When farm operators fail to plan for the transfer of business assets and management to the next generation, it exposes their business to human, financial and legal risks that can threaten farm viability. However, less than one third of U.S. farms have a succession plan in place. Despite survey data and anecdotal evidence documenting a need for succession planning, in 2019 our team was not able to generate enough farmer demand to run an educational workshop on this topic.

To better understand farmer educational needs and preferences in relation to succession planning, our team submitted a proposal for a CALS Summer Internship position. Our proposal was accepted, and CALS student Carolyn Wright joined us in June for a 11-week internship placement. Carolyn took the lead in designing and conducting a needs assessment.

After educating herself about needs assessment methods, Carolyn interviewed seven agricultural service providers with succession planning expertise. She also interviewed five farm families that had participated in a 2015 succession planning workshop series. We used the information gathered from these preliminary interviews to develop focus group questions and activities. Carolyn and Mary Kate facilitated two focus groups in July, one for junior operators and another for senior operators. We had low attendance at our focus groups due to conflicts with forage harvest, so Carolyn completed follow-up interviews with interested farms that were not able to attend the focus group.

An analysis of the interview and focus group data produced six considerations for program development:

1. **Timely access to critical information**. Succession planning is a complex process that involves a lot of big decisions over an extended period time. Farmers need access to relevant information when they are ready to make a decision, not 6 months before or after the decision is made. Programs that make information available when farmers need it can improve and accelerate the decision making process.

2. **Provide clear, achievable steps**. The complexity and length of the succession planning process can be overwhelming to many people. Programs that break the process down into smaller steps can help farm families focus energy and resources to accomplish one goal before proceeding to the next. Checklists or other resources that farms can use to track their progress can provide structure and motivation.

3. **Support peer-to-peer learning**. Farmers have exceptional observational skills, and they excel at learning from their neighbors. However, unlike many production practices, succession planning is relatively private and takes place behind closed doors. Highlighting examples of succession planning successes and failures can help farmers to envision possible business decisions, outcomes, and risks. Programs that encourage peer-to-peer learning can enhance farmer learning while providing added encouragement and accountability.

4. **Build trust and cultivate relationships**. Succession planning typically involves a team of outside professionals working with the farm to create a plan that aligns with the farm’s vision. Farmers need access to trusted advisors who have experience working with agricultural businesses. Programs that introduce farmers to local service providers can help farmers get to know and evaluate professionals in their area.

5. **Incorporate succession planning into existing extension programming**. While most farm operators can benefit from succession planning education early and often, few prioritize it over other production topics. Incorporating business management and succession planning topics into existing extension programs can expose a wider audience to these topics.

6. **Recognize the value of facilitation**. Lack of information is not the only barrier that prevents farms from implementing succession plans. Succession planning takes time, effort, organization, and lots of family communication about sensitive topics. Bringing in a neutral party to facilitate conversations, meetings, or an extended planning process may help farms overcome barriers to action.

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Annual funding in the Plant Protection Act 7721 supports the Cooperative Agricultural Pest Survey (CAPS) pest detection program, led by the USDA Animal and Plant Health Inspection Service (APHIS), to safeguard against introductions of potentially harmful plant pests and diseases. These surveys ensure the early detection of potentially invasive species that could negatively impact U.S. agriculture and/or environmental resources. The NYS Department of Agriculture and Markets (NYSDAM) works with APHIS to prioritize the potentially invasive species to monitor in economically important commodities in NY each year. In 2019, NYSDAM partnered with the NYS Integrated Pest Management (IPM) program to coordinate a soybean CAPS survey to monitor for two potentially invasive moth species, as well as to expand monitoring of the soybean cyst nematode across New York soybean production areas.

The overarching goal of the CAPS program is to monitor for species that shouldn’t be here, and to confirm that they still aren’t in NY or even the U.S. These surveys are often the result of cooperation among state and federal employees, such as APHIS pest inspectors, NYSDAM inspectors and extension specialists. This ‘boots on the ground’ approach allows for broad coverage of the surveys across the state involving many individuals with agricultural and pest identification expertise.

