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**NY FARM BUREAU SUPPORTS
THE STATION MISSION**

New York county Farm Bureau leaders are pitching their priority issues of agricultural economic development in over 30 meetings with editorial boards of daily newspapers across New York. Following last year's historic farm property tax relief and reductions in compensation rates, the state's agricultural industry is poised for growth, say Farm Bureau leaders.

One of their priority issues is "Growing NY Agriculture." According to an article in the *Farm Bureau Perspective*, "This issue area involved the need to keep NY farmers on the cutting edge by bolstering the research dollars for Cornell University and the NYS Experiment Station at Geneva. FB says the increased funding will continue to provide NY farmers with access to the latest in technology, including disease-resistant plant varieties, IPM techniques, and dairy science, as well as research in marketing and new product development."

*From Farm Bureau Perspective,
April 4, 1997*

**JIM CUMMINS AND TERENCE ROBINSON
WIN INTERNATIONAL AWARDS**

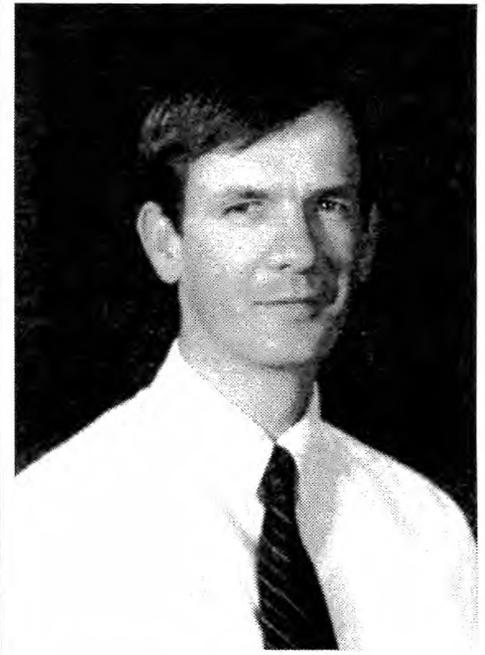
Two Experiment Station apple specialists were recently honored for their years of work for the apple industry. The International Dwarf Fruit Tree Association (IDFTA) gave its 1997 Outstanding Research award to Jim Cummins and its Extension Award for outstanding service to Terence Robinson during the organization's conference held in Rochester, N.Y. in late February.

The following two stories detail their work and originally appeared in the March issue of *The Great Lakes Fruit Growers News*. They were written by Matt McCallum.

**JIM CUMMINS**

The IDFTA honored rootstock breeder Jim Cummins at its recent meeting by awarding the emeritus professor of pomology its Outstanding Research Award. For the past three decades, Jim Cummins and his partner, Herb Aldwinckle, evaluated close to one-half million different rootstocks at the Experiment Station. Cummins retired in 1993 and just finished several years of consultation with Cornell to keep the program moving slowly forward.

"I've tried to keep the evaluation side of the program moving forward," he said. "I
(Continued on page 2)

**TERENCE ROBINSON**

Terence Robinson knows high density apple systems from roots to canopy. The associate professor of horticulture has been doing research and Extension work on tree training systems and rootstocks for the past 13 years to help growers make informed decisions. His years of work and dedication were recognized when the International Dwarf Fruit Tree Association gave him its Extension Award for outstanding service to the fruit industry.

Robinson has been focusing mainly on orchard management systems since he ar-
(Continued on page 3)

(CUMMINS, cont.)



hope they get a replacement for me in the rootstock breeding position because there are many exciting rootstocks still to be looked at.”

To keep the rootstock breeding program going, Cornell will pass funding of the position over to the USDA. The money for the position was successfully lobbied for by the U.S. Apple Association research committee. Cornell and the USDA are in the process of negotiating the transfer of the position and it is hoped that a person will be hired by next fall.

