

**Friends of Agricultural Research-Beltsville, Inc.  
PO Box 1061, Beltsville, MD 20704-1061**

**Dedicated to promoting the research and education programs of the  
Henry A. Wallace Beltsville Agricultural Research Center, Beltsville, MD**

# **THE FAR-B NEWS**

*June 2006*

*Editor: Hank Becker*

## **President's Message**

Dear Friends and Colleagues,

As will be apparent in this edition of the Newsletter, FAR-B has been very active this spring in pursuing various programs and activities in support of BARC. Among these is the continuing effort to help organize the BARC Alliance which is an exciting initiative aimed at building a broad base of support for BARC among the business, government and non-governmental sectors.

Details are presented in an accompanying article in this Newsletter. However, I do want to take this opportunity to express on behalf of FAR-B our sincere gratitude to John Peter Thompson, Chairman of the Board, Bhenke Nurseries, Inc., for his



J. P. Thompson, Chairman of the Board,  
Bhenke Nurseries, Inc.

willingness to take this lead in this effort. FAR-B looks forward to working with John Peter to make this a reality.

This month (June) occasioned the awarding of the first Innovative Research Grants to BARC scientists. The direct providing of funds for research is a relatively new activity for FAR-B, but is one that should be expanded, if possible, given the budget constraints BARC is experiencing. To this end, FAR-B is exploring new ways of raising money for this purpose. We hope this fall we can announce new activities to achieve this.

Finally, I am very pleased that FAR-B's extensive efforts at community outreach, especially those focused on schools, is receiving significant recognition. In this Newsletter is an announcement of one such recognition, the Silver Medal Presidential Award for Volunteerism. My warmest thanks to those who have devoted so much of their time and energy to this program, the award is richly deserved!

Warm regards,

**Darwin Murrell**, President

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## **Area Director's Message**

If the three most important issues in purchasing a house are location-location-location, then the three most important issues at BARC are funding-funding-funding!

A number of budgetary decisions are still winding there way through the halls of Congress. A Supplemental Bill was finally

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passed that would rescind the 1 percent FY06 rescission for Katrina relief efforts within the Agency. Certainly this is good news but these funds at BARC will be used to offset elevated utility costs for FY06. We are still awaiting the mark-up from the Senate but we know from House actions that the funds for the Phytonutrient and Fruit Laboratories were restored as well as past Congressional add-on appropriations.

We at BARC are pleased to have Dr. Allison Yates on-board as the new Beltsville Human Nutrition Research Center Director. Allison comes to BARC with a long and impressive background in the human nutrition arena.

Our new poultry facility is nearing completion and we plan on having a dedication sometime in August. We hope that this will be just the beginning of the re-modernization.

Since I have been out-of-BARC for a three month detail as Acting Area Director for the Southern Plains Area (SPA), I would like to share some impressions. First, yes, BARC is different than other areas within the Agency. The SPA has 20 locations plus some additional worksites spread over four states and Panama; thus, a suitcase and a travel card are necessities. Certainly, many tasks can be handled by phone or e-mail but nothing replaces "face-time" with staff at locations which obviously takes time and a hefty Area Office travel budget.

Many of the financial issues we are addressing here at BARC are challenges at many of the SPA locations; reduced SY staff but maintaining the same size physical plant, increase utility costs, and an eroding of discretionary dollars. It is certainly more difficult to adjust staffing levels at a location with 10 SYs compare with BARC where reorganizations appear to be the norm.

**Ron Korcak**, Assistant Area Director

## **FAR-B Initiates New Grants and Awards Programs**

FAR-B has initiated two new programs in order to provide assistance to BARC in overcoming Federal budget reductions that are anticipated for the next two fiscal years.

One is a Professional Travel Grant totaling \$20,000, proportionately allocated to the three BARC institutes according to their number of SYs. These funds are to be used specifically for scientist travel to cooperating laboratories and professional meetings and will be administered by the Institute Directors as follows: \$7,000 to the Animal and Natural Resources Institute; \$4,000 to the Human Nutrition Institute; and \$9,000 to the Plant Sciences Institute (including the Floral and Nursery Plants group). Requests for Professional Travel Grants should, therefore, be made directly to the appropriate Institute Director.

FAR-B just established a second program, the Awards Program for Scientists and Innovative Ideas. Awards of up to \$5,000 will be made by FAR-B to individual scientists as resources permit. Criteria to be addressed when applying for an award include: (1) approval of the applicant's first line supervisor; (2) a description of the project or innovative idea and an estimate of cost; (3) expected outcome; and (4) other sources of support. One-page applications should be sent via e-mail to the FAR-B President, Dr. K. D. Murrell, at [kdmurrell@comcast.net](mailto:kdmurrell@comcast.net).

