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Farm Viability Institute Competitive Grant Program

Administered by the New York Farm Viability Institute on behalf of the New York State Department of Agriculture and Markets, the Farm Viability Institute grant program awards competitive funding each year to research and education projects that strengthen the economic viability of New York agriculture. The following pages summarize the projects funded through the 2025 and 2026 award cycles, organized into four categories (Dairy and Livestock; Technology & Systems; Apple, Grape & Berries; and Field Crops & Vegetables).

Across every category, these projects put real, usable knowledge, practices, tools, or market connections into producers' hands in ways that leave them better off, whether through new animal health protocols, pest and disease management strategies, bilingual workforce training, or stronger market infrastructure for growers. Together, they illustrate the range of work NYFVI supports and offer prospective applicants a useful reference point for what a competitive proposal looks like.

DAIRY AND LIVESTOCK

Research and projects supporting animal health, productivity, workforce development, sustainability, and the long-term viability of New York dairy farms.

Evaluating the Duration of Extended Colostrum Feeding to Pre-Weaned Dairy Calves

2025 | Dairy Health & Management Services | Casey Bolis

Colostrum is essential for newborn calf health, but questions remain about how long calves benefit from continued supplementation after the initial feeding period. Previous research has shown that extended feeding of colostrum replacer-enriched milk can improve calf health and growth, but results have varied, leaving producers unsure about the most effective and economical approach. This project is comparing two rates of colostrum replacer-enriched milk with a control group to determine whether calves can maintain the health benefits of extended feeding at a lower dosage.

The project will use the results to develop practical feeding protocols based on the best cost-to-benefit ratio. Researchers plan to work with at least three New York dairy farms and develop an economic model showing potential cost savings for participating in and adopting farms. If the project's hypothesis is supported, producers could potentially reduce colostrum-related feeding costs by up to 50% while maintaining similar physiological outcomes.

Why it matters:
Healthy, well-grown calves are critical to the future productivity of a dairy herd. Finding a feeding strategy that maintains calf health while reducing input costs could improve both animal welfare and the return on investment of raising replacements.

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Evaluating the Sustainable Use of Manure Solids as Dairy Cattle Bedding

2025 | Cornell PRO-DAIRY | Jason Oliver

More New York dairy farms are exploring manure solids, including separated solids and composted bedded packs, as an alternative source of cattle bedding. While the practice has potential environmental and economic benefits, producers have expressed a need for better guidance on how to implement it without compromising cow health, well-being, milk quality, or profitability.

This project will examine manure-solids bedding practices on 12 New York dairy farms representing a range of herd sizes and management systems. Researchers will evaluate how manure solids are generated and used while examining animal health and welfare, milk-quality parameters, environmental benefits, and economic outcomes. The information will be used to develop science-based recommendations and extension resources for producers considering or already using manure solids as bedding.

Why it matters:
Using manure as bedding can turn a farm waste stream into a useful resource while potentially reducing bedding costs and methane emissions associated with manure storage. The project aims to make sure those benefits are achieved without creating unintended problems for cows or milk quality.

Feeding Postpartum Diets with High Metabolizable Protein: Optimal Long-Term Production

2026 | Cornell University | Sabine Mann

Recent research conducted under controlled conditions found that feeding dairy cows a high-metabolizable-protein diet during the first 21 days after calving resulted in more than 11 pounds per day of additional energy-corrected milk during early lactation. The next question is whether that response can be reproduced under commercial farm conditions and how long cows need to remain on the higher-protein diet to achieve the benefit.

This project will assess the feeding strategy with farmer participation and examine whether cows respond differently based on parity. The work is based on previous research into dry-cow and fresh-cow nutrition and is designed to demonstrate whether the practice can be incorporated into commercial dairy management without relying on synthetic products or pharmaceuticals.

Why it matters:
For dairy farms operating on tight margins, even a relatively slight increase in milk production per cow can have a meaningful economic impact. Demonstrating that this nutritional strategy works under real-world farm conditions could give New York producers another tool for improving productivity and efficiency.

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Preventative Nutritional Strategies for Hypocalcemia: Which Approach Is Best?

