhaps even southern Illinois and parts of Missouri have access to the 14 FI plants in Tennessee<sup>24</sup>; and producers in most of Iowa have access to either Minnesota or Wisconsin. This leaves southwest Iowa and parts of Missouri with issues in FI processing facilities.

A further look at the Livestock Slaughter Summary points out the tremendous slaughter capacity in Nebraska and Kansas, states adjacent to Iowa and Missouri. Kansas and Nebraska had 21 and 26 FI plants and harvested 6.5 and 6.9 million head respectively. These plants are primarily harvesting

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<sup>20</sup> Livestock, Dairy and Poultry Outlook, August 17, 2011. ERS-USDA

<sup>21</sup> Ibid

<sup>22</sup> Livestock Slaughter 2010 Summary, April 2011. NASS-USDA

<sup>23</sup> Ibid

<sup>24</sup> Ibid

conventionally raised cattle, but a growing percentage of their throughput consists of cattle from All Natural Branded Beef programs. Due to a significantly lower national cow herd inventory, many larger plants are relying on custom cattle from branded beef programs as a part of their overall weekly throughput. These same plants would harvest grass-fed cattle from the larger branded programs at a minimum level of throughput. This would require load lots of finished cattle (48,000 lbs. live cattle). Most of the existing grass-fed branded programs already harvest load lots at a time.

In plants that are considered very small to small by USDA definition, there exists the capacity to handle a significant volume of growth in the grass-fed beef sector. If we consider one typical plant as an example, we can clearly illustrate this potential within the existing infrastructure.

Lorentz Meats, located in Cannon Falls, MN, currently has the capacity to harvest and fabricate 40 head of beef cattle daily with a staff of 54 employees. They are processing for two different grass-fed branded programs at this time. According to USDA definitions of plant size, they would be considered a “very small” plant. However, harvesting 40 head daily equals 200 head weekly. Lorentz Meats has the ability, as do most plants, to add a second shift. This would immediately double their weekly throughput to 400 head, or 20,000 head annually (at 50 weeks annual harvest). Every state in the Upper Midwest region has at least two or more processing plants that can equal or exceed this type of capacity with existing infrastructure. Therefore, the need to construct additional slaughter and fabrication capacity is not necessary in most circumstances. This is usually only a concern where direct marketing is considered, as the slaughter capacity is there for branded programs.

### *§ Summary and Conclusions*

The estimate of current cattle slaughter at FI plants approaching 4 million head annually is good news for the region, since the capacity at these plants is not static. Depending upon the availability of labor, federal inspectors and animals, these plants can fairly easily add a second shift. There may be a need for additional cold storage space if plants move to a second shift, which is much less expensive and risky to construct than new slaughtering plants.

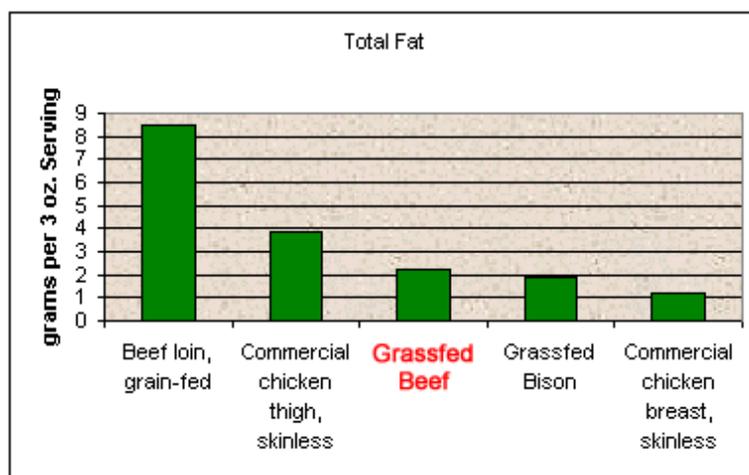
USDA’s recent cattle report put the national herd size below 95 million head, and expects beef output to be down nearly 5% next year as ranchers continue liquidating herds due to severe drought and high feed prices. Farmers and ranchers raising cattle on grass are not immune to high feed prices, however they tend be much better stewards of pasture and as prices for commodity beef increase, so do prices for grass-fed. Fewer conventionally-raised cattle should also create some opportunities with smaller processors that have focused their businesses on commodity beef.

