NYFVI Board of Directors

Left to right
Chair
Jim Bittner, NYS Horticultural Society
Vice Chair
Steve Griffen, Empire State, CAO
Secretary/Treasurer
David Wood, NYFVI Dairy Committee

Left to right
Larry Eckhardt
NYS Vegetable Growers Association
Eric Ooms
NY Farm Bureau
Ron Robbins
NY Corn and Soybean Growers Association
Bob Smith
NYS Nursery and Landscape Association

Left to right
Jim Fravil
at-large member, livestock
Mike Jordan
at-large member, juice grapes and wine
Peter Ferrante
at-large member, greenhouse

NYFVI Advisors

Left to right
Michael P. Hoffmann Cornell AES, Director
Chris Nyberg, SUNY Morrisville, Dean of Agriculture

NYFVI Staff
Dave Grusenmeyer, Managing Director
Kevin Jablonski, Grants Manager
Eileen Maher, Financial Manager
Aileen Randolph, Outreach Communications/Dairy Profit Teams

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Syracuse NY 13209

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It’s been an exciting year at the New York Farm Viability Institute. Last spring, as we approached our tenth year, the board of directors realized the organization needed to evolve. We took some time to reflect and “Take Stock” of ourselves and our mission. We reached out to many of you, our stakeholders, to learn where you thought we excelled, and where we might improve. As a result of the process we’ve formally articulated our mission and goals, and strengthened our governance model.

To better represent the breadth of NY agriculture, in November the board was expanded from seven to ten seats. The three additional, at-large, seats represent the beef industry, greenhouse and floriculture industries, and the wine and juice grape industries. I’m pleased to enter 2015 with Jim Fravil, Peter Ferrante and Mike Jordan on our team. Leading agriculture organizations continue to nominate the other seven board members: NY Farm Bureau, Empire State Council of Agricultural Organizations, NYS Horticultural Society, NYFVI dairy committee, NYS Nursery and Landscape Association, NYS Vegetable Growers Association, and the NYS Corn and Soybean Association. I would like to thank these organizations for the great representatives they have provided over the years.

Beginning in 2015 term limits have been established for all board seats so that no member may serve more than two consecutive three-year terms. As part of our rotation, Larry Eckhardt, nominated by the NYS Vegetable Growers Association, will be stepping down in March 2015. Larry has been with us since the beginning, and I would like to thank him for his commitment. His wisdom and humor will be missed.

Thankfully, our inward gazing didn’t slow us down. In July we hired Aileen Randolph to coordinate our dairy profit team program which now has over 40 teams enrolled. She is also taking the lead on our outreach communications.

In September the board awarded over $1.2 million dollars to 15 new projects representing a cross section of New York agriculture. Thanks to these funds, applied research projects in the dairy, field crop, greenhouse, hops, sod, grapes and viticulture industries are now underway. Projects were also funded that will help farmers choose the most profitable farmers market, successfully access capital in the Catskill region, and improve communications with employees.

Of the 2014 awards, there are two projects that we are particularly vested in because of the role NYFVI played in shaping them. The precision agriculture project with the NYS Corn & Soybean Growers Association, and the calcium bolus project with Dairy Health and Management Services, LLC. In both cases NYFVI was able to encourage additional collaboration with other individuals or organizations that had complementary expertise. As a result both projects are now stronger and better able to serve the needs of their respective agricultural sectors.

NYFVI Mission

Our mission is to help New York farmers become more profitable and improve the long-term economic viability and sustainability of our state’s farms, the food system, and the communities which they serve.

We strive to achieve our mission through a farmer-driven grant making process connecting farmer-identified needs to practical research and education solutions.

We amplify our efforts and the efforts of others through leadership and collaboration. This creation and sharing of knowledge results in positive farm-level impact.

Continued on next page
In November, we held our annual partner’s meeting in Albany New York where we had almost 100 people representing more than 50 agricultural businesses and organizations join us to learn more about the results we and our projects have achieved together.

And the results are impressive. Since 2006 our projects have achieved a six-to-one return on investment as measured by new capital investment, cost savings, and increased farm product sales. In addition, over 1,100 full time, part time and seasonal jobs have been created or preserved. 5,000 producers have participated in our projects and thousands more have been reached with project findings.

And there’s more to come. In December, we closed our 2015 application process and have 39 submissions requesting more than three million dollars.

The New York Farm Viability Institute originally began as the NY Ag Innovation Center, housed within Cornell. It was one of 10 federally funded Farm Bill centers and the only one that is still active today. Since 2005 we have been funded by New York State. We are very appreciative of the trust and confidence they have placed in the organization.

On behalf of the board, I would like to offer our ongoing commitment to our mission and New York agriculture. I encourage you to read more about what we’re doing, and what we hope to achieve in the pages that follow. In short, we will continue to focus on working to achieve for all New York farms the words in our name: Farm Viability.

Jim Bittner
Chairman, NYFVI Board of Directors

NYFVI: Long Term Goals

All of our time, money and energy will be focused on advancing our goals to help New York’s agricultural community.

