

# Panel Discussion: Tree Seed Collection and Direct Seeding in Illinois

Tom Ward

Tom Ward is Agroforester for USDA-NRCS, 2118 West Park Court, Champaign, IL 61821-2986; telephone: 217.353.6647; e-mail: tom.ward@il.usda.gov

In: Riley, L. E.; Dumroese, R. K.; Landis, T. D., tech coords. National proceedings: Forest and Conservation Nursery Associations—2003; 2003 June 9–12; Coeur d'Alene, ID; and 2003 July 14–17; Springfield, IL. Proc. RMRS-P-33. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

**Keywords:** hardwood species, seed storage

The Nature Conservancy in southern Illinois has used direct seeding for forest regeneration since 1989. The Association of Illinois Soil and Water Conservation Districts (AISWCD) held its first direct seeding workshop in 1996. It was in the fall of 1998, however, that Illinois conservationists began to consider direct seeding as a way to accelerate reforestation of riparian buffers. In early 1999, the Forestry Committee of the AISWCD formed a 4-person Direct Seeding Subcommittee. Based on 5 years of work, this subcommittee has published the 150-page *Illinois Direct Seeding Handbook*, conducted 10 workshops and field trips, and distributed seed collection equipment to a 25-county network of SWCDs.

The rate of direct seeding in Illinois has increased from a few dozen acres to about 3,200 ac (about 1,300 ha) in 2001. Interest in direct seeding has been driven by a very large enrollment in the Riparian Forest Buffer practice, which is available through the Conservation Reserve Program (CRP). Between 1997 and 2003, about 93,000 ac (37,635 ha) have been enrolled in Riparian Forest Buffers in CRP, with an additional 20,000 ac (8,100 ha) in the Illinois River Conservation Reserve Enhancement Program (CREP). Due to very high demand, Illinois has faced a chronic shortage of bottomland hardwood seedlings for reforestation of floodplain sites. Compounding this problem is the fact that tree planting is typically done between February and May, when floodplain sites are often underwater or too muddy to plant. Direct seeding utilizes a readily available local resource, Illinois tree seeds, and is best suited to fall planting when floodplains are accessible.

From the beginning, the Direct Seeding Subcommittee has sought to minimize competition for seeds between direct seeding and tree nurseries by promoting increased seed collection. The *Illinois Direct Seeding Handbook* emphasizes tree identification, seed collection, handling, and storage. In the training and workshops on direct seeding, an emphasis is placed on collecting high quality seeds and maintaining seed viability through proper handling and storage.

There have been some challenges in expanding the use of direct seeding. Variability of seed crops has made it necessary to modify species lists in direct seeding plans. In 2001, the only bottomland species available in abundance in central Illinois was bur oak. Last year (2002) was only somewhat better, with swamp white oak (SWO) the most abundant. The length of the seed collection season has made it necessary to store some species while waiting for others to mature. SWO, for example, may begin dropping in early September while pin oak and shellbark hickory may not be available until the end of October. Seed planting may be delayed until November, waiting for late-dropping species to become available. If there is a wet fall and/or an early winter, there may be a very short planting season and a lot of leftover seeds. Brief planting windows may occur in December, January, and February, but favorable winter weather may not occur every year. Large quantities of seeds are needed for direct seeding, and storage space, especially refrigerated storage, may be limited or expensive. Good success has been reported in storing seeds over winter for spring planting if properly handled. Even species in the white oak group, including *Quercus alba*, but especially SWO and bur oak, have been successfully stored for planting in March or April.

A very important tool has been the Direct Seeding Web site, <http://www.directseeding.org>. Launched in 2001, the purpose of the Web site is to bring together those who have tree seeds with those who need them. Thirty-nine tree seed vendors are presently listed, and there is a classified ad feature to highlight the seeds that are presently available or needed. Other features of the Web site include tree seed crop reports, seed collection equipment, information on tree identification, seed biology, seed collection, and seed storage.