North Country Ag Advisor

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Photo Credit: CCE Jefferson

Cornell Cooperative Extension

North Country Regional Ag Team

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North Country Ag Advisor

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"The North Country Regional Ag Team is a Cornell Cooperative Extension partnership between Cornell University and the CCE Associations in Jefferson, Lewis, St. Lawrence, Franklin, Clinton, and Essex counties."

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Our Mission

"The North Country Regional Ag Team aims to improve the productivity and viability of agricultural industries, people and communities in Jefferson, Lewis, St. Lawrence, Franklin, Clinton, and Essex Counties by promoting productive, safe, economically, and environmentally sustainable management practices, and by providing assistance to industry, government, and other agencies in evaluating the impact of public policies affecting the industry."

Dry Weather and Corn Weed Control

By Mike Hunter

Many corn fields were sprayed with pre-emergence herbicide followed by 7 to 10 days without rain to activate them. Widespread field observations and reports indicate that the dry weather conditions in May have resulted in inadequate weed control in numerous corn fields throughout the region. After any herbicide application is made, you should check those fields to make certain that you have controlled the weeds. If you have not checked your corn field since it has been sprayed, now is the time to do so.

In order for most pre-emergence herbicides to do their job, they must be present in the soil solution where the weed seeds germinate. Most weed seeds will germinate in the top one inch of the soil. It requires about ½ inch of rainfall to sufficiently move the herbicide to the soil depth required for effective weed control. This is the main reason for so many failed pre-emergence herbicide treatments this season.

If you have applied a pre-emergence herbicide to corn it is time to scout for any possible weed escapes. If any of these fields have emerged weeds that are breaking through, here is your list of options:

1. You can wait and see if the recent rainfall will provide any "reach back" activity. Reach back is a term used to describe the potential for a pre-emergence herbicide to kill small, emerged weeds. It involves the herbicide being moved into soil solution and taken up by the roots of the weeds. This type of herbicide activity is highly inconsistent, but does exist. If it does not look like you will be getting any reach back activity, you need to take action and apply a post-emergence herbicide before it is too late. Once the broadleaf weeds and annual grasses get much bigger than one inch tall, the chance for any reach back is gone. There is a higher likelihood of reach back activity on broadleaf weeds than grasses and nutsedge.

   Not all pre-emergence herbicides will be able to provide control in this manner. If you have applied products such as atrazine, Acuron, Lumax, Lexar, atrazine plus acetamide premixes (i.e. Bicep Lite II Magnum, Charger Max ATZ Lite, Cinch ATZ Lite, Harness Xtra), Resicore, Verdict, Dual, Outlook, Harness, or Capreno there is a chance for this to occur. Do not expect any reach back from Prowl (or other dinitroanilines).

2. You can decide to take action now and make a post-emergence herbicide application.
   - If it is conventional corn, there are many good choices available to control mostly any emerged weed in a corn field. Proper weed identification is necessary when choosing the herbicide. If you are dealing with emerged grasses it is very important to know what grass species are present.
   - If it is glyphosate tolerant (Roundup Ready) corn, apply glyphosate and consider adding a herbicide with soil residual activity to provide season long weed control. This *does not* allow you to delay the timing of application. Remember, to avoid yield loss from early season weed competition, you still must apply post-emergence herbicides when the weeds are no more than 4 inches tall. Unless the label prohibits reduced rates, it is not necessary to use the full rate of the soil residual herbicide(s) at this time.

If you would like additional information, or have any questions about your field crop weed control options, contact Mike Hunter 315-788-8450 or meh27@cornell.edu.

Photo Credit: Mike Hunter.

Beat the Heat!

Heat Stress Management Program

Join us for a free on-farm demonstration (barn walk through, measuring air speed and temperature, signs of heat stress, etc…) and discussion about the importance of adequate heat abatement for all stages of lactation. This program is applicable to any type/size of dairy farm.

