



# STATION NEWS

New York State Agricultural Experiment Station, Geneva, New York

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Sept. 1 - Sept. 15, 2006

## BRIEFS

### EMPLOYEE OF THE YEAR AWARD CALL FOR NOMINATIONS

Each year the Station Club solicits nominations for an Outstanding Employee. The Outstanding Employee will be announced and presented with gifts at this November's Station Club Banquet. Nominators should solicit letters of support for a selected individual and submit all supporting materials to Jim Ballerstein, Selection Committee Chair, by Friday, September 22.

These packets will be evaluated by a volunteer panel of department and unit representatives. All nominations are confidential. The panel will convene and select this year's outstanding employee based on criteria such as:

- a high degree of excellence in job performance
- a friendly demeanor along with strong interpersonal skills that promote team work
- a willingness to extend themselves to help others
- a commitment to the goals of the Experiment Station
- quality (content) of letters - not quantity (number)
- who wrote the letters (supervisors, co-workers, administrative staff, department chair)
- the diversity of sources for the letters (department, Geneva campus, Ithaca campus, department visiting scientists)

Community involvement (outside the Station) should not be a strong determining factor.

(Continued on page 2)

## Agricultural Engineers at Cornell Help Improve the Water Quality of Lake Ontario

Cornell researchers are collaborating with growers and environmental agencies in a project to protect the Lake Ontario watershed from pesticide run-off.

Cornell agricultural engineer Andrew Landers and the Orleans County Soil & Water Conservation District (SWCD) have secured a \$472,000 Conservation Innovation Grant from the United States Department of Agriculture Natural Resources Conservation Service (USDA-NRCS) that will help apple growers sustain the environment —electronically.

The grant will provide 10 apple growers in Orleans County with nearly half the cost of a new \$44,000 Durand Wayland SmartSpray device. The precision tower sprayer uses sensor-controlled technology, or electronic eyes, to recognize the presence or absence of tree

canopy and tree height. Using this "smart" sprayer reduces the amount of applied pesticide and its associated drift, and decreases the total cost of pesticide application.

"This grant allows us to conduct an exciting applied research and extension project," said Landers, leader of the pesticide application technology team at the New York Agricultural Experiment Station (NYSAES) in Geneva. "Obtaining application data from 10 growers and conducting research with co-operating growers at their orchards will allow us to obtain very useful information with regard to reduced application per acre and drift reduction."

The growers who choose to participate in the two-year trial must document the volume of spray used, and the number of acres and fields sprayed during the growing season. SmartSpray's tractor-mounted controller simplifies the process by providing data on total acres sprayed, acres sprayed per hour, ground speed, and percentage of chemicals saved versus traditional spraying. Landers and his team will then use the data to quantify the sprayer's potential to meet the economic and environmental needs of fruit growers in Western New York, and, ultimately, growers throughout the state and nation.

A SWCD representative will meet monthly with farmers to document progress and share data. Results of chemical reduction will be discussed at the annual growers' conference in Syracuse, NY, as well as various grower workshops and presentations. The Lake Plains



*Durand Wayland representative demonstrates the accuracy of the sensors on the tower during a SmartSpray demonstration at Kast Farms in Albion, NY.*

(Continued on page 2)



(BRIEFS, continued)

Nomination packets will be accepted until Friday, September 22.

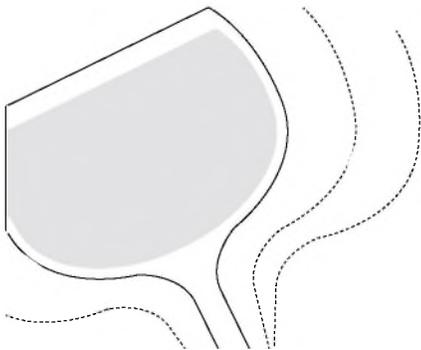
Send complete nomination materials to Jim Ballerstein, Hort Sciences, Hedrick Hall.

Please take a few minutes to think about this, and then nominate someone who perhaps has been long overdue for this recognition. Thank you!

