

Science Update

Our Survey Says: What America Eats

In 1995, some 6,000 people will be interviewed about what they ate on two different days, during ARS' continuing survey, "What We Eat in America." The interviews are part of a 3-year survey begun last year. Two of the survey's uses: targeting nutrition education and determining how well Americans understand nutrition labels. Previous surveys showed that fat intake has decreased from 40 to 34 percent of total calories in the average diet since 1977. But that's still shy of today's recommended 30 percent maximum.

Alanna Moshfegh, USDA-ARS Survey Systems/Food Consumption Laboratory, Riverdale, Maryland, phone (301) 734-8457.

Tiber Thwarts Tipburn

From ARS comes a new iceberg lettuce, Tiber, that wards off tipburn. This disorder strikes when hot weather or too much water or fertilizer makes leaves grow too fast and run out of calcium. Leaf edges killed by tipburn are vulnerable to slime-producing bacteria and fungi. Researchers have offered Tiber to seed companies and breeders for planting in Arizona and California. *Edward J. Ryder, USDA-ARS U.S. Agricultural Research Station, Salinas, California, phone (408) 755-2860.*

New Link to Artery Narrowing

New evidence links high blood levels of an amino acid, homocysteine, with artery narrowing in the elderly. The condition can lead to heart disease and stroke. Researchers found less risk of artery narrowing in people with ample folate (folic acid)

and vitamin B₆. The body needs these to convert homocysteine to useful amino acids and prevent its buildup. People can readily lower homocysteine through diet. A clinical trial would be required to learn whether this can reduce heart disease risk, however. The homocysteine study involved 1,041 men and women still participating in the original Framingham Heart Study in progress for nearly 50 years. Collaborators are with the Framingham Heart Study, Boston University, and the ARS-funded Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University. *Jacob Selhub, USDA-ARS Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts, Boston, Massachusetts, phone (617) 556-3191.*

Hormone Snippet to Kernel: "Don't Sprout!"

Wheat may get turned into pet food instead of bread—if untimely rain makes wheat kernels sprout just before harvest. Now, an ARS plant physiologist has homed in on how wheat plants order kernels to sprout—or not to sprout. Preharvest sprouting cuts the crop's value by making it unacceptable for bread flour and other high-quality uses. But the ARS scientist and a chemist with Canada's National Research Council identified the wheat plant's biochemical decisionmaker. It's the 7-methyl group—a piece of a plant hormone, abscisic acid. The discovery may someday help breeders and biotechnologists develop wheats resistant to preharvest sprouting, which is a problem about 1 year in 5 in the Pacific Northwest. The 7-methyl group, the scientists speculate, keeps plant enzymes from breaking down proteins and starch in a kernel's rain-moistened coat. *Kay Simmons, USDA-ARS Wheat Genetics, Quality, Physiology, and Disease*

Research Unit, Pullman, Washington, phone (509) 335-3632.

CRADA Targets New Bean Virus

ARS and a private company have teamed up in a cooperative research and development agreement (CRADA) to thwart a new virus in snap beans. Silverleaf whiteflies, also known as biotype B sweetpotato whiteflies, transmit golden mosaic virus. First seen in this country in 1993, it wiped out beans in many south Florida fields in 1994. Through the CRADA with Rogers Seed Co. of Nampa, Idaho, ARS researchers hope to identify genetic markers. They will use these easy-to-spot traits to quickly screen many bean lines for natural virus resistance. This will help breeders speed development of resistant cultivars for farmers. *Phillip N. Miklas, USDA-ARS Tropical Agriculture Research Station, Mayagüez, Puerto Rico, phone (809) 831-3435.*

Arboretum Deploys Good Mites Against Bad Ones

Two predatory mites are helping the U.S. National Arboretum cut the use of chemical pesticide. ARS operates the 444-acre arboretum, located in Washington, DC. The good mites, *Phytoseiulus persimilis* and *Amblyseius californicus*, gobble two-spotted spider mites and other mites that pester bonsai, roses, and other plants. The beneficial mites play a big role in the arboretum's integrated pest management (IPM) program. Among the first of its kind for landscaping, the program has reduced pesticide use about 75 percent since 1992. *Scott Aker, USDA-ARS U.S. National Arboretum, Washington, D.C. 20002, telephone (202) 245-5975.*