Presenters Include:

- Dr. Rick Grant or Katie Ballard, Miner Institute
- Lindsay Ferlito, CCE NCRAT
- Casey Havekes, CCE NCRAT

** NON-VACCINATED ATTENDEES MUST WEAR A MASK AND SOCIALLY DISTANCE **

Registration: FREE

https://ncrat.cce.cornell.edu/event_preregistration_new.php?id=1602

June 22, 2021
7:00pm - 8:30pm
Kelly Farm
2270 DeKalb Kelly Rd
Rensselaer Falls, NY

June 30, 2021
7:00pm - 8:30pm
Miner Institute
Dairy Barn
1034 Miner Farm Rd
Chazy, NY

COVID-19 Disclaimer:

This program will adhere to NYS and Cornell University COVID-19 safety guidelines including social distancing and mask wearing for all non-vaccinated attendees. If guidelines change and limit in-person gatherings, this program will be postponed until it is safe.

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Is "Carbon Farming" Coming to New York State?

By Kitty O'Neil

In March of this year, the NYS Senate passed S4707, a bill to establish a tax credit for farm businesses implementing certain practices known to reduce greenhouse gas emissions, among other benefits. The bill was referred on to the NYS Assembly and is currently under consideration in the Assembly Agriculture Committee as A2042. Legislation aimed at addressing climate change while also protecting our state's soil, air, and water has been introduced by various NYS governmental bodies before. Previous policies and investments such as the Climate Leadership and Community Protection Act (S6599, signed by Governor Cuomo in July 2019), have established benchmarking and emissions targets for reductions into the future. This is also the policy that set up renewable energy goals for the state. Many expect additional programs and investments in many different strategies by our state and federal administrations, aimed at mitigating climate change factors, over the next few years. Many are working to ensure these new policies benefit farms who will play a key role.

The current bill under consideration, if passed as currently written, would award tax credits of varying amounts, based on the magnitude of expected greenhouse gas benefits, for adoption of accepted and standardized NRCS conservation practices, such as:

- decreasing the frequency of fallow phases in crop rotations,
- using reduced-till, no-till or strip-till planting methods,
- including legume or non-legume cover crops with subsequent fertilizer reductions,
- improving fuel efficiencies of combustion engine farm equipment,
- managing manure applications for reduction in fertilizer needs on cropland,
- converting annual cropland to grass and legume forage crops,
- planting trees or shrubs for silvopasturing,
- using prescribed grazing plans,
- and many more strategies.

Senate bill S4707 and Assembly bill S2042 are not law yet, but if and when they are passed and implemented, they would begin to compensate farms for using quite a few different practices that will benefit the entirety of the state, national, and worldwide populations. There is much left to figure out in terms of how calculated greenhouse gas emissions will translate to dollars, and how farms may be able to take advantage of these opportunities, but it is encouraging that economic incentives are planned to help farms to adapt and mitigate, counteracting the economic forces that resulted in current practices.

Additional Resources:

- NYS Senate Bill S4707. https://www.nysenate.gov/legislation/bills/2021/s4707
- NYS Assembly Bill S2042. https://www.nysenate.gov/legislation/bills/2021/a2042
- NYS Climate Leadership and Community Protection Act, S6599 of 2019. https://www.nysenate.gov/legislation/bills/2019/s6599
- NRCS Practice Standards for Greenhouse Gas Emissions Reduction and Carbon Sequestration, https://planner-prod-dot-comet-201514.appspot.com/static/media/NRCS_RankingTools.87706528.pdf

For more information about field crop and soil management, contact your local Cornell Cooperative Extension office or your CCE Regional Field Crops and Soils Specialists, Mike Hunter and Kitty O'Neil.

Photo Credit: Mike Hunter.

Calf Barn Ventilation Program

Join us for a free on-farm demonstration (including fogging the barn) and discussion about the importance of adequate calf barn ventilation and the impacts ventilation has on calf health and performance. This program is applicable to any sized dairy farm, and any type of calf barn ventilation system.