- Increase net profits to NY farmers that sustain NY farms;
- Increase local, regional and global market share for NY farmers;
- Foster new farm investments in infrastructure, equipment and technology;
- Increase the business acumen of farmers and the agricultural community;
- Support a trained and adequate farm labor and management system;
- Support a safe, adequate, and quality food and agricultural system for consumers.
Introducing NYFVI
Portfolio Priorities

At its core, the New York Farm Viability Institute’s mission is to help New York farmers become more viable. We do this through strategic management of our grant portfolio, ensuring the projects we fund will create knowledge that will quickly and directly benefit farmers.

Historically, we have resisted categorizing our projects. Our funding decisions are driven by the quality of each proposal, its potential impact and the availability of resources.

Last year as the board considered the organization’s mission and goals, they realized that it would be helpful to develop a structure for the project portfolio that will allow progress to be measured against the goals.

To that end, we created “portfolio priorities” and assigned areas of emphasis to our active projects. The priorities are as follows:

**Improve Operational Practices**
Sometimes it’s the willingness to do something differently that can put more money in a farmer’s pocket. These projects are focused on helping as many farmers as possible refine existing production practices, or learn how to implement a new process to improve their profitability. Some projects will utilize outreach and education to drive changes, others may use applied research to demonstrate the effectiveness of the proposed change. In any case, the risks are fairly low and the project should be delivering an impact in less than two years.

**Foster Industry-Wide Innovation**
Applied research is a tricky area. While there is always valuable knowledge gained from testing in the field, sometimes what you learn is what doesn’t work well in specific conditions, or perhaps in New York overall. This group of projects is focused on learning how New York farmers can best adopt new production practices. The risks involved are moderate, and mainstream adoption of the practice is likely to be 2 to 5 years from demonstrated success.

**Incubate New Ideas**
While most NYFVI projects are building from existing knowledge, sometimes there are projects that are focused on developing a new idea or technique. These projects may nor may not succeed, but have the potential to significantly alter the industry. These projects are likely to be high risk, and if successful take five or more years to reach mainstream adoption.

**Improve Route to Market and Marketing Practices**
In addition to producing quality products, farmers must ensure they have profitable sales outlets. Farms of all sizes benefit from increased access to aggregators, and processors that add value to their products. And, for farms that sell directly to consumers, they must understand the most effective way to market their product. This group of projects work to build market share by increased route to market opportunities, and improve profits by improving marketing expertise. The risk level for these projects is moderate, and they should be delivering a return on investment in their first two years.

**Develop Human Capital**
Strong management practices, and training and development of workers are critical in almost every industry. Farming is no different. Projects in this area of our portfolio strive to develop better managers and management practices, build business plans and ultimately, better bottom lines for all involved. Projects should be delivering an impact in less than two years.
How Quirine Ketterings is Helping Farmers Improve Their Operational Practices to Increase Their Profits and Protect the Environment.

She calls it a “Win-Win Opportunity”. Since 2006, Dr. Quirine Ketterings, head of Cornell’s Nutrient Management Spear Program has led six NYFVI research projects. All of them share a common goal: Adaptive Nutrient Management.

Adaptive nutrient management is a process whereby farmers can test crop responses to nutrient inputs and adjust field management over time, based on real farm data. The process is based on recognition that optimizing both yield and input levels will maximize return per acre and minimize the environmental footprint of crop production.

Early in her work Ketterings demonstrated that manure could replace the need for starter nitrogen in corn fields across a variety of soil types and growing conditions across the state. She first tested the concept at Table Rock Farm, where the project tracked yields to obtain values for a whole farm mass nutrient balance, a measurement of nutrient surplus or deficit, to evaluate the impact of management changes.

As a result of the on-farm experimentation and willingness and interest in the farm crew to improve on management, the farm’s nutrient balance decreased 13% for nitrogen, 29% for phosphorus and 46% for potassium in the past nine years, while milk production increased over time.

“These are impressive numbers from an environmental perspective, and there’s a definite positive economic impact for the farm.” said Ketterings.

In subsequent projects, Ketterings compared manure application methods and rates to evaluate the effect on both yield and forage quality. Rates of 12,000 gallons and 15,000 gallons per acre were compared to the farm’s standard practice of applying 9,000 gallons. After three years, the data showed no benefits to increasing the rate. Additionally, the highest rate contributed more phosphorus and potassium to the soil than is ideal for long term nutrient management. Knowing definitively that the lowest application rate achieved the same yield allows farms to make better decisions.

Following the manure application project, 13 articles were published, 7 presentations were given and 934 farms were reached with information about the best management practices.
We look to achieve long term benefits here of improved soil health, increased yields and a better economic bottom line.

Willard DeGolyer,
Table Rock Farm

NYFVI Active Projects:
Improving Operational Practices

Sometimes it’s the willingness to do something differently that can put more money in a farmer’s pocket. These projects are focused on helping as many farmers as possible refine existing production practices, or learn how to implement a new process to improve their profitability. Some projects will utilize outreach and education to drive changes, others may use applied research to demonstrate the effectiveness of the proposed change. In any case, the risks are fairly low and the project should be delivering an impact in less than two years.

