

Farmer Rancher Grant Program

Final Report Form

PROJECT IDENTIFICATION

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Project Title: Finishing time and weights of grass-fed beef animals

- Project Number: FNC12-860
- Project Duration: 2.5 years
- Date of Report: 11/30/14

PROJECT BACKGROUND

I have a 113-acre farm that is almost entirely in rotationally-grazed pastures. I raise grass-fed beef cattle that are Angus and Angus-Hereford crosses. About four acres of the farm are dedicated to production of hogs, broiler chickens, and laying hens. Virtually all products of the farm are direct-marketed, either through the Grand Rapids Farmers' Market or to other individual customers.

SUSTAINABLE PRACTICES USED BEFORE PROJECT

I was already raising grass-fed beef, pastured hogs and poultry; using the pigs and chickens to prepare land for planting of vegetable crops; limiting or eliminating purchased fertilizer; and direct-marketing to capture the largest percentage possible of the consumer dollar.

PROJECT DESCRIPTION

GOALS

- 1) Develop simple, farmer-designed forms and protocols for tracking grass-fed beef production data. These data collection tools could find use beyond the limits of this project.
- 2) Document the production of beef cattle from Minnesota grass-fed beef producers who are currently successfully producing 600 lb. or heavier carcass weights in the 15-to-18-month time frame.
- 3) Document summer grazing practices, winter feeding practices, and winter feed quality on farms in the study.
- 4) Economic analysis comparing the productivity of the grass-finished systems in this study with a comparable feedlot beef system in which calves are born in the spring, spend

their first summer on grass with their mothers, are weaned in the fall, and finished in a feedlot.

PROCESS

- 1) Very early on, I made visits to each of the farms to get to know the farmers a little bit and see their operation with my own eyes. Having a mental picture of who they were and what their farms were like, and getting that personal connection, was really helpful throughout the remainder of the project. I think other multi-farmer projects should be encouraged to include budget line-items for that kind of travel just to get acquainted.
- 2) I developed draft forms for the farmers to use to input their data on their livestock with the intention of having a group effort to revise the forms and create a uniform system that could be used by other farmers for data entry. That turned out to not be useful at all. Each of the farmers already had their own system. There was very low interest level in working together on standardized forms. I jettisoned that whole development-of-forms-and-templates goal in favor of developing a spreadsheet for myself that could take in the data and put it into standard columns no matter how the farmers wanted to send it to me. I got some data scribbled on slips of paper, some over the phone, some in emailed spreadsheets, and some typed into text of emails. All good.
- 3) Documenting the production, grazing practices, feeding practices, etc. was the heart of this project. I sent out reminders from time to time, but mostly the farmers were very good about sending me their data as soon as they had it available – which was sometimes much later than expected (see attached letter for further explanation). Having the “carrot” of payment for the data was very helpful in getting that data collected. Patience and persistence were both important as well. As mentioned above, a key piece of this was development of the standard spreadsheet that I could use to organize data collected from a wide variety of reporting methods used by the farmers.
- 4) Crunching the numbers and creating tables and charts was the fun part for me, once all of the data were finally collected and compiled into the spreadsheet. I found that the economic analysis required knowing a lot of details about a farmer’s operation that didn’t fit into the data points collected during the course of the study, so there needed to be some fairly intense communication back with the farmers to get those analyses completed.
- 5) Writing up a final report of project results – I personally felt that it was very important to have a nice, polished-looking report that I could hand out to people to read, so I spent a lot of time on this step.

PEOPLE

Three other farmers cooperated on this grant. They were involved by collecting data on their own operations and submitting it to me as it became available or as I requested it. They also provided details about their operations which helped me develop the economic analyses of each farm:

Bill McMillin and wife Bonnie have a 160 acre farm near Kellogg Mn. We milked cows until 5 years ago. At that time we transitioned into grass-fed beef. We have been rotational grazing for 22 years. We have about 35 cows. We keep a few heifers for replacements each year and finish out the rest on grass and hay. We sell our finished animals to Hidden Stream Farm. They market the animals to grocery stores, food coops, and restaurants and also sell at farmers markets. We have 40-45 acres of pasture. We also raise about 45 acres of hay, 20 acres of corn, 10 acres of soybeans and 10 acres of oats a year.