Presenters Include:

- Tim Terry, Cornell PRO-DAIRY
- Lindsay Ferlito, CCE NCRAT
- Casey Havekes, CCE NCRAT

** NON-VACCINATED ATTENDEES MUST WEAR A MASK AND SOCIALLY DISTANCE **

Registration: FREE

https://ncrat.cce.cornell.edu/event_preregistration_new.php?id=1597

Cornell Cooperative Extension
North Country Regional Ag Team

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July 27, 2021
12:30pm - 2:30pm
Stauffer Calf Barn
Ferris Road
North Lawrence, NY
(just around the corner from main farm on Co Rd 54)

July 28, 2021
12:30pm - 2:30pm
Beller Calf Barn
State Route 126
Carthage, NY
(3 miles NW up the road from the main farm)

COVID-19 Disclaimer:

This program will adhere to NYS and Cornell University COVID-19 safety guidelines including social distancing and mask wearing for all non-vaccinated attendees. If guidelines change and limit in-person gatherings, this program will be postponed until it is safe.

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607-592-0290

Dystocia and Difficult Calvings: A Perspective from Dam and Calf (Part 2)

By Casey Havekes and Betsy Hicks (CCE South Central New York Dairy & Field Crops Team)

It is important to remember that the dam is not the only one that experiences the stress of a difficult calving, but the newborn calf does as well. In Part 2 of this series (click here to access Part 1), we will discuss how dystocia impacts the new calf. The information shared below was originally shared as part of Cornell Cooperative Extension's Critical Calf Care series. You can find links to the recordings by clicking here, and supplemental materials by clicking here.

Calves born to difficult calvings are referred to as dystocia calves. Dystocia can have both immediate and long-term impacts on the calf, and research has shown that these calves may have reduced survival rates to adulthood and reduced milk production once they are an adult. Included in the list of immediate impacts on the calf is acidosis. Acidosis arises as the result of asphyxia, which occurs with the premature rupture of umbilical vessels. This terminates oxygen supply to the fetus from the placenta, while carbon dioxide accumulates in the bloodstream creating an acid-base imbalance. When this occurs, there is inadequate oxygen uptake by the placenta or lungs, and consequently there is inadequate oxygenation of body tissue cells. In animals with asphyxia, the concentration of carbon dioxide produced by the cells increases in the blood, because its elimination via the placenta or lungs is impaired, and results in respiratory acidosis. A mild case of acidosis with a pH of slightly less than 7.2 occurs in normal calves immediately after unassisted birth and is considered physiologically normal; however, if respiratory acidosis is severe and not corrected, it can further lead to metabolic acidosis. In the absence of oxygen, body tissue cells derive energy from anaerobic glycolysis, which results in the production of lactate and leads to metabolic acidosis.

One of the most detrimental impacts of this metabolic acidosis is decreased colostrum intake and IgG absorption. Researchers demonstrated that acidotic calves had a 52% decrease in colostrum intake and a 35% decrease in IgG concentrations compared to non-acidotic calves (Murray et al., 2015). Part of this is due to decreased absorptive ability for these calves, but the other part is behavioral and related to the fact that dystocia calves are weaker, take longer to stand, and have poorer suckle reflexes when compared to calves from a normal birth.

Despite dystocia calves having a few strikes against them right from the get-go, there are strategies we can implement to help them succeed. The first is to sit the calf upright in a position called *sternal recumbency*, see Figure 1. This position will allow her lungs to expand to their full potential and will facilitate breathing.

Figure 1. *Calf in "sternal recumbency" position. Photo credit: https://www.calf-tel.com/en/calf-corner/dystocia-calves-need-extra-tender-loving-care*

The next strategy is to further stimulate breathing; once oxygen starts entering the lungs and carbon dioxide starts leaving, this state of metabolic acidosis will begin to correct itself. Sitting the newborn calf upright is the first step, but you can also tickle the inside of her nose with a piece of straw, or pour cold water over her head which will trigger a gasp reflex. Additionally, you can *somewhat* aggressively rub the calf with a dry towel to promote breathing; at the same this is going to help her warm up. One very important point is that you should never hang the calf upside down or swing her to try to get fluid out of her lungs. Research has shown that the fluid that is expelled in this act comes from the stomach (not the lungs) and is beneficial to the calf. Additionally, this increases the risk of the calf aspirating on this fluid, as well as putting more pressure on the lungs from the abdomen.

Once the calf is breathing, the next strategy is to keep the newborn calf warm. In order to stay warm newborn calves

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break down brown fat and engage in physical activity, both of which are compromised for dystocia calves. Using a heat lamp, dry bedding, and calf jackets can help facilitate this process if a dystocia calf needs help staying warm. Expanding the calf's blood volume is another important factor and this can easily be accomplished by feeding colostrum.