Amy Andersen  
Station Club President

## Wine and Culinary Center News

Celebrity Chefs and Wine Wizards will be featured at the Center this fall, using the Viking Kitchen and Demonstration Theater to teach visitors all about the magic of great food and wine. Most of the celebs are authors of popular books, which in some cases are included in the registration fees ranging from \$40 to \$75. The series starts on September 14 and ends on November 18, with presenters including Joan Nathan ("The New American Cooking"), Daisy Martinez (Daisy Cooks!), George Kyrtatas ("My Big Fat Greek Feast"), Garrett Oliver ("The Brewmaster's Table"), Mollie Katzen ("Eat, Drink and Weigh Less"), Leslie Sbrocco ("The Simple & Savvy Wine Guide"), Mary Ann Esposito (host of "Ciao Italia!" on PBS), Andrea Immer Robinson ("Great Wine Made Simple"), Martin Yan ("Martin Yan Quick & Easy"), and Nick Malgiere ("Perfect Light Desserts"). More information is at <<http://www.nywcc.com/>>www.nywcc.com, click on "Learn" and then "Program Schedule".



(AG. ENGINEERS, continued)

Resource Conservation and Development (RC&D) is also backing the grant effort by providing administrative support to the Orleans County SWCD throughout the two-year trial, including help with mailings, field tours and meetings.

"These farmers should be recognized for the amount of time and money they are investing into this grant," said Orleans County SWCD District Manager James Kingston. "Although 46 percent of the cost is paid for through the grant, the remaining 54 percent is still greater than the cost of a new conventional sprayer. Also, these farmers are taking a great risk that could lead to production loss if the technology does not work as well as the manufacturer indicated. This study will prove what type of orchards these sprayers are practical for and if the extra investment is worth it to the farmer."

On August 15, Landers and Kingston held an informational meeting in Albion, NY, to review grant deliverables with eligible farmers and discuss sprayer options. Following the meeting, representatives from Durand Wayland conducted a field demonstration at Kast Farms and answered questions.

"I was very impressed with the Durand tower sprayer. Its performance was superior to the conventional sprayer, particularly against the wind," said George Lamont of Lamont Fruit Farm, one of the top apple growers of Orleans County in attendance. "This grant will assist growers to purchase sprayers that will help us produce more uniform crops of fruit with less pest damage at a lower cost of pesticides which will result in a higher value crop at less cost for the consumer, with less environmental impact."

One of the largest fresh water reservoirs in the world—Lake Ontario—borders Orleans County, providing recreation and travel opportunities and serving as a public drinking water resource and home for wildlife and aquatic species. It moderates land temperatures thus providing an ideal environment for fruit production. Many of the orchards in Orleans County are within a few miles of the lake, thereby subjecting the watershed to pesticide pollution pressure when farmers spray their trees to control insects and disease.

"One of our primary goals is to support the effort of Orleans County farmers who work hard to be productive and profitable while being good stewards of the land," said Kingston. "By providing this cost share opportunity and getting local orchard growers involved we will be able to demonstrate this new technology that may provide benefits in the county and throughout the region."

T. Krakowiak

## NYFVI Grant Helps Fast Track Grower Testing of New NY Apple Varieties

New York's next "big apple" will reach the marketplace quickly thanks to a New York Farm Viability Institute, Inc. (NYFVI) grant that is fast tracking grower evaluation of advanced apple-breeding selections from Cornell University. Project leader, Cornell Horticulture Professor and apple breeder Susan Brown says she hopes to identify two new potential varieties over the next two years and "if the new apples are even half as successful as their predecessors - the Empire, Jonagold, Macoun and other varieties bred by Cornell, New York's apple producers will harvest great fruit with a tremendous economic impact."

From 1996 to 2004, the annual production of Empire apples in the U.S. averaged a fresh market value of \$41.1 million and New York produced half of the nation's total Empire apple crop. Cornell University, with one of only two major apple-breeding programs in the U.S., developed the Empire and 61 other new apples varieties over the past century. And now, Brown says, "The New York Farm Viability Institute grant is providing the funds to fast track grower testing of some very promising selections under commercial orchard

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## Summer Help, and Then Some

Summer brings not only the busy season for the Station, and also vacation for many area high school and college students. Add to that the retirees and other seasonal employees, and the Station has hired over 75 people to work in Entomology, Food Science, Horticultural Sciences, Plant Pathology, the Field Research Unit, Buildings and Properties, and Communication Services this summer. Whether they are working in the fields, doing research, or working in an office, the summer help plays an integral part in the summer activities of the Station.

