

Final Report
Federal-State Marketing Improvement Program (FSMIP)

Project Title:

Enhancing Value-Added Beef Opportunities: Focusing on Market-based Opportunities
(SoLUTions) for Cattle Producers

Grant Period:

Start Date: September 28, 2012

End Date: September 29, 2015

Project Leadership:

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The Issue/Problem

An increased number of cattle producers have been considering value-added enterprises such as direct meat marketing. Beef cattle are raised in each of Tennessee's 95 counties. Tennessee cattle farms and ranches focus on cow-calf production, with scattered pockets of backgrounding and stockering. Beef cattle and calves accounted for \$540 million of Tennessee farm receipts in 2012 – 15 percent of statewide farm product sales. Tennessee cattle farm receipts increased from 2012 to 2015, the result of higher feeder cattle prices. However, most Tennessee cattle still leave the state to be fed to harvest weights.

The Value-Added Beef Program responded to a strong interest from cattle farmers in delivering Tennessee beef to local customers, who have confirmed interest in buying locally-raised products direct from farmers. However, there were many issues to be addressed in the development of successful farm-based, meat marketing enterprises. These issues focused on marketing concerns, which were the primary obstacles producers identified for limiting success.

How the Issue Was Approached

The five project goals were approached as outlined below:

- Survey local consumers regarding their interests, preferences and buying patterns for locally raised beef.
- Survey consumers about local demand, consumption, product preferences, willingness to pay, buying patterns, seasonality and beef product competition.
- Conduct producer focus group studies to determine specific preferences for product labeling and packaging.
- Conduct various budget analysis for farm-based production and direct to market systems
- Incorporate all findings into various educational publications and outreach events.
 - Educational tour
 - Conference/seminars
 - Local workshops

Description of Outreach and Education Activities

Extensive outreach and education activities resulted from the FSMIP project and related activities of the Tennessee Value-Added Beef Program. A summary of workshops, seminars and webinars conducted as part of the value-added beef program is provided in Table 1.

<u>Topic</u>	<u>Number of Events</u>	<u>Dates</u>	<u>Total Attendance</u>
Scratching the Surface	11	November 2011 to March 2012	397
Basic Regulations	13	August 2012 to May 2013	573
On-Site Value Added Beef 101	4	April/May 2013	112
Out-of-State Farm Tour	1	September 2013	28
Production Costs and Considerations for Finishing Animals for Direct Marketing	6	October/November 2013	191
What You Should Know About Beef Quality and Meat Cuts	3	November 2013	100
How Much Meat to Expect, Improving Communications with Your Processor and Making Live Animal Sales	3	March 2015	124
Locally Raised Beef Marketing Workshop	3	March 2015	122
Producer Focus Groups	3	Dec. 2013 – Jan. 2014	37
Webinars	11	2013-2014	44
Other Value-Added Beef Workshops	2	2012-2015	50
Extension Agent Training	4	2013-2015	112

Description of Public/Private Agency Partner Contributions

Rob Holland, Director of the Center for Profitable Agriculture, was the Principal Investigator. Holland coordinated and directed the project and outreach activities. Dan Strasser and Wendy Sneed, Tennessee Department of Agriculture, served as state agency contacts. Dan and Wendy advised throughout the project, contributed to and reviewed project deliverables and served on the conference committee.

Numerous public and private agencies contributed to the successful completion of this project. These contributors also presented information at the Value-Added Beef Conference, held in June 2014, in Manchester, TN. These included:

The University of Tennessee Extension and UT AgResearch

- Gary Bates
- Megan Bruch Leffew
- Andrew Griffith
- Rob Holland
- Dwight Loveday
- Hal Pepper
- Emmit Rawls
- Justin Rhinehart
- Margarita Velandia
- Kim Jensen

U. S. Department of Agriculture:
Jeff Canavan

Tennessee Department of Agriculture
Bill Thompson

Private Farms & Processors:

Phil Baggett	Tennessee Grass-fed Beef
David Bryant	Twin Oaks Farm LLC
Michael Rice	Claybrook Angus
Johnny Rogers	Rogers Cattle Company
Dave Turner	Claybrook Angus
James Yoder	Yoder Brothers Meat Processing

Specific roles and responsibilities of project collaborators are described in Table 2.

Results, Conclusions and Lessons Learned

Consumer Research

Based on national trends in local food preferences, the research found value-added beef consumers were more likely present in Tennessee’s metropolitan areas: Memphis, Nashville, Knoxville and Tri-Cities (Kingsport/Johnson City/Bristol).

Consumers surveyed in Tennessee’s metropolitan areas were willing to pay a premium of \$2.96 per pound for ribeye steaks and \$0.70 per pound for ground beef labeled “Tennessee Beef.”