Dystocia calves often lack a suckle reflex and can be referred to as "dummy calves"; this makes colostrum delivery extremely important. We want to make sure the new calf is getting the best quality colostrum possible and if she does not want to drink, we recommend tube feeding her. In fact, recent research has demonstrated that IgG absorption is not different for calves whether they are fed by tube feeder or by bottle. It is also important to pay attention to how the colostrum is being warmed if you are feeding frozen colostrum. We want to make sure that is being warmed slowly and that may take some careful planning on your part. When placing the colostrum in water to thaw it out, make sure the water is not too hot (< 120°F) as IgG proteins will be denatured and ineffective for the calf. A good way to test is this is by putting your hand in the water; if it is too hot for you to comfortably rest your hand in, then it is too hot for warming the colostrum.

Photo Credit: CCE Jefferson

Lastly and likely the simplest strategy, is just to monitor the new calf extra closely. This calf is going to be more susceptible to disease as compared to calves from normal births. We encourage you to watch out for behavioral indicators of disease as those will often present themselves sooner than physiological signs. Some farms put some type of special indicator on the calf or her hutch/pen, such as a pink clothespin or calf collar, as a reminder that she was born to dystocia and may require special attention. In some cases, the newborn calf may benefit from a non-steroidal anti-inflammatory drug (NSAID). This strategy can be extremely useful, but requires special planning with your veterinarian as it is considered off-label use for that class of medicine.

As discussed in Part 1 of this article series, dystocia has a huge economic impact to the dairy and beef industries with costs coming from both the dam and the calf. Attention to this time period will help ensure the best outcome for them both. For the calf, the various strategies discussed above will help increase the likelihood of her survival, improve resistance to disease, and will promote growth and vitality.

If you have dystocia problems on your farm, please reach out to one of us (Betsy Hicks: bjh246@cornell.edu; 607-391-2673/Casey Havekes: cdh238@cornell.edu; 315-955-2059) and we can help you troubleshoot this challenging area.

Reducing Cross Sucking in Socially Housed Calves

By Lindsay Ferlito

As I outlined in a previous North Country Ag Advisor article (July 2019), there are several benefits to group/pair housing of calves including: increased solid feed intake before weaning and increased weight gain (Miller-Cushon and DeVries, 2016); improved social learning, more adaptable calves, and reduced fearfulness (Bolt et al., 2017; De Paula Vieira et al., 2012; Costa et al., 2014; and Gaillard et al., 2014); more useable space for calves to play; and improved consumer perception. Even with all these potential benefits, when discussing socially housing calves, some of the biggest concerns producers usually have is how to manage the calves in a group and how to prevent cross sucking. As the push for more social housing increases and more producers are implementing this practice, the industry is learning more about how to best manage it for the calves and the farm workers. Thankfully, there are some strategies that have been shown to reduce cross sucking. However, keep in mind that even if you follow all of these steps, you may still have some calves that cross suck, but research has suggested that this won't actually negatively impact future udder health (Vaughan et al., 2016).

1. Feed enough milk.

Feeding calves more milk will increase their time spent eating and help keep them feeling full, which will reduce cross sucking. Regardless of how you house calves (individual, pair, or group), it's beneficial to feed them enough milk. Older industry recommendations stated that pre-weaned calves should consume 10% of their body weight in milk or milk replacer, or about 4 to 6 quarts a day. When talking to producers that provide calves ad libitum (unlimited) access to milk, the animals usually top out at 12-14 liters (or 3 to 3.5 gallons) per day! Some producers are concerned if they feed more milk that the calves will scour, but research suggests that they won't, they will be healthier overall, and will have better growth. It's also important to recognize and understand the difference between pathogenic and nutritional scours. Feeding higher planes of nutrition may result in more lose manure but this is natural. To learn more about nutritional vs. pathogenic scours please refer to https://blogs.cornell.edu/northcountryregionalagteam/2021/04/12/pre-weaned-dairy-calf-calorie-requirements-and-nutritional-scours/. Feeding more milk may seem like a financial setback, but it will pay back in dividends in production alone over the course of that calf's productive life. A meta-analysis of 12 datasets (Soberon and Van Amburgh, 2013), found that calves fed more milk or milk replacer went on to produce more milk themselves. Specifically, they found, on average, that every 1 kg increase in average daily gain pre-weaning translated to a 1,550 kg increase in milk production during that calf's first lactation.

