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# CORNELL UNIVERSITY STATION NEWS GENEVA NEW YORK

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MAY 9-16, 1997

## BRIEFS

### STATION CELEBRATES "RIDE YOUR BIKE TO WORK WEEK"

Again this year, Station Club will be sponsoring a "Ride your Bike to Work" week. It will be held the week of May 25 with special events happening Tuesday thru Friday, May 27-30 (Monday, May 26, is a holiday). See next week's *Station News* for more details.

### STATION CLUB SEEKS PICNIC ORGANIZER

Station Club currently has no person(s) to be in charge of this summer's picnic. If no one is willing, then the event will not take place. The picnic is usually held on a Friday evening in the Station Pavillion, and the dates are booking up, so we need to act fast!

If you would like to be creative and plan the event differently than it's been done in the past, that's fine!

If you would like to take on this responsibility, please contact Colleen VanAllen at x318.

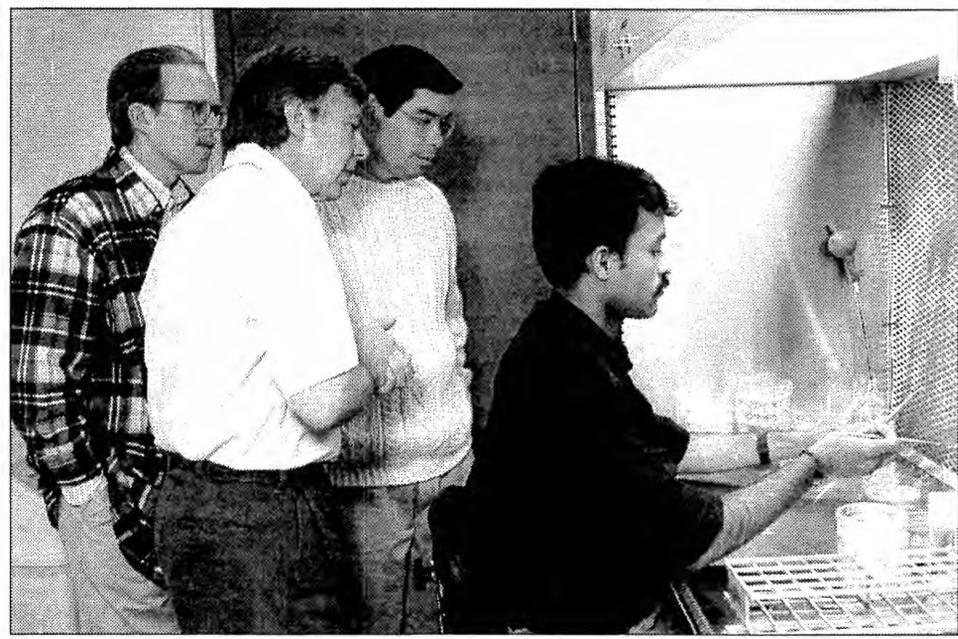
### "NEW IN THE LIBRARY" AVAILABLE

*New in the Library* for May is now available on the Web at <<http://www.nysaes.cornell.edu/library/new.html>> or by going to the Geneva Library Home Page and clicking on "Collection" and then on "May 1997".

### HAZARD: SODIUM AMIDE

Sodium amide is a very dangerous material!! It appears at the top of the list of the most dangerous peroxide forming materials along with all-isopropyl ether, potassium metal, divinyl acetylene, and 1,1-dichloroethylene  
*(BRIEFS Continued on page 2)*

## CONGRESSMAN WALSH VISITS GENEVA



*John McGuire (left) and Congressman James Walsh look on with Herb Aldwinckle as Joy Bolar prepares apple leaves for transformation.*

Congressman James T. Walsh toured the Experiment Station on May 5, and was extremely impressed by what he saw. This was a real learning opportunity for me to see the contributions you make to agriculture, not only statewide, but also on a national and international level," he said, after taking the tour, which he characterized as a "sensory delight."

"I am proud to have met some of the best scientists the United States has in its stable . . . Most people in the country do not know nor will they ever know what you do. So it is important that your leaders know," he said.

