Northern NY Agricultural Development Program
2014 Project Report

Filling in the Missing Links Connecting Cow-Calf Producers, Stockers and Cattle Feeders in the North Country

Project Leader(s):
. Mike Baker, Cornell University Beef Extension Specialist, Ithaca, NY
. Betsy Hodge, Kitty O'Neil, CCE St. Lawrence County, Canton, NY
. Ron Kuck, Steve LeDoux, Mike Hunter: CCE Jefferson County, Watertown, NY
. Peter Hagar, CCE Clinton County, Plattsburgh, NY
. Anita Deming, CCE Essex County, Westport, NY
. Diane Dumont, CCE Franklin County, Malone, NY
. Eric Young, W.H. Miner Agricultural Research Institute, Chazy, NY

Collaborator(s):
Backgrounders, cow-calf farmers, CCE Learning Farm personnel, and veterinarians interested in improving beef production in Northern New York.

Cooperating Producers:
The Rising Plate Meter was used on these farms:

> Extension Learning Farm, St. Lawrence County (Intensive grazing)
> Adam Cook, St. Lawrence County (Moderately Intensive)
> Andy Hurlbut, St. Lawrence County (Moderately Rotated and short)
> Peter Hagar, Clinton County (Intensive Grazing)
> Jacob and Jana Garrant, Maple Summit Farm, Clinton County (Intensive Grazing, organic transition)
> Richard Hoskins, Lewis County (Intensive grazing, stocker operation)
> Dillon Murrock, Murrock Farms, Jefferson County (Organic)
> Ed Robertson, Jefferson County
> Kevin Sullivan, Lewis County
> Clinton Horst, Jefferson County
> Ed Walldroff, Jefferson County.

Background:
Given the increase in the price of feed, predominantly corn, cattle feeders are interested

in receiving heavier cattle. Additionally, as the price of the feeder calf has increased, risk of death loss is reduced on heavier cattle. Discussions with cattle feeders have indicated they are looking for cattle that weigh 800-900 lbs. Most of our cow/calf producers wean calves that weigh 400-500 lbs. and do not have the facilities to winter these calves nor the extra pasture to graze them the following summer. Also our cow/calf producers have small herds and the cost effectiveness of separating and feeding a few calves over the winter would be too high.

Northern New York has an abundance of high quality grass. There are relatively large tracts of contiguous properties. Structures are available from abandoned dairy farms. Aggregation of light weight calves from our small cow/calf herds into larger groups that can be fed over the winter in a cost effective manner, then grazed the following summer, would produce the type of feeder cattle desired by the feedlot. Being in larger groups, these cattle can also be more effectively merchandized.

The challenge for the background/stocker is aggregating cattle from many sources increases the risk of bovine respiratory disease (BRD). Management practices such as weaning, vaccination and nutrition on the cow/calf farm also can affect the rate of BRD.

Given the part-time nature of the cow/calf business, not all recommended procedures to reduce risk of BRD will be performed. Understanding which combination of procedures has the greatest impact on reducing BRD for our small farms in NNY would increase their value to the backgrounder/stocker operator.

Another factor is an increase in interest from beef farmers in improving their herds and income and in working together along the chain from cow-calf to stocker to feeder. Beef discussion groups, regular Beef Week programs, and visits from Mike Baker have set the stage for progress in the beef industry in Northern New York.

Methods:
Survey to determine current practices
Extension Educators offered the survey at each of the four Spring 2014 Beef Week meetings and online through a beef email list. The purpose was to assess what cow-calf farmers are currently doing so we can plan our programming and future research.

Rising Plate Meter Measurements
Through this grant, two Rising Plate Meters (RPM) (See Appendix. Figure 1.) were added to the one already in the North Country for use measuring dry matter per acre on pastures. Jefferson/Lewis counties already had a RPM and one was put in St. Lawrence County and one in Clinton County. Cornell Cooperative Extension Educators Ron Kuck (Jefferson/Lewis), Betsy Hodge (St. Lawrence), and Peter Hagar (Clinton) were the primary users of the RPM this summer. Several interns also learned about using the RPM and pasture management as a result.

Several farms were measured regularly over the summer and the results compared to observations to see if the RPM can reliably be used in Northern New York.

Aerial photos were used to map out, identify and measure the area of the paddocks at each farm. Weekly measurements were taken at some farms, others were measured at intervals appropriate for the farm. Graphs were made and the information was used to work with the farms or to give the Educators more information about beef grazing in the North Country. Some results were entered at the University of Missouri Grazing Wedge site: http://grazingwedge.missouri.edu/index.cfm. The information is available to the public to view.

Educators also took samples and measured the dry matter in those samples and compared it to the RPM measurements to test the calibration of the equipment. We were using equations to convert the data from the RPM to dry matter per acre that were developed in Cayuga County, NY.

