

CORNELL
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STATION NEWS

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OCTOBER 4-11, 1996

BRIEFS

NEW "PRIDE OF NEW YORK"
PROGRAM

Governor Pataki and NYS Dept. of Ag & Markets commissioner Donald R. Davidsen unveiled a new marketing program at the opening of the New York State Fair. The Pride of New York program is designed to identify and promote the food and agricultural products of New York State.

Growers, retailers, direct farm marketers, packers and processors who market farm-produced products, landed aquatic products, manufactured or processed products essentially composed of NY grown farm products for which standards are outlined in a participation agreement are eligible to participate.

The logo is the property of the NYS Dept. of Ag & Markets and may be used on food and ag products, containers or promotional material for these products, and in conjunction with private logos or trademarks. The program is entirely voluntary. A one-time fee of \$25 is required. For more information, call 1-800-455-4501.

GONSALVES INTRODUCES THE FIRST
GENETICALLY-ENGINEERED FRUIT CROP

On Monday, September 23, the Geneva Experiment Station and The University of Hawaii unveiled two lines of papaya which could save the \$45 million Hawaiian papaya industry. "SunUp" and "Rainbow" look and taste like their "Sunset" predecessor and are resistant to the papaya ringspot virus (PRSV), which is destroying the Hawaiian crop.

Papaya is the nation's first genetically engineered fruit crop to be cleared for eventual commercial production. The USDA removed regulatory restrictions on growing the two new cultivars earlier this month.

"Deregulation is the first big hurdle in commercialization," said plant pathologist Dennis Gonsalves, who has been involved in papaya research since 1978. "Commercialization could save the entire Hawaiian papaya industry. Our cultivars have shown excellent resistance in the laboratory, in the greenhouse, and in long-term field trials."

Gonsalves has been cooperating closely on the papaya project with horticulturist Richard Manshardt of the University of Hawaii, Honolulu-based USDA plant physiologist Maureen Fitch, and Upjohn Company scientist Jerry Slightom.

Researchers developed the genetically engineered papaya lines by using recombinant DNA techniques to isolate and clone a PRSV gene that encodes for production of the viral coat protein. The gene was "shot" into cells of the papaya plant using the gene gun developed at the Experiment Station. Expression of the gene in the resulting papaya line renders it resistant to the virus.

Papaya, one of the five largest crops in Hawaii, has been decimated in recent years by PRSV which reduces fruit quality and eventually kills the trees. Many Hawaii papaya growers believe that without PRSV-resistant papayas, the state's commercial papaya production will be virtually eliminated. PRSV infects papayas worldwide.

Jim Hunter compared the process of conferring resistance to a kind of "molecular immunization." Researchers at Geneva selected papaya as a "model system" to develop the technology for genetically engineering virus resistance in fruit crops. Papaya, a fast-growing tree fruit, comes into production within nine to twelve months. "Our intention is to engineer virus resistance into important New York fruit crops like apples and grapes," said Hunter. "It is fortunate that Dennis' experimental work with papaya has immediate



Dennis Gonsalves has been working in conjunction with horticulturist Richard Manshardt of the Univ. of Hawaii, USDA plant physiologist Maureen Fitch, and Upjohn Company scientist Jerry Slightom, to release two lines of genetically engineered papaya which are resistant to the papaya ringspot virus (PRSV).

(Continued on page 2)

(GONSALVES, Cont.)

application in the tropical regions of the world where papaya is such an important crop.”

Gonsalves, who was named to a Liberty Hyde Bailey Professorship at Cornell in November, 1995, directs a research program at Geneva that uses both conventional techniques and the latest molecular technologies to breed disease resistance into fruits and vegetables. He collaborated with Asgrow Seed Company on the development of Freedom II, a genetically engineered virus-resistant squash, which was commercialized in 1995.

Genetic engineering of fruits and vegetables can increase quality and other desirable characteristics while decreasing the amount of chemicals required for pest control. Bioengineering desired traits also reduces the time it takes plant breeders to alter a plant by traditional breeding methods, and can save millions of dollars in crop development.

“These papaya lines pose no plant pest risk and therefore should no longer be considered as regulated articles under our regulations governing the introduction of certain genetically engineered organisms,” said John H. Payne, acting director of Biotechnology, Biologics, and Environmental Protection with the USDA’s Animal and Plant Health Inspection Service (APHIS).

The transgenic papaya will have no harmful effects to humans since PRSV-infected fruits, which contain the gene, are commonly eaten by consumers. Sugar levels are also the same, said Gonsalves, noting, “The only way we have affected papaya quality is to make it resistant to PRSV which improves its survivability.”