Walsh, a Republican, represents District 25 in the United States Senate—Onondaga, Cayuga, Tioga, Broome, and Cortland counties. He sits on the House Agricultural Appropriations Subcommittee, and was instrumental in passage of funding for the Viticulture Consortium, in which the Experiment Station administers \$225,000 in grants for the eastern United States, while the University of California at Davis oversees an equal amount in the west.

"We will do our best to see that the funding for research continues," said Walsh. "Ultimately, research benefits the consumers who want their food as cheap, as fresh, and as pure as they can get it. It is up to us to give it to them."

During Walsh's half-day tour, Jim Tette explained the principles of Integrated Pest Management and recent industry-initiated IPM labeling projects. Jan Nyrop gave Walsh a close visual inspection of the behavior of predaceous mites, and outlined the associated pest management strategy that has saved apple growers \$60/acre by reducing pesticide costs. Herb Aldwinckle explained the transfer of genes into crops for various improvements, concentrating particularly on breeding fireblight resistance into apples.

At the USDA-ARS Plant Genetic Resources Unit, Jim McFerson, Stan Hokanson, Warren Lamboy and Phil Forsline explained germplasm expeditions in Kazakstan, apple bud preservation in nitrogen tanks, DNA fingerprinting of grapes, and the international issue of germplasm ownership.

*(Continued on page 2)*

(WALSH, cont.)



(l-r) Dean Daryl Lund, Congressman Walsh and Jim Hunter took a field tour with Susan Brown and Terence Robinson on Monday.

On the field tour, Susan Brown stressed the Station's development of superior varieties suited to New York State growing conditions. Terence Robinson outlined the Station's research efforts to develop dwarfing rootstocks that were also resistant to fireblight and the national NC-140 project in which rootstocks are being tested in 25 sites around the country, supported by federal funds.

Back at the Pilot Plant, Thomas Henick-Kling explained the Station's winemaking and enology program, which is based on the value-added principle well-known to New York State farm wineries: grapes only constitute 10 to 20 percent of the cost of a bottle of wine. Judy Anderson explained the activities of the Food Venture Center, and John Martini outlined the benefits of the national IR-4 program.

Over lunch, Walsh met with Jim Hunter and eight members of industry—Walter Blackler, of Apple Acres in Lafayette; Brian Reeves of Reeves Farm in Baldwinsville; Mahtab Shaikh and his wife Marilyn of Taste-of-the-East Ltd., in Syracuse, who circulated samples of their Chef Shaikh Hot Sauce; Steve Morse of Beak and Skiff, in Lafayette, where Walsh once worked "picking suckers"; Tom Facer of Comstock-Michigan Fruit; Jim Finkle of Canandaigua Wine Company; and John Martini of Anthony Road Winery in Penn Yan. Each industry representative spoke to Walsh and clearly outlined the benefits of their partnership with the Experiment Station.

## WPS TRAINING SCHEDULED

The following dates have been scheduled for Worker Protection Standard (WPS) training:

May 16, 10:30 am-Noon, Staff Room, Jordan Hall

May 30, 10:30 am-Noon, Staff Room, Jordan Hall

June 13, 10:30 am-Noon, Staff Room, Jordan Hall

June 27, 10:30 am-Noon, Staff Room, Jordan Hall

July 11, 10:30 am-Noon, Staff Room, Jordan Hall

Anyone who will or may come in contact with pesticides or pesticide residues applied in the field or greenhouse should be trained under this Act. Training consists of viewing a video that has been prepared by the Environmental Protection Agency plus a lecture presented by Mart VanKirk, Field Research Unit, and Pat Krauss, Administration. An individual needs to be trained once every five years. A card is given to each employee who completes training that they may carry with them in their wallet or purse.

(BRIEFS, cont.)

(vinylidene chloride). It absorbs and combines with oxygen to form sodium hyponitrite,  $\text{NaON=NONa}$ , and a multitude of other highly oxygenated materials, all of which are heat and shock sensitive explosives.