Results:
Survey to determine current practices
Results will be used to direct educational programs and research for the next 5 years. The project collected 32 total surveys and slightly less usable surveys, e.g, one on bison. Most respondents were cow/calf operations, but a few also sold seed stock, fed out animals and raised stockers. Note: Results do not always total 100% because farmers did not answer all the questions or checked more than one answer in some cases. Percentages were rounded to whole numbers for ease of reading.

Breed:
Predominantly Angus with some Hereford, one Simmental and a mention of Charolais, some Highlander and Dexter

Veterinarian:
83% of respondents reported some level of veterinary involvement in their operation. Most had a veterinarian they work with regularly. This is progress from a few years ago and may be the result of the Beef Quality Assurance Program throughout the state.

Handling Equipment:
23 (79%) had a headgate; some also had a squeeze chute, chute system and used headlocks or dairy tie stalls for handling cattle.

Fly control:
17 (59%) practiced some kind of fly control (were not asked about effectiveness).

Pasture Management:
6 (~21%)	Continuous grazing
17 (59%)	Moderate rotational grazing (3 to 5 paddocks maybe)
8 (26%)	Use intensive rotational grazing
2 (~7%)	Use cornfield, mob grazing or "other"

Future Plans:

        11 (36%)   Stay the same
        18 (60%)   Expand
         1 (3%)   Get smaller

Other:

        18 (69%)   Grass-fed circled (grass finished? not sure)
        2 (8%)   Sell Breeding Stock
        11 (42%)   Breed AI (Tried with mixed success)
                       Embryo transfer and Animal Welfare Approved also mentioned

Calves expected in 2014:

        5 to 120 (many in 15-35 range, average: 21)
        Most calves were going to be marketed in 2014 with some held over to 2015,
        four farmers feed all calves out and then sell. A few go for breeding stock as well.

        Weighing: 14 (54%) weigh calves before they go to market

        Weaning:
        19 (73%) wean calves before they go to market (none weaned before 6 months of
        age, many were 8 months old, some 10 months+)

Castration:

        26 (90%)   Castrated bull calves using banding (one banded and cut)
         6 (21%)   Castrated within first week
                       Rest done from 2 to 7 months of age

De-horning:

        10 (40%)   Farmers de-horned calves (rest may be polled, e.g., 5: cattle polled)
        Timing   Ranged from "As soon as possible" to 6 months

Vaccinating: Calves

        19 (63%) vaccinated calves
                13 (65%) Combination (IBR, BVD, BR3V, PI3)
                5 (25%) Pasteurella
                6 (30%) Clostridial
                3 (15%) Histophilus

                7 (47%) Modified live
                3 (19%) Killed
                2 (13%) Used both

                7 (47%) Before weaning
                5 (33%) After weaning
                3 (20%) Upon weaning
              1 (7%) Buyer did it when calves were picked up

Vaccinating: Cows
        18 (60%) vaccinate cows; most didn't know what they vaccinated with but went with veterinarian recommendations; Triangle 9 and 10 and Rabies most often.
                8 vaccinated in spring
                5 in fall
                3 in winter
                5 no season specified

Marketing Calves (could add up to more than 100%)

3 (11%)	Auction
13 (48%)	Direct to cattle buyer
14 (52%)	Freezer trade
2 (7%)	Through co-op
6 (27%)	Other: seed stock, fed cattle sent to JBS/Cargill, some to feedlot in Midwest

Results of Rising Plate Meter Measurements

The Rising Plate Meter (RPM) is a piece of equipment that you use by walking through the pasture in a pattern and dropping it into the grass. A round plate moves up and down on the handle and a counter records the number of "clicks." The reading is then put into an equation to predict the dry matter/acre available in the pasture.

- Extension Educators learned to use it (as well as 2 participating interns)
- We taught some farmers how to use it
- Used to analyze some pasture situations to help improve management
- Calibration tests found the equations we were using worked well and that the equations we figured out were similar in the middle range, lower on the low end and higher on the high end.
- Does not work in all situations (bushy, unclipped pastures, holes). Needs to be used with some common sense.
- Should have one in every county to lend, show, demonstrate (three currently in NNY region)

Examples of how RPM was used on farms:

Peter Hagar, Clinton County: "I used the rising plate meter several times at Maple Summit Farm in Chazy, NY. Joe, Jana & Jacob Garrant have a small dairy farm and were transitioning to Certified Organic last summer. I wrote a grazing plan and helped set up and design a fencing system. They had never grazed before and were very worried about how it was all going to work out. Since the organic certification required them to have 30 % of their feed from pasture, I used the RPM to measure pasture growth and regrowth during the summer to help them size their paddocks and manage their pastures for optimum feeding. Their son Jacob was also using a grazing stick to keep an eye on his pastures and was very enthusiastic about using the RPM. At the end of the summer, they had successfully grazed 4 rotations through the system and were very happy with their decision to setup a rotational system."