Agriculture in the spring and summer means planting, growing, and harvesting for the Station. "Since most faculty members have only one support staff person in their program, the extra work in the summer is so extensive that summer help is required to assist in planting, weeding, hoeing, entering data, taking measurements, and harvesting," says Pat Mahoney of the Station's Human Resources Department.

While many of the summer workers are connected to the Station through family members or through living locally, the Station also runs a program with Hobart and William Smith Colleges in Geneva. Two students from HWS interned at the Station over the summer. These students, supervised by staff and faculty members, work on research projects for 35 – 40 hours per week for eight to ten weeks. At the end of the summer, the students must prepare a poster on their project and present it after the academic year has begun. The students do not receive academic credit for their summer work, but receive a stipend from grant money at HWS and are also given room and board at the Colleges.

Professor Tom Glover of HWS is the liaison officer between the Station and the Colleges. Glover reviews the applicants to the summer program and selects several students to receive the available internships. Using his knowledge of the Station and its staff (Glover is a visiting professor here in Entomology), he personally places the students with staff members who will serve as good mentors for the individual student and who have interesting projects for the students to work on.

"I find the students to be a tremendous asset to my program. They are remarkably enthusiastic and hard working," says plant pathologist Chris Smart, who has had five HWS students work in her lab since the summer of 2004. She says everyone in her program has enjoyed working with the students as well. "It seems to remind us of how much we enjoy science and why we do what we do."

Not only are the students helpful to the Station, but the experience gained through these summer jobs is invaluable. Gabrielle Meeks, who worked in Smart's lab during the summers of 2004 and 2005 studying the potential of weeds as a source of inoculum of the black rot pathogen of cabbage, says her work here taught her as much as an entire semester-long course could have.

She also appreciated the diversity of her work, saying, "After being in the lab for a few weeks I was glad to move into the field. It really gave me a clear picture of a link between what I had been doing in the lab and actual plants." Meeks recently graduated from HWS and plans to use the science skills she learned at the Station while attending medical school in Jamaica in the fall.

(NYFVI, continued)

conditions across New York State."

Brown says growers want high quality apples they can grow at a profit and harvest when their other varieties are not ripening. Growers in every major apple-growing region of New York State are orchard testing selections bred at Cornell's New York State Agricultural Experiment Station in Geneva. Each participating producer has different soil and climate conditions and different business interests. Together the producers represent the farm stand, u-pick, wholesale, processing, juice, organic and export sectors of the apple industry.

James Allen, president of the New York Apple Association that represents the state's 600-plus commercial apple growers, says, "In today's competitive marketplace, fast tracking a new New York variety can bring new life to our apple industry. If, for example, Dr. Brown develops the next Empire or Honey Crisp that could be sold as an exclusive New York-grown apple that could revolutionize how we grow and market apples."

Brown expects that out of the 20 selections evaluated over the next two years will come two new, high quality apple varieties with strong market potential – one with a mild flavor, one with some zip; both distinctive, crisp, aromatic, and with strong sales appeal. The apples under evaluation will be tested for flavor, texture, vitamin C content, winter hardiness, less browning when cut, storage and shelf life, and suitability for large-scale production.

Brown says, "The New York Farm Viability Institute grant is essential to quickly getting a quality New York-bred apple with strong consumer appeal into the marketplace." Consumer taste tests are planned.

The New York Farm Viability Institute, Inc. is a farmer-driven, independent, nonprofit corporation that grants funds for research, extension and development of innovative technologies for New York agricultural and horticultural producers. Projects must directly benefit producers at the farm business level. To learn more, contact New York Farm Viability Institute, Inc., 159 Dwight Park Circle Suite 104, Syracuse, NY 13209.



Gabrielle Meeks (left) with grad student Maryann Borsick Herman (right) in a plant pathology lab.