Do not purchase, store, or use this material if there is a safer chemical which may be used for the same purpose. If a procedure or experiment calls for the use of sodium amide, attempt to find another procedure or process to produce the same experimental result. If you must use sodium amide, safe handling procedures are as follows:

- All containers must be dated upon arrival and dated again when opened.
- Containers are best stored and used in an oxygen and water free environment, such as a glove box/environmental chamber filled with nitrogen or argon. An evacuated glass desiccator charged with nitrogen would also work.
- Securely tape the lid of the container once it is opened. Teflon™ tape works well for this purpose.
- *Prudent Practices for Disposal of Chemicals from Laboratories* (National Academy Press, 1983) recommends that containers more than three months old that *are not stored under nitrogen* be discarded as hazardous waste. Sodium amide of any age with a yellowish to brownish color must be discarded as this is the peroxide containing material.
- As with potassium, do not attempt to cut or scrape away the yellowish to brownish colored sodium amide as it will likely explode!
- Always wear a lab coat/apron, goggles, and nitrile gloves when handling sodium amide.
- Always use this material in a fume hood.
- If you have old, dated stocks of sodium amide, handle them with great care. Do not attempt to use the dated material. Have it picked up directly from your laboratory as hazardous waste. (This may mean making special arrangements with our hazardous waste managers.)

Sodium amide is one of the most dangerous chemicals in use in our labs. If you must use it, please do so with the greatest care possible.

For more information, feel free to call Tom Shelley, our Chemical Hygiene Officer, at 5-4288.

## FRUITFUL ENDEAVOR IN ASIA

The cover story in the April 1997 issue of the journal *HortScience* features the expedition of the Republic of Kazakstan that were undertaken by Herb Aldwinckle, Plant Pathology, and Phil Forsline, of the USDA-ARS Plant Genetic Resources Unit, in 1989, 1993 and 1995. The researchers were in search of wild *Malus* germplasm.

The article was written by Stan Hokanson, Jim McFerson, Forsline, Warren Lamboy, and Herb Aldwinckle, with collaborators James Luby from the University of Minnesota and Aimak Djangaliev from the Kazakstan Academy of Sciences. The four-color cover was designed by Elaine Gotham, and shows four inset photographs featuring apple varieties, Forsline, a helicopter and a horseman against the dramatic backdrop of the mountains of central Asia.

The domestic apple is thought to have originated in this rugged region of Asia and then spread to other areas along trade routes over thousands of years. Nikolai I. Vavilov was among the first in our lifetime to characterize the area and describe the incredible range of variation among the wild fruit forms found

there. Apple trees in Kazakstan grow in wild forests that dominate the mountainsides. Trees have been found that are 300 years old.

Material collected there is thought to contain genetic information that could prove important in modern breeding programs for traits like disease and insect resistance, fruit quality, growth attributes, and physiological characters.

The expeditions have already proven fruitful. In greenhouse screenings of 1600 seedlings in Herb Aldwinckle's laboratory, material collected has shown resistance to apple scab, cedar apple rust and fire blight. Warren Lamboy of the PGRU and Norman Weeden, Hort Sciences, have used isozyme analysis to determine the levels of genetic variation present in *M. sieversii*. Resistance to apple maggot is being evaluated by Harvey Reissig, Entomology.

In the most recent trip in 1995, Forsline and five other scientists collected fruit from a new site in the Tarbagatai region, which is equivalent to the most northern areas of the contiguous United States. According to the article, trees there demonstrated good cold hardiness and bore 70mm diameter fruit with good

## HortScience

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aroma, firmness and color. Fruit was also collected in Kratau, a hot, desert area. The two areas demonstrate the wide range of horticultural conditions for which the *Malus* species has adapted.

Economic and political unrest accompanying the breakup of the former Soviet Union has made collecting wild germplasm for crop improvement from newly independent states like Kazakstan, Krygyzstan and Tajikistan an important priority for scientists interested in managing the world's apple genetic resources. The once-protected forests are under intense pressure from modern development, overgrazing, and logging.

