

Low-Dose Pesticide Stops Termites

Estimates are that damage from Formosan subterranean termites alone costs U.S. consumers about \$1 billion annually in control and repair costs. So researchers are hoping that the patenting of a tasty new toxic bait with termite appeal will bring closer to reality another potential solution to widespread termite problems. This new termiticide relies on low concentrations of naphthalenic compounds similar to those used in mothballs. Tests have shown that even at low doses, the new bait is also effective against native Eastern subterranean termites.

In collaborative research with the USDA Forest Service, researchers found that not only do certain naphthalenic compounds work against termites, they also prevent wood decay. So they could one day replace heavy metals such as arsenic, chromium, and copper currently used as wood preservatives. But when combined in a cellulose-based matrix, they form a slow-acting toxic bait that termites take back to their colonies. Effective even at low doses, these baits would be both economical and environmentally friendly. *Maria Guadalupe Rojas and Juan A. Morales-Ramos, USDA-ARS Formosan Subterranean Termite Research Unit, New Orleans, Louisiana; [Rojas] phone (504) 286-4382, e-mail grojas@srrc.ars.usda.gov; [Morales-Ramos] phone (504) 286-4256, e-mail jmorales@srrc.ars.usda.gov.*

Chart Helps Us Chow Down on Choline

Another new database is now available, free and online, to help ensure inclusion of adequate levels of the nutrient choline in daily diets. Among other functions, choline helps the body absorb and use fats, including those that become part of cell membranes. Choline also helps the body use acetylcholine, a neurotransmitter that sends signals across

nerve endings. The adequate daily intake is set at 425 mg for women and 550 mg for men. Top sources of choline include meat, nuts, and eggs—with just one large, hard-boiled egg providing 112 mg, one-quarter of a woman's daily need.

Just 2 years ago, scant analytical data existed on the choline content of foods. This new specialty database is the result of a cooperative project with University of North Carolina-Chapel Hill researchers, who analyzed the foods included in the compilation. The database will especially help those who need to minimize their choline intake. Access it at www.nal.usda.gov/fnic/foodcomp. *Juliette C. Howe, USDA-ARS Nutrient Data Laboratory, Beltsville, Maryland; phone (301) 504-0643, e-mail howej@ba.ars.usda.gov.*

Good News for Goat's Milk Drinkers

About a million dairy goats are being raised today in the United States for milk and cheese production. The high protein and low cholesterol levels in their milk—plus its agreeability to many consumers who are unable to drink cow's milk—are steadily increasing its popularity.

But producers need to be constantly on the lookout for infection of their animals by *Brucella melitensis*. This bacterium causes a disease called brucellosis in sheep and goats. In people, *B. melitensis* infection causes Malta fever, characterized by fever and headaches.

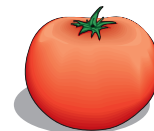
While few cases of brucellosis have occurred in U.S. livestock since 1972, it's essential that producers maintain vigilance to ensure that it doesn't somehow infect their herds. *B. melitensis* is particularly common in Latin America, central and southwest Asia, and the Mediterranean region.

Now a test for detecting *B. melitensis* in bulk goat's milk has been developed

by modifying an ELISA (enzyme-linked immunosorbent assay) test originally developed in 1984 to check cattle for *B. abortus*. *Louisa B. Tabatabai, USDA-ARS National Animal Disease Center, Ames, Iowa; phone (515) 294-6284, e-mail lbt@iastate.edu.*

Carotenoids From Ethanol Byproduct?

In ongoing efforts to find economical and profitable end uses for the corn fiber and distiller's dry grains with solubles (DDGS) left over from making ethanol, scientists have modified the fungus *Fusarium sporotrichioides*. They've given it genes for making lycopene and other carotenoids. This might one day lead to mass-production of lycopene from ethanol coproducts, rather than by extracting and purifying it from tomatoes.



Regular consumption of lycopene appears helpful in preventing some cancers. While tomatoes and watermelon are good food sources, some consumers rely on dietary supplements for their lycopene.

Corn fiber would be an ideal raw material for fungal lycopene production because it's abundant and costs about a nickel a pound. With around 4 million tons of the fiber to dispose of annually, distillers usually sell it inexpensively, as livestock feed. When cultured in the laboratory, the modified fungus can produce 0.5 mg of lycopene per gram of dry weight in 6 days. The next step will be scaling up the process, culturing *F. sporotrichioides* in fermenters on a growth medium containing corn fiber or DDGS. *Timothy D. Leathers, USDA-ARS Fermentation Biotechnology Research Unit, Peoria, Illinois; phone (309) 681-6377, e-mail leathd@ncaur.usda.gov.*

