

Look What's Out There

in

Integrated Pest Management

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“Leftovers” from Ethanol Production a Possible Alternative to Herbicides

There may be a new use for the co-products of converting corn into ethanol. Distillers dried grains (DDGs) are usually fed to livestock, but a new use for the leftovers of ethanol production is being investigated by researchers. Scientists with the Agricultural Research Service (ARS) are studying the efficacy of DDGs as an alternative to chemical herbicides for controlling weeds. Steve Vaughn, an ARS plant physiologist at the National Center for Agricultural Utilization Research (NCAUR), has shown that applying DDGs to soil as a surface mulch can not only suppress weeds, but also improve the growth of tomatoes and some turfgrasses. In one study, Roma tomatoes in DDG-treated plots yielded 226 pounds, versus 149 pounds from untreated control plots. Vaughn attributes some of the increase to nitrogen, phosphorus and other nutrients released by the DDG mulch as it decayed. Approximately 100 scientists are seeking to identify new uses for farm-based commodities like DDGs and help make them commercially available by developing novel processing technologies. Other studies include identifying, measuring and monitoring the activity of the chemicals in the DDG mulch that may keep chickweed, annual rye and other weeds from germinating; testing the mulch's weed control in potted ornamentals; and examining DDGs for phytosterols, lecithin and other substances with potential use as health-promoting food ingredients.

(USDA ARS May 2007)

Newly Discovered Fungus Used in Biocontrol of Whiteflies

An unusually durable fungus that was first spotted on tiny insects feeding on eggplants in Texas may become a new biological control for the widespread and costly agricultural pests known as whiteflies. First isolated by Agricultural Research Service (ARS) entomologist Enrique Cabanillas in 2001, the new fungal species has been named *Isaria propawskii*. In the Lower Rio Grande Valley of Texas, it has been shown to kill both larval and adult stages of silverleaf whitefly. In fact, since 2001, it has periodically wiped out whiteflies at the ARS insect-rearing facilities in Weslaco. The silverleaf whitefly, *Bemisia argentifolii*, feeds on the juices of a myriad of host plants. Heavy feeding can give plants under attack a yellow, mottled look and eventually kill them. Whiteflies cause major crop losses, both directly by feeding and indirectly by transmitting plant viruses. What makes *I. propawskii* such a good candidate as a biocontrol agent of whiteflies is its natural establishment in a semiarid region where temperatures can reach 107 degrees Fahrenheit—and its continuing persistence, even in the absence of insect hosts. This fungus also produces spores prolifically in common culture media making this fungus easy to grow in the laboratory. *Isaria propawskii* also is potentially highly pathogenic against a second major insect pest—the glassy-winged sharpshooter, making

this fungus a promising candidate for practical biological control of two major U.S. farm pests. (*USDA ARS May 2007*)

EPA Instructions for Developing Disposal Instructions to be Included on Household Use Pesticide Product Labels

The Environmental Protection Agency (EPA) has developed new guidelines for labeling household pesticides. The EPA had excluded household wastes from regulation as hazardous waste for many years until 1996 when it began the Consumer Labeling Initiative (CLI). One goal of the CLI was to improve consumer understanding of safer use, environmental, and health information on household consumer product labels, including indoor insecticides, outdoor pesticides, and household hard surface cleaners. The guidelines for proper disposal of hazardous household wastes in different areas of the country are usually developed by individual localities. These local guidelines often conflict with existing label disposal instructions. The differences between existing label disposal instructions and local disposal guidance may, understandably, confuse consumers, complicate local educational efforts, and interfere with state and local responsibilities. Additionally, most disposal instructions do not promote EPA's pollution prevention and waste management goals of source reduction, reuse, and recycling. The purpose of this notice is to present disposal instructions for empty and partly filled non-antimicrobial, residential/household use pesticide products and is directed toward manufacturers, producers, formulators, or registrants of pesticide products. The entire PRN (2007-1) can be found at http://www.epa.gov/PR_Notices/pr2007-1.htm.

(*EPA April 2007*)

EPA Releases 2006 National Pesticide Program Annual Report

The Environmental Protection Agency's 2006 Pesticide Program Annual Report has been posted at <http://www.epa.gov/oppfead1/annual/index.htm>. This report is an overview of

accomplishments of the national Pesticide Program. Highlighted in this report are the cumulative risk assessment decisions for triazines, organophosphates, chloroacetanilides; review of pesticide active ingredients; endangered species program accomplishments; emergency planning and response and other accomplishments.