The USDA has a long history of involvement in Cornell's rootstock program. For the last 20 years it has provided generous support to the breeding program particularly through the funding of a research technician at Geneva, Cummins said. In 1980 the USDA also dedicated a 30-acre rootstock research block at the Appalachian Fruit Research Station at Kearneysville, W.V.

Resistant rootstocks

Cummins is most widely known for his search in looking for rootstocks resistant to fireblight, phytophthora root rot and other fruit diseases. He is a fifth generation fruit grower from southern Illinois who earned a Ph.D. in botany at Southern Illinois University. In 1967 he came to Cornell to take over the rootstock and nursery program started by H.B. Tukey and Karl Brase.

“The second summer I was there we had our first hint of what fireblight would do,” Cummins said. “We saw that M.9 and M.26 were going to have difficulties with these two diseases and started a breed-

ing program to develop resistant rootstocks.”

For the next 30 years the Cummins and Aldwinckle team produced close to 500,000 seedlings in hopes of finding some resistance to fireblight and phytophthora root rot while still having good horticultural properties.

“Herb's screenings were very rigorous and we killed most of them,” Cummins said. “The ones that made it through have excellent resistance.”

From these Cummins has released five rootstocks geared toward the needs of today's growers and has about a dozen more in the pipeline. The ones that have been released include:

- **Novole.** This vole resistant trunkstock was introduced 13 years ago and is just now seeing some commercial interest.

- **G.65.** This rootstock was released in 1989 and is a little more dwarfing than M.9. It will be useful only for more vigorous varieties like Northern Spy or Mutsu or in vigorous growth situations. It should be ready for commercial planting by 1999.

- **G.11.** This rootstock is about M.26 size with similar precocity, but with good fireblight resistance. It should be ready for commercial planting by 1999.

- **G.30.** This rootstock was released last winter and is a strong challenger to replace M.7. After five years of testing this rootstock has doubled the yield of M.7 with yield efficiency as good as M.26. The rootstock will be an excellent choice for spur-type Red Delicious, Cummins said. A limited number of rootstocks will be available for this spring.

- **G.16** is a fireblight-resistant candidate to replace Malling 9. With no burrknots and no suckers, G.16 appear to be horticulturally superior to M.9.

The other rootstock not released for commercial growers yet include:

- **CG.202 and CG.210.** These are M.26 and M.7 size and resistant to fireblight, phytophthora root rot and woolly apple aphid.

- **CG.41** is slightly larger than M.9 but has shown greater efficiency than M.9. It has performed spectacularly in a vertical axis system with good balance between vegetative growth and cropping, Cummins said.

There was a major setback of the release of G.65 and G.11 two years ago when the two rootstocks were withdrawn from circulation by the Cornell Research Foundation because of questions on true-ness-to-type.

G.65 was introduced to rootstock propagators by Cornell in 1991 while G.11 was released to stoolbed operators in 1992. Both had been purchased by nurseries and were ready for commercial sale when field tests showed the rootstocks that came from tissue cultured stock didn't behave as expected. In further testing it was found that for some reason they were not genetically identical to the original G.65 and G.11. All of the rootstocks suspected to be different were pulled off the market and the process of getting the rootstock to the growers had to start over. It is hoped that growers will have access to the rootstocks in two to three years.

Cummins has kept a close tab on the problem because of his work with Cornell and being involved in Cummins Nursery with his son, Steve. Two of his other sons are also involved in the fruit industry. James runs Littletree Orchards in Newfield, N.Y., while John is a fruit technician at the University of Tennessee. His fourth son, Pete, is getting his doctorate in psychology from the University of Tennessee.

RESPONSIBLE FOR FIELD PLOTS? Come to a Session on Spring Soil Conditioning

The Field Research Unit is pleased to announce that Harold M. Van Es, Associate Professor of Soil, Crop and Atmospheric Sciences at Cornell University in Ithaca, is coming to the Station on Wednesday, April 16, at 10 am, to give an information session about the proper time to work the soil for fruits and vegetables. “He will address the implications of doing it incorrectly, cover all

the topics, and answer any questions that people might have,” said FRU leader Mark Scott.