Respondents said purchasing Tennessee Beef gave them a sense of supporting Tennessee farmers and the economy

Respondents perceived Tennessee Beef as fresher and safer than out-of-state beef

Those choosing Tennessee Beef products tended to be younger in age, have some farm background, and have higher incomes than the overall set of respondents.

Freshness, safety, support of local farms, and support of local economies appear were important when respondents selected beef products. These areas can be emphasized in future marketing programs to promote products labeled Tennessee Beef.

A detailed description of the completed consumer research was compiled by the University of Tennessee Agri-Industry Modeling and Analysis Group in the AIM-AG Research Report of May 2014, “Consumer Preferences for Tennessee Beef.”

Table 2. Roles and Responsibility of Project Collaborators.		
<u>Collaborator</u>	<u>Role</u>	<u>Responsibility</u>
Rob Holland UT Extension Center for Profitable Agriculture	Principal Investigator	Project Leader/Coordinator. Director of Outreach Activities.
Dan Strasser Market Development Tennessee Department of Agriculture	State Agency Contact	Project Advisor. State Agency Liaison. Contributor and Reviewer.
Megan Bruch UT Extension Center for Profitable Agriculture	Co-Principal Investigator	Coordinator of Market Survey and Focus Group Activities. Outreach Planning Team. Co-director of Tour.
Hal Pepper UT Extension Center for Profitable Agriculture	Co-Principal Investigator	Coordinator of Cost Analysis/Budget Activities. Director of Cost/Budgets for: (1) meat marketing, and (2) Live animal sales for custom harvest. Co-director of Tour.
Kim Jensen Agricultural Economics UT AgResearch/College of Agriculture	Co-Principal Investigator	Director of Market Survey Activities and Details.
Rebekah Norman Rutherford County Extension UT Extension	Collaborator	Project Advisor. Outreach Planning Team (workshops and conferences).
Margarita Velandia Agricultural Economics UT AgResearch/UT Extension	Co-Principal Investigator	Director of Focus Group Activities and Details.
Dwight Loveday Food Science and Technology UT Extension	Collaborator	Director of Meat Processing Systems Publications: (1) processing cut sheets, and (2) dressing percentages and products.
John Campbell Area Farm Management UT Extension	Collaborator	Director of Budgeting/Cost Systems for Grain-Fed.
Alice Rhea Area Farm Management UT Extension	Collaborator	Director of Budgeting/Cost Systems for Grass-Fed.
Justin Rhinehart Animal Science UT Extension/AgResearch	Co-Principal Investigator	Director of Production System Activities.

Producer Research

Focus group research, conducted from December 2013 to January 2014, collected insights from 26 producers representing 18 Tennessee beef farms. Focus group members sold beef from the farm and/or at farmers markets (55%); through butchers/retail stores and/or to restaurants (22%); through Community Supported Agriculture (CSA) (11%); and through online outlets (11%).

Challenges common to producers across market outlets included pricing, product storage, delivery (logistics) and customer education. Producer focus group members reported that value-added beef customers ask a lot of questions. According to the producers, consumer questions focus around the following topics:

- What cattle eat (all-forage or grain/grass) and whether farm uses feeds containing GMOs
- Whether cattle receive antibiotics or artificial hormones
- Where cattle live during finishing, especially whether cattle are confined
- If beef is natural or organic (though consumers did not always have clear definitions for those terms)
- If the animal is “local” or was raised on the seller’s farm

Marketing Cost Research

The Value-Added Beef Program Team developed a publication detailing marketing costs for beef sold in Tennessee, including:

- Cost estimates for marketing through retail channels
- Start-up and operating costs for a very small-scale enterprise
- Budgeting framework to assist producers in effectively budgeting for their operations

This cost research focus provides a deliverable that can be used and modified across various farm sizes and production styles.

The marketing cost research presented a largely unexpected challenge for estimating production costs based on different production systems. Differing pasture forages and grazing systems, as well as varying definitions of “grass-fed” production, presented great difficulty in establishing baseline assumptions to be used in production budgets.

As a result of this discussion around production assumptions, researchers Holland and Pepper decided to focus only on estimating differences in marketing costs between different market channels. Bypassing production costs altogether, these marketing cost estimates could then be applied to the type of production system used by individual beef producers. While the process added significant time and effort to this component, the end result is a stronger product that can be used by any type of cattle farm that is evaluating value-added beef production.

Measured Results

Value-added beef marketing, measured by broad and program-specific metrics, increased in Tennessee as a result of the research and outreach funded by the FSMIP grant.