(*EPA March 2007*)

Funding Opportunity

○ The Northeast Vegetable IPM Working Group, (http://northeastipm.org/work_vegetable.cfm) is sponsoring an Educator Exchange program. This program offers to pay qualified expenses to help agricultural professionals in the Northeast learn about and share integrated pest management practices. The program was launched in January 2007 and has already funded several consultants, growers and Extension educators to travel to conferences and learn about IPM. They each have a plan for sharing the IPM practices in vegetables and strawberries that they learned.

This program is open to growers, vegetable and/or strawberry specialists, Cooperative Extension educators or county agents, crop consultants, government agency staff, agricultural professionals in nonprofit organizations, or anyone who will be in contact with many vegetable or strawberry growers. The person must provide unbiased, research-based information and be a resident of a northeastern state (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New Hampshire, New York, Pennsylvania, Rhode Island, Vermont, and West Virginia) or the District of Columbia.

The maximum amount of money awarded will be \$800 per person for reimbursement of travel, registration fees, food (up to \$35 per day) and overnight accommodations. Educational programs and travel must take place before December 31, 2007. Approximately \$8,000

remains to be distributed in the Educator Exchange Program. For further information, including updates on funds remaining in this category throughout the year, see http://northeastipm.org/work_vegetable.cfm

- BASF is providing matching grants for public and private integrated vegetation management programs. To qualify for a matching grant, weed managers must be using herbicides as part of weed control initiatives and must use the BASF funding for application. Both aquatic and terrestrial spray applications are eligible for funding, and working with QVM Certified Applicators and QVM Certified advisors is highly encouraged. Land managers who will self-apply the herbicide are not eligible to participate in the program. The deadline for application is July 12, 2007. For more information go to <http://www.vmanswers.com/content.aspx?mid=0&pid=1141>.

- Each year, The Charles A. and Anne Morrow Lindbergh Foundation provides grants of up to \$10,580 (a symbolic amount representing the cost of the Spirit of St. Louis) to men and women whose individual initiative and work in a wide spectrum of disciplines furthers the Lindberghs' vision of a balance between the advance of technology and the preservation of the natural/human environment. Lindbergh Grants are made in the following categories: agriculture; aviation/aerospace; conservation of natural resources - including animals, plants, water, and general conservation (land, air, energy, etc.); education - including humanities/education, the arts, and intercultural communication; exploration; health - including biomedical research, health and population sciences, and adaptive technology; and waste minimization and management. Deadline for application is June 14, 2007. For more information go to <http://www.lindberghfoundation.org/grants>.

- The Northern Nut Growers Association is accepting grant proposals from anyone who has the interest and capability to perform pertinent

research on pests that affect nut trees. This includes NNGA members, academic professionals, private individuals, and corporations. Any topic dealing with temperate zone tree nuts is eligible. Historically, the interests of the NNGA have also included papaws and persimmons. Past annual reports can be consulted for an overview of NNGA interests. Suggested topic areas are propagation, germplasm and cultivar evaluation, pest management and pest biology, mechanical harvesting, post-harvest handling and processing, orchard establishment, orchard care and maintenance, marketing, basic biology and ecology, and foreign exchange of germplasm. Final grant proposal deadline is June 30, 2007. Funding duration can be up to 2 years with grant amounts up to \$5,000. For further information go to <http://www.nutgrowing.org/grant.htm>.

- The Organic Farming Research Foundation (OFRF) funds research on organic farming and food systems and the dissemination of these research results to the greater agricultural community. Proposals must involve farmers or ranchers in project design and implementation and take place on working organic farms or ranches whenever possible. Additionally, proposals should articulate how the proposed research project will foster the improvement or adoption of organic farming systems. OFRF will only fund projects in North America (which includes Canada, the United States, and Mexico). Project proposals are reviewed and awarded by the OFRF Board of Directors, the majority of who are certified organic producers. OFRF particularly encourages farmers, ranchers, researchers, and extension personnel to consider applying for funding. Farmers and ranchers often find that working with professional researchers can make it easier to design and carry out a research project, and OFRF encourages applications from such partnerships. Deadline for application is July 16, 2007. For more information go to http://ofrf.org/grants/apply_research.html.