2026 | Cornell University | Thomas Overton

Hypocalcemia, or low blood calcium around calving, is one of the most important health challenges during the transition period. It can increase the risk of additional diseases, reproductive problems, and reduced productivity. This project compares two of the most common nutritional approaches used to prevent hypocalcemia: acidogenic diets and zeolite.

Researchers will conduct a randomized controlled trial on a commercial dairy farm and compare the two strategies based on cow health, reproductive performance, milk production, and calf growth. The study will also examine whether activity and rumination data can help identify changes in calcium status and how those changes relate to inflammation. A key question is whether any additional milk production associated with acidogenic diets outweighs the potential health and reproductive benefits of zeolite.

Why it matters:
A case of hypocalcemia was estimated to cost producers $246 per cow, while associated conditions such as metritis, retained placenta, and displaced abomasum can add substantially more. Identifying the most effective and economical prevention strategy could help farms reduce health costs while improving transition-cow performance.

A Bilingual Multipronged Approach to Improving Replacement Calf Health and Welfare on NYS Dairies

2026 | Cornell University | Thomas Overton

New York dairy farms are facing increased pressure to improve calf health and productivity while dealing with larger herds, higher costs, and labor challenges. This project takes a broad approach by examining calf management, facilities, and labor together rather than treating them as separate issues. Participating farms will use Cornell's Integrated Calf System Assessment (ICSA) to benchmark calf health, management practices, workplace efficiency, and facility factors. Each participating farm will identify an area of opportunity and an economic goal, then work with the project team to develop and implement practical improvements. The project will also provide bilingual resources and share successful strategies and the ICSA tool through extension programming so other New York farms can apply the lessons learned.

Why it matters:
Raising a replacement heifer represents a significant investment, with a 2019 Cornell study estimating an average cost of $2,355 to raise a heifer to lactation. Poor calf health can add treatment costs, increase mortality, and affect future milk production. Improving calf health while making better use of available labor can therefore have both immediate and long-term financial benefits for dairy farms.

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TECHNOLOGY & SYSTEMS

PROJECTS DEVELOPING NEW TECHNOLOGIES, DECISION-SUPPORT TOOLS, TRAINING SYSTEMS, AND INNOVATIVE APPROACHES TO HELP NEW YORK PRODUCERS MAKE BETTER-INFORMED DECISIONS AND IMPROVE FARM OPERATIONS.

Development of Engaging and Accessible Bilingual Training Resources for the Dairy Workforce

2025 | Cornell University, College of Veterinary Medicine, Quality Milk Production Services | Wolfgang Heuwieser

As dairy farms grow and rely increasingly on non-family labor, effective employee training has become more important, yet many farms lack structured training programs and written standard operating procedures. Approximately 70% of dairy employees are Spanish-first speakers, creating an additional challenge for farms trying to provide consistent training. This project explores whether artificial intelligence can effectively translate dairy training materials and step-by-step job instructions from English to Spanish while also examining which learning methods are most engaging for employees.

The project will first test AI-generated translations with 20 bilingual dairy stakeholders, including extension personnel and dairy employees. Researchers will then use the most effective materials to develop eight bilingual microlearning lessons in English and Spanish. Approximately 80 dairy employees will complete 500 lessons, allowing the research team to evaluate comprehension, engagement, and learning preferences through interaction data and feedback.

Why it matters:
Ready-to-use bilingual training could help farms overcome language barriers, improve employee understanding and protocol compliance, and ultimately save time and money while supporting milk quality and workforce retention. The system could also provide veterinarians, nutritionists, and extension educators with a practical way to create and deliver training materials for the farms they serve.

Grower Ready Drone Tutorial Case Study: Vineyard Pruning Weight

2025 | Rochester Institute of Technology | Robert Chancia

Vineyard crop load is a crucial factor in balancing yield, fruit quality, and long-term vine health, but very few growers measure pruning weight because traditional measurements are labor intensive and provide limited information about variation within a vineyard. This project is testing whether inexpensive drone technology can provide a practical way to map vine size and pruning weight across vineyard blocks.