The FAR-B Board of Directors approved funding for three proposals at its June meeting. The first award was granted to Dr. Lisa Rowland of the Fruit Laboratory for "The Identification of Markers Associated with Parthenocarpy in Blueberry." This work should result in the identification of one or more DNA markers for parthenocarpy (production of fruit without pollination). Markers will be available for future marker-assisted-

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selection in breeding for parthenocarpic cultivars with good fruit quality.

The second award was made for a cooperative proposal from Dr. Lyndel Meinhardt of the Sustainable Perennial Crops Laboratory and Dr. Robert Owens of the Molecular Plant Pathology Laboratory for "The Development of a Viroid Induced Dwarfing Methodology for *Theobroma cacao*." A dwarfing agent of this nature could be used on any superior producing clone to reduce the overall height of trees so as to facilitate cultural practices that control fungal diseases by the timely removal of diseased tissues.

Dr. Susan Lawrence of the Insect Biocontrol Laboratory received the third award for "An Environmentally Friendly Approach to Corn Rootworm Control in Maize." Experiments will be conducted to identify genes that are induced by corn rootworm infestation in roots and leaves and would allow production of inducible insect resistant plants. Such plants would result in lower levels of insect toxin protein in the environment and would supersede the use of chemical pesticides for controlling this major insect pest.

After its summer recess, the FAR-B Board will reevaluate the Grants and Awards Programs to determine how best to proceed with these new initiatives during the coming year. As always, input from FAR-B members is welcome by contacting our President or any of the Board Members.

**Ralph Bram**, Grants & Awards Chairman

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### **FAR-B Annual Meeting**

FAR-B's annual meeting was held at the Henry A. Wallace Beltsville Agricultural Research Center, Building 003, auditorium on Tuesday, May 2, 2006 at 2 p.m.

Preceded by a 1:30 p.m. reception for FAR-B board members, patrons, and

sustaining and associate members with food and drinks provided by Nancy Thrush, FAR-B Vice-President William Wergin called the Annual Meeting to order and made introductions. He introduced featured speaker, John Peter Thompson, CEO, Behnke Nurseries, Inc., Beltsville, who spoke on "The New BARC Alliance and the Rise of Invasive Ornamentals."

Thompson's presentation was very lively, extremely interesting and informative and well received by the audience. He pointed out that gardeners are obsessed with order and symmetry so as to mimic man's perceived vision of the Garden of Eden and the folly of such an endeavor. He illustrated in a slide show the result of using invasive species like ivy, bamboo and wisteria--that look great but need constant tending to be tamed--in home landscaping and gardens. Then he spoke briefly about his mission to bring attention and financial assistance to BARC from business, government and non-governmental sectors—by making them aware of BARC's vital and incredible contribution both to the Washington D. C. area and the nation.

After Thompson's presentation, Phyllis E. Johnson made brief comments about what is happening at BARC. She spoke briefly of an inventory of native plants on BARC property that found rare and old and endangered species of plants and trees. Her talk was most fascinating and informative.

Next, Wergin presented a brief review of FAR-B's many accomplishments during the past year. Then Morton Beroza presided over election of new officers and board members.

Freddi Hammerschlag was elected to the FAR-B board and James Anderson was officially elected Secretary.

**Hank Becker**, Publicity Chairman

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### **Financial Report**

FAR-B's budget for 2006 will once again show expenditures exceeding income by a considerable margin. This deficit will result of the Board of Directors' decision to dip into reserve funds to provide \$20,000 to BARC scientists for travel grants and up to \$15,000 to fund an Awards Program for Scientists and Innovative Ideas as discussed earlier in this newsletter.

On the income side of the 2006 budget, we anticipate that the 29 percent reduction in pledges to the Combined Federal Campaign last fall will be offset by increased yield in interest on FAR-B's investments.

**Vernon Pursel**, Treasurer

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### **BARC Poster Day**

Once again FAR-B assisted in making the annual Poster Day event a resounding success by providing a tent adjacent to the ARS Visitors Center so that the high school interns could display their posters alongside of the BARC post-docs and newer researchers.

This year 29 Eleanor Roosevelt High School seniors displayed their posters that described their research efforts in BARC laboratories.

Jenny Allen, Intern Coordinator for BARC, assisted FAR-B in providing eight judges who evaluated the posters and FAR-B then provided \$300, \$200, and \$100 cash awards to the three interns with the highest overall scores.

