

CORNELL UNIVERSITY STATION NEWS GENEVA NEW YORK

VOLUME LXXIX • NO. 44
NOVEMBER 6-13, 1998

BRIEFS

ANNUAL AGRIBUSINESS ECONOMIC OUTLOOK CONFERENCE: December 15

The annual Agribusiness Economic Outlook Conference will be held on Tuesday, December 15, from 10:00 a.m.-3:30 p.m. at Cornell University, Ithaca, NY. Sponsored by Cornell's Department of Agricultural, Resource, and Managerial Economics, in cooperation with the Department of Policy Analysis and Management, the Conference will feature an economic outlook on agricultural and consumer issues. The Conference is open to anyone with interests in these areas.

The morning plenary session begins at 10 a.m. in the David L. Call Alumni Auditorium in Kennedy Hall. Dr. William Tomek, Department of Agricultural, Resource, and Managerial Economics, will provide the national perspective on the economy and agriculture. At 11:00 a.m., Dr. Gregory Poe, also with the Department of Agricultural, Resource, and Managerial Economics, will present "Agricultural Environmental Policy: Picking Up the Pace?", a discussion on emerging agricultural environmental policies that will affect New York Farmers.

In the afternoon, three concurrent sessions will examine specific commodities and topics in more depth. These sessions will begin at 1:15 p.m. as follows:

- In Session A, held in the David L. Call Alumni Auditorium, Dr. Tomek will address the outlook for grains, feed and other farm outputs; Mark Stephenson, Senior Extension Associate, and others from the Department of Agricultural, Resource, and Managerial Economics will discuss the dairy situation and outlook.

- In Session B, held in Room 145 Warren Hall, Dr. Gerald White, Department of Agri-

(Continued on page 3)

AGTECH BUSINESS PARK UPDATE

Is an agtech business park in the Station's future? Would companies engaged in agricultural research and development activities see an advantage in being affiliated with the Station? Would an agtech business incubator be of benefit to faculty and contribute to the long-term viability of the Station? Who would the tenants of such a facility be?

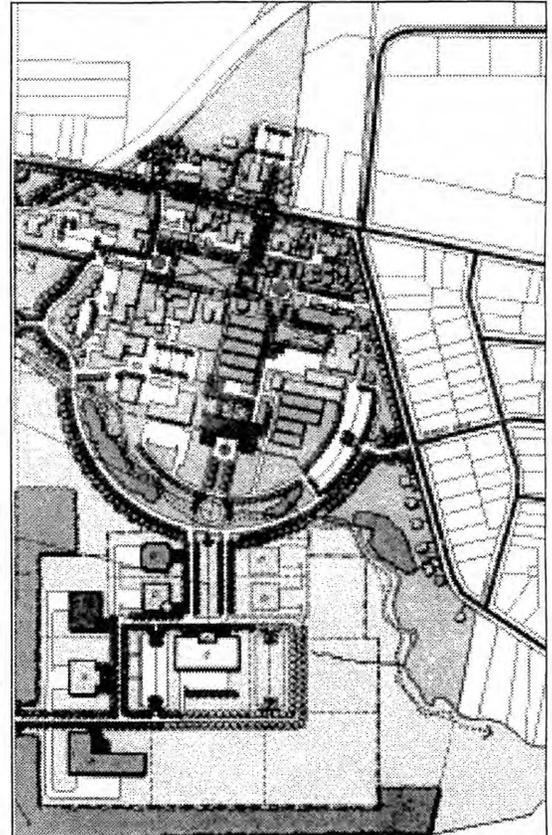
These and other questions were on the minds of the 15 professors, chairs, unit leaders, and others who attended the AgTech Business Park update held in Jordan Hall, on Oct. 28. The meeting was scheduled by Jim Hunter.

"The proposed Park would support the Station's mission by bringing private agriculturally-based industry resources to Geneva to pursue mutual research and development," said Hunter. He is actively seeking input and eventual buy-in from Station faculty.

The concept of an AgTech Business Park originated with Gene DePrez, a consultant who was hired by the city of Geneva back in 1994 to identify unique opportunities for development in and around Geneva. He cited the Experiment Station as Geneva's principal asset for potential economic development that could benefit both the local and state economy. The concept received further credence in the master plans of both the Station (1996) and the City (1997), which were completed by the Saratoga Associates, an architectural, engineering and planning firm.