New York Organic Dairy Initiative
CCE Cortland County $48,000
Enhanced Tools for Dairy Farm Business Analysis by New York Farms
Cornell University $104,537
Increasing High Tunnel Profitability with Improved Soil Management
Cornell University $80,922
Precision Orchard Management to Increase Apple Orchard Profitability
Cornell University $149,624
Expanding Use of Reduced Tillage Systems, Controlled Release Nitrogen Fertilizer and Cover Crops on Sweet Corn, Field Corn and Cucurbit Farms
CCE Suffolk County $56,533
Dairy Profit Discussion Groups for Enhanced Profitability and Productivity of New York Dairy Farms
Cornell University $13,688
Production, Pests, Profitability: Neighborhood On-Farm Education for Field Corn and Alfalfa
Cornell University $24,970
Adapt-N and Soil Health Tools for Precision Management in Corn Production
Cornell University $149,975
Improving Crop Quality and Production Capacity for NYS Hop Growers
CCE Madison County $70,119
Orchard Management to Increase Apple Orchard Profitability
Cornell University $149,624

While Protecting the Environment!

Nitrogen: 13% decrease  Phosphorus: 29% decrease  Potassium: 46% decrease
NYFVI Active Projects: Fostering Innovation in Agriculture

Applied research is a tricky area. While there is always valuable knowledge gained from testing in the field, sometimes what you learn is what doesn’t work well in specific conditions, or perhaps in New York overall. This group of projects is focused on learning how New York farmers can best adopt new production practices. The risks involved are moderate, and mainstream adoption of the practice is likely to be 2 to 5 years from demonstrated success.

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<thead>
<tr>
<th>Project Description</th>
<th>Institution</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Expanding Use of Reduced Tillage Systems on Fresh Market Vegetable Farms</td>
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<td>Determining Optimum Planting Depths for Early-Planted Corn and for Soybeans via</td>
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<td>Farmer-Participatory Field-Scale Studies</td>
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<td>Increasing the Competitiveness of the NY Grape Nursery Industry</td>
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<td>Partial Mechanization of High Density, Tall Spindle Apple Orchard Pruning, Thinning</td>
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<td>and Harvest for Improved Profitability</td>
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<td>Defining Therapeutic Approaches for Lactating Dairy Cows with Low Fertility after</td>
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<td>Resynchronization of Ovulation in Commercial Dairy Farms</td>
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<td>Associations of Nutritional Strategy and Grouping Management During the Dry Period</td>
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<td>and Early Lactation with Biomarkers of Energy Metabolism and Inflammation, Health,</td>
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<td>Milk Yield, and Reproductive Performance of Dairy Cows on Commercial Dairy Farms</td>
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<td>Preventing Market Loss of Annual Landscape Plants</td>
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<td>New York Corn and Soybean Growers Association</td>
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<td>Data Management Capabilities on New York Corn and Soybean Farms as a Means to</td>
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<td>Improve Crop Input Use Efficiency, Yields, Farm Profitability and Land Stewardship.</td>
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<td>Prediction of Soft Scald in Honeycrisp Apples to Manage Storage and Marketing</td>
<td>Cornell University</td>
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<td>Impact of Extending the Postpartum Voluntary Waiting Period on Reproductive</td>
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<td>Performance and Profitability of Lactating Dairy Cows</td>
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<td>Biological Control of the Black Vine-Strawberry root weevil complex:</td>
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<td>The whole farm approach</td>
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<td>Site Trials and Producer Outreach to Demonstrate Suitability of Turkish Fir for</td>
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<td>Adoption for Commercial Christmas Tree Production in NYS</td>
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<td>Improving White Grub Control in Sod Through Establishment of Persistent Entomopha-</td>
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<td>Control of the Black Vine-Strawberry root weevil complex:</td>
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<td>Effective Aphid Management in Greenhouse Crops by Optimizing Biological Control</td>
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<td>and Nutrient Inputs</td>
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<tr>
<td>Winter Forage: Impact of Early Planting on Nutrient Storage and Spring Yield</td>
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<td>Cost-Effectiveness of Oral Calcium Bolus Supplementation in Commercial Dairy Herds</td>
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<td>Association Between Select Bulk Tank Bacteria Counts and Milk Quality</td>
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Precision Agriculture: Driving Innovation

Location. Location. Location. As modern technology meets modern agriculture farmers are able to use GPS and GIS systems along with electronic sensors to collect and store information about the soil, crop health, and yield foot by foot through their fields.

Todd Du Mond, crop farmer from Union Springs, NY was part of corn and soybean projects with researchers at Cornell University. As he harvested crops in various research trials he noticed wide yield fluctuations from real-time yield monitors as he drove the combine across different soil types through the field. While the variation averaged out across the research trials, Todd wanted to use this information, along with precision agriculture technology, to optimize farm productivity across all soil types.

As more farmers, like Todd, own equipment with GPS and GIS systems that allow for variable seeding and fertilization rates, there is growing interest in using soil and crop information to make management decisions on an acre by acre basis within each field.

NYFVI is funding a project with the New York Corn and Soybean Growers Association (NYCSGA) in collaboration with individual farmers, the Soybean Checkoff Program, DuPont Pioneer, and Cornell to identify optimum variety choices, seed placement, seeding rate, and nitrogen application given a field’s geography, climate and soil type. The goal is to improve crop input use efficiency, crop yields, farm profitability, and land stewardship.

