



February 2007

BARC is part of the USDA's Agricultural Research Service and encompasses programs at the Beltsville Agricultural Research Center; the U.S. National Arboretum in Washington, D.C.; and worksites in Chatsworth, New Jersey; Presque Isle, Maine; and McMinnville, Tennessee. BARC is the largest and most diversified agricultural research complex in the world. BARC's record of accomplishments and its ongoing programs have made it a world leader in agricultural research.

Blowing Our Own Horn!

BARC SCIENTISTS WIN TECH TRANSFER AWARD

It was announced on January 19, 2007 that four Beltsville Area scientists and a scientist from the FDA were selected as winners of the 2007 Award for Excellence in Technology Transfer by the Federal Laboratory Consortium for Technology Transfer (FLC). The award recognizes laboratory employees who have accomplished outstanding work in the process of transferring a technology developed by a federal laboratory to the commercial marketplace. **Drs. Mark Feldlaufer, Jan Kochansky** (retired), **Jeff Pettis, Matt Kramer** and **Margaret Oeller** (FDA) will be recognized at an award ceremony on May 17, 2007, at the FLC National Meeting in Arlington, Texas, for their effort to develop a "New Antibiotic to Control American Foulbrood Disease of Honey Bees".

AAAS FELLOW INDUCTION

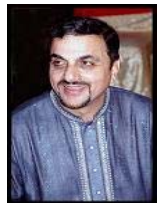
Dr. Robert E. Davis, Research Leader of BARC's Molecular Plant Pathology Laboratory, was inducted as Fellow of the American Association for the Advancement of Science (AAAS) at the Society's Annual Meeting in San Francisco in February 2007. Dr. Davis is a member of the National Academy of Sciences.

BARC SCIENTIST RECEIVES ASSOCIATION OF INDIANS IN AMERICA AWARD

At the 27th Annual Academic and Outstanding Achievement Awards Ceremony of the Association of Indians in America (AIA), Washington, D.C. Chapter, **Dr. Autar Mattoo** was named the 2006 AIA Scientist of the Year. The Award was given in recognition of



Dr. Mattoo's contribution to science and mentoring international scientists and students including those of Indian origin. AIA is the oldest national association of Asian Indians in America, a non-profit organization founded in 1967. **Dr. Mattoo** is a plant physiologist in BARC's Sustainable Agricultural Systems Laboratory.



NEW RESEARCH LEADER APPOINTED



Dr. William Kustas has been named Research Leader for the Hydrology and Remote Sensing Laboratory, Animal and Natural Resources Institute (ANRI). **Dr. Kustas** received his Ph.D. from Cornell University in 1986 and immediately joined BARC as a Research Hydrologist. During his research career, he has authored or co-authored over 120 peer-reviewed journal publications/book chapters and received seven grants totaling over \$2.6 million. His main research area is understanding land surface-atmosphere energy exchange processes at both micro and macro scales. Research focus includes developing models which utilize remote sensing data to estimate surface energy fluxes and evapotranspiration over agricultural fields, natural ecosystems and snow covered basins. **Dr. Kustas** is a fellow of the American Geophysical Union and is the Chief Editor of the *Journal of Hydrometeorology*.

Community Interest...

COMMUNITY SUPPORTED AGRICULTURE

BARC will once again be hosting a Community Supported Agriculture (CSA) activity. CSA's are an innovative strategy to connect local farmers with local consumers. CSA is a partnership which provides a direct link between the production and consumption of food. CSA members pay an upfront "subscription fee" to the farmers. In return, local consumers are provided a share of the season's harvest, usually on a weekly basis.

This year BARC has partnered with Calvert Farms. More information about the Calvert Farm and its CSA can be found at www.calvertfarm.com. For more general information on CSA's and other CSA farmers go to www.localharvest.org.