## **Benefits of Grass-Fed and Pasture-Raised Beef and Dairy**

### *§ Human Health*

- Studies show that meat from grass-fed cattle is less likely to house dangerous bacteria such as *E. coli*.
- Grass-fed beef and bison have less total and saturated fat per serving than grain-fed, and approximately the same amount of fat as skinless chicken, wild deer and elk.<sup>25</sup>

<sup>25</sup> <http://www.animalwelfareapproved.org/wp-content/uploads/2011/12/The-Grassfed-Primer-online-update-12-1-11.pdf>



Source: Eat Wild, [www.eatwild.com](http://www.eatwild.com) (Accessed 11 October 2011)

- Grass-fed meat provides two-to-six times more omega-3 fatty acids than grain-fed beef loin and commercial, skinless chicken thighs. Omega-3 fatty acids are known to fight depression and reduce the risk of certain types of cancer due to higher levels of vaccenic acid and CLA.<sup>26</sup>
- Grass-fed meat is lower in total fat and higher in beta-carotene; in vitamin E (alpha-tocopherol); in B-vitamins thiamin and riboflavin; and in minerals calcium, magnesium and potassium<sup>27</sup>.

### § Animal Welfare

- In accordance with standards set by Animal Welfare Approved, grass-fed and pasture-raised cattle have continuous access to outdoor pasture.<sup>28</sup>
- The natural feeding regimen for cattle is the consumption of pasture species from birth to death. Their diets should not be supplemented with grain, animal by-products or synthetic hormones, nor should they be given antibiotics to promote growth or prevent disease.

### § Environmental Stewardship<sup>29</sup>

- Animals raised on pasture rather than conventional farms and confined operations provide a net benefit to the environment. A diet of grazed grass requires less fossil fuel than its grain equivalent.
- Pasture-raised animals manage their own fertilization and harvesting. Due to year-round ground cover more moisture is held within topsoil, solar energy is effectively captured, and nutrients are efficiently cycled.
- Grazed pasture removes carbon dioxide from the atmosphere more effectively than any other land use, including forestland and ungrazed prairie, helping to slow global warming.
- Compared with undisturbed grassland, moderately grazed land has more carbon stored in the

<sup>26</sup> <http://www.animalwelfareapproved.org/wp-content/uploads/2011/12/The-Grassfed-Primer-online-update-12-1-11.pdf>

<sup>27</sup> S.K. Duckett *et al*, *Journal of Animal Science*, (published online) June 2009, "Effects of winter stocker growth rate and finishing system on: III. Tissue proximate, fatty acid, vitamin and cholesterol content."

<sup>28</sup> <http://www.animalwelfareapproved.org/wp-content/uploads/2011/12/The-Grassfed-Primer-online-update-12-1-11.pdf>, pg5

<sup>29</sup> <http://eatwild.com/environment.html>

soil. Stored carbon can increase fertility, positively affect water availability and cycling, and slow global warming.

- Grazed pasture emits less pollution and greenhouse gases, decreases soil erosion, provides a habitat for wildlife, and absorbs more rainwater.<sup>30</sup>

## Barriers to Adopting and Managing Grazing and Policy Opportunities

Studies from The Michael Fields Agricultural Institute<sup>31</sup> and Winrock International in collaboration with the University of Vermont<sup>32</sup>, employed interviews with dairy producers in Wisconsin and northeastern states to discover barriers conventional producers face in adopting grass-fed techniques, and policy recommendations to overcome them. While neither of these studies focused on cattle production, they still provide insight into issues that beef producers will face when deciding to transition to managed grazing.

Barriers described by producers in studies include:

- Decreased income from grazing
- Not enough land available for haying-grazing
- Increased workloads to start and manage grazing
- Lack of technical assistance and information on grazing
- Social and family pressure to operate conventionally
- Current debt loads preventing transition to grazing
- Lack of capital required to transition to grazing

Policy recommendations outlined in studies include:

- Increasing university research into managed grazing
- Implementing technical training and curriculum at the university, technical college and high school levels
- Increasing state and federal funding to support grazing programs
- Removing unintentional barriers in state and federal farm programs that limit grazing
- Debt restructuring and loan funds to support transition to grazing
- Income enhancements and protections such as extending crop insurance to pasture-hay crops, revenue assurance or environmental benefit payments
- Connecting retiring producers to beginning farmers that will use managed grazing

We intend to explore how these and other policy recommendations might support the transition of existing and new cattle producers to managed grazing.