During 2014 nine cooperator farmers planted over 2,500 acres in trials for this project using their precision agriculture enabled equipment. Data from the 2014 growing season are still being analyzed but the project is generating significant interest from growers and more have said they are interested in participating for the 2015 growing season. Project leaders Savanna Crossman and Dan Ochs are anticipating 12 farmer cooperators and 3,500 acres seeded for trials in this project for 2015.

“The New York Corn and Soybean Growers Association is a grassroots organization representing corn and soybean producers’ interests. The Association works to develop and expand markets, educate members, and enhance public policy for corn and soybean growers in the Empire State. The Association sponsors research on corn and soybean production, utilization, and marketing; and hosts educational programs on management, production, and marketing.”

Todd Du Mond Dumond Ag, LLC, Union Springs

“Where there is yield variation there is the opportunity to improve productivity. I wanted to understand the sources of the variability and determine how to optimize management practices and precision agriculture technology to improve productivity, profitability, and my stewardship of the land.”

Todd Du Mond Dumond Ag, LLC, Union Springs
Developing Marketing Strategies to Grow Market Share

While urban markets can be expensive for producers to reach, they also provide top dollar for farm products. Producers therefore must ensure that they maximize their sales through effective, modern marketing. Unfortunately, for many producers this does not come naturally.

The FarmROOTS program of GrowNYC was created to provide Greenmarket participants with technical assistance, including one-to-one business development, workshops, on-farm trainings, mentoring, and outside consulting.

In 2014 NYFVI provided funds to the FarmROOTS program to assist them in expanding their marketing assistance to Greenmarket producers from NY State, with the aim of working with 15 producers to improve marketing techniques. Additionally, grant funding would be used to develop templates and learn lessons that can be applied to other producers within the system and throughout the state.

As of the end of 2014, the marketing assistance provided to producers by FarmROOTS has been an unqualified success. Marketing outcomes as a result of the project include increased unique website visitors and social media followers, creation of loyalty programming, and identification of new marketing channels. One of the most interesting leverage points for FarmROOTS is the ability to engage world-class graphic designers with an interest in local agriculture to help producers affordably develop better logos, signs, and point-of-purchase materials. All of these efforts led to an average sale increases of 8% for participating producers.

While the initial NYFVI grant funding to GrowNYC will soon wind down, FarmROOTS Director Christopher Wayne has recently submitted an application for renewed funding to assist the program in extending marketing assistance to even more producers. Says Wayne, “Marketing assistance now represents 35% of all technical assistance provided by the FarmROOTS program, and we have a long wait list of producers. Without NYFVI’s investment we would not have been able to help as many farmers as we did, nor would those farmers have been as successful as they have. Hopefully, future collaboration with NYFVI will help us to ensure that every farmer in the growing Greenmarket system is achieving their full potential in accessing the huge consumer base of NYC.”

The chart at right illustrates farmer market sales results before and after working with the FarmROOTS program. With total traffic remaining roughly the same, marketing improvements made with the help of FarmROOTS staff led to a 114% increase in purchases.
Cooperatively Building a Route to Market

Catch-22. Within their first few years many small producers’ cooperatives reach a point where they can no longer grow with the limited unpaid labor provided by producer-members but can’t yet afford to pay salaries. This can be the breaking point for many otherwise successful ventures.

One of the most rewarding roles that NYFVI can play as a grant funder is to provide “bridge” funding in these situations, providing a one-time infusion of funds to enable the cooperative to bridge the gap between failure and long-term financial viability.

This exact situation presented itself to the NYFVI Board of Directors when the Adirondack Grazers Cooperative, a beef producers’ cooperative marketing pasture-raised beef, applied for funding in 2013. Though it was a small cooperative at the time, with 14 members marketing 8 head of beef per month, Adirondack Grazers presented an excellent business plan with strong projected growth. Because of this, as well as the potential for the cooperative to serve as a model for other farmers, the Board decided to provide the cooperative with bridge funding to enable them to hire full-time staff before they could otherwise afford to.

To date, the cooperative’s successes include growing from 14 to 36 producer-members, increasing cooperative production from 8 to 52 head per month, and improving from a net operating loss to a net monthly profit, including staff salaries, all within 18 months. While these successes are surely due to the hard work of their farmers and staff, the NYFVI Board is proud of the small but crucial role that NYFVI has played in making the cooperative a growing success.

“One of the biggest challenges for small- to medium-sized livestock producers is affordably accessing markets where they can receive a fair price for their product. Over the years marketing cooperatives have helped farmers in many industries do exactly that, and the Adirondack Grazers Cooperative has proven that this model can succeed for modern beef producers in New York.”

Jim Fravil
New NYFVI Board member, beef farmer, and longtime farm financial adviser

NYFVI Active Projects: Building Routes to Market and Improving Marketing Practices

Farms of all sizes benefit from increased access to aggregators, and processors that add value to their products. And, for farms that sell directly to consumers, they must understand the most effective way to market their product. This group of projects work to build market share by increased route to market opportunities, and improve profits by improving marketing expertise. The risk level for these projects is moderate, and they should be delivering a return on investment in their first two years.

