April

May
4-5 — Equipment & Engine Training Council annual meeting in Milwaukee. Contact Virgil Russell at 512-442-1788.

July

August
1-4 — Georgia GCSA Summer Conference in Augusta. Contact Karen White at 706-789-4076.

September
7-10 — Responsible Industry for a Sound Environment annual meeting in Palm Beach, Fla. Contact 202-872-3860.

October

November
1-3 — International Irrigation Expo in San Diego, Calif. Contact 703-573-3551.
1-3 — Georgia GCSA annual meeting at St. Simons Island. Contact Karen White at 706-789-4076.
4-6 — Penn State Golf/Turf Conference in State College, Pa. Contact 814-863-3475.
9-12 — West Virginia GCSA Turf Conference and Show in Morgantown, W. Va. Contact Robert Maguire at 304-243-4154.
9-13 — New York State Turf & Grounds Exposition in Syracuse, N.Y. Contact 800-873-8873.
13-17 — Professional Lawn Care Association of America Annual Conference in Nashville, Tenn. Contact 800-458-3466.

December
7-10 — Ohio Turfgrass Conference in Columbus. Contact 614-769-5442.
8-10 — Georgia Turfgrass Show in Atlanta. Contact 770-975-4123.
19-12 — Rocky Mountain Regional Turfgrass Association Conference in Denver. Contact 303-770-2220.

* For more information contact the GCSAA Education Office at 800-472-7878.
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Field burning

Continued from page 58

of next year's crop.

Unless the straw is removed from the crowns of perennial grass plants, the crowns don't receive enough light, Elliott says. Straw left on the field also limits herbicide effectiveness.

About a third of the straw can be sold for animal feed and bedding, but the supply far exceeds demand.

Elliott and ARS agricultural engineer Donald B. Churchill proved for the first time that low-input, on-farm composting of the high-carbon straw was possible. Their method involved gathering the straw in large windrows alongside the field and turning three or four times with a tractor-mounted front-end loader.

"Before our experiments, it was believed that you would have to add nitrogen before the straw would decompose. There was also concern that the compost wouldn't reach high enough temperatures to kill weed seeds and inhibit diseases," Elliott notes.

Growers discovered that they could also leave the straw on the field to decompose in place, if they chopped it fine enough that the grass crowns weren't covered. Another ARS research project addresses the variation in crop needs and environmental conditions across the Willamette Valley and drier grass-growing regions of the Pacific Northwest.

"The southern part of the valley has poorly drained soils that are very wet in winter," says ARS agronomist Jeffrey J. Steiner. He's coordinating a long-term sustainable cropping systems program with scientists from ARS, Oregon State University, and the USDA's Natural Resources Conservation Service; extension specialists; and growers.

The south valley supplies most of the annual and perennial ryegrass seed. The moderately drained soils to the north allow more crop diversity, and growers farm tall fescue seed as a major crop. Well- drained hilly areas produce fine fescue seeds, but these soils erode easily if not managed properly.

In each of the three regions, Steiner and colleagues are looking at the best methods for managing straw (cutting and leaving on the field versus removing the straw), rotating crops (grass seed continuously and wheat or meadowfoam), and planting methods (conventional or no-till).

"One of the main problems is how to rapid establish each crop. Otherwise a grower can go as many as 20 months in rotation sequence without an economic return," he says.

The first complete crop rotation will end this year. But the study has already provided valuable information for growers. Stephen M. Griffith, an ARS plant physiologist, also looks at nitrogen use in the seed crops. He and others have found that as long as chopped-up straw residue doesn't cover the growing crowns of the grass plants, it may help the crop in the long run.

"Over time, the residues contribute nitrogen to the soils," Griffith says. "We also have evidence that the microbial community and soil quality are improving underneath the straw," he adds.

Kathryn Barry Stelljes is a public affairs specialist for ARS information in Albany, Calif. (541) 750-8722.