For the 2020 soybean CAPS survey, two moth species that are already problematic elsewhere in the world, but not known to exist in the U.S. were selected. The Golden Twin Spot moth (*Chrysodeixis chalcites*), which currently causes yield losses in Africa, Europe, the Middle East and Canada, has a larval stage known as a ‘looper’ which can cause significant damage to soybeans, tomato, cotton, tobacco, beans and potatoes (Fig. 1). Feeding by the loopers can result in defoliation, and they can also cause foliar damage due to rolling leaves with webbing for nests. The Silver Y moth (*Autographa gamma*), which is already a concern in many countries in Asia, Europe and Africa, also has a caterpillar larval stage that can cause significant damage to soybeans and many other agronomically important crops, including beets, cabbage, hemp, peppers, sunflower, tomato, potato, wheat, corn and wheat (and many more) (Fig. 2). These caterpillars also defoliate and harm leaves through rolling and webbing. Given how potentially damaging an introduction of these pests could be to U.S. agriculture, it’s important that we are vigilant in our efforts to monitor for them and ensure they aren’t in NY.

In addition to monitoring for these two moth species, we also prioritized a pest that has very high potential to affect soybean yields in NY, and one that has thus far only been confirmed in one field in NYS. The soybean cyst nematode (SCN) is considered the number one pest of soybeans nationally and globally, causing an estimated 109 million bushels of yield loss in the U.S. in 2017. Extensive collaborative sampling for this pest from 2014-2017, supported by the NY Corn and Soybean Growers Association and Northern NY Agricultural Development Program, was coordinated by Cornell University and Cornell Cooperative Extension programs. Over the four years of the SCN survey, numerous fields in 17 counties were sampled, and one field in Cayuga County was identified as positive for SCN in 2016, albeit at very low levels. Though it’s promising that SCN wasn’t identified widely across NY, we are fairly confident that it is very likely in many more than just one field in one county. Given the potential impact this pest could have on NY soybean (and dry bean) production, we decided to include this pest in the 2019 and 2020 CAPS survey.

Janice Degni monitored the CAPS pheromone traps every 2 weeks throughout the summer, checking for the Golden Twin Spot moth and Silver Y moth. The project was a collaboration of CCE crop educators (Jaime Cummings and Ken Wise of NYS IPM, and Mike Stanyard, Erik Smith, Mike Hunter, and Aaron Gabriel) Janice monitored traps in 5 of the team counties while Jaime monitored Tompkins. We communicated the importance of these surveys to cooperating farmers who agreed to host these traps in 30 fields across the state. Any suspicious moths caught in the traps were submitted to the Cornell Insect Diagnostic Center for identification.
Podcasts

The regional dairy educators’ first podcast, “Dialing into your best dairy”, continues to be a new resource for growing portion of the dairy industry. To date, the series has tallied almost eight episodes, Soundcloud and 15th. Collaboration with PRO-DAIRY and the other regional dairy educators was critical for the development of the series. Since release, many of the episodes were featured on Hoard’s Dairyman Intel, a weekly e-newsletter sent directly to thousands of subscribers and posted on their website. Hoard’s also featured a story on one of the SCNY team’s farms, Fouts Farm, highlighted in an episode of the podcast along with photos sent to them by Betsy. Further sharing of these stories on social media outlets (e.g. Facebook and Twitter) enhances the reach that this project has gained.

Over the last quarter, Betsy and Melanie, along with the other regional dairy educators, have been working hard at the next collaborative podcast effort – “Troubleshooting herd health issues on your dairy”. This series is longer, fourteen episodes, and is scheduled to be released starting on November 30th. Instead of looking at a dairy farm through the “perfect world” lens of the first podcast, this series aims to look at what happens when things aren’t going the way they should on a dairy and gives tips to listeners on what to look for to alleviate problems. The collaboration with PRO-DAIRY is key to getting the series’ releases out in the public via their e-leader newsletter, which reaches farms across NYS directly. Closer to home, podcasts are shared with SCNY farms via newsletter, Facebook posts and direct email. As this means of communication becomes more used, the regional dairy educators are poised to deliver relevant content that is interesting and a resource that will be available for all.

