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Institute of Food and Agricultural Sciences

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Citrus Leaves

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Citrus Research and Education Center - News and Information

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Citrus Leaves
is the monthly newsletter for employees and friends of CREC.

Would you like to be in "Citrus Leaves?" We welcome your contributions, suggestions and corrections. Editor, Monica Lewandowski; E-mail mmlew@lal.ufl.edu; Ext. 233. Photography, Gretchen Baut; Production and Distribution: Word Processing, Barbara Thompson, Supervisor; Kathy Snyder, Karla Flynn and Linda Murphy; Customer Service, Kathy Witherington, Supervisor, and Nancy Burke.

On the web: www.lal.ufl.edu and click on Citrus Leaves!

Status of IFAS and CREC Budget

Summary of Budget Matters

by Harold Browning, Center Director

The following is a brief overview of our budget situation following the special session of the legislature that convened in December. The Special Session called for a return of state general revenue funds from the current fiscal year which started in July, 2001. State agencies were asked for a "cash callback" to make up for lost revenue from the declining Florida economy in recent months. The share of that callback in IFAS was over $8 million, but some assistance was provided in meeting the callback through the legislature approving non-recurring funds to replace a portion of the state funds recalled. Thus, the actual cut was about $4.6 million. Administrative reductions, off-the-top savings, and savings from personnel vacancies were used to reduce the impact of the cuts, and ultimately, individual units were informed of cuts that they would experience.

By the end December, CREC had returned $137,000 of state funds to meet our required reductions. This came from vacant USPS and A&P positions salary savings. Limited spending of all state funding at CREC during the period provided some additional flexibility. Discussions with CREC faculty and infrastructure departments led to a plan to continue providing support to the Center under the budget reductions. Details of the budget for the remainder of the year include the following:

- A freeze is in effect for all USPS and A&P positions. Those that have been vacated since the freeze was implemented will not be filled, but some substitution of use of OPS to meet needs of critical positions is being made. This freeze is likely to continue past July of 2002.

see Budget Update on page 2

Dr. Moore Retires

by Dr. John Attaway

After 59+ years of service to the Florida citrus grower, Dr. Edwin L Moore has retired from the Scientific Research Department of the Florida Department of Citrus, effective December 31, 2001. This is literally the end of an era.

After receiving his Ph.D. in food chemistry from the University of Massachusetts, Dr. Moore joined the staff of the Florida Citrus Commission on July 1, 1942. His initial research project was to find a way to ship orange juice to American service men serving overseas during the Second World War. The result of the project was the development of frozen concentrated orange juice technology which was patented in 1948 by Dr. L.G. MacDowell, Dr. E.L. Moore and Mr. C.D. Atkins.

In the subsequent years from the 1940s to the 2000s, Dr. Moore contributed to every research project by the FCC/DOC staff in the area of citrus juice processing.

Dr. Moore continues to maintain his office in the Packinghouse and will continue to provide his expertise to CREC and the citrus industry.

Budget update . . . from page 1

- With some minor adjustments to the operating budgets for the remainder of the year, we will continue to support the programs of the center. The resources of the Center have been allocated to complete the current year with some contingencies for unexpected facilities repairs, utilities and other needs. A carry-over contingency also has been set aside to allow some flexibility as we move into the next fiscal year.

- Faculty at CREC have discussed some measures that will conserve the resources of the Center and several of these have been implemented, including additional charge backs on some of the support services at the Center.

The prospects for state budget improvement for the next year starting in July are uncertain as the Legislature begins to address state shortfalls, but at this time, the budget cuts experienced during 2001 may establish the starting point for next year's budget. We continue to make plans that will help address the future budget situation. Planning also is advancing in IFAS to address the budget and its possible impacts on our organization.