Broad Measures

- 149 percent increase in the number of farm-based retail meat permits issued by TDA from December 2011 to May 2015 (from 57 to 142)
- From February 2011 to May 2015, the number of freezer beef operations listed on Pick Tennessee Products website increased by 47.5 percent (from 80 to 118)

- From February 2011 to May 2015, the number of meat marketing farms listed on the Pick Tennessee Products “retail meats” website increased by 83% (from 48 to 88)
- Sales direct to the consumer, from Tennessee farms, increased from \$15.38 million in 2007 to \$19.2 million in 2012.

This research and outreach complemented other value-added beef outreach activities during the project period. The importance of the collaborative network which developed – between university, agency, producer and industry members – cannot be overstated.

A summary of the educational publications developed for the value-added beef program is provided in Table 2.

Program-Specific Measures

The **Tennessee Value-Added Beef 101 Workshops** were on-farm workshops held in April and May 2013. These were held at Baggett Family Farm, the home of Tennessee Grass Fed Beef, in Montgomery County; in Grundy County, at Double A Farm; in Henry County, at Paris Landing State Park and Yoder Brothers Processing; and in Knox County, at the East Tennessee AgResearch and Education Center (ETREC).

In all, 106 people attended the four workshops with 31 at Baggett Family Farm, 17 at Double A Farm, 40 at Yoder Brothers and 18 at ETREC. The workshops included presentations on regulations, profitability, processor-producer relationship and retail meat permitting.

A total of 55 evaluations were collected from the 106 participants in 4 workshops. The highest impact was on increasing understanding of regulations involved with direct marketing meat. Participants also reported significant increases in their understanding of beef consumers and in the process of farm financial assessment for value-added beef marketing. Complete results are reported in CPA Info #202, Tennessee Value-Added Beef 101 Workshops Evaluation Summary, published September 2013.

The **Marksbury Farm Tour** was an out-of-state tour of a Boyle County, Kentucky, meat processing, retail market and event facility. Among the 28 participants, the highest impact was rated as an improved understanding of how to develop and implement marketing strategies for a value-added meat business. A complete summary of the tour evaluation results is reported in CPA Info #203, Exploring Meat Processing and Marketing Opportunities Possibilities Tour to Marksbury Farm: Evaluation Summary, published October 2013.

The **What You Should Know About Beef Quality and Meat Cuts Workshops** were held in November 2013. There were 100 participants in 3 workshops. Participants indicated their greatest increase in understanding came in “Traits affecting tenderness and flavor” and “USDA yield grades.”

When asked to identify the two most important things learned in the workshop, “grade/yield,” “grass-fed vs. grain-fed,” “cuts and cut locations,” age/harvest timing” and” freezing and storage” were the most frequent responses. The top actions that were planned as a result of the workshop were “communicate with consumers and processors,” “learn and research more,” “begin to improve tracking of genetics, inputs, slaughter dates and yield” and “sell at younger or appropriate age.”

	<u>Title</u>	<u>Number</u>	<u>Authors</u>	<u>Date</u>
1	An Examination of Consumers' Preferences for Differentiated Beef Products	Research Report	Menard, Jensen, and English	June 2012
2	Basic Regulatory Considerations for Retail and Non-retail Meat Sales in Tennessee	PB 1805	Holland	October 2012
3	Listing of USDA Livestock Slaughter Facilities in Tennessee	D-3	Pepper and Bruch	September 2013
4	Retail Meat Sales in Tennessee: Basic Weights and Measures Regulations	D-1	Bruch	November 2013
5	Tennessee Value-Added Beef Entrepreneur Experiences. A Series of Nine Case Studies	D-9	Bruch and Others	December 2013
6	Understanding Yield Grades and Quality Grades for Value-Added Beef Producers and Marketers	SP-755	Holland and Loveday	December 2013
7	General Overview of the History, Regulations and Inspection Information for Direct Meat Marketing in Tennessee	PB 1819	Holland and Bruch	December 2013
8	Consumer Preferences for Tennessee Beef	AIM-AG Research Report	Jensen, Bruch and Menard	May 2013
9	Participant Assessments of the 2014 Value-Added Beef Conference	CPA Info #220	Holland and others	May 2014
10	Initial Considerations for Starting a Livestock Harvesting and Processing Facility	CPA Info #221	Holland and Pepper	May 2014
11	How Much Meat to Expect from a Beef Carcass	PB 1822	Holland, Loveday and Ferguson	June 2014
12	Improving Communications with Your Beef Processor	PB 1820	Holland and Loveday	August 2014
13	General Guide to Marketing Live Animals for Custom-Exempt Harvesting and Processing	PB 1821	Bruch and Holland	July 2014
14	Understanding Beef Checkoff and State Beef Promotion Assessments	SP 773	Pepper and Valerie Bass	December 2014
16	General License and Labeling Guidelines for Marketing Pet Food and Pet Treats as Animal Feed in Tennessee	PB 1832	Holland, Pepper, Leffew and Critzer	July 2015
17	Budgeting for a Small-Scale Tennessee Value-Added Beef Marketing Enterprise	In review	Pepper and Leffew	In review
18	Marketing Locally Raised Beef: Lessons Learned from Value-Added Beef Producer Focus Groups	PB 1834	Leffew	September 2015
19	Consumer Preferences for Tennessee Beef: Results of a Consumer Survey	PB 1835	Leffew	September 2015

A complete summary of workshop evaluations is published in CPA Info #211 Participant Assessments of the 2013 Value-Added Beef Workshops: “What You Should Know About Beef Quality and Meat Cuts.”