LocalHarvest SM
real food. real farmers. real community

POTATO ZEBRA CHIP

A newly emerging potato disease (potato zebra chip), first identified in commercial potato fields in Texas and Mexico in 1995, has become widespread since 2000, resulting in serious economic losses in both fresh and processing markets. The disease has since been found in several potato-producing areas in the U.S., including Texas and Nebraska. Infected potato plants exhibit a wide range of symptoms, and the infected tubers exhibit extensive brown discoloration throughout the entire tuber and death of eyes, which either do not sprout or rarely produce hair sprouts. Chips made from diseased potatoes develop dark brown banding patterns, termed "Zebra Chip." Extensive testing over several years has failed to find the cause of the disease. **Dr. Ing-Ming Lee** of BARC's Molecular Plant Pathology Laboratory (MPPL), in cooperation with **Gary Secor** of North Dakota State, have initially identified a new phytoplasma that may play a significant role in disease development of this in some, but not all, potato growing areas. Phytoplasma are organisms that lack a cell nucleus and a cell wall. As a group they are known to cause over 600 plant diseases. Plant to plant transmission of phytoplasmas is by insect vectors. Evidence indicates that pathogen(s) causing this disease are complex and more than one type of pathogen may be involved. A working team, including **Rosemarie Hammond** (MPPL) and **John Hammond**

(Floral and Nursery Plants Research Unit, US National Arboretum), with expertise in bacteriology, virology and entomology are undertaking to systematically identify the causal pathogen complex. For more information on Zebra Chip or phytoplasmas in general contact **Dr. Lee** at Ing-Ming.Lee@ars.usda.gov



NEW HAIRY VETCH CULTIVAR



Dr. Thomas Devine of BARC's Sustainable Agricultural Systems Laboratory has developed a new cultivar of hairy vetch for use as a winter cover crop. The new cultivar 'Purple Bounty' has improved winter-hardiness combined with earlier flowering. Hairy vetch is planted in the fall and after over-wintering produces abundant

biologically-fixed nitrogen in the spring that can be used to nourish subsequent crops such as corn and tomatoes. The early flowering feature of 'Purple Bounty' is an important advantage because it permits earlier planting of the subsequent crops like corn and tomato crops. 'Purple Bounty' should encourage more widespread use of this nitrogen fixing legume cover crop. For more information, contact **Dr. Devine** at Thomas.Devine@ars.usda.gov.

Mark Your Calendar!

BELTSVILLE AREA DISTINGUISHED LECTURE SERIES

This seminar is open to the public



Dr. Cynthia L. Baldwin, Professor, Department of Veterinary and Animal Sciences, University of Massachusetts, Amherst, MA

Date: Wednesday, March 15, 2007

Time: 10:30 a.m. - 11:30 a.m.

Place: Building 003 Auditorium, BARC-West

Title: "Developing Veterinary Vaccines: The Role of the Immunological Toolkit"

BIOFUELS AND WATER QUALITY CONFERENCE

April 4 – 5, 2007, Building 003, Auditorium. The Mid-Atlantic Regional Water Program and BARC are convening this 2-day conference to discuss the impacts of agricultural based biofuels on water quality and the environment. To register, contact Jake Vandevort at jvandev@umd.edu. There is a \$25 registration fee. For additional conference information, contact Tom Simpson at simpson@umd.edu or Ron Korcak at Ron.Korcak@ars.usda.gov.

ENVIRONMENTAL FILM FESTIVAL IN THE NATION'S CAPITAL: "SUZHOU GARDENS"

March 22, 7:00 pm – 9:00 pm – For 1,500 years, wealthy Chinese created spectacular gardens as a refuge from the outside world. China has restored classical architecture, extensive water features, plantings, and stones of many of these treasures from the past. National Arboretum Director Dr. Thomas Elias will discuss the influence of the traditional designs, especially those of Yangzhou, on the Arboretum's future China Garden. Admission is free, but advance registration is required. For more information or to register, please visit www.usna.usda.gov/Education/events.

NATIVE PLANT SALE

March 31, 10:00am – 2:00pm – Plant sales area is across the street from the National Bonsai & Penjing Museum. Start to supplement your garden with native plants from a variety of vendors. Sponsored by the Friends of the National Arboretum. Free. www.usna.usda.gov/Education/events



Celebrate!

National Agriculture Day, March 21, 2007

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