In the last two years, a committee facilitated by Pat Krauss has been working to more fully explore the feasibility of developing such a park. Members of the committee include representatives from the Station, SUNY Construction Fund, the City of Geneva, Ontario County, Geneva Growth, Inc, and the Saratoga Associates, all of whom share a mutual interest in developing an agricultural technology and business park at the Station. The committee has been overseeing a combined county, Geneva Growth, Station, and city-funded feasibility study and a preliminary environmental audit, paid for by the SUNY Construction Fund and others.

At the meeting, presentations were offered by the principal committee members: Dan Sitrer, principal with The Saratoga Associates; Rich Rising, Director of Economic Development for the City of Geneva; Bob Seem, associate director; (Continued on page 2)



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(AGTECH, cont.)

and Mike Manicowski, Director of Economic Development for Ontario County.

"The mission of an AgTech Business Park is two-fold," said Hunter, in his opening statements. "One of the primary goals is fostering economic development for both the local and state economy. Secondary, is to foster development and use of Cornell University agricultural technology while contributing to the long-term viability of the Experiment Station. It is this second goal that is most important to faculty and staff at Geneva," he said. "We need to explore the benefits and costs."

Sitler reported on potential market support. "We mailed surveys to 250 potential users," he said. Approximately 60 responses were returned, indicating interest among specific user groups in the following areas: transgenic plants and microorganisms, biological control agents, plant activators, EPA collaboration, gene identification and use, nutraceuticals, chemical pesticides, product analysis, customized process technologies, and traditional process technologies.

Sitler also characterized the park. The AgTech Business Park would eventually fill 78 acres of land along Pre-Emption Road, south of the main campus, on what is known as the Denton Farm. It could provide up to 510,000 sq. ft. space, and create as many as 850 or more jobs at full build-out, which would occur over at least 15 years. Lease rates would be in the \$4-\$8 /sq ft. range for small and start-up companies, and \$10-\$15/sq. ft for existing companies. Two-thirds of the park would target agriculture and biotech businesses, and one-third of the park would target complimentary businesses like software and information systems, testing for microorganisms, food packaging technology, electronic data management, and computer instrumentation. A private developer would be involved with the majority of the project. Management of the park would probably be by a board of directors, of which Station faculty and administration would comprise some as yet-to-identified proportion.

According to Sitler, the Station benefits both directly and indirectly from such a facility. "Such a park would create an opportunity for significant synergy among Station and AgTech Business Park researchers that could result in significant collaboration and corroboration," he said. As one who is familiar with similar parks, Sitler said, at university parks, one-third of the users tend to be faculty and staff, one-third tend to be students who have graduated, and one-third are from the broader marketplace.

Bob Seem reported on business incubators and research parks at other institutions. Among them: Innovation Park at the University of Saskatchewan, Michigan Bio Tech Institute, Scottish Crop Research Institute, and the Center for Crop Utilization at Iowa State. Faculty reaction in Iowa was very negative at first, reported Seem. "They were worried about contamination of intellectual property, and a loss of institutional resources from faculty to park. Now," he said, "faculty reaction is extremely positive." Among the many benefits: companies at the Center actively supported faculty research projects; companies were able to cost-share expensive equipment with faculty; faculty had more consulting opportunities; and students were able to find job opportunities with Center companies before and after graduation. In addition, Center scientists were willing to serve on committees, engage in seminars, and enhanced the level of scientific and intellectual activity.

The next steps in development of the park are to investigate and secure involvement in the project from the Empire State Development Corporation (ESDC) and to gain the backing of local legislators and government officials. Also, steps must be taken to establish a marketing and build-out plan; identify capital to subsidize construction of infrastructure and facility; resolve the property ownership issue; identify proper mix of use, lease and land sale options; determine the ability of the Experiment Station to offer an attractive amenity package; and fund an environmental impact statement (EIS). City and Station officials have submitted a \$100,000 matching grant to secure state funding for a generic environmental impact statement with the City, County and the Station.

