

2013-2014 PROGRESS REPORT
North Central Region
Sustainable Agriculture Research and Education (SARE) Program

Progress Report Year: 2014

Project Title: Finishing Time and Weights Of Grass-Fed Beef Animals

Project Number: FNC12-860

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WORK ACTIVITIES

The work for the project this year consisted primarily of data collection on 2012-born calves: cooperators submitted data on beef steers' weaning weights, spring pre-pasture weights, pre-slaughter live weights, and carcass weights. Collaborators also tracked their pasture rotations for the summer and reported that information. Grant funds were used as planned to pay collaborators per data point submitted, and for scale rental and mileage for transporting a livestock scale to the Brown and Jewett farms.

Outreach work included a field day presentation by Jake Grass in July 2013, and participation on a beef panel discussion by Jane Jewett in September 2013. As part of the beef panel event, Jane collected evaluation data from attendees. A report on that evaluation is attached.

A 6-month extension of the project was requested and granted, so the final report will be due October 30, 2014. This extension was requested in order to accommodate the marketing schedule of the Grass Meadows Farm (Jake and Lindsay Grass). They have been transitioning to late summer/fall calving over the course of this project, and therefore their marketing of 2012-born calves is not complete as of the end of April 2014.

RESULTS

Data received from Bill McMillin on his 2012-born calves shows the consistency of his grass-fed beef production system that is based on high-quality winter forage and summer rotational grazing. His is a high-cost system that uses the infrastructure that he had in place for his dairy herd. Over the course of this project, Bill has realized the value of his system for finishing out a grass-fed beef animal with a consistent carcass weight in a period of time that is comparable to

feedlot-finishing. He is planning to shift from cow/calf production to become a grass-fed beef finishing operation.

Bill McMillin's average carcass weights:

2010 average carcass wt.: 632 lbs. (number of animals = 12)

2011 average carcass wt.: 665 lbs. (number of animals = 14)

2012 average hot carcass wt: 700 lbs. (number of animals = 17)

2012 average carcass yield: 57%

2012 average age at slaughter: 16.9 months

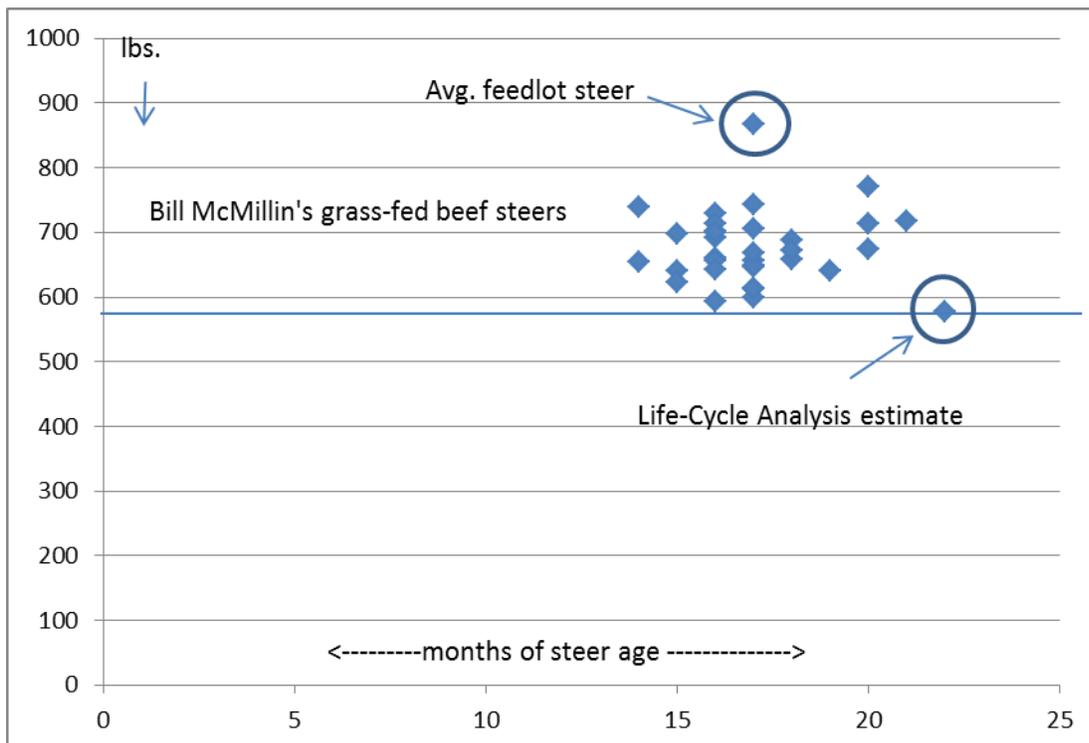
2013 average carcass wt: 641 lbs. (number of animals = 15)

2013 average carcass yield: 55%

2013 average age at slaughter: 17.0 months

The following chart shows a scatter plot of Bill McMillin's steer weights in 2012 and 2013. The majority of his animals are finishing in the same time frame or earlier than average feedlot beef, although carcass weights are lighter than for the average feedlot steer. 100% of Bill's animals finished sooner and with a higher carcass weight than the grass-fed beef weight and finish time estimates used in the Life Cycle Analysis by Pelletier et al.

(Comparative life cycle environmental impacts of three beef production strategies in the Upper Midwestern United States. Nathan Pelletier, Rich Pirog, Rebecca Rasmussen. July 2010. Agricultural Systems 103(6):380-389.)



WORK PLAN FOR 2014

The work to be done over the next 6 months includes:

- Receiving pre-slaughter live weights and carcass weights from the Grass Meadows Farm
- Charting and analyzing data from each farm, particularly exploring the relationship between winter forage quality and the age-carcass weight index of the animal
- Collecting cost-of-production data from collaborators and calculating profitability of each farmer's system of grass-fed beef production
- Developing a method to display pasture rotation information submitted by farmers
- Updating and expanding PowerPoint presentation of project results

OUTREACH

Jake Grass of Grass Meadows Farm gave a presentation on grass-fed beef at the Northeast Minnesota Forage & Grassland Council Field Day on July 20, 2013. More than 100 people were in attendance.

Jane Jewett of WillowSedge Farm participated in a beef panel discussion at Itasca Community College in Grand Rapids, MN on September 16, 2013. It was moderated by Troy Salzer of Carlton County Extension and also included Dr. Alfredo diCostanzo and Dr. Allen Bridges, both University of Minnesota researchers in the Department of Animal Science and members of the U of MN Extension Beef Team. The beef panel was part of campus-wide events on food systems, and the audience of 90+ included students, faculty, and community members.

Plan for outreach once all data are received:

- Update and annotate PowerPoint presentation
- Create brief (2- to 4-page) fact sheet describing the project results
- Create PowerPoint presentations detailing the beef production systems of Edgar Brown and Bill McMillin, since they were unable to host field days (due to biosecurity concerns on the part of Edgar Brown and personal and family health issues on the part of Bill McMillin)
- Present PowerPoint at relevant events and meetings; may include county-level Soil & Water Conservation District meetings and Forage & Grassland Council meetings
- Present PowerPoint to the Midwest Perennial Forage Working Group of Green Lands Blue Waters