Field Notes:

Planting Bottomland Hardwoods for Wildlife in the Delta

Tree season soon will be upon us. No, not cotton – trees!! The best time for planting dormant hardwood seedlings in the Delta is from December through February. All trees native to the Delta have some value as wildlife habitat. While some tree species produce mast, foliage, nectar, or fiber that are eaten by animals, others provide cover, vertical structure for nesting and territory establishment, cavity or den trees, forage sites for insects and other invertebrates, and perch stands.

In recent years, programs have proliferated which assist landowners in planting bottomland hardwoods. Generally it is the hard mast species such as oaks, pecans, and hickories that are favored. These species provide a fatty, high energy food for game species – deer, turkey, squirrels, and waterfowl. But many other species are important food sources for a variety of Delta wildlife. We've tried to summarize the usefulness of bottomland hardwoods as wildlife food sources in the accompanying table.

Here are some simple guidelines for planting trees. If you will invest in planting a large area, you will need help, particularly if this is your first attempt. Count on a lot of preparation and start at least a year before you intend to plant.

• Match species to site, especially flooding regime and soil. Most bottomland hardwoods can tolerate saturated soil or even inundation while dormant, but will die if late season floods cover young leaves. Bottomland hardwoods grow best on medium textured soils, well drained with adequate moisture. But many hardwoods useful for wildlife will grow well enough even on gumbo clay.

• Purchase vigorous seedlings, at least 3/8 inch root collar diameter and eighteen inches top length. Roots can be pruned to length of eight inches to make planting easier but retain at least two or three first order lateral roots. Smaller seedlings are not vigorous enough, and don't have the reserves to withstand late summer droughts. Larger seedlings are very successful, as long as an adequate planting hole is dug. We've planted seedlings and cuttings as large as six feet to eight feet tall with a hand-held power auger.

• Some species will grow well from cuttings, especially cottonwood. Roots develop readily from buds in the stem. Seeds of the hard mast species can be placed directly in the ground, in a planting hole two to four inches deep. Cheaper than purchasing and planting seedlings, this direct seeding works well with Nuttall oak but is trickier for other species.

• The key is to plant properly. Don't allow the roots to freeze or dry out; take to the field only as many as you will plant in a day. Plant seedlings directly from the bag supplied by the nursery or transfer small amounts to a planting bag or bucket. Keep the roots moist by placing peat moss in the bag. Use a sharpshooter (small shovel) to make a slit or hole deep enough to plant the seedling with the root collar just below the ground surface. The roots need to all fit easily into the planting hole. They should not be twisted, balled up, or bent, nor should roots remain on top of the soil. Moist soil should be packed around the roots. This is easily accomplished by inserting the sharpshooter into the soil a few inches away from the planting hole, bending the shovel toward the seedling in order to push the soil around the roots, then "heel and toe" the soil with your boot around the seedling, covering the second hole made by the shovel in the process. The key is to avoid leaving an air pocket near the roots after closing the hole. This is extremely important in clay soils, as they will crack and open this air pocket to the surface when they dry out in summer.

• We are often asked for recommendations for site preparation, weed control, tree shelters, and follow-up treatments. These are active areas of research and we don't have simple guidelines. A lot of the planting under federal programs have been "disc, plant, and walk away"operations which minimize establishment costs and may produce adequate survival and moderate early growth under many conditions. But we think many landowners are more interested in maximizing wildlife benefits, as long as costs are reasonable. Thus, there may be a place for tree shelters, which are known to accelerate early height growth; for herbicides prior to planting or immediately after, while seedlings are still dormant, to control woody vines and competing herbaceous species; or for more complex methods which quickly result in vertical structure and multiple species stands.

These simple guidelines to tree planting in the Delta will get you started. There are many other aspects to think about, however. What are my objectives? How many trees should I plant to meet those objectives? Where can I get more help? This last question is the easiest to answer. You can get help from consulting foresters, county foresters with the Mississippi Forestry Commission, and partnership programs such as Delta Wildlife or the Fish and Wildlife Service (the Yazoo Refuge Complex and others). Seedlings can be purchased from several commercial nurseries in the Delta, or from the State nursery in Winona but be warned that you'll need to book large amounts a year in advance. Finally, researchers at the Center for Bottomland Hardwoods Research in Stoneville are working to develop new methods that meet many objectives and we're committed to putting that information directly into your hands. Watch for future articles in *Delta Wildlife*, and check out our website at **www.srs.fed.us/cbhr**. You may want to attend our annual review of current research, sponsored by the Southern Hardwood Forest Research Group in February every year. Check the website for the date and more information!

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