The session will be held at the Fruit & Vegetable Research Farm at a location to be announced. Project leaders and technicians with responsibilities for field plots are strongly encouraged to attend. All other Station employees are also welcome.

(ROBINSON, cont.)



rived at the Experiment Station in 1984. When rootstock breeder Jim Cummins retired in 1993 he took over some of the responsibility for rootstock research.

Orchard Systems

Robinson's biggest impact on the fruit industry has come from his work with orchard systems. Through on-farm demonstrations and number crunching, Robinson feels he has been able to show that high-density systems have economical merit for New York's fruit growers. The on-farm work has been done on 10 farms statewide in conjunction with Steve Hoying and Warren Smith regional Extension fruit specialists. Economic data has been developed with the help of Cornell economists Jerry White and Allison DeMarree.

"With the high-density systems, growers have a fear of the potential for failure and the tremendous economic consequences that would follow. This leads them to believe there is an inordinate amount of risk involved," he said. "A lot of this is because they are unfamiliar with the training techniques and rootstocks. Once they get past this and have some

success they are more willing to go farther and plant higher densities."

New York growers are moving toward higher densities with the industry settling at about 500 to 700 trees per acre in the future, Robinson said.

"Certainly some growers will plant higher densities, but the law of diminishing returns applies if you go much higher than that," he said.

The preferred planting system in New York at the 500 to 700 trees per acre density will be the Vertical Axis. There is also a lot of interest in the V systems for very high densities.

Rootstock Research

The Geneva series of rootstocks developed by Cummins is another bonus for growers putting in high-density plantings. These new disease-resistant rootstocks will lower the risk of loss from fireblight and phytophthora root rot, Robinson said.

There have been four Geneva rootstocks released including G.65, G.16, G.11 and G.30 and more are on the way.

"There are 10 other elite selections that have shown good promise," Robinson said. "Over the next four to five years some hard decisions will have to be made on what one or two of these have advantages over the ones already released."

Behind these elite selections are sev-

eral hundred more clones that have been screened for fireblight and phytophthora root rot. None have been tested in the orchard. Trials will be set up over the next few years to look at these and in seven to ten years there should be some results.

Developer of Accel

Robinson's other area of expertise has been in the thinning area with the development work on Abbott Laboratories Accel product. He had luck increasing fruit size with Benzyl Adenine (BA), one of the active ingredients in Accel, on Empire trials starting in 1986. Robinson along with several New York fruit growers like George Lamont and Pete Conklin saw a real opportunity with the product for the state's growers. They lobbied Abbott to put the product on the market and in 1995 Accel was labeled for use.

Fruit Background

A native of northern Mexico, Robinson grew up on his family's apple and peach farm about 100 miles south of El Paso. His great grandfather purchased the farm in the late 1880s. His two brothers are still operating the farm today.

Robinson earned his B.S. in agronomy from Brigham Young University in 1978. He received his M.S. and Ph.D from Washington State University in horticulture in 1982 and 1984, respectively.

AGRICULTURE FEATURED ON NEW SATELLITE CHANNEL

Direct Satellite Service (DSS) owners can now tune their television sets to a new channel devoted exclusively to serving those who live in or love the country, according to staff reports in *Country Folks West* newspaper, of April 7. The new channel, Channel 283 on DIRECTV, broadcast its first program on March 28 at 5 am Central Time. It has been dubbed the "CNN of agriculture." It will carry regular programming centered on current news, weather, markets, commentary, and rural lifestyle features, broadcast by a team of regional and national correspondents, livestock and commodity market experts, meteorologists, and talk show hosts.

"We're excited about the opportunity to meet the information needs of people in rural America. The satellite technology available today gives us the best way to reach an audience beyond the city limits that deserves a steady, reliable up-to-the-minute source of critical information on issues that affect their lives every working day," said Orion Samuelson, executive producer and chairman of the board of CHANNEL EARTH.