2. Feed milk from nipple (not bucket) and a slow flow nipple.

Calves have a strong natural desire to suckle, which is why producers see calves performing non-nutritive oral behaviors (such as sucking on parts of their pen) and cross sucking when the calves can consume their milk very quickly. A recent study from the Journal of Dairy Science (Salter et al., 2021) found calves that were fed milk via a bottle and teat took longer to eat compared to calves fed milk via a bucket (Figure 1). Further, this translated to less time spent cross sucking for the teat bottle fed calves (Figure 2, on next page). Take it one step further, and increase the time spent eating even more by using a slow-flow nipple.

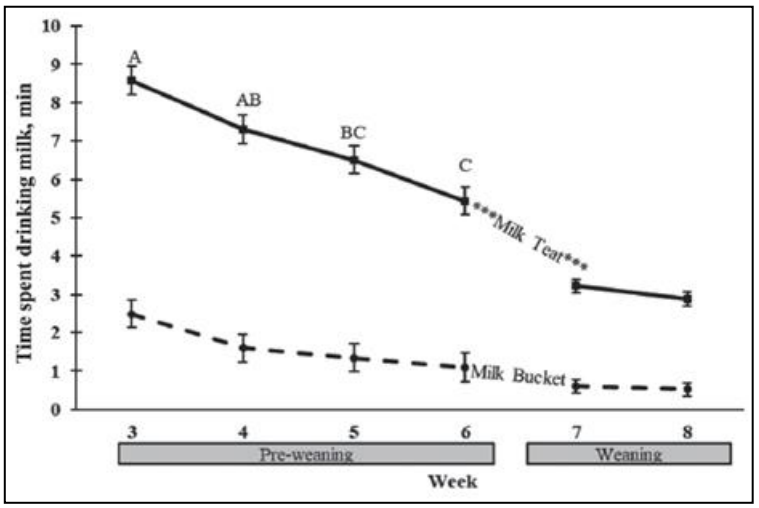

Figure 1. Time spent drinking milk for pair-housed calves fed via milk bucket or milk bottle teat (Salter et al., 2021).

3. Wean gradually.

Weaning abruptly can lead to unwanted non-nutritive behaviors and cross sucking. To minimize this, wean calves gradually, or with a step-down program and monitor grain intake. Industry recommendations suggest waiting until a calf is consuming 2 lbs of grain/day to start reducing milk, and according to the Dairy Calf and Heifer Association Gold Standards, they should be consuming 3-4 lbs/day for a few days before completing removing milk.

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4. Reduce competition.
Make sure there are enough nipples for the calves in the pen. If you have pair-housed calves, provide them each with a feeding station, and in a group-housed ad libitum situation, provide multiple nipples so multiple calves can eat at once.

5. Offer chopped hay.
At a young age, calves won't each much hay, but research has shown it can help calves develop feeding behaviors that will be beneficial when their diet consists of more forage. Early hay provision may increase starter intake, improve feed efficiency, result in higher average daily gain, promote rumen health, and it may even help with cognitive development. Plus, it gives them one more "oral behavior" to do that isn't cross sucking.

6. Feed starter from specialized starter teat bottle.
According to Version 4.0 of the FARM Program, all dairies should be offering solid feed (either hay or starter) to all calves starting by day 3. Most dairies choose to offer a little bit of starter feed in a bucket. Salter et al. (2021) found that offering this starter in a specialized starter teat bottle (seen in the picture to right) reduced the amount of time calves spent cross sucking (Figure 2).