Agricultural and Environmental News

New Varieties of Lettuce Resistant to Verticillium Wilt

Agricultural Research Service (ARS) scientists at Salinas, Calif., have teamed with University of California-Davis colleagues to produce the first-ever parent iceberg lettuces resistant to the lettuce disease, verticillium wilt. This disease is caused by a soil-dwelling, root-rotting fungus called *Verticillium dahliae*. This fungus infects roots of vulnerable plants, moving into leaves and causing them to discolor, then to eventually wilt and die. In the case of iceberg lettuce the plants collapse like a deflated ball before they have a chance to form their familiar firm, nicely rounded heads. The fungus can also infect and kill hundreds of other kinds of plants, including strawberries and tomatoes.

Ryan J. Hayes, a research plant geneticist with the ARS U.S. Agricultural Research Station in Salinas, plant pathologist Krishna Subbarao at UC-Davis, and their colleagues have bred resistant varieties of iceberg lettuce and have made seeds of the three new parent lettuces available to researchers and plant breeders for the first time this April. They published additional details about verticillium wilt resistance in a recent issue of *Plant Disease*. According to Hayes, more than a half dozen companies that produce vegetable seeds have requested seed samples. These parent lines are meant for crossing with consumer-ready lettuces to boost the commercially grown lettuces' resistance to verticillium wilt. Breeding lettuces with natural resistance remains the most environmentally friendly, economical and sustainable option for combating the fungus. Researchers have invested more than a decade in scrutinizing promising lettuces in greenhouse and field tests before determining that the new parent lines were ready for plant breeders everywhere to use. (USDA ARS May 2007)

Did You Know That



Some facts on unintentional poisonings:

- Once every 13 seconds a U.S. poison control center receives a call about an unintentional poisoning
- Poison centers reported more than 70,000 calls made to poison centers with concerns about potential exposure to common household pesticides
- 50 percent of the 2 million poisonings each year involve children younger than six years old
- EPA recently proposed that all rat poison bait products be marketed in tamper-resistant bait stations with solid blocks as opposed to small pellets that children can ingest.

Go to <http://www.epa.gov/pesticides/health/ppweek-lockit.htm> for more information on preventing unintentional poisonings. (EPA May 2007)

Events



June 17-29, 2007

The International Short Course in Agroecology, IPM, and Sustainable Agriculture will be held in East Lansing, MI. For more information contact: K.M. Maredia, IIA, 416 Plant/Soil Sci. Bldg., Michigan State Univ., East Lansing, MI 48824, USA.

KMaredia@msu.edu. Fax: 1-517-432-1982.
Phone: 1-517-353-5262.

Comments or Questions?

July 11-14, 2007

The Second National Conference on Facilitating Sustainable Agriculture Education. Cornell University. For more information contact Kathi Colen Peck, Conference Coordinator, kscp@turbonet.com.

July 18-19, 2007

Green-Blue Summit - Clean Water Through Residential IPM. The Green-Blue Summit will focus on connections between water quality and integrated pest management (IPM) in turf and structural settings. It will be held at Penn State's Great Valley Conference Center, about 30 miles west of Philadelphia. For more information and to register go to:
www.NortheastIPM.org/greenbluesummit.cfm

August 7-9, 2007

Managing Vertebrate Invasive Species. Hilton Hotel, Fort Collins, Colorado. For more information go to
<http://www.aphis.usda.gov/ws/nwrc/symposia/invasives/index.html>

August 19-23, 2007

234th ACS National Meeting

The topic for the meeting is: Rodenticides for the protection of public health, agriculture and natural resources and will be held in Boston, MA. For more information go to:
<http://northeastipm.org/ontarget/2007/rodenticidepapers.pdf>

September 10-12, 2007

Convergence of Genomics and the Land Grant Mission: Emerging Trends in the Application of Genomics in Agricultural Research. Purdue University, West Lafayette, Indiana. For more information go to:
<http://northeastipm.org/ontarget/2006/GenomicsConf1stAnnounce.pdf>

If you have any comments or questions regarding any of the material presented, please let us know by sending an e-mail to: jbanieck@wvu.edu.
Thank you.