Piggy Pat’s Local Producer to Plate Project: Increasing Profitability for Local Sustainable & Organic Farms
McCann Farm & Piggy Pat’s Restaurant $21,900

A Full-Service, Member-Driven Beef Cooperative
Adirondack Grazers Cooperative $75,000

Marketing plan development and evaluation for farmers’ market producers
GrowNYC $81,892.58

Business Planning for Western New York Food Hub Value-Added Products
Eden Valley Growers, Inc. $20,000

Promoting Participation in the Long Island Sustainable Winegrowing Program
Bedell Cellars $14,970

Defining Farmers Market Benchmarks to Improve Producer Profits
Farmers Market Federation of NY $36,222
Can Chlorophyll Measurement Help New York Apple Growers Maintain Profits?

The introduction of Honeycrisp apples was a big boost for growers as consumers embraced the taste. Unfortunately, challenges with timing the harvest means 50% of the crop is often lost. With Washington State poised to triple Honeycrisp production that number needs to change.

Ensuring that a given apple is always eaten in optimal condition relies principally on correct harvest timing, which will also reduce storage disorders and post-harvest rots. In recent years, ethylene gas, which many varieties of ripening apples emit at a predictably accelerating rate as they ripen, has emerged as a sophisticated means of ensuring proper harvest timing and storage, leading to a large improvement in the quality of grocery-store apples purchased months after harvest. However, some varieties, including the popular Honeycrisp and Gala varieties, do not reliably produce ethylene. In these varieties, producers are still using color change as the primary maturity indicator, although it is highly variable. Chlorophyll content has been recognized as another reliable indicator of maturity, but until recently there was no simple method for measuring chlorophyll content in the field. A new tool called a DA meter enables measurement of chlorophyll in the apple peel quickly and quantitatively, but has undergone little testing. Craig Kahlke, of Cornell Cooperative Extension’s Lake Ontario Fruit Program, is in the midst of a one-year project to examine DA meter readings in both low- and high-density apple plantings. It is believed that the newer high-density plantings will have more narrow chlorophyll ranges at harvest, leading to more consistent fruit quality in storage and ultimately higher success rates.

Data from the project will be analyzed and compared with other harvest maturity indices to see if the DA meter does in fact show promise as a reliable indicator of harvest maturity. If so, researchers such as Kahlke will conduct further analysis to see how the DA meter can best be incorporated into modern apple orchards and storage facilities, with the eventual goal of minimal variability in stored apples, leading to the perfect bite of apple for every customer and an excellent market for NY’s apple growers.

Speaking about the potential of the DA meter, NYFVI Board Chairman and apple producer Jim Bittner says “Though mainstream adoption of the DA meter may be several years off, the NYFVI board and reviewers felt that the potential of chlorophyll as an indicator of maturity was too high to ignore. For NY apple growers, it is essential that we remain cost-competitive with regions with more favorable climates, and correct harvest timing leading to better pack out rates from storage is our best chance of

NYFVI Active Projects: Incubating New Ideas

While most NYFVI projects are building from existing knowledge, sometimes there are projects that are focused on developing a new idea or technique. These projects may or may not succeed, but have the potential to significantly alter the industry. These projects are likely to be high risk, and if successful take five or more years to reach mainstream adoption.

Greenseeker Technology for Greater Corn Yield and Enhanced N Fertilizer Use for Corn
Cornell University $144,591

Source Identification and Education on Sporeforming Bacterial Entry at the Dairy Farm Level: A Crucial Next Step to Production of High Quality Raw Milk in New York
Cornell University $148,598

Detecting Variability in Apple Harvest Maturity Between Different Planting Systems Using a DA Meter
Cornell University $22,151

Testing a Promising New Canopy Management Technique to Reduce Management Costs in Vineyards
Cornell University $112,547

A Structured Approach to Salmonella Dublin Control on a NYS Dairy Farm
NYS Veterinary Diagnostic Lab $4,000

Cornell University Cooperative Extension puts knowledge to work in pursuit of economic vitality, ecological sustainability and social wellbeing.

Project Leader: Craig Kahlke, Area Extension Educator, CCE Lake Ontario Fruit Program
Improving Communications to Stabilize the Work Force

Labor. Finding and retaining good help is a universal concern among New York’s farmers. Mary Jo Dudley with the Cornell Farmworkers Program is helping dairy farmers develop strategies to improve workplace relations and retain their workers.

Their process was fairly straightforward, Dudley and her bilingual team conducted a series of interviews with 29 farm owners and managers, and 23 focus groups with 125 farm workers. This allowed them to identify what farmers are doing well with their workforce, as well as farm specific areas of conflict and misunderstanding.

On a macro level, owners are concerned about labor shortages, retention and transitioning to and managing a Hispanic workforce. Farmworkers also have concerns. Many would like to better understand the criteria for pay increases and time off. They are also interested in opportunities for training and advancement. Some also indicated a desire to know more about the overall future of the farm. On a personal level, the quality of housing is important.

On a day-to-day basis, chief concerns among owners and managers include maintaining proper milking procedures, meeting milk quality targets, starting milking on time and animal care.

Drawing from research data, project staff facilitated discussions designed to address farm specific issues, improve workplace communication, and increase productivity.

Often farmers are surprised by what they learn. One farmer realized that he did not conduct formal performance reviews with his Hispanic workers, although he had done so with the local employees. To overcome the barriers involved, the project staff worked with the farm owner, managers and workers to develop evaluation tools that are culturally appropriate for a low-literacy workforce.