Photo credit: www.coburn.com/braden-start-nurser-complete

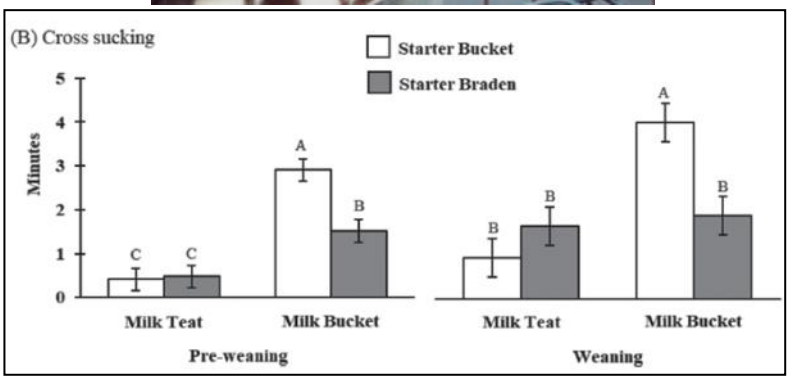

Figure 2. Time spent cross sucking for pair-housed calves fed milk with a bottle teat or milk bucket and for fed starter with a bucket or specialized Breaden teat bottle (Salter et al., 2021).

5A Poultry Processing Plant Tours

Tours in St. Lawrence County for individuals considering processing their own or other's birds

Saturday, June 12th
10am-3pm
$15, includes brown bag lunch

Cornell Cooperative Extension | St. Lawrence County

ATTENTION NORTHERN NEW YORK DAIRY FARMERS...

NCRAT Dairy Specialists want to help you track progress as you make changes to your dairy!

Example Projects:

- monitoring lying time and lameness scoring following a foot bath change
- tracking cow comfort metrics following a stall update, or new barn build
- measuring average daily gain of calves following a dietary change
- tracking passive transfer of calves following a colostrum management change
- analyzing sorting activity following a forage particle size reduction
- ... and more!

Lindsay: lc636@cornell.edu; 607-592-0290 / Casey: cdh238@cornell.edu; 315-955-2059

Cornell Cooperative Extension
Livestock Program Work Team

Red Meat Processing in NYS: Bottleneck in the Local Food Economy

By Dr. Mike Baker, Dana Havas, Nancy Glazier, Lynn Bliven, Dr. tatiana Stanton, Erica Frenay

Executive Summary

The livestock industry provides value to NYS by contributing approximately $893M in sales to the economy and supplies nutrient-dense food for local consumers. The COVID-19 pandemic highlighted the weaknesses in the current NYS livestock supply chain, especially the bottleneck of meat processing.

This study was developed to clarify challenges, specifically barriers to increasing processing capacity in NYS. To meet this goal a survey was developed and administered via one-on-one interviews to 112 USDA, Custom Exempt, and 5A processors over the course of 6 months from Oct 2020 to Feb 2021.

The results of the survey showed that there is interest by processors in increasing capacity. Of the Custom Exempt processors, 31.6% would be interested in transitioning to USDA especially if funding was made available (20.3% without funding), and 59.1% of USDA processors would be interested in increasing capacity if funding was made available (54.6% without funding).

In addition to accessible grant funding for meat processors, additional efforts would be needed to increase the supply of NYS-raised meat, including: 1) a staff position(s) to provide technical and logistical assistance to new and existing processors and farmers, 2) defined pathways to employment as a meat cutter, 3) more value-added processing facilities, and 4) investment in creating and maintaining an updated directory of all meat processing facilities that serve farmers in NYS. Together with grant funding for processors, these investments would build a more robust local food supply chain, one that is better equipped to overcome COVID-19-like shocks to our food system.

Introduction

The livestock industry provides value to the NYS economy. According to a 2014 analysis on the economic impact of agriculture, the non-dairy livestock industry contributes $893 million in sales to the economy, and an extensive and diverse range of products to local and regional markets[1].

Prior to the COVID-19 pandemic this industry already showed potential for growth, as demand for local products had been on the rise for several years[2]. This demand was mirrored by a 2017 Cornell Small Farms Program poll where 85% of livestock producers surveyed believed that the NYS livestock sector had potential for growth.

In 2020, the COVID-19 pandemic caused a spike in demand for local meat. The increase in local meat sales resulted in increased need for the services offered by the small processors, who could not accommodate the surge. Many reported having hundreds of names on a waiting list and telling their farmer customers they could not accept new bookings through 2021. As a result, panicked livestock producers were scrambling to provide for their customers[3,4]. In July 2020, the Cornell Small Farms Program surveyed NYS livestock producers about the impacts of COVID-19 on their businesses. Of the 650 farmers responding, 85% reported that demand for their products had increased, but 81% could not meet this increased demand because of inadequate processing capacity[5].