Jim Hunter is forming an advisory committee to determine what kind of park and amenity package would be in the best interests of the Station. "Biotechnology is not the only focus of this park," he cautioned. He prefers to characterize potential projects in the

AgTech Business Park as "emerging science and technology, with a strong agricultural focus." He also acknowledged that the Station is fortunate to have individuals such as Rich Rising who have extensive knowledge of how to do economic development projects and secure financial and political support.

"Time is ripe for developing the AgTech Business Park," noted Rich Rising, in closing at the meeting. "The ESDC is showing intense interest in biotech development," he said, and cited their recent funding of an \$11 million biotech facility on Long Island.

L.McCandless

Need Help in Starting Your Own Agtech Business?

Many more or less traditional aspects of fruit and vegetable agriculture may be affiliated with a future AgTech Business Park at Geneva, but entrepreneurs and Station faculty with research that may be ready for prime time may not want to wait. According to Bob Andersen, "Learning of the free business planning services available in Geneva may have been the most important new information for many of us at the AgTech Park meeting."

The Brockport Small Business Development Center is located at the Geneva Enterprise Development Center (GEDC, formerly the American Can Building at 122 N. Genesee Street). They provide help on an as-needed basis in developing business plans, financial reports, marketing, and small business counseling. The service is free and available to anyone, even if you are not a GEDC tenant. Call 315-781-1253.

The Worker Ownership Resource Center is located at 1 Franklin Square, Geneva. They offer a 12-week training course to people who want to either start or expand a business. Training includes writing a business plan, feasibility studies, marketing issues, taxes—anything you need to know about owning and starting a business. One-on-one technical assistance is also available. If you complete the course and write a business plan, you are eligible to apply for a small business loan. The training course is \$120 for 12-weeks. Call 315-789-5091 for more information.

(BRIEFS, continued)

cultural, Resource, and Managerial Economics, will address the fruit, grape and wine situation and outlook. Dr. Jayson Harper, Associate Professor in the Department of Agricultural Economics and Rural Sociology, Pennsylvania State University, will join Dr. White is discussing risk management for horticultural producers. Finally, research updates will be presented.

• Session C, organized by the Department of Policy Analysis and Management, will be conducted in the Stone I Microcomputing Center of Mann Library. Dr. Lois Wright Morton, Senior Extension Associate in the Department of Policy Analysis and Management, will address "Local Policy Making: Internet Data as an Information Source." Philip Davis, Instructional Librarian, will then discuss "Practical Tips for Using the Internet: Search Engines, Organizing and Downloading", which will include hands-on computer time.

A discounted conference registration fee of \$30 is offered until December 1. Registrations postmarked after December 1 will be \$45. Registration fees will be waived for Cornell and CCE staff, and media personnel with valid IDs; however, you must pre-register. Box lunches, if desired, will be available for \$6.00 and parking permits (for those who need them) are available for \$2. For further information or to request a pre-registration form, contact Carol Peters at 607-255-1602; clp7@cornell.edu

1999 SELECT BENEFITS ENROLLMENT

This is to announce that Cornell's annual open enrollment period for statutory Select Benefits Plan is November 1 through December 4, 1998. Benefit Services cannot accept open enrollment changes before or after these dates. Open enrollment packets that contain complete information on the choices available to faculty and staff will be mailed to home addresses during the week of October 26, 1998. This message is addressing **Select Benefits only**, not the statutory health insurance open enrollment period.

Charie Hibbard

(Continued on page 4)

HORTICULTURAL SCIENCES SEMINARS

November 9**"Inheritance and Linkage of geminivirus resistance Genes Derived from *Lycopersicon chilense* (Dunal) in tomato (*Lycopersicon esculentum* Mill.)"**

Mr. Philip D. Griffiths

Gulf Coast Research and Education Center, University of Florida, Bradenton, FL

Tomato mottle virus (ToMoV) is a bipartite geminivirus which has infected Florida tomatoes (*Lycopersicon esculentum* Mill.). It is transmitted by the silverleaf whitefly (*Bemisia argentifolii* Bellows and Perring n. sp.) causing leaf curling, epinasty, stunting of growth, reduction in leaf size and a reduction in yield. There are no acceptable varieties commercially available that are resistant to ToMoV, and commercial varieties or lines tolerant to tomato yellow leaf curl virus (TYLCV) show only limited tolerance to ToMoV. Sources of resistance to ToMoV have been identified from accessions of the wild species *Lycopersicon chilense* Dunal. A low recovery of resistant phenotypes in segregating F2 populations has suggested that the resistance involves more than one gene.