(Continued on page 4)

Kara Dunn



(SUMMER HELP, continued)

Professor Glover agrees that everyone benefits from this program. "The kids get to see that real world science is different than teaching lab science. Here, you may have to do an experiment for two months straight before you get any results." He also stresses the importance of the students learning to develop their projects around "real world questions," such as problems facing local growers. As for the Station, he says the students "add a certain vitality" to the labs with their enthusiasm to learn.

The Station and Hobart and William Smith Colleges are also teaming up to begin a similar "Research Semester" program during the academic year. Students would again be paired up with a staff or faculty member and work on an individual project for 20 – 25 hours each week. This would give the student academic credit equivalent to that of two courses at the Colleges.

While many of the students from HWS who come to work at the Station are biology majors, students studying chemistry, environmental studies, and computer science have also taken advantage of the programs offered. "The hope is that with the development of the Ag-Tech Park, students in other majors like English and economics may be able to participate in these programs and work with the resident companies," says Glover.

Any faculty or staff interested in the summer or other programs may contact Tom Glover at (315) 781-3602 or [glover@hws.edu](mailto:glover@hws.edu).

D. Oonk

**Eagles may soar in the clouds,** but weasels never get sucked into jet engines.

~Jason Hutchison



*Charlie Linn, and Art Muka, had a captive audience in the entomology section.*



*Tanya Taylor explains some of the applications of nanotechnology in agriculture.*

*Marguerite Wells, who was in the "Ask the Experts" corner, fielded questions about organics in research, teaching, and extension. Many of the questions related to home gardening.*



*Melanie and Drew Wickham take a few minutes to chat with Senator Nozzolio.*



*Deb Oonk and Nancy Long serve up cold cider.*

# Empire Farm Days 2006



# Whale Watch

## 2006



Barry Zhang finishes off an ear of corn compliments of the ever-popular Station corn roast.



Rong Kong and Guoping Feng offered whale watchers tastings of jams, maple cream, grape seed oil and plums.



Jan Nyrop encourages Rye Weber to get up close and personal with a praying mantis while mom, Betsy Binn, looks on.



Chris Smart and Ross Arvin examine apples for scab.



Joanne Labate demonstrates DNA extraction from a banana.

## Literacy Volunteers Need Your Help

Literacy Volunteers of Ontario County (LVOC) are seeking individuals to be trained as tutors to work with visiting scientists and international students who want to improve their conversational skills in English. LVOC is offering a tutor training session beginning with an Orientation on September 11 from 6-9 pm at the Geneva FLCC campus center at 63 Pulteney St. The sessions will continue every Monday and Thursday evenings from September 14 – October 5. A follow-up session will be held November 16. Please consider becoming a volunteer tutor to help not only our colleagues here at the Experiment Station, but other members of the community as well. For further information log on to [www.literacyvoc.org](http://www.literacyvoc.org) or contact Mary Murphy at the LVOC Canandaigua office, 585-396-1686.

*Hugh price*

# Save the date!

## Station Banquet Friday, November 3rd





## CALENDAR of EVENTS SEPT. 1 - SEPT. 15, 2006

### MEETINGS

#### CHAIRS MEETING

**Date:** Tuesday, September 5, 2006  
**Time:** 8:30 AM  
**Place:** Director's Office

#### CANCELLED

**CALS Faculty Senate Meeting**  
Wednesday, September 6, 2006

### SEMINARS

#### PLANT PATHOLOGY

**Date:** Tuesday, September 12, 2006  
**Time:** 3:30 PM (Refreshments at 3:00 PM)  
**Place:** A-134 Barton Lab

#### FOOD SCIENCE

##### Dr. Christopher Lam

"Analytical Application of LC-MS/MS with Stable Isotope-labeled Internal Standards in Pesticide Residue Analysis"

**Date:** Wednesday, September 6, 2006  
**Time:** 10:15 AM  
**Place:** Food Science & Technology Conference Room, Second Floor, Room 251

##### Dr. Wlodzimierz Borejsza-Wysocki

"HPLC, GC, Liposomes and Other Methods for the Detection of Organic Molecules"

**Date:** Monday, September 18, 2006  
**Time:** 10:15 AM  
**Place:** Food Science & Technology Conference Room, Second Floor, Room 251