The continued ability of CREC faculty and staff to meet our program goals and address citrus industry challenges will be based on making some changes to insure that the funds needed to support the program are in place. Increases in grant funding to faculty in recent years will provide some ability to substitute for loss of state funds. Our goal is to make adjustments as the budget situation unfolds to avoid unnecessary personnel reductions. Your patience is appreciated as we face the budget uncertainty. ■

NEWS AROUND CREC

Diaprepes Task Force Meeting February 8, 2002 BHG

9:00 - 9:10 am - Welcome and Introductions -Garvie Hall and Connie Riherd - BHG Room 1

9:10 - 9:30 Status of Congressional Funding for Diaprepes Andy Lavigne

9:30 - 9:45 - Scope of Diaprepes Research at the University of Florida - Harold Browning

9:45 - 10:00 - Scope of Diaprepes Research at the USDA Laboratories - Calvin Arnold

10:00 - 10:30 - Polk County Grower Panel - J. Steve Rogers

10:30 - 11:00 - Coffee Break

11:00 - 12:00 - Scientific Poster Session - BHG Room 2

12:00 - Lunch break

1:00 - 2:30 - Scientific Posters, continued

The public is invited.

CREC Welcome

Harry E. King IV - OPS (Dr. Albrigo)
Joaquin Gonzalez del Fuente - student (Dr. Albrigo)
Mark Pobjecky - OPS (Dr. Brlansky)
Samunder Singh - Postdoc (Dr. Singh)
Victorine Alleyne - OPS FDOC (C. Davis)
Lyudmyla Tretyak - volunteer (Dr. Michaud)
Daniel Crews - OPS (Dr. Whitney)
Tony Putter - Visitor (Dr. R. Lee)
Drew S. Downs - OPS (Dr. Childers)
Tanya R. Thompson - OPS (G. Baut)

Scientific Seminars

All seminars are on Tuesdays with refreshments beginning at 10:45 AM and seminars at **11:00 AM - 12:00 PM, BHG Room 1.**

Feb. 19 - Dr. Mahmood Nachabe, Ph.D., Department of Civil and Environmental Engineering, University of South Florida. Use of Precision Agriculture to Determine Variability of Crop Yield in Dryland Agriculture Systems.

Mar. 5 - Dr. Reza Savabi, Research Leader, USDA-ARS, SHRS, Everglades Agro-Hydrology Research Unit, Miami, FL. Title: To Be Announced

Mar. 26 - Dr. Bayram Cevik, Ph.D., former student of Dr. Richard F. Lee, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. Characterization of the RNA-Dependent RNA Polymerase Gene of Citrus Tristeza Virus

May 7 - Dr. Edgardo Etxeberria, Professor, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. Title: To Be Announced

May 14 - Dr. Larry W. Duncan, Professor, UF/IFAS Citrus Research and Education Center, IFAS, Lake Alfred, FL. Profitability of Using Entomopathogenic Nematodes for Management of *Diaprepes abbreviatus*

May 21 - Dr. Muhammad Farooq, Post-Doc with Dr. M. Salyani, UF/IFAS Citrus Research and Education Center, Lake Alfred, FL. Title: To Be Announced

CREC Farewell

Sandra McKittrcik - OPS (Dr. Dawson)
Cheri Dickinson - OPS (Dr. Graham)
Timothy Dorriety - OPS (Dr. Schumann)

Congressman Putnam and Trade Policy Officer Hughes Visit CREC

Congressman Adam Putnam (FL-District 12, far left) and Mr. James Hughes (second from left), a trade policy officer with the British embassy in Washington, D.C., visited CREC on January 17. Hughes, a new appointee, represents the United Kingdom in the US on trade policy issues involving agriculture. The purpose of the visit was to familiarize Hughes with Florida's agricultural industries.

At CREC, Dr. Harold Browning (second from right) spoke to Putnam and Hughes about the Center's research programs and its role in the citrus industry. The group also had the opportunity to speak with Dr. James Graham (far right) about citrus canker research, and with Dr. Mickey Parish on food safety issues.

The tour for Putnam and Hughes also included the Florida Department of Citrus, Florida Citrus Mutual, Citrus World and a cattle operation.

Citrus Fest Winds Up

Left: CREC had an exhibit at this year's Citrus Festival with free fruit and citrus information. The exhibit was one of several citrus displays in the Orange Dome.