"About 90% of the wild apple forests that existed near Almaty in 1935 are now gone," writes Hokanson.

To expand the collection and add new germplasm to the system, Forsline is planning another trip to the region this fall.

## GIVE THOSE TOMATO SEEDLINGS A WORKOUT

So if you dare, but the trick to growing sturdier tomatoes is to get them on an exercise program while they are still young.

"Brushing plants 10 times a day when they are small gets them to flex and bend like they do in the wind," says Thomas Bjorkman, plant physiologist in the Horticultural Sciences department. "It makes them stronger and sturdier."

"Moving into the field can be hard on tender nursery stock, especially the typical tomato transplant," says Bjorkman. "An exercise program can get them ready."

Because transplants grown in greenhouses are often leggy and tender, they are vulnerable to damage by commercial transplanters as well as wind once they are planted. The challenge was to grow a sturdier plant, he reasoned.

In research conducted over two years, Bjorkman and graduate student Lauren Garner discovered that brushing transplants with 10 strokes once a day reduces plant height by

about one-third and results in stockier plants.

"Among plants, short and sturdy is better than tall and skinny," said Garner. Brushing does not adversely affect quality nor long-term growth and flowering. One "stroke" consists of one back and forth motion.

The technology is exceedingly low-tech and the treatment program is quick and easy to implement. In the commercial setting, Bjorkman recommends that growers gently drag a plastic pipe across seedlings when the seedling flats are lined up on the greenhouse tables. The home gardener can use an unpainted broomstick or their hand. Brush 10 strokes, once a day, as soon as the plants are 2 1/2 to 3 inches tall. Treatment can also start later, when plants are taller, but results will not be as dramatic.

"Don't overdo it the first day or two," warns Bjorkman. "Go lightly." The plants sometimes wilt immediately the first time, but recover quickly and do not wilt after they get accustomed to being brushed. Plants also react

the same whether brushing is fast or slow, done early or late in the day. Bjorkman cautions against brushing transplants when the leaves are wet because it may spread disease. Brushing more than 10 times risks damaging the plants and yields no greater effect. Brushing less causes no significant reduction in seedling height.

The brushing technique is particularly effective for reducing plant height in tomatoes, pansies, and cole crops. Brittle plants that tend to snap, like impatiens and peppers, or seedlings that tend to be sticky, like lettuce, are not good candidates.

Bjorkman and Garner also found that brushing is more effective than impedance, which consists of laying a sheet material on top of the seedling flats.

For more information about "Mechanical Control of Tomato Transplant Height," refer to <http://www.nysaes.cornell.edu/hort/faculty/bjorkman/other/tomato/TomRep.html>

**CALENDAR of EVENTS**

MAY 9-16, 1997

**EVENTS/MEETINGS**

**Tuesday, May 13, 10:30 am**

348 Morrison Hall, Ithaca  
CALs Chairs' meeting

**Friday, May 14, 3:00 pm**

Staff Room, Jordan Hall  
Chairs' and Unit Leaders' meeting

**Friday, May 16, 10:30 am**

Staff Room, Jordan Hall  
Worker Protection Standard (WPS) training  
(see related story)

**SEMINARS**

**FOOD SCIENCE & TECHNOLOGY**

**Date:** Tuesday, May 13  
**Time:** 10:30 am  
**Place:** FST Conference Room  
**Speaker:** Dr. Andy Rao  
Professor of Food Engineering  
Food Science & Technology,  
Geneca  
**Topic:** Role of Food Properties in Food  
Processing  
  
**Speaker:** Ms. Jararat Tattiyakul  
Graduate Student  
Food Science & Technology,  
Geneca  
**Topic:** Rheological Properties of Tapioca  
Starch Dispersions

**Don't "fore"get**  
to sign up for the 9th Annual  
**Station Club Golf Tournament**  
**Friday, June 6**  
**BIG OAK**  
**GOLF COURSE**