From these interactions, a guidebook *Building an Effective Work Team on your Dairy Farm* was developed with recommendations of best practices for dairy team building. Bilingual tools developed range from sample work contract and understanding paystubs, to housing maintenance checklists and production charts.

Results from the work are outstanding. By improving the workplace environment participant farms avoided expenses and production losses related to employee turnover estimated at $468,750 - $562,500. Farms also invested approximately $12,500 in improvements to employee housing.

To allow them to continue their work, NYFVI awarded them a 2014 grant of $100,000.

NYFVI Active Projects: Developing Human Capital

Strong management practices, and training and development of workers are critical in almost every industry. Farming is no different. Projects in this area of our portfolio strive to develop better managers and management practices, build business plans and ultimately, better bottom lines for all involved. Projects should deliver an impact in less than two years.

Building a Better Bottom Line for NYS Berry Growers
Cornell University $84,285

Enhancing Economic Growth in Agriculture via Business Planning and Analysis
Cornell University $48,122

Helping Beginning Farmers to the Next Level in Business Development
CCE Albany County $19,617

Improving Workplace Communications: Opportunities for Worker Training and Advancement
Cornell University $100,000

The Capital Access Agricultural Loan Program
Catskill Mountainkeeper $18,536

Improving NY Livestock Farmers’ Profitability With Better Record Keeping and Financial Management
Hudson Mohawk RC&D Council $35,236

NYCAMH OSHA LEP Training Program
Bassett Medical Center $50,000
NYFVI 2014 Grant Awards: Farmer-Driven Impact

At the heart of the NYFVI project selection process is extensive farmer participation. Farmers are routinely engaged in a variety of different ways to identify and prioritize issues of concern in various New York agriculture sectors.

This information is then relayed to potential grant applicants to help them better address high priority needs.

Over 60 farmers served on one of eight subject matter specialty review panels where they scored and priority ranked proposals within their area of expertise. Results of that review and ranking then went to the NYFVI board of directors to make the final funding decision within typically tight budget constraints. Forty six proposals requesting over $4 million were submitted for funding.

With about $1.2 million available to fund project, the following projects were ultimately selected for funding

**Promoting Participation in the Long Island Sustainable Winegrowing (LISW) Program.** An outgrowth of previous projects, LISW was formed in 2011 by several Long Island wine producers to encourage growers to engage in sustainable production practices, and also to assist members in differentiating their product by effectively communicating their practices to customers. Led by Bedell Cellars of Cutchogue, LISW will receive $14,970 over two years to increase membership, conduct outreach, and ensure the long-term success of the program.

**Defining Farmers Market Benchmarks to Improve Profitability.** By enabling producers to compare their business to industry standards, benchmarking is an essential tool in business planning and analysis. The NY Farmers Market Federation will receive $36,222 to establish the first benchmarks for producers selling at the 600 farmers markets in the state. These benchmarks will help producers identify the best market for their products and goals and compare their marketing expenses to others in similar markets via an online decision tool. The data acquired will also be disseminated via webinars and workshops throughout the state.

**Improving Workplace Communications on Dairy Farms.** The agricultural workforce in NY State is in the midst of historic change, with immigration policy and cultural changes making it increasingly difficult for farmers to find good workers. Worker retention is therefore tremendously important. The Cornell Farmworker Program will receive $100,000 to engage NY dairy farms and their largely Hispanic workforces to create bilingual standard operating procedures to ensure clear communication of expectations, policies, and criteria for bonuses and raises, with the aim of preventing the misunderstandings that often lead to workforce turnover.

**The Capital Access Agricultural Loan Program.** Access to capital is a critical need for many farmers. In partnership with The First National Bank of Jefferson, the Catskill Mountainkeeper organization raised $100,000 of private funds to guarantee loans to farmers.
NYFVI is investing $18,536 to enable Catskill Mountainkeepers to provide outreach and education to loan recipients in the guarantee program. This work will ensure that loan recipients have the tools to succeed in their businesses, enabling them to pay back their loans in a timely manner, thereby ensuring the long-term success of the program.

**Improving White Grub Control in Sod through Establishment of Persistent Entomopathogenic Nematodes (EPN).** Kyle Wickings of Cornell University will receive $81,220 to figure out how to fight pests naturally. EPNs, tiny worms the size of a pin-head, have been shown to be effective in eliminating white grubs in sod by eating their larvae. This reduces the use of pesticides and increases the market value of the product. Unfortunately, the commercially available EPNs are typically short-lived and intolerant of climatic extremes. Wickings work will assess the potential for establishing persistent, native EPNs in NY sod farms. It builds on other NYFVI funded work which found native EPNs to be effective in in fighting pests in forage crops and strawberries.

**Testing a Promising New Canopy Management Technique to Reduce Management Costs in Vineyards.** A novel approach to pruning and vine management, successful in France, could save growers of Vignera grapes in the Finger Lakes and Long Island grape regions up to $500 per acre. But how will it affect vine size, fruit composition, wine quality, and production costs in New York? That’s what Dr. Justine Vanden Heuvel of Cornell University will receive $112,547 to find out. It’s an important question, as economic analyses suggest that some Finger Lakes growers are losing up to $1,390 per acre per year.