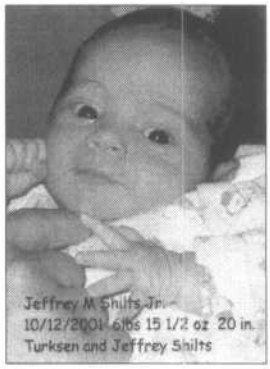
Right: The Florida Department of Citrus brought the world's largest glass of orange juice to the Citrus Festival. It stands 8 feet tall and holds more than 730 gallons of orange juice. It was first unveiled in 1998 to promote awareness of citrus' health benefits for National Minority Cancer Awareness week. In 1999, it was officially accepted into the Guiness Book of World Records as the world's largest glass of OJ!

Congrats in Order

Employees are welcome to submit news and photos of personal and family accomplishments. Submit to Monica Lewandowski, Ext. 233 or mmlew@lal.ufl.edu

Julia Beretta, above, displays her medal and T-shirt for running in the Disney Marathon on January 6. The race course included back lot areas of DisneyWorld as well as parts of the parks. It was Julia's first marathon.

Bradley Drouillard, above, displays his medal for earning his way into the *100 Book Club Reading Incentive Program* in his kindergarten class. Proud parents are Diana and Greg Drouillard.



Congratulations to Turksen and Jeffrey Shilts on the arrival of their new son, Jeffrey M. Shilts, Jr. on October 12 (6 lb. 15 1/2 oz, 20"). Turksen works in Dr. Chung's lab.

MEET . . . THE BRADDOCK LAB

Dr. Robert Braddock

For past 32 years, Dr. Robert Braddock, UF Professor of Food Science, has worked on technology related to processing and citrus by-products.

Citrus by-products include the leftover peel, pulp and other waste products generated in juice processing, which are recovered and converted to usable products. For example, oils from the peel are extracted for food flavorings, while the rest of the leftover peel, pulp and other residues are processed into cattle feed and molasses.

Dr. Braddock's work has focused on several aspects of juice and by-products technology, including membrane concentration and freeze concentration, high-pressure pasteurization, feed mill air pollution, and citrus oil recovery and quality issues. His has also worked on viscosity problems related to concentration of pulpwash in citrus juices, and is currently working with his graduate student, Eve Weiss, on issues related to halogenated compounds in citrus oils.

Dr. Braddock is a native of Port Orange, Florida. He earned a BS in Mathematics and a MS in Food Science from UF, and a Ph.D. in Food Science from Michigan State. He came to CREC in 1970.

Dr. Braddock has always felt that "one of my main missions is to train students . . . future scientists and technical people for the industry." He has mentored 25 students in his career, including current CREC faculty members Dr. Mickey Parish and Dr. Renee Goodrich. Currently, his lab includes graduate students Eve Weiss and Norman Nehmatallah and chemist Rockey Bryan.

Dr. Braddock has mentored 25 students in his career, including Drs. Mickey Parish and Renee Goodrich.

Dr. Braddock teaches Citrus Processing Technology, which was the first course taught at CREC. He originally taught the class in Gainesville, but began offering the course at CREC after the construction of Ben Hill Griffin, Jr. Citrus Hall. Today, it is one of the Center's most popular courses and is taken by food science students from CREC and Gainesville as well as citrus industry personnel.

In 1999, Dr. Braddock published the "Handbook of Citrus By-Products and Tech-nology," a 247-page resource for industrial and academic scientists, engineers, processors and students. "I have tried to answer the questions that have been asked of me all these years, said Dr. Braddock, noting that the book contains references and information that are otherwise difficult to find. "I don't know [of a book] anywhere that has this kind of information."

Rockey Bryan (left) and Norman Nehmatallah.

Dr. Robert Braddock and his laboratory are involved in research on processing and citrus by-products technology. Left to right: chemist Rockey Bryan, Dr. Braddock, and graduate students Eve Weiss and Norman Nehmatallah.

With over 90% of Florida's oranges processed mainly into juice, Dr. Braddock says that processing research is vital to the industry. "I feel sort of that the processing research group [at CREC] is like the tail wagging the dog," he said with a wry smile.

His many outside interests include music, fishing, hunting and Gator sports. "I'm a big Gator fan," he said. He plays racquetball twice a week with Dr. Bill Miller, as he has done for the past 25 years.

