

CORNELL  
UNIVERSITY

## STATION NEWS

GENEVA  
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JANUARY 31-FEBRUARY 7, 1997

## BRIEFS

GENEVA SCIENTIST RECEIVES  
AWARD

Paula Tennant of the Experiment Station's Department of Plant Pathology, a Jamaican by birth, was voted by the Scientific Research Council in Jamaica as "Young Scientist of the Year" (1996), in recognition of her outstanding research accomplishment on the papaya ringspot virus.

The Scientific Research Council (SRC) is a statutory body established by the Jamaican Government in 1960 to foster and coordinate scientific research in the island and encourage the application of the results of such research to the development of resources. Tennant researched the papaya ringspot virus under the guidance of Dennis Gonsalves, the preeminent expert on the subject. Together, they developed a transgenic papaya variety that has important ramifications for papaya production in Jamaica. Tennant will return to Jamaica in March. She expects to continue her research in the area of genetic engineering.

Congratulations, Dr. Tennant, and best wishes for a successful career.

NOMINATIONS FOR WORLD  
FOOD PRIZE

The World Food Prize Foundation is seeking nominations for World Food Prize Laureate. The award recognizes people who have made significant, applied contributions toward increased quality, quantity, or availability of food. To be considered, nominations and supporting documents must be submitted by mail by March 15, 1997. For additional information, contact David G. Acker, Office of the Secretariat, The World Food Prize, at the College of Agriculture, Iowa State University, Ames, IA 50011;

(BRIEFS, Continued on page 3)

## WINTER PRUNING IS UNDERWAY



*The Field Research Unit prunes Denton 12: front, Al Soper; Craig Ingerick is on the ladder; Mark Scott is in the background in the black coat; on the right is Lee Hibbard; on the left is Steve Gordner. The knee and foot belong to Greg Noden. Denton 12 is the last standard block at the Station, by which we mean the row spacing is 40 by 40 feet and the trees are 20 feet tall. Before dwarf and semi-dwarf trees, this spacing was the industry standard.*

The job of pruning the fruit trees, small fruits and grapevines at the Experiment Station is accomplished by a small, dedicated crew that works day in and day out in all sorts of inclement winter weather.

"We have about 10,000 trees to do," said Field Research Unit leader Mark Scott. "That's 400 acres of apples, pears, cherries, peaches, plums, grapes, and raspberries, all of them under various training and yield systems."

This year, because of the lack of snow, Alan Soper, Fred Jensen, Lee Hibbard, Sam Rosato, Gary Wood, Pete Griner, Craig Ingerick, Jack Reich, Keith Czadzeck, Mark Scott, and Greg Noden are about one week ahead of schedule. The same crew is also responsible for snowplowing and shoveling at the Station and there just has not been much accumulation on Station roads, sidewalks and parking lots.

"We start pruning in mid-December and usually finish the first week in April," said Scott. Being ahead does not mean the crew can slack off. "The weather can change at any time," said Scott, "especially in February and March, which are the heavy snow months."

The amount and quality of any fruit crop is determined by the relationship between vegetative and reproductive growth. Since woody tissues compete with the fruits for the products of photosynthesis, excessive vegetative growth precludes high yields. On the other hand, moderate growth is necessary to maintain a large, functional leaf surface. Pruning opens the tree up to light, makes the tree healthier, and distributes light more evenly so fruit ripens more evenly. Red apples require light to color up; a good pruning job exposes more fruit to more light.

(Continued on page 2)

(PRUNING cont.)

"Usually, we are pruning for maintenance—trying to balance tree growth with fruitfulness," said Scott. "But certain research projects sometimes require other considerations. In young orchards, for instance, we might want to maximize woodiness until the tree fills up its allotted space in the row and the orchard comes into production."

The crew has a broad knowledge of various pruning systems required for various training systems. Terence Robinson, for instance, has apple trials on slender spindle and y-trellis structures. Each system requires a certain understanding of how to maximize light in the tree structure.

When the unit prunes for the plant pathologists and entomologists at the Station, whose main thrust is plant protection, they tend to prune for vegetative growth. When they prune for the horticultural scientists who focus on production, growing systems, and yield, they prune to maximize fruitfulness.

Particular fruits also have their own pruning requirements. "When we work for Bob Pool out on Research South, we have to know the difference between pruning *Labruscas* and *viniferas*," said Scott. Winter hardiness among grape varieties varies, and the pruning system varies with the hardiness.

One of the unit's favorite people to prune for is Kevin Maloney, who is in charge of small

fruits. "The raspberries are a pain in our side," said Scott, who has an earthy sense of humor, "but Kevin makes up for it by bringing us fruit in the summer."

