## "Spurgefest 99" Features IPM and Beetle Giveaway

At press time, ARS and cooperators were making final plans for Northern Plains ranchers and land managers to take home up to 10 million tiny helpers—flea beetles—this summer to help rein in leafy spurge, an exotic, noxious weed. The adopt-a-bug project is a highlight of "Spurgefest 99," scheduled for June 29 to July 1 in Medora, North Dakota. Spurgefest 99 is the first major conference of the 5-year integrated pest management program ARS launched in 1997. The program is called TEAM Leafy Spurge—short for "The Ecological Areawide Management of Leafy Spurge." It aims to help land managers find the most cost-effective tools to curb the spread of leafy spurge. The weed chokes out desirable forage plants on at least 5 million acres in 29 states and increases its extent by about 10 percent annually.

*Aphthona* flea beetles from the weed's Eurasian homeland form the program's cornerstone. ARS researchers were first to identify these beetles as effective spurge enemies. After years of safety testing, *Aphthona* were imported in the 1980s. Now they feed on leafy spurge at thousands of locations in more than 19 states and Canadian provinces. Grazing animals such as sheep and the judicious use of herbicides round out the control options. ARS manages TEAM Leafy Spurge in cooperation with USDA's Animal and Plant Health Inspection Service, other federal and state agencies, and four land-grant universities. For more information on Spurgefest 99 and TEAM Leafy Spurge, visit http://www.sidney.ars.usda.gov on the World Wide Web. *Chad Prosser, USDA-ARS Northern Plains Agricultural Research Laboratory, Sidney, Montana; phone (406) 482-2020, e-mail chad@mail.sidney.ars.usda.gov.*

## Byproduct Gets a New Life

Soapstock—a gummy, amber-colored byproduct of oilseed processing—could become a new biodegradable film for encapsulating chemicals and packaging fresh produce. Soapstock is produced when hexane and other chemicals are used to extract and refine edible oil from the seeds of cotton, safflower, and sunflower. Cottonseed processors alone generate 60 to 120 million pounds of it each year. Most soapstock goes into animal feed. But ARS scientists want to exploit its plant esters, glycerides, and phospholipids. Passing their first hurdle, which had stymied previous researchers, meant ridding soapstock of its water and hexane without eliminating its desirable properties. Then the scientists spread ground soapstock paste onto glass plates and spheres to form thin, flexible films. They seek an industrial partner to help refine the films and explore their potential. Two possibilities: as packaging for perishable produce like bell peppers or for encapsulating fungicides and other chemicals in slow-release formulations. Soapstock-coated capsules of fungicide, placed in water, delay the chemical's release about 3 hours. This may apply for pharmaceutical compounds as well. The scientists are also testing soapstock gel for hair styling and coloring. *M. Sam Kuk and Amy Ballew, ARS Southern Regional Research Center, New Orleans, Louisiana; phone (504) 286-4552, e-mail mskuk@commserver.srrc.usda.gov.*

## Beefed-up Compost May Guard Strawberry Fields

Special compost, enzymes, and beneficial microbes could turn out to be an effective recipe for guarding strawberry fields from weeds and disease. If the research bears fruit, the strategy could replace some uses of methyl bromide, a widely used fumigant that is being phased out. As part of ARS' nationwide search for reliable, affordable substitutes, scientists in California are testing the strategy this summer in commercial fields and research plots.

Currently, California growers fumigate their fields with methyl bromide and another fumigant before planting. This kills weed seeds and disease-causing pathogens. The experimental compost—enhanced with enzymes, organic acids, and beneficial bacteria—is mixed with corn gluten meal and beneficial fungi. The enzymes should speed the decay of the compost. This will make nutrients available to beneficial microbes applied to fields, including bacteria that may stimulate plant defenses against pathogens. The added fungi—known as mycorrhizae—should help plants take up water and phosphorus. The tests will also determine whether beneficial microbes and corn gluten meal, a corn processing byproduct, stifle the weeds. ARS is conducting the tests under a cooperative research and development agreement with Soil Technology of Fallbrook, California. *Carolee T. Bull, USDA-ARS Crop Improvement and Protection Research Unit, Salinas, California; phone (831) 755-2889, e-mail CTBull@aol.com.*

## New Rapid Test for Drug-Resistant Salmonella

ARS and University of Georgia scientists have developed a quick way to identify *Salmonella typhimurium* DT-104. This potentially deadly *Salmonella* strain resists many antibiotics. The researchers found a key gene sequence present in DT104. Current tests can take 6 weeks, but the new information lets the job be done in 2 hours. The difference could be vital for nipping outbreaks in the bud—and saving lives, since physicians need to treat this strain more aggressively than other *Salmonella* strains. Delays in identifying DT104 almost cost a Vermont dairy farmer her life in 1997. The pathogen has also sickened children in Nebraska. The genetic discovery opens the door to developing a commercial test kit that might detect the pathogen in blood samples or in runoff water from animal production. *Paula Fedorka-Cray, USDA-ARS Richard B. Russell Agricultural Research Center, Athens, Georgia; phone (706) 546-3602, e-mail pcray@ars.usda.gov.*