This study was developed in response to this need with the hope to answer the questions 1) is there an interest by existing processors to increase capacity; 2) what are the perceived barriers to increasing capacity; 3) how would the opportunity for external funding affect the interest of increasing capacity and; 4) what recommendations can be made to help the livestock industry in NYS. Additionally, we intend to build a searchable directory of processing facilities in NYS for farmers and other stakeholders.

Materials and Methods

A small team of CCE educators and Cornell Extension faculty developed and administered a survey via one-on-one interviews to NYS processing plants from October 2020 through February 2021. The call list came from NY Department of Agriculture and Markets and USDA, fine-tuned with personal knowledge, internet searches, and contacts.

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[1] Schmit, T. M. 2016. The Economic Contributions of Agriculture in New York State (2014). In: Cornell University (ed.), Dyson School of Applied Economics and Management.

[2] Thilmany-McFadden, et. al. The Economics of Local Food Systems: A Toolkit to Guide Community Discussions, Assessments, and Choices. U.S. Department of Agriculture, Agricultural Marketing Service, March 2016. Web.

[3] Thilmany, D., Canales, E., Low, S.A. and Boys, K. (2021), Local Food Supply Chain Dynamics and Resilience during COVID-19. Appl Econ Perspectives and Policy, 43: 86-104. https://doi.org/10.1002/aepp.13121

[4] Niche Meat Processor Assistance Network (NMPAN). *August 2020 Impact Assessment*. August 2020. Accessed September 2020. https://lfscovid.localfoodeconomics.com/impact_assessments/niche-meat-processor-assistance-network-nmpan/.

[5] July 2020, SFP Producer Survey

Results

There are approximately 300 processing plants in NYS. They consist of USDA Inspected, Custom Exempt[6] and 5A facilities[7]. The focus of this paper will be on USDA and Custom Exempt plants. Educators made 184 calls and completed 112 surveys. Table 1 lists the type and percentage of plants that completed the survey.

Table 1. Type of inspection listed by processors that completed the survey.

USDA federal inspection	16%
Custom Exempt (may include venison processing for hunters)	52%
NYS 5A non-amenable livestock (e.g. farm raised deer, bison, rabbits) licensing	11%
NYS 5A poultry licensing	19%
None of the listed services are offered	2%
Total	100%

Beef and dairy cattle, small ruminants (sheep, goats), and swine make up the majority (65%) of the animals processed. These species are followed by hunter harvested deer (11%), poultry (7%) and other (bison, farm raised deer, and elk). While only 11% of the total, the timing of processing hunter-harvested deer coincides with a higher demand for livestock processing. This creates a seasonal Fall bottleneck.

Custom Exempt Transition to USDA

As shown in Table 2, without grant funding only 20.3% of Custom Exempt plants stated they would be interested in transitioning to USDA, 17.7% 'maybe', and 62.0% stated 'no'. If funding was made available those interested increased to a total of 31.6%, 'maybe' to 25.4% and 'no' decreased to 43.0%. With 52% of the meat processing capacity in the state being Custom Exempt plants (Table 1), even if a small proportion of these plants transitioned to USDA inspection this would greatly improve the state of the livestock industry in NYS by increasing potential market channels for the producers.

Table 2. Interest in Increasing Capacity with and without external funding (Custom Exempt to USDA and USDA increase capacity)

	Custom to USDA	Custom to USDA (with funding)	Increase USDA capacity	Increase USDA capacity (with funding)
Yes	20.3%	31.6%	54.6%	59.1%
No	62.0%	43.0%	22.7%	22.7%
Maybe	17.7%	25.4%	22.7%	18.2%

[6] A Custom Exempt plant is under the jurisdiction of the USDA, however, there is no Federal Inspector present while the animal is processed so the meat can only be consumed by the owner(s) of the animal.

[7] 5A facilities process non-amenable farm raised game species such as bison, farmed deer, and rabbits, and depending on the market channel that is used to reach the consumer it may require federal inspection at a USDA facility.