The first place award went to Jason Kunz for his project "The Effect of New Strains of *Bacillus thurengiensis* (BT) on the Diamondback Moth, *Plutella xylostella*. Antioxidant." Second place award went to Elizabeth Mongeon for her project "Combinatorial Microbiology: A Simplified

Approach to Isolating Insecticidal Bacteria." Third place award went to Jasmine Bennings for her project "The Effect of Viroid Infection on Tomato Growth and Development."

**Vernon Pursel**, Treasurer

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### **FAR-B Lead Science-Enrichment Program Merits Silver Presidential Volunteer Service Award**

For the third straight year, BARC scientists have teamed with FAR-B, the Beltsville Elementary School, the University of Maryland, and others to bring science enrichment to the Beltsville school. Skillfully planned by FAR-B's ARS liaison Diane Odland of the ARS Information Staff, each lab's station entertained and exposed students to basic concepts that are sorely missing from the science-starved elementary school curriculum.



Kindergarteners Nkechi Ofulue, Ashley Hosein, Victoria Diaz, Brittney Maharaj, and Anisa Roberts check out a cool cow on Science Enrichment Day

A year ago, the enrichment theme on human nutrition won a bronze medal Presidential Volunteer Service Award. This year's theme won again. This time the group received a silver medal Presidential Volunteer Service Award for its efforts. Organizers are already

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dreaming of “going for the gold” next future year.

From May 2 to 4, four BARC laboratories and FAR-B volunteers returned to the Beltsville Elementary School for an intensive, hands-on science enrichment event for its students. This year, about 14 BARC scientists and a supporting cast of FAR-B and other volunteers demonstrated to students the wonders of Animal Science.

Each of four BARC labs set up a demonstration station in the school gymnasium. The group heading to Pat Allen’s station received a scientific explanation of how parasitic organisms attack chickens. They used a laboratory microscope for a close-up view of the parasite. Students--many perhaps for the first time ever--then got their hands on the feathers of a real live chick.

At Duane Norman’s station, students experienced the vacuum tug and pull of a real milking machine. And they received a lesson in basic animal genetics. They explained why some cows grow up to have horns, and some do not? Why some cows are black and white, while others are red and white?



Students experience the vacuum tug and pull of a real milking machine

At the honeybee station, Bart Smith and associates helped students look for the queen inside a sealed beehive. Then

students received a science lesson about how honeybees pollinate many fruit and vegetable plants and their critical role in pollination. Each year honeybees pollinate about \$14 billion worth of crops.

Entomologist Dave Adamski had creepy-crawly live caterpillars to handle, and majestic pinned Monarch Butterflies to admire. Many insects are migratory travelers, Adamski explained, while twirling a world globe. Students discovered that Monarch Butterflies in winter, go deep into Mexico and look for a tree laden with Monarchs.

A poster contest is under way for students to display what they learned from the science enrichment event. Teachers will select 35 winning posters, and they will go on display at Citizens National Bank in the Chestnut Hills Shopping Center, Beltsville, about June 1. The bank invites the public to stop by and have a look.

**Jim Butcher**, Outreach Chairman

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### **National Visitor Center Gets New Director**

Jennifer Woodward-Greene first became associated with ARS BARC in 1986. She has a Master of Science in Animal Science: Environmental Dairy Nutrition, and graduated *cum laude* with her B. A. in Animal Science, both from the University of Maryland. She conducted her graduate research at the BARC. Her research on nutrient cycling focused on N conservation in the rumen, and her large animal, 6 X 6 LS digestion trial was the first ever digestion trial conducted in the new BARC Dairy facility.

While in grad school at Maryland, she worked part-time as a High School Molecular Biology Teacher and as a lab technician at ARS. As an undergraduate, she worked 30 hours a week at ARS Beltsville in the Roads and Ground Unit as a landscape laborer and tractor operator,

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with research animals as an animal caretaker, and as a technician in the Ruminant Nutrition Lab before becoming a full time employee.

Jennifer volunteered for several agricultural and leadership development organizations. She is active as a 4H mentor, and in collegiate student organizations. In 1993, she submitted an employee suggestion to the ARS Beltsville Area Director for "Partners in Education," a joint program with BARC, The University of Maryland, and the student Agriculture professional honorary organization, Alpha Zeta. The Alpha Zeta Agriculture Field Day at BARC program served as a template for discussions on what eventually became the BARC Public Field Day.