Raspberries are biennials. Black, yellow, purple, and red raspberries are grown at the Station, and so are blackberries. The first year, they throw up a shoot called a primocane. The second year, the shoot (now called the floricanes) bears fruit and then dies. First, the crew prunes out the dead canes. Then they thin out the floricanes to maximize fruiting.

The unit does what they consider to be the hardest pruning jobs first. "Everyone likes to work in the dwarf tree blocks," said Scott, "but we still have one standard block where the trees are 20 feet tall and spaced 40 feet apart." For that block, the crew uses ladders.

The job is physically demanding. It takes strength, agility, perseverance, a good set of insulated Carhartts to keep warm, gloves, hats, and a good pair of insulated steel-toed safety boots. The Station provides the winter clothing and the tools, which includes hand saws, pruners, and loppers, chainsaws, pneumatic loppers, and ladders.

"None of us have any trouble sleeping at night," said Scott. "More often than not, after a day in the field when the wind chill is hovering at -20° F, you come into a warm house and get a warm dinner, and you can't stay awake."

## The Principles of Pruning Demystified

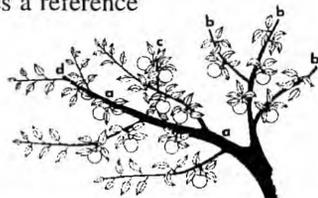
When people call Mark Scott in the wintertime looking for information on pruning fruit trees in orchards or backyard gardens, Scott refers them to C. G. Forshey's, "Training and Pruning Apple Trees," Bulletin #112.

The bulletin was originally written in 1976 and is in its seventh printing. "It's still the best information we've got," said Scott. "When we train new people in FRU, we tell them to read it again and again and again. It is a plain, straightforward publication and only costs \$3."

The bulletin deals with the objectives of training and pruning; the physiology of tree growth; the principles of training and pruning the young apple tree, depending on the type of tree structure you hope to cultivate; the principles of pruning bearing trees; the economics of pruning and includes a reference section.

C. G. Forshey was a professor emeritus in the Department of Horticultural Sciences at Geneva when he wrote the publication.

Copies of the bulletin are available from Bev Dunham in the Bulletin Room.



## COLD WEATHER SAFETY INFORMATION



The Department of Environmental Health & Safety is providing the following information related to working in cold environments.

### Cold Stress Hazards

Hypothermia and frostbite are two major health hazards associated with exposure to cold weather elements.

#### Hypothermia:

- over cooling of the body due to excessive loss of body heat
- weakness, drowsiness & disorientation
- uncontrollable shivering
- slurred speech and poor coordination

Individuals displaying these signs should be brought to warm shelter and receive medical attention.

#### Frostbite:

- formation of ice crystals in exposed body parts
- first appears as pain in extremities (nose, fingers, toes)
- body parts become pale and numb
- skin becomes hard and blotchy

Re-warming should be done gradually. Don't massage the affected area, loosen tight clothes/jewelry, and obtain medical attention.

#### Prevention

- Stretch and warm-up muscles prior to outdoor physical activity.
- Take frequent rest and fluid breaks.
- Wear layers of light, loose-fitting clothes.
- First layer consisting of cotton or polypropylene to wick away moisture from skin.



- Important clothing items include a warm hat with ear protection, mittens, woolen socks and face or neck protection.
- Always take into account the wind chill factor.

(BRIEFS, cont.)

515/294-2883 (telephone); 515/294-9477 (fax); or bjelland@iastate.edu (e-mail). A nomination form that can be used to submit initial information via e-mail is accessible via the World Food Prize World Wide Web Page at <http://www.netins.net/showcase/wfp>

**URL TIP FROM THE LIBRARY**

It's tax time again. And for those of you who do not want to wait in line at the post office for an obscure IRS form, or have not yet received yours in the mail, those friendly fellows at the IRS have a web-site for you. Click your browser on:

[http://www.irs.ustreas.gov/prod/forms\\_pubs/index.html](http://www.irs.ustreas.gov/prod/forms_pubs/index.html)

You can now download any IRS form from their inventory using Netscape. There are also instructions on how to file electronically. Now this is our tax dollars at work!

**SAFETY TIP: DO NOT FILL GAS CANS IN BED LINERS**

Bed liners are wonderful inventions, but they can cause a deadly static electricity buildup that can cause the gasoline being pumped into a gas can inside the bed of a pickup truck containing a bed liner to spontaneously ignite. The insulating effect of the plastic liner prevents the static charge generated by gas flowing into a metal can from grounding. As the charge builds, it can create a static spark between the can and the gas nozzle.

Two recent technical bulletins recommend that a gas can should never be filled in the bed of a truck with a bed liner in it. For safety's sake, place the container on the ground and fill it. Make sure the can is not near any vehicle or people while it is being filled.