“Deregulation is a major positive step which augurs well for rapid adoption and acceptance of other agricultural biotech products,” said Lynn W. Jelinski, Director for the Center for Advanced Technology in Biotechnology at Cornell University, which provided partial funding for the project. “Dennis has a special gift for combining outstanding science with real-world problems to make a positive impact on society.”

Deregulation is also an important landmark for academia. This is the first time that any university has gone through the regulatory process to get a transgenic plant deregulated from APHIS. Previous regulatory exemptions, starting with the FlavrSavr tomato in 1994, have gone to large corporate developers, including Calgene, Monsanto, Asgrow Seed, and Pioneer Hybrid.

USDA deregulation is a major milestone in the path to commercializing a PRSV-resistant papaya, but several hurdles remain. Other federal agencies, including the Food and Drug Administration and the Environmental Protection Agency, must also clear the genetically engineered papaya. In addition, licenses for use of the new technology for papaya production are still being negotiated with corporate patent holders. This aspect is being handled by the Papaya Administrative Committee, based in Hilo, Hawaii, which manages the federal marketing order for the fruit. Production of sufficient “SunUp” and “Rainbow” seed to meet the papaya industry’s needs will also require time, so the cultivars will not be immediately available. The first virus-resistant papayas could be appearing in grocery stores in 1998.

(BRIEFS, Cont.)

SURPLUS FOR SALE

The following items are being surplus by the Field Research Unit and Buildings and Properties. Minimum bid prices are given for some items. Send sealed bids to the respective unit by Friday, October 11, at 1:00 pm. Please be sure to include your name, campus telephone number, and department on each bid. The Station has the right to reject any or all bids.

Field Research Unit items:

Sealed bids for the following items should be sent to Mark L. Scott, Field Research Unit. Any questions—give Mark a call at x296.

- Ford 3pt. 5' mower
- 2 section spike tooth harrow
- hay wagon chassis
- 250 gallon fuel tank with pump

Buildings and Properties items:

Sealed bids for the following items should be sent to the Building and Properties Office:

- 1980 Chevy pick-up, #CCM24A1144917
53,780 miles, minimum bid: \$650
- 1982 Chevy pickup,
#1GCCC14D3CF356743
81,070 miles, minimum bid: \$500
- 1985 Ford 4x4 pickup,
#2FTHF26H7FCB2281
with Fisher snowplow
74,695 miles, minimum bid: \$2,500
- Weaver twin post lift
11,000 lb capacity
minimum bid: \$450

ANNUAL EMPLOYEE/FAMILY DAY SET

Saturday, October 19, is the date set for the 22nd Annual Employee/Family Day on the Ithaca campus. The Cornell-Colgate football game will kick off at 1:30 pm at Schoellkopf Field, followed by a chicken barbecue or lasagna entree choice, to be served in Barton Hall from 3:30-6:00 pm.

To purchase tickets, complete the form below and send to the Personnel Office, Jordan Hall by Wednesday, October 9. Make check payable to “Cornell University.”

Name: _____		
Department: _____		
Extension: _____		E-mail address: _____
No.	Ticket Type	Total
_____	Football @ \$3.00 each	\$ _____
_____	Chicken Barbecue @ \$2.50 each	\$ _____
_____	Lasagna @ \$2.50 each	\$ _____
Total amount enclosed		= \$ _____



**Don Lipker • Charlie D'Amico • Tom Bryan
Retirement Party**
Thursday, October 17, 1996 • Club S6
6:00 pm Cocktails • 7:00 pm Dinner

Entree Choices:

Baked Chicken • NY Strip Steak • Broiled Fish

Please respond by **October 14** to Dave Lasher, Buildings and Properties,
 NYSAES, PO Box 462, Geneva, NY 14456



Please print:

Name(s): _____

Address: _____

Phone: _____

• Dinner Choices •

No.	Entree	Total
_____	Baked Chicken (\$15.00)	_____
_____	NY Strip Steak (\$20.00)	_____
_____	Broiled Fish (\$18.00)	_____

*Gift donation included in dinner price

Total Amount Enclosed _____

Please respond by October 14, 1996. Make check payable to Dave Lasher

**OUTSTANDING EMPLOYEE
NOMINATIONS BEING SOUGHT**

This year's Outstanding Employee of the Year will be announced at the November 8 Station Club Banquet. Send your letter of nomination to Al Fairbrother via campus mail or E-mail (arf2@nysaes.cornell.edu) by Friday, October 18. It's an easy way to give that co-worker a well deserved pat on the back.