Researchers will conduct proof-of-concept trials in two commercial vineyards and two study vineyard blocks, including both Concord and wine grape varieties. The project will use drone imagery to create crop-load maps and develop science-based recommendations for vineyard management. It will also produce a self-service knowledge base with four training modules covering drone certification, equipment and software selection, how-to guidance, and vine-size sensing. The final resources will include a financial model comparing the costs and potential benefits of adopting the technology.

Why it matters:
Drone-based sensing could give growers a faster and more affordable way to identify differences in vine growth and crop potential across a vineyard, allowing management practices to be targeted rather than applied uniformly. This technology also has potential applications beyond pruning weight, including yield forecasting, nutrition monitoring, and disease assessment.

Evaluating Lighting as an IPM Tool Against Pests in Controlled Environments

2025 | Cornell University, College of Agriculture and Life Sciences, Entomology | Samantha Willden

Controlled-environment agriculture is expanding in New York, but pest-management strategies developed for traditional field production do not always translate directly to greenhouses and other protected systems. This project is investigating whether the lighting systems already used in CEA can become part of an integrated pest management strategy rather than simply serving as a source of crop lighting.

Researchers will study how different LED lighting regimes affect both green peach aphids and their biological-control predators, including impacts on pest behavior, reproduction, predator navigation, feeding, and crop quality. The project will focus initially on lettuce and will validate the results with CEA grower partners. The researchers are targeting an IPM approach capable of reducing pest pressure by at least 75% while maintaining crop yield comparable to standard HPS lighting.

The project will also produce extension materials and hands-on training, with a goal of informing 100 growers, training 30 growers through workshops, and conducting field validation with 12 CEA growers.

Why it matters:
CEA growers have the opportunity to use environmental controls in ways that aren't available to traditional growers. If lighting can be integrated with biological control to suppress pests, growers could gain another tool for reducing pesticide use while maintaining crop productivity.

Combating Fire Blight Using Natural Light and Photocatalytic Nanoparticles

2026 | Icahn School of Medicine at Mount Sinai | Mark Rea

Fire blight remains one of the most damaging diseases affecting New York apple production, while the number of reliable control options is limited. Copper products can no longer be used once flowering begins, biological products require precise timing and can be costly, and repeated antibiotic applications create concerns about resistance. This project builds directly on previous NYFVI-supported research that found titanium dioxide nanoparticles combined with natural sunlight-controlled fire blight as effectively as streptomycin in field trials.

Researchers will evaluate four photocatalytic nanoparticles: silicon dioxide, zinc oxide, tungsten trioxide, and titanium dioxide. These materials use light to produce a disease-suppressing effect and are readily available and relatively inexpensive. The project will compare their effectiveness against fire blight while also considering application costs and potential environmental impacts. The goal is to identify the most effective and practical option for future development.

Why it matters:
A successful photocatalytic treatment could provide apple growers with an entirely different approach to fire blight management, potentially reducing dependence on antibiotics and expanding options for both conventional and organic production.

Bilingual Resources and Training for Greenhouse Disease and Insect Pest Identification

2026 | NYS Integrated Pest Management | Elizabeth Lamb

Early identification is one of the most important—and least expensive—steps in managing greenhouse pests. Yet many greenhouse operations do not have dedicated scouts, leaving employees who are already performing other tasks responsible for recognizing pest problems. Spanish-language training opportunities are also limited, making it harder for some employees to access the information they need.

A 2025 pilot project at five greenhouse operations with 58 participants demonstrated the potential of on-farm Spanish-language training. The program covered aphids, thrips, and mites and included hands-on training with hand lenses, presentations, and pre- and post-training evaluations. Participant knowledge increased by as much as 83% on individual evaluation questions, and growers expressed interest in continuing the training.

The 2026 project will build on those results by developing 15 pest-identification training topics with associated presentations, scripts, evaluations, and handouts. Training will be delivered at approximately 14 locations, with about 10 participants per location. The project will also create six short videos and three longer videos for distribution through social media, including WhatsApp, and the Cornell IPM website.

Why it matters:
Training employees to recognize pests while they are still at low levels can allow growers to intervene earlier, when problems are less expensive and easier to manage. Creating reusable Spanish-language resources also extends the reach of the training beyond the farms participating directly in the project.