Edgar Brown has an 80 acre farm near Willow River in Pine County. The majority of his farm is divided into paddocks for rotational grazing, and he is working on establishing hybrid poplar along the fencelines in all the paddocks, for windbreak and shade. He has 16 cows and has direct marketed beef for many years. He transitioned to grass fed beef in 2010 and began selling to Thousand Hills Cattle Company in 2011.

Jake and Lindsay Grass operate Grass Meadows Farms in conjunction with Lindsay's brother John Takala's beef operation. This joint operation consists of 120 cow calf pairs for the production of grass fed beef. The cattle are born on our northern farm of 210 acres in St. Louis County. The calves are finished on our southern farm of 70 acres in Pine County. The cattle are sired by Angus bulls and out of Angus, Gelbvieh and Scottish Highland cows. We raise most of our own finishing forage in Pine County on 120 rented acres.

Two U of MN Extension Educators helped on this project: Wayne Martin, Alternative Livestock Specialist; and Troy Salzer, Carlton County Extension. They provided input during the preparation of the application and advice on the winter forage sampling protocols for each farm. Troy Salzer also made the Carlton County Extension's livestock scale available to the Jewett and Brown farms, and had quite a bit of personal contact with Edgar Brown to assist him with forage sampling and other concerns, and also gave him a ride to my field day in October 2012. Dean Harrington is a banker in Plainview, MN who wrote a letter of support for this project and is anticipating making use of the results in his banking business: he wants to make loans to graziers but needs the economic analyses of grass-fed beef.

RESULTS

Please see the attached 20-page report detailing the results of this project.

DISCUSSION

This project has been eye-opening for me. I have seen how my farm stacks up against other grass-fed beef operations, and have realized that there are changes I could make to improve the performance of my farm. I think a key realization is that it is wrong to have a fatalistic attitude about grass-fed beef performance. There is clearly potential for many operations to improve, and we need to work on finding ways to improve productivity and profitability while also recognizing the multiple and sometimes non-economic benefits of grass-based production.

I think this project succeeded in demonstrating that grass-fed beef can be more productive and

efficient at producing beef than it is frequently portrayed in both the scientific literature and in the media.

A clear advantage was having multiple farms involved. For this project, four farms was a good number – it would have been difficult to deal with more than that with the variety of types of data being collected. For the future, I think it would be extremely useful to have grass-fed beef production data collected over a wide geographic area and from many farmers. This could be done much more easily with fewer types of data being collected. My report on this project suggests the key data types that would be needed.

A disadvantage was the fact that this project was about beef cattle, and the sheer length of time it took to collect all of the data. Cows take a long time to grow up, and when various factors delay their growth and finishing time, their life cycle pushes out beyond the SARE project grant cycle. It would have been beneficial to have more flexibility even than the 6-month extension and then the one-month extension that I was granted for this project.

If asked for more information, I'd say: Read the report! (attached 20-page report on results).

PROJECT IMPACTS

Please see the 20-page report, attached, for economic analyses. There are no immediate project impacts on the farms involved because we didn't change anything about their practices – we just documented what the practices were and the results of those beef production practices. I fully anticipate economic, environmental, and social impacts in the future as I believe this report will help move grass-fed beef away from the fringes and towards the mainstream in the eyes of farmers and educators; thus leading to more adoption of grass-based production. At this point, though, increased adoption is speculative and it isn't possible to quantify the impacts.

OUTREACH

- 1) The Jewett farm hosted a field day on October 22, 2012, with the following collaborators: Aitkin County NRCS, Northeast MN Forage and Grassland Council, and University of Minnesota Extension. Thirty-three adults and three kids attended, and participants came from as far as 150 miles away. Preliminary study data (mostly participants' historical carcass weight data) were presented, the project was described, and a pasture walk was conducted with participation from Scott Kittleson of Aitkin County NRCS, Tom Gervais of the regional NRCS office in Duluth, Wayne Martin of U of MN Extension, and Troy Salzer of Carlton County Extension. Betsy Wieland, Minnesota NCR-SARE Co-Coordinator, attended the field day and presented information about the SARE Farmer/Rancher grant program.