**Production, Pests, and Profitability: On-Farm Education for Field Corn and Alfalfa.** Responding to direct requests by field crop farmers in the state, the NY State Integrated Pest Management (IPM) Program, part of Cornell Cooperative Extension, will receive $24,970 to establish an on-farm education program offering small-group education in IPM principles as well as Integrated Crop Management (ICM) practices. While a similar program has been successful in engaging soybean growers, this program will be the first in a decade to be offered to alfalfa and field corn producers.

**Adapt N and Soil Health Tools for Precision Management in Corn Production.** Cornell University professor, Dr. Harold Van Es will receive $149,975 to lead a team of soil scientists, extension agents and, agribusiness professionals to drive widespread adoption of new technology to help grow corn. The Adapt-N tool brings sophisticated computer modeling and cloud computing to a farmer’s field through a tablet or smart phone. This allows for more precise use of nitrogen, reducing costs and environmental effects.

**Alfalfa-Grass Management to Maximize Milk Production from Dairy Cattle.** Cornell University professor, Dr. Debbie Cherney and her team of extension educators will receive $82,388 to identify the “perfect bite” of alfalfa-grass mixtures to maximize milk yields in dairy cows. Currently about 90% of the alfalfa in NY is planted with perennial grass. Unfortunately, many of these grasses grow faster than alfalfa, leading to difficulty in timing harvest for maximum nutrition and yield. Cherney’s work will test new grasses, as well as test a new tool that utilizes software to identify optimum harvest windows.

**Optimizing Biological Control and Nutrient Inputs to Manage Aphids in Greenhouses.** Aphids are among the most challenging management issues for greenhouse growers in the state, especially with growing public pressure to reduce use of neonicotinoid pesticides, the most common treatment for aphids. Cornell University Associate Professor Neil Mattson will use a $132,858 grant to study whether slow-release fertilizers, a more efficient source of nitrogen, can combine with biological control methods to effectively control aphids while reducing pesticide use by 50%.

**Winter Forage: Impact of Early Planting on Nutrient Storage and Spring Yield.** Tom Kilcer of Advanced Ag Systems will receive $88,593 to answer the question: How can farmers maximize yield and optimize manure use in winter forage crops? Building on an earlier project that found fall nitrogen plays a key role in optimizing spring forage yields, this work will compile and analyze data from farmers in several NY regions to develop and share information about the most effective fall manure application. This knowledge could help increase the yield of winter forage by 30% and save $50 per acre in nitrogen purchases, while helping to protect the environment.

**Improving Crop Quality and Production Capacity for NYS Hop Growers.** Building on the success of a 2012 NYFVI grant, Steve Miller of Cornell Cooperative Extension of Madison County, the de facto Hops Production Specialist for the state, will receive $30,000 to continue the important work of educating growers in the burgeoning NY hops industry. Information developed by the project will continue to reduce production losses and improve both harvest quality and post-harvest processing, leading to high-quality hops for brewers in the state.

**Cost Effectiveness of Oral Calcium Supplement in Dairy Herds.** Dr. Matthew Curler of Dairy Health Management Services will use a grant of $99,907 to develop a cost-effective calcium supplementation protocol for dairy cows affected with subclinical hypocalcemia (SCH). SCH affects as many as 50% of second-and-greater lactation cows and has been linked to reduced immune function, impaired energy balance, and limited early-lactation milk production. The new protocol will enable NY dairy farmers to effectively identify and treat SCH, leading to greater health, production, and profitability.

**Association between Select Bulk Tank Bacteria Counts and Milk Quality.** Quality Milk Production Services (QMPS), a Cornell University program, launched an updated bulk tank analysis program for dairy farmers in June of 2014. The new program is offering quantitative data on bacteria counts, an improvement to the detected/not detected data offered in the old program. Dr. Paula Ospina of QMPS will receive $59,878 to further analyze these quantitative data to establish threshold levels for various bacteria and establish links between bacteria levels and milk quality.
Addressing High Priority Critical and Emerging Issues

The opportunities and challenges facing NY farmers are constantly shifting. The NYFVI focus grant program provides the flexibility to respond.

For example, when spotted wing drosophila (SWD) began decimating New York berry crops NYFVI responded by funding one of the first SWD projects in New York and worked with the New York Berry Growers Association to secure additional funding to control this invasive new pest. During 2014 NYFVI was similarly able to respond quickly to two emerging treats to NY agriculture and one significant opportunity.

NYCAMH OSHA LEP Training Program
In 2014 the federal Occupational Safety and Health Administration (OSHA) announced plans to randomly inspect NYS dairy farms, with the associated risk of public notification of safety violations and attendant fines. The New York Center for Agricultural Medicine and Health (NYCAMH), in collaboration with several partner organizations seized on this teachable situation to organize training and mock inspections in preparation for the OSHA inspections. NYFVI was able to quickly step up and provide funding for this training work.

In just the first quarter of this effort walkthroughs were held on 34 farms attended by over 70 farm managers, 41 English training sessions were held on 28 different farms reaching 445 workers, 52 Spanish training sessions were held on 34 different farms reaching 486 workers, and respiration fitting was done on 4 farms. These educational efforts are continuing and, regardless of the inspection threat, this project is creating a safer and healthier work environment on NY farms.