**Station
Craft Fair
&
Book Sale**

*Saturday, November 9
in the
Jordan Hall
Auditorium*



Station Employees to Participate in Talent Night

The First Annual Talent Night at the Smith Opera House will be held Saturday, October 19, at 7:00 pm, and will include such Station employees as Paul Robbins and Carol and Dennis Gonsalves.

Tickets are \$5 each and are available at Area Records and Martin Music in downtown Geneva, Jack & Cork's Washington Street Liquor, Headley's Discount Liquor Barn on Route 5 & 20, Smith & Jones in Seneca Falls, Rossi Music in Canandaigua, The Emporium in Penn Yan, and at the door on the night of the performance.

THIS WEEK'S CALENDAR

OCTOBER 4-11, 1996

EVENTS/MEETINGS

Wednesday, October 9, 3:45 pm
 FST Lunch Room
Chairs' and Unit Leaders' Meeting

SEMINARS

PLANT PATHOLOGY

Date: Tuesday, October 8
Time: 3:30 pm
Place: Room A133, Barton Lab
Speaker: Moshe Reuveni
 University of Haifa,
 Golan Research Institute, Isreal
Topic: Phosphates and their role in inducing systemic resistance against foliar diseases and controlling powdery mildews

ENTOMOLOGY

Date: Friday, October 11
Time: 1:00 pm
Place: The Paul J. Chapman
 Conference Room
 (Room 310, Barton Lab)
Speaker: Dr. Gene Robinson, Professor
 Department of Entomology
 University of Illinois
Topic: A Tale of Two Brains: Hormonal, Neural & Genetic Regulation of Behavior in Honey Bee Colonies

PEOPLE

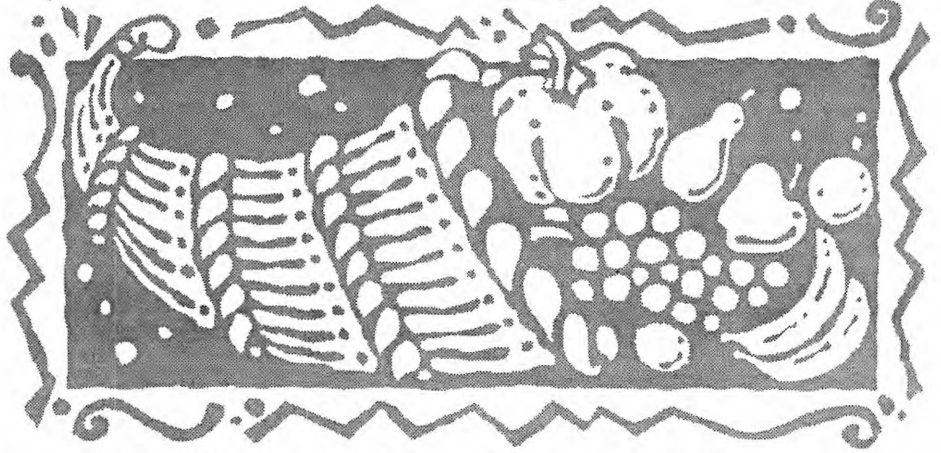
Condolences:

Condolences are extended to Albert Woelfersheim on the death of his father on September 20. Albert works at the Hudson Valley Lab in Highland.

CLASSIFIEDS

FORRENT: One-half country home. Geneva-Phelps area. Limited pets. Deck, enclosed porch, yard. \$675/month includes utilities. Security deposit and references required. Write PO Box 252, Phelps, NY 14532.

Station Club
BANQUET



Friday, November 8



*Bonnie Carney's
 Retirement Dinner*

October 25, 1996 • Holiday Inn in Waterloo

6:00 pm Cocktails • 7:00 pm Dinner

Buffet Dinner \$16.00

Roast Loin of Pork • Baked Chicken

All dinners include Shrimp Bisque, Tossed Salad, Fruit Salad, Potato Salad, Salt Potatoes, Orange Glazed Carrots, Pasta, Rolls, Dessert, Coffee and Tea

Please respond by October 18, 1996,

to Nancy Staton, Entomology, NYSAES, PO Box 462, Geneva, NY 14456



Please print:

Name(s): _____

Address: _____

Phone: _____

Number Attending _____ @ \$16.00 each = \$ _____

Gift Donation \$ _____ (optional)

Total Amount Enclosed \$ _____

Please respond by October 18, 1996. Make check payable to Nancy Staton