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## **BHG CITRUS HALL RENOVATION UPDATE**

**Phase I renovations of the Ben Hill Griffin, Jr. Citrus Hall are scheduled for completion Nov. 29.**

The following renovations will be completed:

- the reworking of the ceilings and roof; front entrance renovations;
- the Library ceiling and lighting;
- Library renovations;
- West entry/EM Lab corridor new flooring, acoustical grids, lighting and tile;
- Teaching lab area drywall removal and replacement/painting.

**Phase II is scheduled to begin after the first of the year and will encompass:**

*(See BHG Renovations, continued on page 2)*

# CITRUS LEAVES

Citrus Leaves is published in the interest of CREC employees and friends.

October 2006

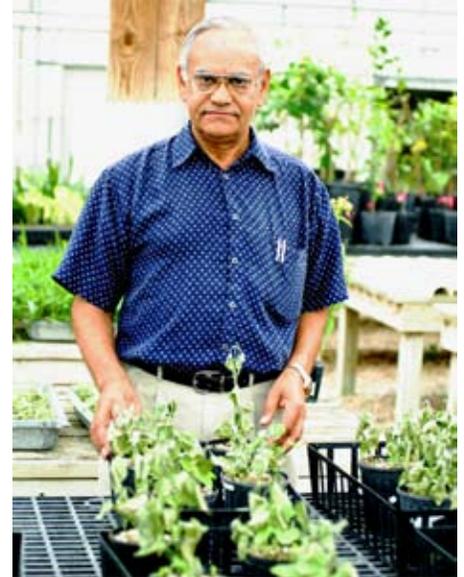
## **Weed Management in Citrus Oct. Lab Highlight - Dr. Megh Singh**

**W**eed control in Florida citrus accounts for approximately 20 to 28 percent of the total annual production cost for citrus in Florida. Dr. Megh Singh, Professor of Horticulture, specializing in weed management, has been conducting research programs both in the laboratory and the field.

The main emphasis of the program is maximizing the efficiency of weed control in citrus. "Currently our research area focuses on several areas: the evaluation of new herbicides for weed control in citrus, increasing the efficiency of existing (registered) herbicides, exploring effective methods to reduce the herbicide leaching, studying herbicide physiology in weeds (absorption, translocation, and metabolism), investigating biological/ecological characteristics of weeds, evaluating herbicide phytotoxicity affects on citrus, and herbicide resistance," Singh stated.

Studies on allelopathy of lantana and basil plants have also been conducted which provided good information on the germination of weeds. In published studies, allelopathic effects of several crops and weeds have been attributed to the presence of phenolic compounds in their

*(See Weed Management, continued on page 3)*



Dr. Megh Singh reviews the symptoms of a new compound on plant in greenhouse.

## **Faculty Attends International Meetings**

**D**uring August many important international meetings were held, three if these were particularly important to citrus science and research. They were The International Society of Horticultural Science (ISHS) Congress 2006; the 4th Citrus Research International (CRI) Symposium; and the II International Citriculture Meeting. CREC was represented at each of these meetings by Drs. Gene Albrigo, Fred Gmitter, and Pete Timmer.

Drs. Gmitter and Albrigo attended the International Horticultural Congress, 2006, in Seoul, South Korea. The Congress is held every four years and provides an opportunity for horticulturists from around the world to come together, learn more of the research activities underway around the world, and become more familiar with the horticultural industries and traditions of the host country and region.

There were more than 2,000 participants registered for the Congress this year, exceeding the organizers' goals. There were six Colloquia and 16 Symposia

organized, covering a wide range of topics. Gmitter was responsible for organizing a Symposium titled "Citrus and other Tropical and Subtropical Crops," with the assistance of Albrigo, and their colleagues, Dr. Deng Xiuxin (People's Republic of China) and Professor Doo-Kihl Moon (Korea).

Gmitter was also invited to deliver two presentations /titled "Genomic Studies of Citrus Canker Resistance in Fortunella and Citrus," and "Triploid Citrus Breeding by Interploid Hybridization and Embryo Rescue."

Albrigo attended the Executive Committee meeting prior to the ISHS Congress and was able to visit with his former Ph.D. student, Yong Soo Hwang, who has a postharvest handling program on deciduous fruits as part of his program at Chungnam National University in South Korea.

After the ISHS Congress, Albrigo was invited to make a presentation on citrus production in the U.S. during an international seminar on

*(See International Meeting, continued on page 3)*

## FACES AROUND CREC

To complement the Lab Highlights featured over the past few months, this column will focus on employees who work in the labs, visiting scientists and students, and many of the other “behind-the-scenes” members of the CREC community.