*On August 23, Martin Delgado, Clerk for the House Appropriations Subcommittee on Agriculture, visited the Station with Joe Garbarino, Budget Officer for the USDA-ARS Administrator in Washington. Mr. Delgado is a key advisor to congressional appropriators and helped shepherd full funding for the USDA-ARS Grape Genetics Research Center in Geneva through committee and the House of Representatives. A number of Station faculty and students illustrated the value of federal formula funds and other USDA grant programs to Geneva stakeholders for the visitors. The group, accompanied by Cornell Interim Vice-President for Government and Community Relations Steve Johnson, heard about progress at the Technology Farm from Dan Fessenden and the importance of grape genetics research from GGRU Acting Research Leader Amanda Garris and other USDA scientists. The Senate has yet to act on their version of the Agriculture Appropriations Bill. In the above photo Tanya Taylor, postdoctoral fellow in plant pathology, shows the group a substance used to form microfluidic chambers. It's clear (and tiny), which makes it difficult to see in the picture. "This is a good thing when we study our chambers with the microscope," Tanya said. "It doesn't disrupt our optics."*

## CLASSIFIEDS

**FOR RENT:** Cottage, west side of Seneca Lake, 3.5 miles from Geneva, furnished, two bedrooms, large deck, great beach front, private. Weekly rental available in August and September, \$1,500/wk, deposit required. No pets, no smoking, no huge reunions/parties. Perfect for quiet, small family gatherings. Contact rkcamera@gmail.com or dck2@cornell.edu

**FOR SALE:** 1999 Ford Taurus. Excellent condition. 3.0 L V6. 27-29 mpg. \$3,200 or best offer. Call Dave Gadoury at 789-8112

**FOR SALE:** Log Home. Approximately 1 acre lot overlooking Seneca Lake, 3-4 bedrooms, large sun-porch (12x31) with gas fire place, large established perennial gardens, front, side and back decks, 1 car + garage. 12 miles from NYSAES. Penn Yan Schools. \$159,900. Contact Jane Irwin at mji4@cornell.edu or 315-730-0082

**FOR RENT:** Comfortable, fully furnished three-bedroom sabbatical home for responsible individual or family. Nice bath, modern kitchen, office, full laundry,

off-street parking in quiet neighborhood. Walking distance to Experiment Station (one mile), schools, hospital, and Madia's. Available mid-October 2006 through early May 2007. Attractively priced at \$500/month plus utilities. Email Doug at dck2@cornell.edu or call 315.521.3669.

**FOR SALE:** Dodge Caravan 2000. \$3,900 Good Condition. Cash only. Available July 15th. Mileage 122,000. Please contact Gabino Reginato at ghr4@cornell.edu or (315) 781-0670 between 6-10 PM

**FOR RENT:** 1/2 house at 130 Cherry Street, 1 mile from Station. Two bedrooms, washer/dryer hook-up. Garbage pick-up included, off-street parking, no pets, no smoking. Available Sept. 1. \$475 plus utilities. Contact Michele Kaufman at x2419 or 781-2489 (evenings)

**FOR SALE:** 1991 West Wright Potter Sailboat. Includes 1991 Shore trailer, original users guide,

swim ladder, paddle, gaf hook, porti potti, anchor, extra ropes and ALL sails. Tan Bark main sail, genoa, jib, multi colored spinaker. \$4,000. ALSO: 2004 2.5 HP Mercury Motor. Less than 4 hours run time. \$600. Contact Donna at dmb62 or call 585-637-6673 or 585-315-9021

**FOR RENT:** Spacious 2 Bedroom Apartment Available on Milton Street, 5 blocks from Hobart and William Smith Campus, 1 block from the heart of downtown Geneva, and a 20-25 minute walk (5 minute drive) to the Station. Apartment is unfurnished, has all wood floors, 1 bath and on street parking. No pets or smoking. \$450 + utilities. Contact: Dia Mohan at 315-759-5242 or Alex Da Costa at aed4@cornell.edu

**THESBIAN'S DREAM:** Voucher for theatre tickets at the Stratford Festival of Canada. Must be used before Oct. 5, on this season of plays which ends Nov. 12. www.stratfordfestival.ca \$400 value. Will sell for \$325. It's transferable. Due to family health issues --- we can't go. Linda at llm3@cornell.edu