

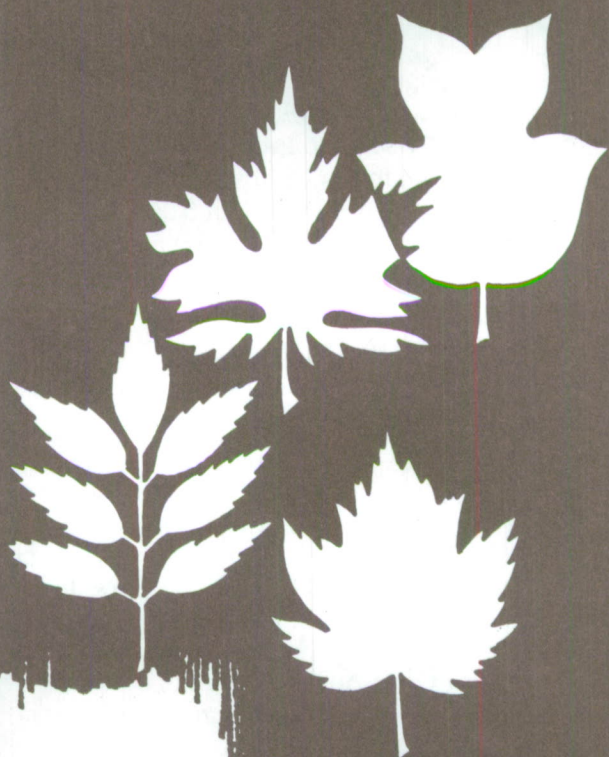
tree and shrub planting in Illinois



Illinois
Department of
Natural Resources

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foreword

This booklet was prepared by the Division of Forest Resources of the Illinois Department of Natural Resources. It is designed to help prospective planters select tree and shrub seedlings for conservation purposes.

NURSERIES

Seedling trees and shrubs are grown at two State nurseries. The Mason State Nursery is located in Mason County. The Union State Nursery is located in Union County. Together they grow and distribute about 6,000,000 seedlings each year. A list of private nurseries can be obtained from any of the forestry offices, see page 10.

HOW TO ORDER

If you have a management plan approved by your District Forester, you may be eligible to obtain seedlings at "no cost." Instructions may be obtained by contacting your District Forester. No cost seedlings orders can be submitted from June 1 - March 31 through the appropriate division field office.

Landowners without an approved management plan may purchase remaining planting stock for conservation purposes at the list prices on the current Stock Price List. Orders can be submitted from February 1 - March 31. Orders received prior to February 1 will be returned. No orders will be accepted after March 31.

WHAT TO PLANT

Illinois has approximately 2.9 million acres of land in need of reforestation. This land consists of a wide variety of sites. Time spent in proper planning, planting, and weed control can mean the difference between success and failure.

PURPOSES FOR PLANTING TREES OR SHRUBS

- To control wind and water erosion.
- To restore forests on lands not suited for agricultural use.
- To produce wildlife food and cover.
- To produce wood products.

EXAMINING THE PLANTING SITE

Examine the site you plan to plant. Note your observations on the following check list. Then match the items on your list with Table I. Pick a species that fulfills your purpose and best fits the site.

CHECK LIST

1. Area Size

_____Acres County_____

_____Twp.____R.____Sec.____Qtr.

(plat book or your deed)

2. Surface erosion

_____None_____Light_____Medium

_____Severe

3. Vegetative competition

_____Annual_____Perennial_____Brush

_____Grass/weeds

4. Site location

_____Upland_____Prairie_____Bottomland

(Sloping) (level)

5. Soil series, texture and drainage class.

(contact your county Soil and Water Conservation District)

6. Purpose

_____Wildlife_____Timber_____Xmas

_____Erosion_____Tree

Control

Most conifers need full sunlight for best development. Avoid planting them in the shade.

Hardwoods with similar rates of height growth and site requirements may be mixed. Mixtures are more desirable than plantings of a single species.

**TABLE I
SOIL AND MOISTURE CONDITIONS
FOR SPECIES REQUIREMENTS**

Planting Sites Location

SPECIES	Planting Sites Location										Remarks	
	Severly Eroded	Well Drained	Poorly Drained	Well Drained	Poorly Drained	Wet	Well Drained	Poorly Drained	Wet	Very Dry		Dry
Ash, Green		X	X	X	X	X	X	X	X			
Ash, White		X		X			X					
Cedar, Red	X	X	X								X	
Cherry, Black		X	X									
Cypress, Bald (s)		X	X	X	X	X	X	X	X			
Dogwood, Gray		X	X									Wildlife
Gum, Red (s)				X	X		X	X	X			
Hackberry		X	X				X					
Hickory, Shagbark		X	X				X					
Maple, Silver				X	X	X	X	X	X			
Oak, Black		X	X				X				X	
Oak, Bur		X	X	X			X					
Oak, Pin			X				X	X	X			
Oak, Red		X	X				X				X	
Oak, White		X	X				X				X	
Pine, Loblolly (s)	X	X	X	X	X							
Pine, Red		X	X								X	
Pine, White		X	X								X	
Poplar, Tulip (s)		X	X				X					
Sycamore		X	X		X	X	X	X				
Walnut, Black		X	X				X					

(s) - Recommended for Southern Illinois only; South of Interstate 70.