Results of evaluation surveys at the Oct. 22, 2012 Field Day:

How likely are you to try some new grazing methods on

your farm?		
Very likely	Somewhat likely	Not likely
11	5	0

Have today's presentations changed your opinion of grass-fed beef production?		
More Positive	No Change	More Negative
9	8	0

How useful was the information you heard today?			
	Very	Some	Not
SARE program	10	7	0
Pasture mgmt.	13	5	0
NRCS prgs.	10	5	0
Grass-fed beef	11	5	0
Selling Meat	11	1	0

Comments:

"Very helpful to talk with others and their use of grazing practices & see actual fields in production."

"Well organized and very informative."

"Good presenters & information."

- 2) A field day was held at the John Takala farm near Iron, MN on July 20, 2013 with Jake Grass of Grass Meadows Farm participating with a talk on grass-fed beef. The Takala farm houses the cow/calf portion of the Grass Meadows beef operation. This event was part of the regular summer field day held by the Northeast Minnesota Forage & Grassland Council, and about 100 people attended. It was coordinated by Carlton County Extension and Aitkin County NRCS.
- 3) Jane Jewett gave a presentation about the project and participated in a beef panel discussion along with Dr. Allen Bridges and Dr. Alfredo diCostanzo at Itasca Community College in Grand Rapids, MN on September 16, 2013. This was part of events related to a campus-wide read of *The Omnivore's Dilemma* by Michael Pollan. A survey was taken of the faculty, students, and community members attending the event.

Beef Panel Evaluation

September 16, 2013 at Itasca Community College

Evaluations were handed out to all attendees as they entered. Fifty-six evaluation forms were returned.

7 people identified themselves as “Citizen”
2 people identified themselves as “ICC Faculty” or “ICC Staff”
47 people identified themselves as “Student”

Question 2 about familiarity with beef production:

6 people rated themselves as “Knowledgeable”
36 people rated themselves as “Moderate”
14 people rated themselves as “Limited”

Questions 3 and 4 about attitudes toward grass-fed beef and feedlot beef were scored as follows:

Unfavorable = -1

Neutral = 0

Favorable = 1

Question 3: Opinion of grass-fed beef – average score was 0.7, indicating a positive outlook toward grass-fed beef among a majority of attendees.

Question 4: Opinion of feedlot beef – average score was -0.3, indicating a negative outlook toward feedlot beef among a majority of attendees.

Questions 5 and 6 about any changes in attitude as a result of the presentations were scored as follows:

Less favorable now = -1

No change = 0

More favorable now = 1

Question 5 about change in opinion of grassfed beef – average score was 0.3, indicating that on average, opinions of grass-fed beef became slightly more favorable as a result of the presentations.

Question 6 about change in opinion of feedlot beef – average score was 0.2, indicating that on average, opinions of feedlot beef became slightly more favorable as a result of the presentations.

Additional planned outreach:

The 20-page report will be shared with the Midwest Perennial Forage Working Group members, which includes researchers and educators from Iowa, Minnesota, and Wisconsin. More information about that group: http://greenlandsbluewaters.net/Perennial_Forage/default.htm

If the Midwest Perennial Forage Working Group approves, the report may be further shared with the Green Lands Blue Waters mailing list of 430+ individuals involved in efforts to increase perennial crops on the agricultural landscape.

The report will also be shared with Warren King and others at the Wallace Center's Pasture Project. Warren King received a copy of my 9/16/13 presentation and has requested the final report.

Northern Plains Sustainable Agriculture Society Winter Conference, January 23, 2015 in Aberdeen, SD. Jane Jewett is scheduled to present this project at a conference session.

Grassworks.org Conference, January 15-17, 2015 in Wisconsin Dells, WI. Jane Jewett will submit a poster application by the deadline (COB 12/01/14).