Inheritance studies indicated that at least two additive genes with high heritability controlled ToMoV resistance in a resistant line derived from accession LA 1932. Random amplified polymorphic DNA (RAPD) markers in lines derived from accessions LA 1932, LA 1938, LA 1969, and LA 2779 were mapped to three regions on chromosome 6. Two of these regions had significant associations with ToMoV resistance, with intermediate resistance in the heterozygotes. Atypical symptom responses to ToMoV infection in a line derived from accession LA 2779 were caused by *Tm-2* or a closely linked gene on chromosome 9.

Mr. Griffiths is a candidate for the vegetable breeding position in the Department of Horticultural Sciences, Geneva.

November 12**"Breeding for Resistance to Downy Mildew (*Peronospora parasitica*) in Broccoli (*Brassica oleracea* L. Italica group)"**

Dr. Min Wang

Post Doctoral Research Geneticist, US Vegetable Laboratory, Charleston, SC

Broccoli is among the top ten vegetable crops in the United States, and its popularity is growing at a steady rate. It contributes to human health and nutrition by providing vitamins, minerals, and chemoprotective factors and has become the most important vegetable among *Brassica oleracea* crops. Downy mildew, caused by *Peronospora parasitica* (Pers. ex Fr.), is one of the most economically important diseases in broccoli. The use of fungicides is a primary method of controlling this disease at the present time. Due to the toxicity and detrimental environmental effects from fungicides and public pressure to decrease pesticide use, development of cultivars of broccoli with downy mildew resistance is an attractive solution to combat this disease.

Multiple screening tests at both cotyledon and three-expanded leaf stages among USDA inbreds and commercial hybrids and genetic distance estimation based on RAPD analysis revealed two divergent inbred lines, EV054 and MA024. These lines were chosen as resistant and susceptible parents, respectively, for creating segregating populations to use in screening for polymorphic RAPD bands linked to downy mildew resistance. Two F1 populations, four backcross populations, and two F2 populations were generated through conventional breeding methods. Five hundred individual plants from the eight populations and their parental lines are currently being evaluated for their reaction to downy mildew infection. These data will provide information on the mode of inheritance of downy mildew resistance. Concurrently double-haploid (DH) populations are being generated from each of the two F1 hybrids via anther / microspore cultures. To date, 40 polymorphic RAPD bands have been identified between EV054 and MA024. The two F2 populations will be employed in bulked segregant analysis to determine the potential linkages between RAPD markers and downy mildew resistance. The discovery of a RAPD marker linked to downy mildew resistance would allow indirect selection for resistance genotypes in broccoli and provide a starting point for isolating resistance genes.

Dr. Wang is a candidate for the vegetable breeding position in the Department of Horticultural Sciences.

CALENDAR of EVENTS

NOVEMBER 6-13, 1998

EVENTS/MEETINGS

Friday, November 6, 6:00 pm

Club 86, Geneva
Station Club Banquet

Tuesday, November 10, 10:30 am

348 Morrison Hall, Ithaca
CALs Chairs' meeting

Wednesday, November 11, 3:00 pm

Location to be announced
Geneva Chairs' and Unit Leaders' meeting.

DEADLINES

- **Monday, November 9:** Sweet corn proposals, progress reports due to Director's Office.
- **Monday, November 16:** Cabbage proposals, progress reports due to Director's Office.
- **Thursday, November 19:** ARDP/ARA progress reports due to Director's Office.

SAGES HALLOWEEN PARTY A SUCCESS

The SAGES Halloween party was well attended by over fifty students, post-docs, visiting scientists and their families. Prizes for the best female costume went to Tania Krastanova (a.k.a. "The clown") and best male costume was Tim Widmer (a.k.a. "The laundry man"- not to be confused with "The kitchen man"). A special thanks to Onofre Berton for allowing us to use his portable stereo for the dance. We would also like to thank everyone who helped decorate and carve pumpkins.