Channel 283 will broadcast from studio facilities in Chicago and air live reports from throughout the country, including regular news updates from Capitol Hill. It will deliver over 13 hours of programming every Monday through Friday and eight hours (5 am-1 pm) on Saturdays.

Country Folks West, April 7, 1997

APPLE MARKETING ORDER PASSED

New York apple growers recently voted by a strong margin to renew the New York State Apple Marketing Order, underscoring the growers' new faith in marketing programs. Under the Order, growers assess themselves \$.16/bushel for fresh apples and \$.08/hundredweight for juice and processing apples. The state Dept. of Ag & Markets collects these funds and the NY Apple Association, representing the state's 700 commercial apple growers, uses them to boost growers' products through advertising, encouraging supermarket chains to order and display New York apple products, and exhibiting at trade shows.

From *Rural Futures*

CALENDAR of EVENTS

APRIL 11-18, 1997

EVENTS/MEETINGS

Wednesday, April 16, 8:30 am
Lounge, Jordan Hall
Geneva Administrative Managers' Meeting

Wednesday, April 16, 10:00 am
Fruit and Vegetable Research Farm
"Spring Soil Conditioning: Timing is Everything" information session (see related story)



DEADLINES

Thursday, April 17
Apple Research and Development Program quarterly reports (3 copies) due in Director's Office, Jordan Hall.

CLASSIFIEDS

HOUSING AVAILABLE: Very clean unfurnished one-two bedroom apartment upstairs in an older 2-story house. Apartment has one full bath, living room, dining room and kitchen, private entrance in the front and back, and off street parking. \$500/month which includes water and steam heat. For details or to see apartment contact Mike at x332 or call 789-9205.

FOR SALE: 1987 Chevrolet Caprice, V8, AC, only 70,000 miles. Recent body work. One-family owned. Reason for selling—husband bought a pick-up truck. Asking \$3,500. Call Denise at x411 or evenings 716-526-6984.

**"For is it not true that
human progress
is but a mighty
growing pattern
woven together by the
tenuous single threads
united in comon effort?"**

—SOONG MAI-LING—
(MADAME CHIANG KAI-CHEK)

SEMINARS

FOOD SCIENCE & TECHNOLOGY

Date: Tuesday, April 15
Time: 10:30 am
Place: Food Science Conference Room
Speaker: Professor Georg Cross
University of Ulm/Germany
Topic: Biosynthesis and Degradation of Gallotannins
Hosted by: Professor Geza Hrazdina

PLANT PATHOLOGY

Date: Tuesday, April 15
Time: 3:30 pm
Place: Room A133, Barton Lab
Speaker: Wendy McFadden
Agriculture Canada
Topic: Evaluation of grape downy mildew (*Plasmopara viticola*) management strategies

ENTOMOLOGY

Date: Thursday, April 17
Time: 10:30 am
Place: The Paul J. Chapman Conference Room
Room 310, Barton Lab
Speaker: Marta Oliva
Graduate Student, Boyce Thompson Institute
Topic: Taste & Addiction to Host Chemicals: Learning from Hungry Caterpillars
Social interaction time with speaker at 10:00 am
Coffee & cookies will be available.

WORLD WIDE WEB SEMINAR SERIES

Date: Friday, April 18
Time: 10:30 am
Place: Staff Room, Jordan Hall
Speaker: Cathy Weeden
Topic: The Basics of HTML Publishing, HTML markup and manipulation of images using Netscape Gold, and getting your newly created pages on the Station Server.



1997

MARCH OF DIMES

WALK AMERICA

**Sunday,
April 27**

Walk for someone you love, or sponsor one of our own Station Team Walkers to help raise money for healthier babies. The 1997 March of Dimes WalkAmerica will be held on

**Sunday, April 27,
and begin at 10:00 am
at the
Seneca Lake State Park.**

If you are interested in joining the Station Team or sponsoring a Team member, please contact Kathy DeRosa in the Director's Office, at x211 or by e-mail at kad2@nysaes.cornell.edu.