Pick up a  
sign-up form in  
your department/unit

**"Shared joy is double joy,  
and shared sorrow  
is half sorrow."**

—SWEDISH PROVERB—

**STATION SOFTBALL SEASON FAST APPROACHING**

With the warmer weather soon on the way, it's time to start thinking of softball again. This year's season begins Tuesday, May 27. Games will be held on Tuesdays and Thursdays beginning at 6:15 pm (Wednesdays are reserved for make-up games). Everyone at the Station, as well as direct family members, is welcome to participate, and everyone who joins a team and shows up for the games will get a chance to play. Anyone wishing to play should contact one of the captains listed below:

Team	Captain	Team	Captain
FST/PP/ENT (FSPE)	Ed Woodams	PGRU	Todd Hommeran
HS/X-tras	Steve Reiners	Services Staff	Dave Lasher

**Games begin at 6:15 pm. '97 SOFTBALL SCHEDULE Forfeit at 6:30 pm.**

TUESDAY	THURSDAY	PLAYOFFS
<b>May 27</b> HS/X-tras vs. FSPE	<b>May 29</b> PGRU vs. Serv Staff	(Teams in order of victories— Double elimination tournament)
<b>June 3</b> Serv Staff vs. FSPE	<b>June 5</b> HS/X-tras vs. PGRU	<b>July 28</b> Team #1 vs. Team #4
<b>June 10</b> Serv Staff vs. HS/X-tras	<b>June 12</b> FSPE vs. PGRU	<b>July 29</b> Team #2 vs. Team #3
<b>June 18 (Wed)</b> PGRU vs. HS/X-tras	<b>June 19</b> FSPE vs. Serv Staff	<b>July 30</b> July 28 Loser vs. July 29 Loser
<b>June 24</b> HS/X-tras vs. Serv Staff	<b>June 26</b> PGRU vs. FSPE	<b>July 31</b> July 28 Winner vs. July 29 Winner
<b>July 1</b> FSPE vs. HS/X-tras	<b>July 3</b> Serv Staff vs. PGRU	<b>CHAMPIONSHIP GAME:</b> <b>August 5</b> July 30 Winner vs. July 31 Winner
<b>July 8</b> FSPE vs. PGRU	<b>July 10</b> Serv Staff vs. HS/X-tras	(Home teams are listed first. Home team captains are responsible for field equipment, and umpires, if needed)
<b>July 15</b> Serv Staff vs. FSPE	<b>July 17</b> HS/X-tras vs. PGRU	
<b>July 22</b> PGRU vs. Serv Staff	<b>July 24</b> HS/X-tras vs. FSPE	

**CLASSIFIEDS**

**HOUSING AVAILABLE:** Unfurnished one-bedroom upstairs apartment in house located at 15 East North Street. Apartment has kitchen, bath and large living room. Convenient location to stores and to the Experiment Station. \$475.00 per month includes utilities. For more information call 781-2005.

**HOUSING NEEDED:** Housing needed for June, July and August for a Spanish visiting scientist, wife and one-year-old daughter. A two-bedroom apartment, summer sublet, small house or sabbatic house, etc. is needed. Contact Alan Lakso at x399.

**FOR RENT:** Very clean studio apartment within walking distance of the Station. Fully furnished which includes all linens and kitchen utensils. Private entrance and use of garage. Laundry and marketing within walking distance also. \$350/month including utilities. For details, contact Karen at x378 or kje7@cornell.edu.

**FOUND:** Cellular phone found near Food Science building. To claim, contact Rhonda Lavonne Smith at rls7@cornell.edu or call x240.

**FOR SALE:** CCM Concorde 26" men's 10-speed bicycle. Like new. \$50. Call 789-8112.

**FOR SALE:** Weight bench (incline/decline). Great condition! \$50 Dumbbell weights (3,5,10 and 15 lbs) \$25. Contact ekc5@cornell.edu

**FOR FREE:** IBM 286 computer with color monitor, mouse, keyboard and dot matrix printer. Great for high school or college student with minor word processing needs. Contact ekc5@cornell.edu

**LOST:** Keys lost. If found, please contact Weitian Liu at x362 or E-mail at wl46@nysaes.cornell.edu