Watch Station News for details on the next SAGES event. *Dan Waldst*

CLASSIFIED

FOR SALE: Men's Blade Runner Pro 2700 roller blades, black, size 10. Includes knee and elbow pads. Like new, used only a couple of times. Great Christmas gift! \$45 or best offer. Call Cathy at x328 or e-mail mcm4@nysaes.cornell.edu.

WANTED: International coins and stamps needed! I am hoping to add some more coins or paper money of small value to my nephew's coin collection and stamps to my niece's stamp collection for Christmas...If you have some you would be willing to donate, please contact Cathy,x328, or send to C. Heidenreich, Plant Path, in campus mail. Thanks

WANTED: Free room and board available to female in exchange for evening help with adult care. Minimal duties. Please call 789-0503 after 6:00 pm.

FOR SALE: Princeton (sturdy) journal boxes @\$10 each. Contact the Library, Jordan Hall.

SEMINARS

HORTICULTURAL SCIENCES

Date: Monday, November 9

Time: 11:00 am

Place: Jordan Hall Staff Room

Speaker: Mr. Philip D. Griffiths
Gulf Coast Research and Education Center
University of Florida
Bradenton, FL

Topic: Inheritance and Linkage of geminivirus resistance Genes Derived from *Lycopersicon chilense* (Dunal) in tomato (*Lycopersicon esculentum* Mill.)

Mr. Griffiths is a candidate for the vegetable breeding position in the Department of Horticultural Sciences.

Date: Thursday, November 12

Time: 11:00 am

Place: Jordan Hall Staff Room

Speaker: Dr. Min Wang
Post Doctoral Research Geneticist
US Vegetable Laboratory
Charleston, SC

Topic: Breeding for Resistance to Downy Mildew (*Peronospora parasitica*) in Broccoli (*Brassica oleracea* L. Italica group)

Dr. Wang is a candidate for the vegetable breeding position in the Department of Horticultural Sciences.

BOOK DONATIONS NEEDED

This year's Craft Show & Book Sale will be held on Saturday, November 14th. Station Club is looking for volunteers to help staff not only the booth that sells Station Club apparel, but also the booth that sells the books. This would involve a mere 1-2 hours of your time maximum and is guaranteed to be a fun job. If you are interested, please let me know what times you would be available and which booth you would prefer (x325, drr2).

The Library will be accepting book donations (jigsaw puzzles and board games, also) on November 12 and 13 **only**. No magazines please. For every three books you donate, you can receive one free!

LETTER FROM HONDURAS

Dear Friends of Zamorano:

Yesterday I toured the Zamorano campus and visited Jicarito to see the damage caused by Mitch and observed the remarkable efforts being made to restore life to normal.

On campus, the damage to roads, bridges, crops, and infrastructure is extensive. Several hundred yards of our potable water system were uprooted. The river destroyed the bridges to Suyatillo and Santa Inez and threatens to undercut the road behind the Kellogg Center. The plastic houses in Horticulture were inundated, and a couple of our small buildings were washed away. Lake Titicaca overflowed its banks and flooded a large part of San Nicolas. The Vegas of Monte Redondo were significantly damaged. Many crops were destroyed or damaged. While all of our animals survived, they are suffering from the excessive and extended humidity; foot lameness in cattle is a real problem. We're awaiting better estimates of our agricultural losses; fortunately, they are far below the 70% losses suffered by the country as a whole.

In the surrounding area, 88 houses are listed as destroyed in Jicarito and Joya Grande alone. Happily, we can now report that no lives were lost in our neighboring communities; however, many people are hungry. Yesterday we distributed clothing, milk, cheese, beans, corn and hundreds of tilapia fish to our neighbors who were most affected by the storm.

But there is good news as well. Our main buildings are in pretty good shape. We have our electricity back. The restoration of the potable water system is nearing completion. We can travel by car to and from Tegucigalpa. Our internet connection is back up, although damage to the national phone system will cause sporadic problems. Campus roads are being repaired. Local employees have reported back to work. Visitors stranded on campus for three days have continued on their way.

The best way to summarize the situation may be to say that the waters have receded, the clouds have dispersed, and "both figuratively and literally," rainbows appeared yesterday.

*Keith Andrews
Director General as reported by Alfredo Rueda, former graduate student in Tony Shelton's program*