Esta Curso es Necesaria: Bringing Produce Safety Training Opportunities to Spanish-Speaking Farmers

2026 | Cornell University | Elizabeth Bihn

Access to appropriate training is an important part of both regulatory compliance and market access for New York's fresh produce industry. Yet Spanish-speaking growers and farm employees face limited access to standardized produce safety training in their preferred language. Although Spanish-language course materials already exist, there are not enough resources available to deliver the training consistently across New York.

This project will expand access to the Produce Safety Alliance Grower Training course in Spanish, along with technical assistance to help participants put what they learn into practice. The training addresses requirements under the Food Safety Modernization Act's Produce Safety Rule and helps farms prepare for third-party food safety audits and buyer requirements. The project will also recruit and mentor inactive Spanish-speaking PSA Trainers, creating additional capacity to provide training in the future.

New York has approximately 44,000 Spanish-speaking farm employees, while current PSA training data shows a significant gap between English- and Spanish-language offerings, with only 14 Spanish courses compared with 146 English courses.

Why it matters:
This project isn't simply translating information; it is building a more accessible training system that can help growers and farm employees understand, implement, and maintain food-safety practices. Greater access to training can support regulatory compliance, market access, worker knowledge, and the economic viability of farms and packinghouses.

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APPLE, GRAPE, & BERRIES

RESEARCH ADDRESSING DISEASE, PEST, CROP-LOAD, AND PRODUCTION CHALLENGES ACROSS NEW YORK'S FRUIT INDUSTRIES.

Effective Tools for Preventing Post-Harvest Rots on Apple Fruit in New York

2025 | Cornell University | Scott Cosseboom

Fungal diseases can cause significant losses after apples leave the orchard, particularly because New York growers may store fruit for months before it reaches the market. With apples held in cold or controlled-atmosphere storage for extended periods, pathogens such as Botrytis and Penicillium can continue to develop and reduce the amount of fruit that ultimately reaches consumers.

This project is evaluating the primary fungi responsible for post-harvest apple diseases by collecting and identifying pathogens from rotting fruit in packinghouses across New York's major production regions. Researchers will also evaluate these pathogens for sensitivity to both commonly used and newly developed fungicides. The results will be used to update disease-control recommendations for growers and packinghouse operators.

Why it matters:
New York's apple industry generates an estimated $574 million in economic impact, and post-harvest losses can significantly reduce the value of an otherwise successful crop. Identifying resistant pathogens and determining which fungicides remain effective can help growers and packers protect fruit quality, reduce storage losses, and preserve marketable yield.

Chemical Thinning of Apples with New Chemistries, Models and Variable Rate Spraying

2025 | Cornell University | Terence Robinson

Managing crop load is one of the most important decisions apple growers make during the season. Too much fruit can reduce size and quality, while excessive thinning can reduce yield and farm revenue. This project brings together several newer tools to make chemical thinning more precise, including the new thinning products Accede and Brevis, three crop-load models, and variable-rate spraying based on blossom-density maps.

Researchers will provide technical support to New York apple growers through webinars, newsletters, and field days, helping producers incorporate these tools into their existing crop-management programs. The project is designed to benefit growers ranging from smaller orchards to large commercial operations, with variable-rate technology offering an additional opportunity to target applications according to conditions within individual orchard blocks.

Why it matters:
More precise crop-load management can help growers consistently hit their desired yield and fruit-size targets while maximizing crop value. The project also introduces growers to tools that could reduce unnecessary chemical applications and make orchard management more data driven.

Evaluating Novel Attract-and-Kill Strategies for Managing SWD on Blueberry Farms in NY

2025 | Cornell University / NYS Integrated Pest Management | Anna Wallis

Spotted wing drosophila (SWD) is an invasive pest capable of causing severe losses in berries and other soft-fruited crops. In the absence of pesticide protection, losses of 80–100% have been documented. Conventional management relies heavily on intensive insecticide programs, creating concerns about pesticide resistance as well as environmental and human-health impacts.

This project is evaluating recently introduced attract-and-kill products as potential alternatives to repeated insecticide applications. Trials will be conducted on farms across New York, with results shared through field meetings, winter conferences, newsletters, and webinars. While the field trials focus on blueberries, SWD affects a much broader range of New York crops, including strawberries, other berries, cherries, and grapes.