Today, Friday, January 31, is the deadline to sign up for the *13th Annual Station Club Bowling Party* to be held on Saturday, February 8 at 9:00 pm, at Sunset Bowl, Geneva.

See last week's *News* for details and a sign-up form or call Matt Lewis at x251. (clarification on alcoholic beverage: Beer is limited to 2 bottles per person)



**Trees at a Glance** (Plant Profile of the Week)

brought to you by the Geneva Arboretum Association

**RAT TAILS! IT'S A DOUGLAS FIR!**

Many have heard of Douglas fir (*Pseudotsuga menziesii*)—perhaps it was your Christmas tree of choice this year—but what you probably did not know is that it is not a fir at all! It differs from true firs by having cones which are pendant, as in pines or spruces. True firs have erect cones, such as can be seen on the balsam, Nordmann and white firs on the Experiment Station campus. Another obvious difference is that Douglas fir cones have conspicuous 3-lobed bracts or “rat tails,” which protrude beyond each cone scale, while true firs do not.



Examination of the cones on the evergreen trees behind the Stone Barn near the Sawdust Cafe will reveal which are Douglas fir. Douglas fir needles (leaves) are dark yellow-green, have a deeply grooved upper surface, two light lines on the lower surface, persist for two to three years, and are twisted at the base, giving a two-ranked appearance on the twigs.

The Douglas fir is the largest tree in the Northwest, second in size only to the giant redwoods of California. The long-lived, stately Douglas fir has a conical or cylindrical shape and may live 800 to 1000 years, with a record height of 325 feet and 8–10 feet trunk diameter. In virgin forests, they average 180–250 feet in height and 4–6 feet in diameter. Such stately specimens are anchored by a well-developed, widespread root system. In natural settings, the tree is an intermittent heavy seed producer (about every 6 years) and reaches maximum seed production only when it is between 200 and 300 years old. In years of light to medium seed production, no new seedlings may grow, as the seeds are eaten by squirrels, chipmunks and seed-eating birds. The buds are grazed by deer and other animals and the trees are also an important source of cover for wildlife.

Douglas fir was first observed by Menzies on Vancouver island when he accompanied the British naval captain, Vancouver, on his expedition to the Pacific coast in the 1790s. David Douglas, a Scottish botanist sent by the Royal Horticultural Society to collect plants in the US in 1825, discovered it again at Hudson's Bay. Both its discoverers are recognized in its common and Latin names. The species has also been known as “Oregon pine”; in fact, Douglas fir is the Oregon State Tree.

Douglas fir is the number one lumber producer in the US. The tree is valued for wood which is soft and light, strong, durable, straight-grained and tough, does not warp and takes a beautiful finish. It has been used extensively for telegraph and telephone poles, and for underlayment for thousands of miles of railroad track in the West. Perhaps your attic contains a WWII footlocker which were made, almost without exception, from this material. Douglas fir is also the primary wood used in the manufacture of plywood.

Douglas fir makes a good ornamental for gardens and parks in northern climates. It is best suited to deep, rich, well-drained loam soils. If you are looking for a different type of evergreen for your landscape, *P. menziesii* may be the tree for you.

**Going... Going... Gone!**

**Food Science Stockroom Give-A-Way!!**

**Who:** To All Station Depts/Units  
**What:** Free Inventory Stock  
**When:** February 3rd-28th

**Time:** 8:00am-Noon and 1:00-4:00 pm daily  
**Where:** FST Stockroom (G-17)  
**Terms:** For Station Use Only  
**Hope to see you on MONDAY!!**

## CALENDAR

JANUARY 31-FEBRUARY 7, 1997

### EVENTS/MEETINGS

**Tuesday, February 4, 10:30 am**

Lounge, Jordan Hall

*Geneva Administrative Managers' Meeting*

**Wednesday, February 5, Noon**

Room G19, Hedrick Hall

*Arboretum Association's monthly meeting*

### PEOPLE

• *B&P welcomes a new employee; others change positions.*

B&P welcomes Lyle Hobart aboard as a new employee in the Heating Plant. Dan Irwin and Lyle Hanvey, both previously of the Heating Plant, will now be working in the Electric Shop. Lyle Hanvey's position in the Heating Plant has been filled by Chris Bauer whose position as Custodian in Barton Lab has been filled by Jeffrey Thibault, a temporary employee who has been working in the Carpenter Shop since May '96.

### CLASSIFIEDS

**FOR SALE:** Used men's downhill ski boots. Size 10, rear entry. Like new. \$40.00. Contact Colleen at x318 or cmh6@cornell.edu.