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<sup>30</sup> <http://www.nrcs.usda.gov/technical/rca/ib6text.html>

<sup>31</sup> The Future of Managed Grazing: Barriers to managed grazing in Wisconsin and how to overcome them. The Michael Fields Agricultural Institute, July 2006

<sup>32</sup> Policy Recommendations for Overcoming Barriers to the Adoption of Rotational Grazing. Winrock International and the University of Vermont, 2007

## PART SIX: RECOMMENDATIONS AND IMPLEMENTATION PLAN

### Summary of Findings | Prologue to Recommendations

Each year in the Gulf of Mexico, a 6,000 to 8,000 square mile “dead zone” is created by an algae bloom resulting from nitrate and phosphorus runoff, due to heavy use of synthetic fertilizers in our agricultural practices. To explore management practices that effectively reduce this harmful run-off, this study has investigated the strengths, weaknesses, opportunities and threats (SWOT analysis) to encourage a significant increase in the number of cattle finished on grass through market-based approaches. Land that is maintained in perennial or annual grasses and other forages significantly reduces runoff and erosion into our watersheds, helps build soil organic matter (increases water holding capacity), and sequesters significantly more carbon than land that is annually tilled and planted into crops. It is important to understand the nature of the problem as it currently exists, examining why the problem exists and the number of acres that typically impact harmful runoff. Therefore, an examination of the role that supply chain participants, from farmers to processors to distributors/buyers, must play in order to effect change is critical in informing our recommendations. It is also important to note that an increase in the numbers of animals in the region finished on grass cannot take place without the involvement of lenders, investors and landowners in these new agri-businesses.

Acres that contribute to the run-off of nitrogen (N) and phosphate (P) could be classified as “vulnerable”, in that their proximity to riparian areas makes whatever (N) and (P) they lose have a greater impact on surface water quality. The primary crop planted on these acres within our target region is corn, with some corn-soybean rotation. Within this target region, Iowa, Illinois, Minnesota and Indiana comprise four of the top five U.S. corn production states. With corn prices currently near \$6.00 in the Midwest, there’s little incentive for growers to plant a larger percentage of acreage to crops such as soybeans that use much less (N) and (P) per acre. There is also a strong bias among seed and chemical manufacturers that synthetic fertilizers are superior to allowing animals to fertilize fields through their leavings of manure and urine. Well-documented crop production results from the use of animal fertilizer and animal grazing impact, and cost comparison estimates, will be needed to convince the vast majority of row crop farmers that moving away from synthetic nitrogen and phosphate will be in their best economic interests.

The other category of truly vulnerable acres is those that have been put into dormant fields through USDA’s Conservation Reserve Programs (CRP). These acres are often highly erodible, have poor soil structure, and are not typically suitable for row crop farming. As budgets for CRP programs are cut, these acres become vulnerable to row crop planting and subsequent application of synthetic fertilizers, further exasperating issues of run-off. If grass-fed producers can be found to rent-lease these acres, owners may be open to keeping them in pasture.

While grass-fed certifications and protocols are largely silent on the use of fertilizers to promote grass production, the majority of farmers finishing cattle on grass and other forages use rotational and management intensive grazing methods that significantly reduce the need for synthetic fertilizer application. However, the various grass-fed certifications and protocols do contribute to water quality and the reduction of (N) and (P) usage by requiring that animals have direct access to pasture for more than 95% of their lifetime and not be fed any grain or grain-by products during their lifetimes.

