

Panel Discussion: Cover Crops Used at Georgia Forestry Commission Flint River and Walker Nurseries

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Cover Crops Used at Flint River and Walker Nurseries

Flint River Nursery, located near Montezuma, Georgia, has used rye, wheat, brown top millet, and sorghum sudan grass for cover crops. Flint River has just begun to return to a summer cover crop situation.

At Walker Nursery, located near Reidsville, Georgia, certified rye has been sown by the State Department of Corrections (DOC) for their harvesting, with a benefit to both DOC and the nursery. They prepare land, plant, fertilize, spray herbicides and harvest the rye. Generally, no summer cover crop is sown at Walker.

Methods and Rates of Application at Flint River Nursery

We are generally on a 2:2 rotation (2 seedling crops, then 2 cover crops) where practical. We will grow a crop for 3 consecutive years on a particular field before it is harvested and planted into cover crop. Quality generally is greatly reduced in the third year.

Our soil organic matter content has been generally pretty low in the past, but has increased significantly over the past year. Sudan grass provides us with the most increase in organic matter, as well as the most coverage and, therefore, the most shading or choking-out of nutsedge and other weeds. Nutsedge, particularly purple nutsedge, is the hardest weed to control and our biggest problem.

Wheat bulk is generally the cheapest and most used winter cover crop. We plant wheat bulk in November, with an application rate of 2.5 bushels/ac (6.25 bushels/ha) and harrowed in lightly with a drag on the back of the harrow. No water, fertilizer, or herbicide are applied.

This past year, we waited for the wheat to mature and dry, and then drilled sudan grass right on top of it, disturbing the soil as little as possible. This worked very well because sudan grass seeds were already germinating from the application of sudan grass during the previous summer. The rate of application is around 30 lb/ac (34 kg/ha). Sudan grass, as well as wheat, rye, and millet, seem to be nonhosts of needle nematodes (*Longidorus* spp.) (Cram and Fraedrich, this proceedings).

Nutsedge control is a big factor to consider. The nursery routinely sprayed all fallow fields 2 or 3 times each summer in the past in an attempt to eradicate nutsedge. The nursery is now trying to keep fields in some type of cover crop when not in seedling production.

Costs Involved for Cover Crops

No costs are involved for rye sown at Walker Nursery. All costs are incurred by the DOC.

Costs at Flint River Nursery usually range from U.S. \$7 to \$10 per bushel for wheat bagged, and U.S. \$4 to \$6 per bushel bulk. Sudan grass ranges from U.S. \$9 to \$13 per 50 lb (23 kg) bag. Sorghum sudan is the most beneficial and costs less per acre overall.

With the uncertainty of methyl bromide in the future, it is more important than ever to include cover crops in our regime. In the first year for non-fumigated hardwoods, the weed control from residual seeds left behind is the only problem. This is never a problem in first-year fumigated hardwoods or pines where broad spectrum herbicides can be used.