Ron Kuck used the RPM to solve a growth problem with a stocker: turns out there was not as much dry matter in the paddocks as thought. Measures were taken to solve the problem.

Betsy Hodge used the RPM weekly on three cow-calf farms and entered the results into the University of Missouri website to create grazing wedges. Two of the three farms were overgrazing which became obvious with the use of the RPM. The other farm improved the order of their paddock use to better match the wedge.

Conclusions/Outcomes/Impacts:
Survey to determine current practices:
- Great to see more farmers with a veterinarian relationship (BQA progress)
- Some management items are all over the place with little consistency
- More producers are vaccinating than expected, although the timing is not always the best
- Cornell University Extension Beef Specialist Mike Baker's conclusions and subsequent NIFA-USDA grant to pool cattle and attempt to get more consistency in the cattle sold in NY fits the need in Northern New York
- As over half of the farms surveyed expect to increase cow numbers, this adds to the argument that a greater effort to assist in marketing is necessary
- We need to be able to show that fly control and de-worming will benefit NNY beef farms because the cattle handling and labor to do it causes some farmers to avoid these proven practices.

Rising Plate Meter Measurement:
- Farmers need help with paddock sizing and grazing techniques
- More producers are doing rotations but not doing well with stocking rates
- RPM is a good tool for measuring dry matter/acre in Northern New York
- Having the RPM takes some of the guesswork out of pasture design and ration planning.

Outreach:
Betsy Hodge wrote an article that was used in the county Ag Newsletters, by Mike Baker in his on-line Beef Cattle Comments (attached), and posted under Beef News on the www.ccenny.com website. Betsy Hodge and Ron Kuck presented the topic at the NY Ag Extension Educators In-service in November 2014 (pdf attached). RPM was shown and discussed at NNY Fall 2015 Beef Week programs, pasture meetings in 2014, and on pasture walks, e.g., evening pasture walk at the farm of Nancy Lynch to show her rotational grazing and efforts to reclaim pasture with her beef herd (see pictures). There was also a meeting to demonstrate the weed wiper at the Extension Learning Farm in Canton. (The grant provided funds to help repair the wiper so it could be demonstrated around the North Country). Peter Hagar also built and demonstrated a wiper in Clinton County. We plan to do more demos in more counties with the wiper in 2015.

Next steps: See Conclusions

Acknowledgments:

Reports and/or articles in which results of this project have been published.
See Appendix B. and Outreach section.

For More Information:
The following project leaders can help with contact with farmers who participated:
• Betsy Hodge, CCE St. Lawrence County, 315-379-9192, bmf9@cornell.edu
• Ron Kuck, CCE Jefferson County, 315-788-8450, rak76@cornell.edu
• Peter Hagar, Clinton County Soil & Water Conservation District (formerly CCE Clinton), 518-561-4616, peter.hagar@ccsoil-water.com
• Diane Dumont, CCE Franklin County, 518-483-7403, drd9@cornell.edu
• Anita Deming, CCE Essex County, 518-962-4810, anita.deming@cornell.edu
• Mike Baker, Cornell University, 607-255-5923, mjb28@cornell.edu

Photos :

Photo 1. Pasture Walk at Nancy Lynch's Gramma's Grass Acres, Brasher, NY. Farmers gathered for an evening of observing Nancy's farm. Nancy uses progressive pasture methods to reclaim pastures with her beef cattle. She raises grass fed beef for direct sale to consumers. Photo: Betsy Hodge, CCE St. Lawrence County.

Photo 2. Northern New York Livestock Team Leader Betsy Hodge of Cornell Cooperative Extension of St. Lawrence County demonstrates the Rising Plate Meter and shows the grazing wedge results at a pasture walk at Nancy Lynch's Gramma's Grass Acres in Brasher, NY; photo by Ron Kuck, CCE Jefferson County.
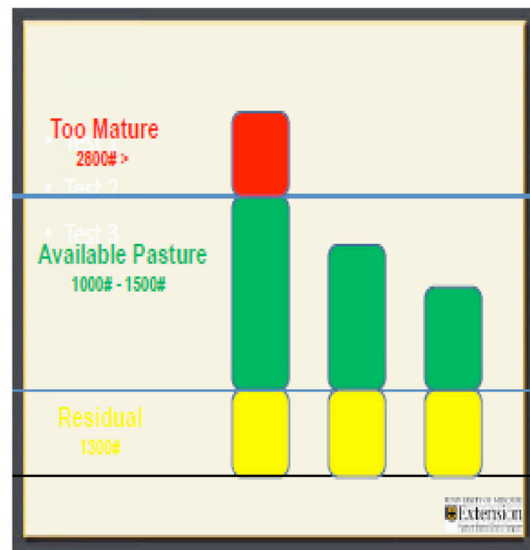

Photo 3. A Rising Plate Meter, left, and small grazing wedge; photo: Ron Kuck, CCE Jefferson County.