Direct marketers have certainly played an important role in stimulating consumer demand for grass-fed beef. Direct marketing of cattle allows new or transitioning producers to gain valuable knowledge and experience about finishing animals on grass, at a much smaller scale and at a lower cost of entry. This direct marketing experience provides a solid segue to growth into the branded programs markets. In a transition period, we cannot expect producers to make a sudden “all or nothing” change in operations, due to the paradigm shift in the thought and management process. Shifting from a commodity mindset in production practices to specialized production takes time, as new and better practices must be learned. The majority of the grass-fed producers and producer networks presented in our case studies initially started as direct marketers and have increased production so that they are supplying and growing the branded program sector. Therefore, today’s direct marketer can certainly be viewed as a future participant in branded grass-fed programs.

Except in the case of Raincrow Ranch, which owns their own slaughter and fabrication facility, the other producer groups from our field research that are marketing grass-fed beef under a brand are using a third-party to process their cattle. The importance of aggregation cannot be underestimated. Aggregation lowers costs at every point in the supply chain, and makes it possible for branded grass-fed beef to compete with natural, organic and other types beef in wholesale and retail markets. Building a new processing plant is a very capital intensive undertaking and there are multiple examples of new plants failing shortly after startup. Falling cattle numbers and declining per capita beef consumption are both freeing up capacity at existing processing plants. One of the primary keys to success for new and existing grass-fed producers seeking to bring a branded beef program to market is to aggregate enough supply on a weekly or bi-weekly basis to attract the attention of existing processors.

Whether they are producer cooperatives, alliances, networks or marketers that buy cattle, branded programs play an important role in the aggregation, distribution and facilitation of sale in wholesale, food service and retail channels. As important as direct marketing has been and will be to expanding the numbers of producers finishing animals on grass, the vast majority of consumers get their beef through other channels. Grass-fed brands tell a compelling “story” to a much larger audience of consumers that want information about the human, environmental and animal health attributes of the foods they eat. The brands also manage logistics, vendor and customer relationships, and are able to market on a much larger scale than individual producers can. If grass-fed beef is to compete with other beef categories and reach its potential market share, it needs to develop strong brands, which are supplied with cattle raised in our target region.

Conventional beef, mostly sold just after weaning, and eventually finished on grain in feedlots, is a model that allows producers to more or less cash flow their operations and leaves the risk and cost of financing to others. When producers choose to grass finish their cattle, all this changes. For the most part, financing from sources like banks or Farm Credit is not available to grass-fed operations. It is not that these lenders will not look at these operations; it’s just that grass finishing cattle by producers at any scale is a very recent change in the way business is done, and lenders haven’t been educated about the opportunity. Investment in branded programs and grass-feeding operations is needed to finance expansion, particularly the purchasing of cattle for finishing and acquiring infrastructure like coolers, freezers and refrigerated trucks as capacity expands. Grass-finishing is a “green business” that has attracted the attention of social and innovative investors. Landowners are potentially a key audience for the “story” of grass-based agriculture systems, since these systems generally improve the quality of the land, increase its value, and can provide owners with revenue opportunities outside of cash land rents.

This study confirms a growing market for grass-fed beef; adequate distribution and processing capacity within the Upper Midwest to support this growth; and the fact that more producers are seeing the benefits of switching to pasture-based operations. Our theory of change involves understanding the barriers that new and transitioning producers face and how these can be overcome with technical assistance, financing, and the building of producer networks, to improve consistency of supply and effect cost control. By presenting field research of successful farmers and ranchers and engaging with existing capable place-based organizations, we begin to build the compelling arguments and the learning environment for change.

## Recommendations and Implementation Plan

The following are our recommendations and strategies for implementation:

1. Engage with investors and land owners to promote the economics and benefits of grass-fed beef production, with the goal of securing investments to finance forward contracting of finished cattle, cash flow finishing operations and/or transitioning to grass-based farming.
  - Hold at least one investor-landowner forum in each major Midwestern cities (Chicago, Minneapolis, Milwaukee, Des Moines, St. Louis and Indianapolis)
2. Partner with regional organizations already engaged in this issue to pilot test our strategies with farmers and ranchers in the Upper Midwest, to transition them to grass-based beef production in an economically viable manner while supporting positive environmental outcomes.
  - Engage with four multi-county regions (currently being identified) to pilot our strategies for transitioning farmers and ranchers to grass-based systems. These pilots will focus on components from farm to fork including production, processing, rendering, distribution and marketing options.
    - Partner with regionally trusted organizations.
    - In each region, identify and work with a group of farmers who are in the process of transition and help facilitate their involvement with existing processing, distribution and marketing venues.
    - Develop a training module utilizing our case studies (based on field research presented in Appendix 2) and additional currently existing materials that will be used with partner organizations (train-the-trainer) and the participating farmers.
    - Track the changes made in their operations regarding impact on potential for harmful runoff, carbon sequestration, diversity of wildlife and plant life, livestock health and care, benefits of food products produced, and profitability.
  - Work hand in hand with the regional partners to strengthen the existing alliances and networks among farmers/ranchers. These networks are critical to supporting current and future transition among farmers who will benefit from peer learning.
    - By working with place-based organizations in the Upper Midwest that are already engaged on these issues, we will: leverage the work they have done to date; reduce the time needed to test our strategies; build their capacity to work across the supply chain; and lay the foundation for a more sustained effort than if we were to work independently of these groups. Examples of such organizations include The Land Stewardship Project in MN, River Country RC & D in WI, and Leopold Center in IA.

- Continue to expand the team’s links and connections to key stakeholders that will be vital as the work expands. For example, we will build a strong working relationship with Green Lands Blue Water, a consortium of Midwestern universities and civic organizations that are coordinating their individual efforts to protect the environmental integrity of the landscape.
    - Develop forums for producers-marketers-branded grass-fed beef programs to engage with retailers and distributors. The goal is to increase the “pull” through the supply chain and assist retailers and distributors with developing promotions of grass-fed beef in their consumer communications.
3. Develop and test a communications strategy to inform various target audiences with key messages in support of this project’s focus.
- Assess the landscape of voices that are both in support of and critical of grass-based agriculture and develop and test various communications strategies that respond to critiques and provide fuel for advocates.
  - Identify key target audiences and develop messaging that encourages their participation either in this project or to expand their activity in general with grass-based agriculture.
    - We anticipate that buyers will be a key audience.
    - It is probable that we will target and communicate with investors, conservancies, and public-private landholders to increase awareness of opportunities in grass-based agriculture.
  - Create a new forum for discussion of grass-based production systems within the region that specifically targets a farmer and rancher audience.
4. Expand the Planning Committee to include participants from the supply chain who can support increased impact of the project with buyers from various regions.
- Based on the analysis and recommendations from the Implementation Plan, we will determine the other sectors and stakeholders that should be engaged.
  - Include regional pilot project leaders in the Planning Committee.
  - Host three face to face meetings over the course of the grant period.
  - Reconfigure subcommittees as needed to support continued planning, analysis, strategy testing and implementation.
5. Improve understanding of current policy barriers and potential new policy-based opportunities, and develop and implement means to inform the policy process.
- By working with the planning committee and their first-hand knowledge of the system, uncover where state or federal policy and regulatory change could be important to growth in the sector. Some areas that we anticipate will be included are: interstate meat shipment rules, regulations governing land conservancies that might create options for pasture systems, and federal conservation programs.
  - Assess the larger national landscape to identify policies that need modification or development and work with partners who are well-positioned to inform the policy process. For example, we anticipate that the Land Stewardship Project, Center for Rural Affairs,

National Sustainable Agriculture Coalition, the Pew Charitable Trust, and others, will be interested in our findings and are positioned to inform the policy process.

# APPENDIX ONE



## PLANNING COMMITTEE

**PASTURE PROJECT PLANNING COMMITTEE MEMBERS**

NAME	ORGANIZATION
Allen Williams	Livestock Management Consultants
Andrew Gunther	Animal Welfare Approved
John Fisk	Wallace Center at Winrock International
Kerri McClimen	Consultant to Pew Charitable Trust
Kerry Smith	USDA Agricultural Marketing Service
Laura Paine	Wisconsin Dept. of Ag
Lauren Gwin	Oregon State University
Mike Lorentz	Lorentz Meats
Patty Whisnant	America Grass Fed Association
Rory Schmick	Pacific Natural Foods
Todd Churchill	Thousand Hills Cattle Ranch
Warren King	Wellspring Management
Will Harris	White Oak Pastures