Why it matters:
SWD is one of the most significant pest threats facing New York berry production. Effective attract-and-kill strategies could give growers another management option while reducing overall pesticide inputs and helping address the growing problem of insecticide resistance.

Improving Woolly Apple Aphid Management: Integrating Scouting, Timing, and Canopy Management

2026 | Cornell University | Carlos Antolinez

Woolly apple aphid has been resurging as a management challenge in New York orchards. The pest can be difficult to control because populations may be protected within the tree canopy and root system, while spray timing and pruning practices can influence how effective control measures are. This project is taking a more integrated approach by examining how scouting, insecticide timing, and canopy management work together.

Researchers will compare calendar-based spray programs with scouting-triggered applications and evaluate different pruning strategies and insecticide timings. The project will also work with commercial orchards to determine how management practices perform under real-world conditions and develop practical recommendations that can be incorporated into integrated pest management programs.

Why it matters:
Better scouting and timing could help growers target treatments when they are most effective rather than relying solely on calendar applications. Integrating canopy management with pest monitoring may also improve control while reducing unnecessary insecticide use and associated costs.

Field-Testing a Sour Rot Risk Prediction Tool in New York Grapes

2026 | Cornell University | Sara E. Emery

Sour rot can cause substantial losses in New York wine grapes, particularly when warm, wet weather occurs late in the growing season. Current management often relies on repeated insecticide and antimicrobial applications, but disease pressure varies from year to year, and unnecessary treatments add cost and increase selection pressure for resistance.

Researchers have developed a weather-based sour rot risk model designed to identify when environmental conditions favor disease development. Preliminary work in Vignoles found that using the model to time applications reduced spray frequency by 50% without increasing sour rot incidence or severity. The 2026 project will validate the model in 10 commercial vineyards across the Finger Lakes and Long Island and further develop an online decision-support application in collaboration with Cornell IPM and NEWA.

Why it matters:
A validated risk model could move sour rot management away from a calendar-based approach toward decisions based on actual disease risk. This could help growers reduce unnecessary applications, lower costs, and improve the precision and sustainability of disease management.

Linking Production Costs to Consumer Demand: Financial Tools for NY-Grown CEA Strawberries

2026 | Cornell University | Miguel Gomez

Controlled-environment production could give New York strawberry growers an opportunity to extend the growing season, protect crops from weather-related losses, and potentially improve fruit quality. However, the cost of investing in protected production can be a significant barrier, and growers need better information about whether the additional production and infrastructure costs can be supported by the market. This project examines both sides of that equation by comparing production systems and evaluating consumer demand for New York-grown strawberries.

Researchers will compare open-field, low-tunnel, and high-tunnel production using two day-neutral strawberry cultivars. The study will evaluate yield, labor requirements, disease pressure, spray needs, weather protection, and shoulder-season production while updating production costs under current New York conditions. Consumer research will run alongside the production trials to measure

willingness to pay for New York-grown strawberries compared with out-of-state fruit and determine whether information about production practices influences consumer demand.

The research findings will then be used to develop a New York-specific financial decision tool incorporating partial budgets, break-even points, return on investment, net present value, and benefit-cost ratios. Extension resources will also help growers apply the findings to their own operations, including checklists and pricing and messaging guidance.

Why it matters:
The question isn't simply whether protected strawberry production *works*; it's whether it makes financial sense for a New York farm. By combining real-world production data with consumer demand and economic analysis, this project can help growers evaluate whether investing in season-extension systems is likely to generate a worthwhile return.

FIELD CROPS & VEGETABLES

FROM BUILDING HEALTHIER SOILS TO MANAGING EMERGING PESTS AND DISEASES, THESE PROJECTS FOCUS ON PRACTICAL WAYS TO IMPROVE CROP PRODUCTIVITY, REDUCE PRODUCTION RISKS, AND STRENGTHEN THE PROFITABILITY AND RESILIENCE OF NEW YORK FARMS.