Research

Betsy and Lindsay (CCE Dairy Specialist for NCRAT) submitted a paper to the Journal of Dairy Science on their former NYFVI-funded Tie stall project. The paper, entitled, “Benchmarking Lameness, Injuries, and Lying Behavior on New York Tie Stall Dairies” will go to review before acceptance. The manuscript was submitted to the Journal of Dairy Science’s new journal, JDS Communications, which is a “new online-only, gold open access journal that aims to publish short papers, with a rapid publication time, on topics similar to those published in the Journal of Dairy Science”.

Betsy and Christine (CU Grad Student) submitted their paper, "Farmer perspectives of antibiotics in the dairy farm environment" to Journal of Environmental Quality. This paper is also awaiting review before acceptance.

The current NYFVI project, “Focus on Farm Management: Areas of Opportunity and Excellence in Calves, Transition Cows and Cow Comfort” returned to normal after a brief break during the start of the pandemic. The project includes five contact points: initial farm visit and questionnaire, farm assessment of the three areas, farm report delivery and decision on actions, farm check-in, and farm re-assessment. During this quarter, co-PI’s Betsy, Lindsay and Margaret (NWNY Dairy Specialist) focused on farm assessments for all fifteen farms involved in the project. Data from these assessments is being compiled, and report delivery (contact point 3) will be underway soon.

While NYFVI did not fund the dairy x beef cross calf proposal in their 2019 competitive grant cycle, Betsy and Margaret have worked towards putting together a survey to gather more data on the dairy x beef calf industry in NYS. This survey will be made live in the last quarter. Conversations with other regions in the US have given input on the survey, and has also led to a potential collaboration with the NE Region, Penn State and UConn in particular, to further characterize the industry and needs in the region. This collaboration will help for grant submission in the near future.

(Vigilance against Potentially Invasive Species ...Continued from page 2)

Clinic for thorough identification. Thus far, we have not caught any Silver Y or Golden Twin Spot moths. And that’s good news! As the growing season winds down, we will collect soil samples from the same 30 fields for Soybean Cyst Nematode testing.
In regards to the SARE Pasture Compaction Grant, I continued to work on videos to use as deliverables for this grant. I have competed one video on the biological portion of soil health. It can be viewed at: [https://cornell.box.com/s/7dh3bi9oa8dijxkjny84aviwbflthd42](https://cornell.box.com/s/7dh3bi9oa8dijxkjny84aviwbflthd42)

Other videos for this project are in progress. They include: “The Mighty Aggregate” on the soil aggregate as the keystone to soil health, “The Rainfall Simulator Demonstration”, and “Pasture Soil Compaction- Identification and Remediation”. I prepared the NY Soil Health Trailer for events, however all three trailer events have since been cancelled. I was able to use the setup of the demonstrations in shooting stock video for the above projects.

In regards to the Dairy Grazing Apprentice Program on August 20th, I visited a new apprentice/master pair in Birdsal, New York. I have a new master to evaluate of in Keeseville, NY. Also, GRAZE Magazine asked to do a story on one our masters in the Hudson Valley to help publicize the program.

Our proposal to NIFA was turned down for funding. I was the PI on the proposal and Pennsylvania Assoc. of Sustainable Agriculture (PASA) was a collaborator. The reviewer’s comments seemed mostly positive with only two suggestions to make it a stronger proposal. The 12 partners and PASA have agreed to resubmit again next year.

Articles that I have written during this quarter include:

- “Let’s Celebrate Another Dairy Grazing Apprentice Graduate”

Projects:

- Conducted two focus groups and follow-up interviews with 7 senior operators and 5 junior operators.
- Presented needs assessment results and recommendations to a group of extension educators, agricultural service providers, and other stakeholders.
- Published an article reviewing Penn State Extension’s “Business Transitions” online course in the Dairy Digest and on our team blog. Small Farms Quarterly accepted this article for publication in the fall 2020 edition (forthcoming).

While Mary Kate is developing a proposal for a more extensive succession planning program in 2021, she is also collaborating with a group of farm business management educators across the state to offer Design Your Succession Plan, a 4-part webinar series, in October 2020. Through her involvement in this course, Mary Kate will become certified to deliver the entire Design Your Succession Plan curriculum.