The **Production and Cost Considerations for Finishing Animals for Direct Marketing Workshops** were a series of six workshops held from September to December 2013. There were 191 participants. Participants responding to workshop evaluations rated the top two actions they planned to implement from the workshop as improving the business plan with budget/financial information and improving calf selection/frame/timing. Participants also said they would “change or improve marketing” and “better forage and forage planning.”

Participants at each location reported significant increases in knowledge, with the greatest increase reported for “economic considerations for value-added beef” (91.6% of respondents) followed by “production considerations for grass-fed beef” (89.8% of respondents).

Detailed response metrics for these workshops may be found in CPA Info #212 Participant Assessments of the 2013 Value Added Beef Workshops: “Production and Cost Considerations for Finishing Animals for Direct Marketing.”

The **2014 Value-Added Beef Conference** was a two-day conference held in March 2014 at Manchester, TN. There were 119 participants and 17 presenters participating in the conference. There were 14 agencies represented at the conference trade show.

Conference respondents rated the conference an average of 4.5 on a 5.0 scale of usefulness. The highest changes in respondent understanding were reported in:

- analyzing costs of finishing and direct marketing
- understanding local and conventional finishing/production systems
- understanding consumer preferences for local beef

All conference participants who said they made farm decisions reported that they learned things at the conference that will help them make changes to increase sales, reduce costs and/or market their products more effectively.

A complete detail of the participant responses may be found in CPA Info # 220, “Participant Assessments of the 2014 Value-Added Beef Conference.”

Current and Future Benefits

Economic Impact -- Farm incomes and rural economies have been positively impacted by the increase in value-added beef marketing in Tennessee. Beef producers report that increasing value-added beef sales has increased their business with beef processors. This creates real economic impact and value to the broader Tennessee economy. For example, one farm that had been only marketing to farmers market customers in Knoxville started providing 800 pounds of ground beef weekly to a restaurant. This tripled the farm’s previous volume with its processor.

Collaborative Networks -- This project brought together groups directly involved in marketing Tennessee beef – producers, processors, federal and state regulators – as well as educators and researchers. Networks established between these groups are already paying dividends, as

educational outreach for a 2014 on-farm poultry processing project drew upon relationships established during the Value-Added beef project. In addition, collaboration allowed for the development of an on-line market assessment tool where value-added beef producers can evaluate consumer demographics within user-specified distances from their market location.

Establishing a Meat Marketing Outreach Model -- Another benefit from this project is establishing a model for market research and outreach education related to other Tennessee livestock and poultry enterprises. Program design and implementation is not the only area that benefits from the success of the Value-Added beef program. Many Value-Added Beef Program farmer clients are also interested in direct marketing other species, as indicated by evaluations collected in 2014, at the inaugural Value-Added Beef Conference.

Market Opportunities for Beef By-products -- An unexpected result of the value-added beef research program was discovering markets for pet food and pet products made from Tennessee beef. These products include bones, liver and liver jerky, and raw beef pet snacks. Future research and market development efforts could build on this discovery.

Recommendations for Future Research

Tools focused on cost analysis -- There is a future need for research and development for decision aids that help beef producers analyze costs specific to beef marketing – as well as tools to help evaluate the costs of different beef production systems.

Production and marketing (label) claims -- Value-added meat marketing can introduce many terms meaning different things to different people – such as “grass-fed,” “no added hormones,” or “all natural.” There is a need for more investigation into how consumers value these claims, and outreach is needed to better educate producers about what is required to make different claims.

Market studies and outreach for other species -- Beef producers say their consumers are usually interested in buying other meats. This presents the opportunity for market studies and outreach specific to other animal agriculture products – especially how other species complement value-added beef products.

Description of Project Beneficiaries

Outreach and education directly tied to the research funded by the FSMIP grant included 34 events that reached 1,363 people. Other projects associated with the broader Value-Added Beef Program included an additional 30 events and more than 600 additional participants.

The reports mentioned in this report are available at: <https://ag.tennessee.edu/cpa/Pages/VA%20Beef.aspx>