Building Soil Nitrogen Supply with Manure

2025 | Cornell University/CALS/Animal Science | Quirine Ketterings

Manure can do more than provide nutrients; it can help build the underlying productivity and resilience of agricultural soils. Previous NYFVI- and NNYADP-supported research found that soil organic matter alone supplied an average of 132 pounds of nitrogen per acre to corn, while fields with a history of manure applications showed increased microbial activity following spring manure applications. These findings suggest that manure management and soil health are intricately connected, but growers need better ways to estimate how much nitrogen their soils can supply.

This project collaborated directly with farmers to evaluate practical methods for assessing soil nitrogen supply and microbial activity. Researchers proposed using tools such as “zero-N stamps” and single-strip evaluations, along with measurements of microbial biomass, active carbon, soil nitrogen, and manure history. The goal was to help growers better account for nutrients already available in their fields and understand how manure contributes to long-term soil productivity.

Why it matters:
Better estimates of soil nitrogen supply can help farmers avoid applying fertilizer they don't need. That means lower fertilizer costs, more efficient manure use, and potentially stronger crop performance. Just as importantly, understanding manure's role in building soil resilience can help

farms make better decisions as weather variability and input costs continue to challenge profitability.

Cover Crops and Herbicide Strategies to Tackle Glyphosate-Resistant Weeds in NY Soybean Production

2025 | Cornell University | Vipan Kumar

Glyphosate-resistant weeds, including horseweed, Palmer amaranth, and tall waterhemp, are becoming an increasingly serious problem for New York soybean growers. These weeds can be difficult and expensive to control, particularly when herbicide resistance limits the effectiveness of traditional management programs. Cover crops offer another tool for suppressing weeds, but growers need better information about how cover crop termination timing works in combination with pre-emergence herbicides.

This project focused on developing practical integrated weed-management recommendations for soybean production. Researchers will evaluate different cover crop termination timings and herbicide strategies to determine which combinations provide the most effective suppression of glyphosate-resistant weeds. The project also includes hands-on opportunities for approximately 50 soybean producers to learn and evaluate these practices.

Why it matters:
Herbicide-resistant weeds don't just create another management headache; they can directly affect yield, production costs, and long-term farm sustainability. Giving growers a combination of cultural and chemical tools can reduce reliance on a single herbicide mode of action while helping protect soybean yields and farm profitability.

Glynwood Grains Connector

2025 | Glynwood Center for Regional Food and Farming | Jenn Hayden

New York grain and bean growers face a different kind of production challenge: having a crop to sell is only part of the equation. Producers participating in previous NYFVI-supported work identified a need for better coordination between farmers and buyers, particularly for markets that could support more diversified grain and bean production. Without that middle-of-the-supply-chain connection, opportunities to capture additional value at the farm level can be difficult to access.

The Glynwood Grains Connector project aims to create that missing link. Working with established networks of producers and buyers, the project will determine the most useful structure for a formal grain-market intermediary and then begin implementing the new infrastructure. Possible models include a marketing clearinghouse or grains guild that connects growers with buyers and helps coordinate the market.

The project has ambitious participation goals: 120 producers and 90 buyers will provide input or gain knowledge, while 60 producers are expected to express interest in participating. Researchers also aim for 44 new producer-buyer partnerships and 24 growers reporting increased revenue through participation.

Why it matters:
A stronger market connection can turn diversified grain production from an interesting possibility into a dependable revenue stream. By addressing the coordination gap between growers and buyers, the project could help New York producers capture more value from crops they are already capable of growing.

Exploring Novel Strategies for the Management of Stemphylium Leaf Blight of Onion in the Face of Fungicide Resistance

2025 | Cornell University/College of Agriculture and Life Sciences/School of Integrative Plant Sciences | Frank Hay

Stemphylium leaf blight (SLB) is a major disease threat to New York's $80.2 million onion industry. The disease causes premature leaf death, reducing bulb size and yield while potentially affecting storability. Typical losses in New York can reach 10–30%, or approximately $990–$2,970 per acre. Management has become increasingly difficult as the pathogen develops widespread resistance to fungicides that growers have historically relied upon.

This project explores two alternative approaches to SLB management. The first uses UV-C light applied at night, which can damage the pathogen's DNA. The second uses titanium dioxide as a photocatalyst; when combined with natural UV light and water during the day, the treatment produces reactive oxygen species that can disrupt pathogen activity. Researchers will evaluate how effective these approaches are and begin examining their potential financial costs and benefits.