**Laura Waldo, Schumann Lab:** Laura has worked at CREC since April 2004. She has a B.S. in Horticultural Science and is currently working on her M.S. in Environmental Science through the UF Distance Education Program. Her work in Dr. Arnold Schumann’s lab includes the BMP Verification Study (more information can be found at <http://128.227.17.113/bmp/index.htm>), as well as groundwater sampling from monitoring wells and lysimeters. Laura was born in Madison, Wisconsin and is still a Packers’ fan. She is currently a resident of



Laura Waldo, “GO PACKERS!!”  
(photo by Gretchen Baut)

Auburndale with her three “kids” (her pugs, Reggie and Lucy, her kitty, Lilo). She enjoys kayaking, landscape design, visiting family in Orlando, and Pug rescue.

**Dr. Shiv D. Sharma, Singh Lab:** Dr. Sharma first worked here from November 1998 until 2001 and just recently returned to the Singh lab. Currently, his research in the Singh lab is on weed management in citrus consisting of uptake and translocation studies, greenhouse studies, laboratory studies relating to herbicide efficacy and mode of action. He has done allelopathy and herbicide soil column leaching studies. “Recently, I attended a training program at the University of Tennessee on determining and identifying shikimate as a factor of glyphosate resistance in weeds,” Sharma stated.



Dr. Shiv Sharma in forefront with Dr. Tom Mueller (Univ. Tenn.). Photo courtesy of Dr. Sharma.

Dr. Sharma was born in Haryana, India, is married and has two children. His daughter, Neha (22 years old) lives in India and his son, Diptesh (18 years old) is a student at UF in Gainesville majoring in mechanical engineering. Sharma received both his B.S. (Honors) in Agriculture and his M.S. in Agronomy from Haryana Agricultural University in Hisar, India. He received his Ph.D. in Weed Science from Starthclyde University in Glsgow, Scotland. Sharma enjoys traveling, football games, movies, and helping at home.

(“BHG Renovations,” continued from page 1)

- Front entrance and lobby/store front to the Library;
- Creation of the new media center;
- Restrooms;
- Meeting rooms;
- Replace various walls and doors throughout the building.

**During Phase II, the BHG Hall will be off limits and the end date will be announced at a later date. The Ben Hill Griffin, Jr. Citrus Hall is a conference facility that includes meeting rooms, a teaching laboratory, an electron microscopy facility and the largest citrus library in the world. For more information, please call Anita Whitaker, ext. 1233.**

### DR. KYEONGHWAN LEE RECEIVES PRESTIGIOUS AWARD

By Christen Taylor, Program Assistant - Precision Technology and Mechanical Harvesting

The 2006 annual American Society of Agricultural and Biological Engineers (ASABE) International Meeting was held in July at the Portland Convention Center, Portland, Oregon. During the four-day event, Kyeonghwan Lee, who has a doctorate in Biological and Agricultural Engineering, received the first place doctoral Graduate Student Research Award of 2006. The purpose of the award is to recognize excellence in the conduct and presentation of research to build the knowledge base needed by engineers who design equipment, facilities, and processes for the sustainable operation of a biological system.



Dr. Kyeonghwan Lee (center) during award ceremony. Photo courtesy of Dr. Lee.

Lee is a postdoctoral associate for Dr. Reza Ehsani and works with the automation of mechanical harvesting machines. The award consisted of two competitions, one for M.S. research and one for Ph.D. research, and is comprised of two segments including a written research paper and an oral presentation. Three finalists were selected on the basis of their written papers and were invited for an oral presentation at the ASABE International Meeting. The final contestants were decided on the basis of combined performance in the written paper and oral presentation. Lee topped the finalists and was awarded a cash prize and plaque for his excellence at the ASABE Awards Recognition Luncheon. His dissertation was titled “A Dielectric Permittivity Sensor for Simultaneous Measurement of Multiple Soil Properties.” CREC is pleased to congratulate Dr. Kyeonghwan.

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*("Weed Management," continued from page 1)*



Dr. Shiv Sharma works with a Sample Biological oxidizer – This equipment combusts the plant samples treated with <sup>14</sup>C herbicide.

residues. "Phenolic compounds found in decaying rye residues were phytotoxic to the germination of lettuce seed. It has been reported that a living cover crop of spring-planted rye reduced early-season biomass of common lambsquarters, common ragweed, and

large crabgrass," Singh said.