A Structured Approach to Salmonella Dublin Control on a NYS Dairy Farm
Salmonella Dublin (SD) is a pathogen that causes severe disease and death in young animals and is a concern from a public health perspective. A study conducted in 2013 estimated the prevalence of SD in NY dairy herds at 2.5%. While SD is found on a relatively small number of farms, better tools to control and eliminate the disease can help the NYS dairy industry avoid a situation where the disease becomes endemic on a much larger percentage of farms.

NYFVI is providing funding assistance to a multiyear collaborative project between the NYS Cattle Health Assurance Program and the NYS Veterinary Diagnostic Lab to study management practices that will control the spread of SD and help farmers eliminate it from their herds. This effort will benefit farms, improve food safety, and reduce the risk of SD exposure to cattle care workers.

Matching Funds for Beginning Farmers
Support to beginning farmers is critical for a vibrant future for NY agriculture. In 2006 NYFVI provided the first funding to the newly established beginning farmer program at Cornell. In 2009 and again in 2014 the institute was able to provide required matching funds to the NY Beginning Farmer Program in support of USDA Beginning Farmer and Rancher Development Program grant applications. The result of this match fund support was over $1.7 million of federal money coming to NY and the northeast in support of beginning farmer educational efforts.
NYFVI Dairy Profit Teams:

The current NYFVI Dairy Profit Team Program was launched in October, 2013. It marks the first time NYFVI has awarded profit team grants directly to farms.

Past NYFVI dairy profit team grants were larger grants that were administered through CCE offices. The profit team model demonstrated the ability to deliver tremendous results to participating farms. Past teams have helped some farms stay in business, while others have navigated successful expansions, or transfers to the next generation.

The current program design is eligible for dairy farms (cow only) and reimburses up to $2500 dollars in meeting expenses for enrolled teams. Each team is required to meet 7 times over 15 months, and provide meeting reports as well as expenses for reimbursements. The farmer decides what he or she would like to focus on, chooses a facilitator and selects the team.

While many teams focus on production issues, such as nutrition, herd health, and calving rates, others are using the teams to develop plans to transfer the farm to its next generation.

Approximately 60% of our 40 enrolled teams are facilitated by a Cornell Cooperative Extension Educator. Other teams are facilitated by various agribusiness organizations.

Extensive work was done to promote the program and the materials have been widely distributed. Media placement includes: Grass-Roots, NODPA newsletter, DFA newsletter, NEDPA’s newsletter, ProDairy’s newsletter, Country Folks, Batavia News, Morning Ag clips and CCE list serves.

Additionally, NYFVI has promoted the program at Empire Farm Days, Pro Dairy’s Nutrition and Feed seminars, the DFA Leadership conference and more.

Current enrollment at 40 teams is below program capacity. Efforts are underway to increase the number of teams. Late in 2014, NYFVI collaborated with Farm Credit East on its Pulse of Agriculture Survey to learn how many farms are currently using an advisory team. This information will provide critical insight into current practices at dairy farms.

If you are interested in learning more about the program, please visit “Dairy Profit

“I’ve found profit teams to be a great tool to help us run the business. The structured conversations that come from meetings with clear goals and agendas produce real results.”

David White, third generation farmer, and a partner, Cabhi Farms

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The Distribution of the NY Dairy Industry

Source: USDA NASS 2012 Census of Agriculture
NYFVI Perspective: What’s a New York Farm? Who is a Farmer?

Slicing, dicing and defining what’s a farm and who’s a farmer isn’t as straightforward as one might expect.

NYFVI continuously wrestles with these questions and more as we work to identify and fund projects that will be relevant to, and have the greatest impact for, the broad spectrum of NY farms and farmers.

As the accompanying charts illustrate, there are many ways to quantify farms. Farms can be identified by location. They can be measured by sales per acre as well as what they grow. The top group of charts illustrate the location of New York farms, as well as sales per acre. Looking at both views helps build understanding of the importance of the smaller farms near metropolitan areas like Long Island and the Lower Hudson in the overall scheme of NY agriculture.

If you look at the farms by their main crop, as we do in the second group you’ll see the answer you get here is quite different if you look at the number of farms producing a particular crop vs. the value of the crop. It’s also worth considering that respondents could only choose one answer. And, since dairy farms often also grow corn and hay, these numbers might not paint the full picture.

Another perspective, illustrated in the bar chart the USDA-National Agricultural Statistics Service (NASS)—the best source of data on the industry—defines a farm as any operation with the potential to produce at least $1,000 worth of agricultural goods in a year.

That’s in contrast to the state, where for purposes of a New York agricultural property tax exemption, a farm is defined as a minimum of 7 acres with annual gross sales of $10,000 or more. Each of these definitions creates a very different view of the state’s agriculture.

Who is a farmer? According to NASS, farmers are overwhelmingly white, male, and averaging 57.6 years old with the average getting older each year. But looking behind the data, there’s more to that story.

NASS counts only the principle farm owner, typically the senior patriarch. Most farms however are multigenerational with two and sometimes three generations actively engaged managing the farm.

Many farms are also co-owned by women, even though they may not be considered the principle owner.

The result—young people and women, who are actively engaged in farming and in many cases co-owners, are under-reported in USDA statistics.

For more insights into the composition New York’s agriculture visit “Portrait of NY Agriculture at www.nyfvi.org

Jim Bittner’s sons, pictured here, would not be counted as farmers in the USDA statistics.