Also a musician, Dr. Braddock played clarinet in the Imperial Symphony Orchestra for 12 years and saxophone in dance bands.

Dr. Braddock currently oversees Facilities issues as part of CREC's Faculty Management Committee.

His family includes wife Mary Jo, a former elementary school teacher, and a son and daughter that both have careers in Florida's citrus industry.

Rockey Bryan

Rockey Bryan, a Winter Haven native, has worked with Dr. Braddock for 5 years. His lab work involves gas chromatography, capillary electrophoresis, GC-mass spectrometry, high-performance liquid chromatography (HPLC) and other techniques associated with analytical chemistry. One of his lab interests is developing methods for the analysis of compounds.

Rockey earned an AA in pre-law from Polk Jr. College (now Polk Community College) and a bachelor's degree in criminology from Florida State University. At FSU, he majored in criminology with an emphasis in forensics, and minored in sociology. He was accepted into two

Rockey's career history includes working in magic shows at Circus World. He also competed professionally as a kick boxer.

see Braddock Lab, page 5

The Braddock Lab continued . . .

Rockey Bryan, from page 4

law schools, but opted to work and earn money for law school.

So . . . he started working for the Ringling Brothers and Barnum Bailey's Circus World, then located near Interstate 4 and US 27. At Circus World, he was a customer services host, an assistant magician doing magic shows and a sound and light technician.

Impending changes in Circus World management prompted Rockey to start job searching, and he found a job with Dr. Herb Nigg. His work involved running statistical analyses, then later was trained as a lab technician. When grant funding came to a close, he took a job at Florida Distillers as a quality control supervisor.

About ten years ago, Rockey returned to CREC to work for the FDOC's Dr. Paul Cancalon, and five years ago was hired by Dr. Braddock.

Rockey's outside interests include karate and the martial arts. He holds a black belt in karate and competed as a kick boxer (his record as a professional was 10-2) and as an amateur boxer. He also delved into Thai-style kick boxing, which Rockey describes as "a lot rougher," with different rules than the American style of kick boxing. Nowadays, he focuses on karate and enjoys both the physical and mental aspects of the discipline.

Norman Nehmatallah

Norman Nehmatallah is native of Leamington, Ontario Canada. After graduating with a BS in Food Science and Human Nutrition from UF, he worked in research and development in the beverage industry. He decided to pursue a career in this area, and entered the UF graduate program in the Department of Food Science and Human Nutrition in Fall 2001.

Norman is working towards a MS with Dr. Braddock. His research involves developing methods for the detection and quantification of folate in citrus juice using capillary electrophoresis. Folate, or folic acid, is an important vitamin found in citrus. A major goal is to develop methods that can be used to monitor folate concentrations during processing and storage.

Norman is currently taking Dr. Rouseff's Flavor Chemistry and Technology course at CREC. After Norman completes his required coursework in Gainesville, he will move to CREC to conduct research in Dr. Braddock's lab.

Norman's hobbies include playing the guitar and piano and reading novels.

Eve Weiss

Eve is working towards an MS in Food Science with Dr. Braddock. After completing coursework in Gainesville, she moved to CREC last May. Her research involves the study of halogenated compounds in cold pressed orange oil, a citrus processing by-product used for flavorings.

A native of Yonkers, New York, Eve moved to Jacksonville in 1990. She holds a BS in Food Science from UF and entered the graduate program in Fall 2000.

In her graduate research, Eve has gained experience with analytical techniques using HPLC, GC and NMR. She is interested in nutrition and health, and would like to pursue a career along this line.

Among Eve's favorite foods . . . citrus!

Eve is one of four graduate student finalists chosen to present her research at the American Chemical Society National Meeting - Agricultural and Food Chemistry Division in Orlando this April. As a finalist, she will have her travel expenses paid and will compete for a $750 cash award.

Eve holds a Hunt Brothers Assistantship, funded by an endowment established by the Frank and Ellis Hunt families in Lake Wales to support graduate research at CREC. In addition, Eve was awarded the A.S. Herlong Graduate Fellowship, funded by an endowment in memory and honor of citrus grower A.S. Herlong.