The total estimated annual weed management cost to the Florida's citrus industry during the last year was approximately \$115 per acre; therefore, it is very important to have the latest tools and techniques available for the industry. "Even a small improvement of 10-15 percent reduces the cost of production by \$11.50 to \$17 per acre to the industry, which is very significant," Singh said.

The major thrust of Singh's research program has been to reduce the rate of application of both pre- and post-emergence herbicides. Use of adjuvants has been a very successful approach as he has significantly reduced applications in the last 16 years. This approach has also been successful in reducing the environmental loading of herbicides.

However, there are concerns about the impact of continuous use of glyphosate as some weed species have evolved resistance under horticulture and other cropping systems. Work has been initiated in this direction to avoid the onset of resistant weed species in citrus groves. This work is currently underway in collaboration with Professor Tom Mueller, University of Tennessee.

"Our greenhouse experimental facilities are state of the art, with the use of a chamber track sprayer. This sprayer helps in precise application of herbicide solutions on the plants grown for greenhouse experiments. This facility contributes a lot towards our research program for the citrus industry," Singh explained.

"We have expertise in conducting herbicide distribution studies. For such studies, we have biological oxidizer equipment which helps us to understand distribution the pattern of herbicide using radiolabelled chemicals."



Gary Test stands with Chamber Track Sprayer – A state-of-the-art facility for precision spraying of plants for greenhouse experiments.

Currently, Dr. Shiv D. Sharma is working as a Postdoctoral Research Associate, specializing in herbicide physiology in weeds (absorption and translocation and metabolism). In June 2006, Sharma attended a training program in the University of Tennessee on determining and identifying an important trait to understand resistance development in weeds. Also working in the Singh lab is Gary Test, Sr. Laboratory Technician. "He is of great assistance in conducting laboratory, greenhouse, and field studies on the different aspects of weed management," Sharma said.

*(Thank you to Drs. Singh and Sharma, and Mr. Test for contributing to this article.)*

*("Internatinal Meeting," continued from page 1)*



Dr. Gene Albrigo

"Trends in Citrus Industries and Research," held in Jeju City, Jeju Island. The island is the major mandarin production area in South Korea with most production in greenhouses.

Following the ISHS Congress, Drs. Gmitter and Timmer were also invited to deliver plenary talks to the 4th Citrus Research International (CRI) Symposium, also held during August, in Port Elizabeth, South Africa.

"This was the first time CRI invited foreign experts to deliver plenary talks, and it may have been

of value as the attendance at the meeting this year was the highest number ever," Gmitter stated.

Gmitter presented information on the citrus scion breeding work that the CREC plant improvement team conducts in the area of citrus scion cultivar development. Timmer gave the opening talk to the Symposium on citrus canker, greening, and other diseases threatening citrus in both Florida and South Africa.

After the meeting, Gmitter visited several citrus facilities, accompanied by Dr. Graham Barry, a former CREC graduate student who earned his Ph.D. degree a few years ago under Dr. Bill Castle's supervision.

Following the CRI Symposium, Timmer and his wife, Nancy, spent a few days vacationing (birding) with Lise Korsten of the



Dr. Fred Gmitter



Dr. Pete Timmer

University of Pretoria and her family.

Timmer then traveled to São Paulo, Brazil and presented an invited lecture in Cordeiropolis on Alternaria and scab diseases at the II International Citriculture Meeting sponsored by Improcrop. He also met with Renato Reis, who is finishing his doctoral degree at Sao Paulo State University to discuss progress on his research on Alternaria brown spot. Timmer is a member of Reis's Ph.D. committee.

*(Thank you to Drs. Gene Albrigo, Fred Gmitter, and Pete Timmer for contributing to this article. Faculty photos by Gretchen Baut.)*

# CREC OFF THE CLOCK



Mondal visits a Buddha at a mountain temple.

visited CREC three times in the past. "Jeju is an island in Korea and is a good place for citrus production," Mondal said.

## KOREAN VISIT

During August, Sachindra Mondal, postdoc for Dr. Pete Timmer, was invited to present collaborative research on greasy spot and melanose. Mondal worked with Dr. J. W. Hyun, National Jeju Agricultural Experiment Station, Korea, during his week-long visit. Dr. Hyun is Dr. Timmer's counterpart in a cooperative research project and was Mondal's host scientist during his visit. Dr. Hyun has

## RODEO: TRUCKER STYLE

Congratulations to Richard Flynn, husband of Karla Flynn (Word Processing). Richard, employed by The Martin-Brower Company, Kissimmee, Fla., competed in the 2006 Food Industry Truck Driving Championship Sept. 15-17 and took second place in the 48-foot tractor trailer class out of 110 drivers. This is a best-in-class competition that focuses on driver skills and safe driving in the food industry. Richard received \$750, a medallion, and a crystal trophy.