Why it matters:
Fungicide resistance leaves growers with fewer reliable tools for protecting a high-value crop. Developing alternative disease-management strategies could give onion growers added options while reducing dependence on conventional fungicides. If successful, the research could provide a foundation for developing practical, cost-effective treatments for commercial production.

Preparing Sweet Corn Growers for Tar Spot

2025 | Cornell University | Sarah Pethybridge

Tar spot has quickly emerged as a new disease concern for New York sweet corn growers. First detected in Western New York in 2021, the disease had spread as far south as Route 14 by 2023 and was widespread across Western and Central New York in 2024. Because tar spot is relatively new to

the state, growers are still developing an understanding of how the disease behaves under New York conditions and what management strategies will provide the best return.

This project combines field trials, disease scouting, and on-farm participatory research to develop recommendations for managing tar spot as disease pressure and economic conditions evolve. Researchers will investigate fungicide options while building local knowledge about varietal susceptibility, disease development, and effective scouting and diagnosis. Extension activities will reach approximately 150 vegetable growers and independent service providers, with additional information distributed to roughly 600 stakeholders through VegEdge.

Why it matters:
An emerging disease can become an expensive problem very quickly if growers don't have the information to recognize and manage it. Early research and education can help sweet corn growers make informed decisions before tar spot becomes an even larger threat to New York's processing and fresh-market industries.

Soil Health Diagnostics for Better Decisions: Soilborne Disease Risk on NY Vegetable Farms

2026 | Cornell University | Daniel Heck

Soilborne diseases such as Fusarium wilt, Phytophthora blight, Rhizoctonia root rot, and Pythium damping-off can remain hidden in fields until plants begin to wilt and severe damage has already occurred. In the previous two years, Cornell's Vegetable Health Diagnostic Clinic received more than 110 grower samples confirmed with soilborne diseases. By the time symptoms appear, growers may have few options other than changing rotations, switching crops, or accepting yield losses.

This project aims to move vegetable disease management from reactive to preventive. Researchers will develop and validate a practical soil-testing protocol capable of detecting and quantifying major soilborne pathogens before planting. Samples from approximately 40 farms across New York will be used to map disease risk and establish a clearer picture of pathogen pressure in vegetable production.

The testing framework is designed to fit into practices growers already understand, such as routine soil sampling. Results would be paired with clear management recommendations, helping growers determine whether a field is appropriate for a susceptible crop, whether a longer rotation or resistant variety is warranted, or whether targeted biological or chemical treatments should be considered.

Why it matters:
Knowing that a disease exists after a crop is already damaged doesn't give a grower many good options. Early, field-specific information could allow farmers to make management decisions before planting, reducing unexpected losses and unnecessary inputs while improving long-term soil and farm productivity.

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Show, Don't Tell: Promoting Soil Health Adoption & Nematode Awareness Through Participatory Research

2026 | Cornell University | Elizabeth Buck

Soil health practices can benefit farms across production systems, but farmers don't have to rely solely on generalized recommendations. This project uses on-farm demonstrations and hands-on education to help growers see how soil health practices perform under their own conditions. Participating fresh-market vegetable and dry bean farms will develop field-specific soil health plans and compare changes in plant vitality and other indicators over time.

A particularly engaging part of the project is the "Soil Your Undies" campaign, which gives growers a simple, visual way to observe soil biological activity. Researchers will also evaluate fields for nematodes, including soybean cyst nematode in dry beans and other damaging nematodes in vegetable fields. These pests can reduce root development, interfere with water and nutrient uptake, and cause yield losses without obvious above-ground symptoms. Limited previous sampling found nematodes in 10 of 14 dry bean fields examined in one 2021 effort, demonstrating the need for broader monitoring.

Results from the case studies and nematode testing will be shared through educational meetings, allowing participating farmers to become examples and advocates for other growers in Western New York.

Why it matters:
Soil health is not one-size-fits-all. By combining field demonstrations with actual soil and nematode data, growers can see what is happening beneath their feet and connect management practices to crop performance. That kind of local, hands-on evidence can make soil health recommendations much easier to understand and, ultimately, adopt.