Although most of her time is spent with her graduate work, Eve has a variety of interests, include music and the outdoors. She plays the piano and has composed music, and enjoys outdoors activities such as walking, hiking and canoeing. She also enjoys yoga, cooking and the theatre. Among her favorite foods . . . citrus!

Eve works alongside Rockey Bryan and Dr. Braddock in Room 45 in the Packinghouse.

Citrus Canker Info

CREC personnel are reminded that canker decontamination/disinfection procedures are mandatory for equipment and personnel working near or contacting any citrus plant. This includes strict limitations on movement of plant material, including fruit. Info is posted on a bulletin board outside the CREC Mailroom.

Manuscripts Submitted to the Publications Committee in January

R. T. Villanueva, J. P. Michaud, and C. C. Childers. Ladybeetles (Coleoptera: Coccinellidae) as Predators of Mites (Acari) in Citrus. *Florida Entomologist.*

L. R. Parsons, T. A. Wheaton, W. S. Castle. Reclaimed Water for Agricultural Irrigation - A Florida Experience. *Irrigation Journal.*

M. Farooq and M. Salyani. Spray Penetration into the Citrus Tree Canopy for Two Air-Carrier Sprayers. *Applied Engineering in Agriculture.*

W. M. Miller, W. F. Wardowski, and W. Grierson. Packingline Machinery. *Book Chapter for Fresh Citrus Fruits.*

February 2002

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
					1 Plant Path & Friends 11 am	2
3	4 Southern Assoc. of Agricultural Scientists dinner Citricult II 4-7 pm	5	6 **Seminar:** Soil Water Meas. 11 am Teaching Lab	7 Flavor Chem & Tech 4-8 pm	8 **Diaprepes Task Force Meeting 9 am** Plant Path & Friends 11 am	9
10	11 Citricult II 4-7 pm	12 Happy Chinese New Year	13 In-service training - Citrus Rootstock and Scion Varieties - Problems and Opportunities	14 Flavor Chem & Tech 4-8 pm	15 Plant Path & Friends 11 am	16
17	18 CRE Foundation mtg Citricult II 4-7 pm	19 **Seminar:** Precision Ag 11 am	20 FL Rural Water Assoc. workshop	Faculty mtg 8:30 am 21 In-service training, citrus in urban env. Flavor Chem & Tech 4-8 pm	22 Plant Path & Friends 11 am	23
24	25 Citricult II 4-7 pm	26 Supervisors mtg 8:30 am Citrus canker tech advisory task force mtg	27	28 Flavor Chem & Tech 4-8 pm		

All events subject to change.

February 2002

4 - Southern Assoc. of Agricultural Scientists - dinner at CREC

6 - "Soil water measurement using capacitance sensors." Dr. Colin Campbell, Prof of Soil Science, Washington State Univ. 11 am, BHG Teaching Lab.

8 - Diaprepes Task Force meeting. 9 am - BHG Room 1.

13-14 - In-service training, Citrus Rootstock and Scion Varieties: Problems and Opportunities. Dr. Ed Stover, IRREC. BHG Rooms 3-4.

18 - CRE Foundation meeting, Packinghouse Conf. room. Dr. Browning.

19 - "Use of Precision Agriculture to Determine Variability of Crop Yield in Dryland Agriculture Systems." Dr. Mahmood Nachabe, Dept of Civil and Env Engineering, Univ of South Florida. BHG Room 1, 11 am - 12 pm (10:45, refreshments).

20 - Florida Rural Water Assoc. "Focus on Change" workshop.

21 - Faculty mtg., BHG Room , 8:30 - 10:30 am.

21 - In-service training, Citrus production in the urban environment. BHG Rooms 2,3,4. Dr. Steve Futch.

26 - Supervisors mtg, Packinghouse conf room, 8:30 - 10:30 am.

Classes at CREC This Semester:

HOS 6546 Citriculture II, Mon. 4pm -7pm, Dr. Albrigo. BHG Conf room.

FOS 6317C Flavor Chemistry and Technology, Thurs, 4pm- 8pm, Dr. Rouseff. BHG Teaching Lab.