**FOR RENT:** Furnished room to non-smoker. Use of kitchen and laundry. Separate bathroom; garage. Must supply own linen, towels, etc. South Main St. (near HWS), 1 1/2 mi from Station; available immediately. \$275/month. Call 789-3226.

**SKI TICKET BARGAIN:** Get a lift ticket for downhill skiing at Bristol Mt. on Sunday, Feb. 16, 5-10 pm for only \$11! Rentals will be available for \$9, and lessons for \$5. Proceeds will benefit the Bristol Mt. Ski Patrol. Tickets must be purchased by Feb. 7. Contact Jennifer Grant (jag7, x342 or 789-2126).

**HOUSING WANTED:** Family of four seeks two or three-bedroom house or apartment to lease or sublet for three months this spring/summer while remodeling our house. Contact Francine D'Amico at 781-7012 or damico@hws.edu

**LAKE COUNTRY BIKE & SKI CLUB:** Cross country ski trips are happening now! To find out more about outings and becoming a member, attend the next meeting on Tuesday, Feb. 4 at the Geneva Chamber of Commerce (basement) at 7:30 pm. Or call Jennifer Grant 789-2126 or Tom Geary 789-1138.

**MISSING:** 1 dolly and 1 Stihle 009 chainsaw are missing from FRU. If anybody knows of their whereabouts, please call Mark Scott at x296.

## SEMINARS

### HORTICULTURAL SCIENCES

**Date:** Monday, February 3  
**Time:** 11:00 am  
**Place:** Staff Room, Jordan Hall  
**Speaker:** Eloy Rodriguez  
 Professor, Plant Biology,  
 Cornell/Ithaca  
**Topic:** Tropical Agromedicinals:  
 Phytochemicals and profits

### FOOD SCIENCE & TECHNOLOGY

**Date:** Tuesday, February 4  
**Time:** 10:30 am  
**Place:** FST Conference Room, Second Floor  
**Speaker:** Karl J. Siebert, Ph.D.  
**Topic:** Mechanisms of Beverage Colloidal Stabilization: Prevention of Protein-Polyphenol Haze Formation

*This will be simultaneously transmitted to Penn State via the PictureTel System.*

### PLANT PATHOLOGY

**Date:** Tuesday, February 4  
**Time:** 3:30 pm  
**Place:** Room A133, Barton Lab  
**Speaker:** Chris Becker  
 American Cyanamid Company  
**Topic:** The field trials and corporate tribulations of applied agricultural research within industry: An American Cyanamid perspective

### CCE SATELLITE NETWORK VIDEOCONFERENCE

*"Breast Cancer Risk and the Environment: Tools for Understanding"*

**Date:** Thursday, February 6  
**Time:** 10:00 am  
**Place:** Staff Room, Jordan Hall  
**Sponsors:** The Cornell University Program on Breast Cancer and Environmental Risk Factors in New York State (BCERF)  
**Topics:** Interpreting the Headlines: Understanding Breast Cancer Risks and Rates  
 Environmental Chemicals and Breast Cancer: What We Know and What We Need to Know  
 Risk Reduction: The Importance of Early Intervention  
 Conclusion: What to Expect from BCERF in the Future

## SURPLUS FOR SALE

The following vehicle is being surplused by Buildings and Properties. Minimum bid price is given. Send sealed bids to Gus Curtiss, B&P, by February 7, at 1:00 pm. Please be sure to include your name, campus telephone number, and department on your bid. The Station has the right to reject any or all bids.

B68165  
 1981 Chev Pickup w/cap  
 2GCCC1414D1B1186016  
 95,822 miles  
 Very poor condition  
 Minimum bid: Best Offer

The following items are being surplused by The Field Research Unit. Minimum bid price is given for each item. Send sealed bids to Mark L. Scott, FRU, by Friday, February 7, at 4:00 pm. Please be sure to include your name, campus telephone number, and department on your bid. The Station has the right to reject any or all bids. Successful bidders have three working days to pay for items. Please feel free to give Mark a call at x296 with any questions.

1978 International Hydro 86  
 Condition: poor (needs transmission repair)  
 Minimum bid: \$1,500

1964 International Hi-Boy 140  
 Condition: fair  
 Minimum bid: \$1,200

1964 International 140  
 Condition: fair  
 Minimum bid: \$1,200

1967 Ford 3000 diesel  
 Condition: fair  
 Minimum bid: \$3,000

1966 International Cub w/belly mount mower 5'  
 Condition: good  
 Minimum bid: \$2,000

1970's Woods 10' offset mower  
 Condition: poor (needs gearbox repair)  
 Minimum bid: \$350



*"Adults average 15 laughs a day.  
 Children laugh 400 times a day.  
 Somewhere between childhood and adulthood, we lose 385 laughs a day."*

—ALLEN KLEIN—