Besides the Field Day, the full blown Partners in Education Program generated numerous educational programs for youth, adult groups including Extension and commodity groups, university student groups and classes, even an international tour from a top level delegation from Moldova, arranged by Alpha Zeta's national office.

After nearly 16 years at ARS, in 2000 she went to private industry as Manager of Education and Scientific Affairs for the Horizon Organic Farm and Education Center, part of the Marketing Department of Horizon Organic Foods, an international, public food company. She managed operations, budget, program, and up to 20 employees. Jennifer found her niche and love in this position, as it utilized and developed her strengths in science, education, program development and analysis, and marketing.

Just before her return to ARS, Jennifer worked for the USDA Cooperative State Research Education and Extension Service in Washington D.C., where she served as a Program Specialist in CSREES' Competitive Research Grants Programs Unit. Back at ARS, Jennifer has continued working on a national level in the ARS Recruitment Office marketing ARS as an

employer of choice, and working with hundreds of clients improving their resumes and Federal job applications. She worked with ARS National Program Staff for Animal Production and Protection, putting on two National Stakeholder Workshops just before assuming her current position as the new director of the ARS National Visitor Center.

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### **17<sup>th</sup> Annual BARC Poster Day Award Winners**

The 17<sup>th</sup> Annual BARC Poster Day was held on April 26 at the ARS National Visitor Center. BARC Poster Day is an opportunity to publicly recognize our newest research scientists, visiting scientists, and post-doctoral research associates, and it provides an excellent opportunity for these scientists to present their research results to the scientific community and others interested in advances in agricultural research.

Award-winning posters were presented by David P. Puthoff of the Molecular Plant Pathology Lab; Martha C. Anderson of the Hydrology and Remote Sensing Lab; Meghan A. Kelly of the Nutrient Requirements and Functions Lab, and Chun-Chieh Yang of the Instrumentation and Sensing Lab. Students from Eleanor Roosevelt High School who conducted research projects under the mentorship of BARC scientists also participated.

In the student division, award winning posters were presented by Jason Kunz, Elizabeth Mongeon, and Jasmine Bennings.

Friends of Agricultural Research-Beltsville (FAR-B) provided financial support so the students could present their work along with the BARC scientists. More information can be found at [www.ars.usda.gov/ba/posterday](http://www.ars.usda.gov/ba/posterday).

**Friends of Agricultural Research-Beltsville, Inc.**

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**Beltsville Area**

Area Director: Phyllis Johnson  
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Jennifer Woodward-Greene

**In Memoriam**

**Heggie Holtan**

Heggie Holtan died on March 22. He was a man of many parts: a gymnast and athlete; a man of science who performed pioneering research in hydrology; an all-round handyman (carpenter, electrician, plumber) who added to or re-built nearly every home he ever owned; a man of faith who helped found Holy Trinity Lutheran Church of Laurel, Maryland; a faithful husband, devoted father of 3 children; and grandfather of 7 grandchildren.

Heggie was born April 10, 1909, on a tobacco farm in Stoughton, Wisconsin. He was the youngest of 13 children of a hard-working Norwegian family. He loved sports, especially gymnastics, and so he trained to be a physical education teacher at LaCrosse College. He graduated in 1933, just in time for the Great Depression.

He joined the Civilian Conservation Corps, where he got work helping agricultural field research teams and found he had a talent for engineering. These teams traveled all over the U.S., taking measurements and setting up experiments at various field sites. It was on one of those field trips into Georgia that he met his wife Glenna Humphries, who he married on January 5, 1938.

The newlyweds traveled all over the U.S. But Heggie realized that he needed formal training to further his career, so he and Glenna traveled to the frozen wastes of Ames, Iowa, where he entered the engineering program at the University of Iowa. He studied, and she worked to put food on the table. He even cooked on occasion.

Heggie soon resumed his career, and in Alton, Illinois, their eldest son Andy was born in 1943. Three years later, twins Greg and Susan were born. In 1947,

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Heggie was transferred to the Agriculture Station at VPI in Blacksburg, Virginia.

In 1953, Heggie was transferred to the USDA Plant Industry Station in Beltsville, Maryland, where he was instrumental in establishing the Hydrograph Lab--a national database for the collection and correlation of rainfall and soils data from all over the U.S. This lab was the first to employ computer modeling of rainfall infiltration and run-off for various soils

and terrains, using empirical data input to equations he developed.

He directed this lab until his retirement in 1974, after 42 years of government service. During his career, he published many scientific papers, and was asked to speak at conferences worldwide.

After retirement, he and Glenna moved to Vero Beach, Florida, to be near his son Greg.

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**FIRST CLASS**

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