$3 Million Boost Against Wheat Scab

ARS has distributed the first of the new $3 million annual funding increases for research to combat wheat scab. The new funds build on $500,000 that ARS has allocated annually since 1997. Caused by *Fusarium* fungi, wheat scab shrivels kernels of wheat and other cereals. It also produces toxins that can ruin the crop's value for food or feed products. From 1991 to 1997, U.S. farmers lost 470 million bushels of wheat to scab.

ARS distributed the new funds to university and ARS researchers who are part of the U.S. Wheat and Barley Scab Initiative. It is a consortium of about two dozen universities supported by 40 wheat- and barley-related organizations and many individuals. This year, about half of the $3 million increase went to ARS and university labs in Minnesota and the Dakotas, the hardest hit states. Researchers will address issues in food and feed safety, biological control, pesticide use, and crop breeding. This past spring, for the upper Midwest, ARS and the University of Minnesota released McVey, a new, high-yielding spring wheat with improved scab resistance. Farmers may plant the new variety as early as next year. *Robert H. Busch, USDA-ARS Plant Science Research Unit, St. Paul, Minnesota; phone (612) 625-1975, e-mail busch005@maroon.tc.umn.edu.*

The Big Book of Plant Names

A new book on nearly 10,000 economically important plants greatly expands on a long-popular—and out-of-print—reference. The new, 784-page volume is *World Economic Plants: A Standard Reference*. It stems from USDA's Agricultural Handbook No. 505 that was first published in 1977. *World Economic Plants* provides information needed by scientists and others who study, identify, or classify crops, weeds, poisonous plants, and plants with medical and industrial potential. The book supplies accepted scientific names, important synonyms, common names, economic uses, and geographical distribution. It was published under a cooperative research and development agreement between ARS and CRC Press of Boca Raton, Florida. Details on purchasing the book, priced at $125, can be found online at http://www.crcpress.com/catalog/2119.htm. *John W. Wiersema, USDA-ARS Systematic Botany and Mycology Laboratory, Beltsville, Maryland; phone (301) 504-9181, e-mail jwiersema@ars-grin.gov.*

Turning Old Tires Into New Products

By adapting some cotton ginning technology, ARS scientists created a new way to recycle more of the 265 million tires discarded in this country each year. Recycled rubber can be used to make new tires, along with truck bed liners, running tracks, shoes, carpet backing, brake pads and shoes, asphalt, water hoses, floor mats, and other goods.

Currently, companies typically cut tires into small pieces. Then they pulverize the rubber and polyester/nylon fiber components—either by grinding or by using a freezing treatment and a hammer mill. This recovers over half the rubber, but the rest goes to landfills. Recovered rubber, or "crumb," is worth about $500 per ton. The scientists' two patent-pending methods would allow the companies to recover—as separate materials—the fiber, or "fluff," as well as the rubber crumb. Fluff is valued at about $475 a ton. Several companies are considering licensing the technology. *W. Stanley Anthony, USDA-ARS Cotton Ginning Research Unit, Stoneville, Mississippi; phone (601) 686-3094, e-mail anthonys@ars.usda.gov.*

Dual-Purpose Durum

Bread loaves with a slightly nutty taste and a cream-colored interior could soon be baked largely from durum wheat flour. Durum is typically used in making pasta. But durum suited for breads would give growers a new market. ARS researchers are developing durum breeding lines for both kinds of products. Meanwhile, they devised a baking procedure to yield pan bread made mostly from durum.

Until now, bread flour of more than 25 percent durum did not produce light, airy loaves. But 1-pound loaves of 60 percent durum flour, baked with a modified version of the industry's sponge-dough method, had about the same volume as loaves of 100 percent hard red spring wheat flour. The gluten content of wheat flour is key to good loaf volume and to dough flexibility and strength. During the first, or sponge, stage, commercial bakers mix 70 percent of the flour with water and yeast and let the mixture ferment. For the dough stage, the sponge is further mixed with water, sugar, nonfat dry milk, shortening, salt, and the remaining flour. The scientists used 60 percent durum flour and 10 percent spring wheat flour for the sponge stage. The remaining 30 percent—for the dough stage—was spring wheat flour. *Gary A. Hareland, USDA-ARS Hard Red Spring and Durum Wheat Quality Laboratory, Fargo, North Dakota; phone (701) 231-7728, e-mail hareland@badlands.nodak.edu.*