Of those surveyed, 31% said they did not know how much external funding would be required to transition, but 75% said they could cost share at least some of the external monies received.

USDA Increasing Capacity

Again, in Table 2, without funding 54.6% of USDA facilities stated they would be interested in increasing capacity, 22.7% stated 'maybe', and 22.7% 'no'. If funding was made available, those interested increased to a total of 59.1%, 'maybe' remained at 22.7% and 'no' decreased to 18.2%. The availability of external funding was not an incentive for those USDA processors that had no or moderate interest in increasing capacity.

The USDA processors indicated that the estimated cost to increase efficiency was over $200,000 and 82% of the plants said they could cost share a portion of the external funding. Half of the respondents said they could cost share 26%-50% of the cost to expand.

Barriers to Increasing Capacity

Both types of processors were asked to identify barriers (
Table *3*). For Custom Exempt operators, the major barrier was financial and labor constraints. The remaining factors were of lesser and similar value. For USDA processors, labor was the largest barrier followed by space. Financial, while important for USDA plants, was less so than for Custom processors. Based on conversations with plants surveyed, USDA operators appeared to have a better handle on the cost to add new equipment, machinery, cooling space, etc. Their concern was not in making the investment but in finding labor.

Table 3. Major barriers to transitioning from Custom Exempt or increasing capacity (%)

Barrier Type	Custom to USDA	Increasing USDA capacity
Financial constraints	46	32
Labor constraints	41	68
Regulations	33	19
Space constraints	32	50
Paperwork	29	0
Modernization	29	23
Values do not add to 100% because participants were allowed to rank barriers as "no barrier", "moderate barrier", or a "major barrier".		

Recommendations

To overcome the identified barriers (financial, labor, and space), support is needed. To assist farmers and processors and strengthen the NYS food supply chain, specifically regarding livestock production and processing, we make the following recommendations:

1. *Extension Support*
    a. Support to existing processors for evaluating diversification (Custom Exempt to USDA, USDA increasing capacity), developing HACCP plans, business transition/succession, and labor.
    b. Support for interested parties in building new processing facilities.
2. *Pathways to Employment as a Meat Cutter.*

    With reliable labor a major barrier to processing expansion, no solution will be successful without creating new pipelines of employees.
3. *Accessible Grant Funding for Modernizing or Expanding Existing Processing Plants.*

    At least 18 other states have utilized CARES and other COVID-related funding to provide grants to existing small meat packers in their states.[8] Existing facilities have a proven track record for success, and they are willing to cost share on external funding.
4. *List of packing plants and Development of a Farmer/Processor Network*

    Farmers and other stakeholders involved in navigating the supply chain are often not aware of the various processors available to them, and the list is constantly changing, old plants going out of business and new plant being started. By developing a list of packing plants in NYS and making it publicly available locating plants would not be such a challenge. In addition, there are many challenges beyond identifying plants that would benefit from an improved network between farmers and processors (possibly through the services of a third party).

5. *Support value-added processing facilities.*
    a. The dairy industry is the largest animal industry in NYS. Market dairy cows could be a large supply of ground beef for institutional facilities, but we lack adequate processing for cull cows in NYS.
    b. Support for the Farm to School program to get NYS meat in schools. The NYC school district requires cooked meat for their students. Infrastructure that includes a cooking facility would add value.

Working together--and with additional investments of staff positions and funding--Cooperative Extension, farmers, and livestock processors can build resiliency into New York State's meat supply chain.

For more information, please contact Erica Frenay, Cornell Small Farms Program Livestock Specialist, at ejf5@cornell.edu.

[8] Niche Meat Processors Assistance Network: https://www.nichemeatprocessing.org/state-funding-programs-for-meat-processing-facility-improvements-upgrades-new-facilities/

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What's Happening in the Ag Community

Due to COVID-19, there are some restrictions for in-person work and programming. ***Check out our CCE NCRAT Blog and YouTube channel for up to date information and content.***
Summer Heat Stress Program, see page 4 for more information.
Calf Ventilation Program, see page 6 for more information.
5A Poultry Processing Plant Tours, see page 11 for more information.