Richard and Karla Flynn.

## FUTCH FAMILY SAFARI



Pictured from left to right: Dr. Steve, David, Bill, and Deborah Futch.

After graduating from high school, Bill Futch, the son of Dr. Steve and Deborah Futch, was given the opportunity to choose any destination in the world as a gift. Bill chose an African hunting trip the family took in June. Bill was successful in obtaining several trophies, including this kudu which was a record trophy. Bill recently graduated from Winter Haven High School and is attending Polk Community College.

## VISIT FROM ITALY

Gianluigi "GG" Votino, is a visiting Ph.D. student from the University of Palermo, Italy. He has joined Dr. Jim Syvertsen's lab for six months to work on drought stress physiology of citrus and lives in Lake Alfred. GG earned his B.S. and M.S. from the University of Palermo majoring in Crop Production and Pest Management, and specializing in Tree Fruits of Temperate and Mediterranean Regions.



Gianluigi "GG" Votino

## FISH TALES

In June, Drs. Harold Browning and Jude Grosser traveled to Lake Stanzikimi in Northwestern Ontario for a week of fishing. Enjoying the Canadian fishing during the same week were Drs. Clay McCoy and Steve Garnsey. All three parties joined up for a shore lunch, sharing not only their catch but fish stories as well.



Browning shows off a fat Canadian walleye.



As fresh as it gets! Grosser/Browning, Garnsey, and McCoy parties join up for a walleye shore lunch.

# October 2006

CREC Calender

[www.crec.ifas.ufl.edu](http://www.crec.ifas.ufl.edu)

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3 Time Reporting Due	4 Production Mgr. Mtg.	5 Faculty Meeting	6 HOLIDAY - UF HOMECOMING	7
8	9	10	11	12	13 Pay Day	14
15	16	17 CCA	18 Time Reporting Due Processor's Day	19	20	21
22	23	24	25	26	27 Pay Day Sarasota Master Gardeners	28
29	30	31	Nov. 1 Time Reporting Due	Nov. 2	Nov. 3	Nov. 4
Nov. 5	Nov. 6	Nov. 7	Nov. 8	Nov. 9	Nov. 10	Nov. 11
	CRE Foundation				Pay Day HOLIDAY	

Oct. 4 - Production Mgr. Mtg., Mark DeBouis, Rm. 2-4, BHG, 9 a.m. - 3 p.m.

Oct. 5 - Faculty Mtg., Dr. H. W. Browning, Employee Breakroom, Bldg. 7124, 8:30 a.m. - 10:30 a.m.

Oct. 6 - HOLIDAY - HOMECOMING

Oct. 17- Certified Crop Advisers, Dr. Tom Obreza, Rm. 2-4, BHG, 7 a.m. - 6 p.m.

Oct. 18 - Processor's Day, Dr. Renee Goodrich, Rm. 2-4, BHG, 8 a.m. - 5 p.m.

Oct. 27 - Sarasota Master Gardeners, Dr. Steve Futch, Packinghouse Conf. Rm., 9:30 a.m. - Noon.

Nov 6 - CRE Foundation Mtg., Dr. H.W. Browning, Rm. 3-4, BHG, 10 a.m. - 2 p.m.

Nov. 10 - HOLIDAY-Veterans' Day Observed

## BHG REMODELING MEETING ROOM SHORTAGES

Due to the unpredictable nature of the remodeling of BHG, restrictions for the usage of BHG meeting room for new events and meetings are in effect. These restrictions will remain in effect until conditions of the meeting rooms and conference room can be evaluated.

**Effective immediately,** the primary rooms available will be the Packinghouse Conference Room, the Employee Breakroom (Bldg. 7124), and Room 12 Conference Room. As a result, there is the likely chance there will be a shortage of meeting room space. Please plan ahead and reserve rooms as far in advance as possible.

Calendar Updates and Changes can be seen on the web at <http://www.crec.ifas.ufl.edu/news>

Next Month's Deadline is  
Oct. 18, 2006

## MOVING? PLEASE SEND CHANGE OF ADDRESS TO:

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700 Experiment Station Road  
Lake Alfred, FL 33850

OR E-MAIL:  
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