NUMBER OF PLANTS TO ORDER

The following table will help you determine the approximate number of seedlings you will need for your area.

Table 2 - Seedlings Per Acre Based On Specified Spacing.

Spacing (feet)	Trees (per acre)
10 x 10	436
12 x 12	302

If you plan to control weeds by discing or mowing, space your rows wide enough apart so that the machine you use will go between them.

For spacings other than those listed above, determine the number of trees per acre by substituting dimensions in the following formula:

$$A = 43,560 \text{ sq. ft.}$$

$$\# \text{ trees per acre} = \frac{A}{L \times W}$$

L = Distance in feet between trees
W = Distance in feet between rows

CONDITION OF ORDER/SALE AND INSPECTION

A minimum order consists of 250 seedlings or one "packet". The trees must be planted in blocks or groups. The Illinois Compiled Statutes, 525 ILCS 40/6. ". . . plant material secured or produced shall be used exclusively for conservation purposes, such as for wildlife habitat, erosion control, energy conservation, natural community restoration, general reforestation, research, commemorative plantings and educational programs such as Arbor Day. **Products such as Christmas trees, roundwood, and other materials derived from State distributed plants or plant materials may be utilized, sold or removed, except that no such plants shall be resold, bartered or given away and removed alive with the roots attached.**"

Your planting area may be inspected. Compliance with the terms of the application will be checked at that time. Violation of the conditions described in the Compiled Statutes above is a class B misdemeanor.

PREPARATION OF THE PLANTING SITE

Domestic livestock seriously damage and destroy trees. For this reason a fence will be required when livestock graze adjoining lands. Vegetation such as heavy grass sod, other perennial weeds, and brush must be removed from the immediate vicinity of the trees. These plants compete seriously with newly planted trees. Mechanical means such as plowing and discing may be used for site preparation, during the summer or fall prior to spring planting.

Herbicides may also be used for weed and brush control, as a pre-planting, post planting, or at the time of planting treatment.

Read and heed the label directions when using any pesticide. Specific instructions as to kind, rates, and methods may be obtained from your District Forester.

CARE OF PLANTING STOCK

Your seedlings should be planted as soon as possible. They may be held in their unopened containers for as long as a week but they must be stored in a shaded, cool place, out of the wind where temperatures are relatively constant. If the bags have holes or rips, moisten seedlings and reseal.

If they can not be planted within a week of receipt, they should be heeled-in as follows:

Heeling-in

1. Choose a mellow, well-drained soil in a shady area.
2. Dig a "V" shaped trench and pile the soil along one edge (Fig. 1)

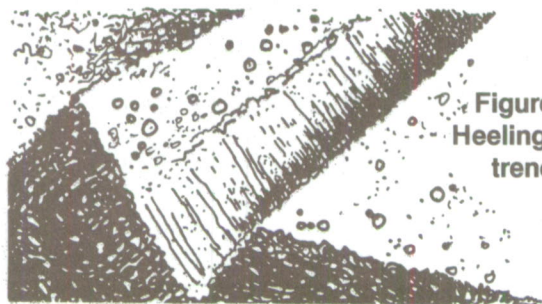


Figure 1.
Heeling-in
trench.

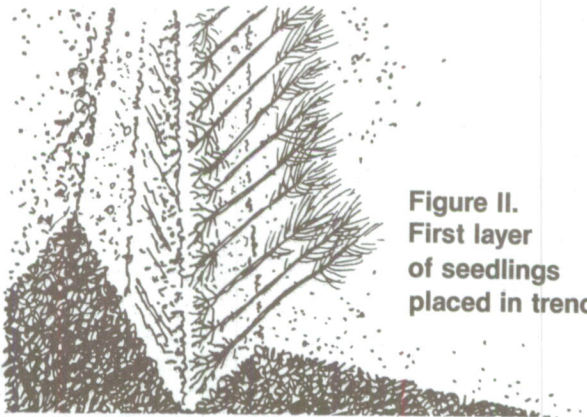


Figure II.
First layer
of seedlings
placed in trench.

3. Remove the seedlings from the package and cut the bundle tapes.
4. Separate the bundles and place the loosened trees against the sloping side of the trench in a thin layer and cover the roots to a point 1 to 2 inches above the roots.
5. Soil from the trench is layered and packed over the roots.
6. A second layer of trees may then be added.
7. The trees should be watered thoroughly. If they are left in the bed for some time, they should be watered at regular intervals.
8. **Do not leave the seedlings "heeled-in" for over two weeks.**

HOW TO PLANT SEEDLINGS

No matter what method of tree planting you use, it is most important to keep the roots moist at all times. Carry the trees in a bucket; add enough non-chlorinated water to completely cover the roots. Take out one tree at a time and plant immediately.

Plant the tree at the same depth it was grown in the nursery. It is usually easy to recognize the old soil line because of the difference in color of the bark. Sometimes there is also a slight bump or welling at this point (root collar).

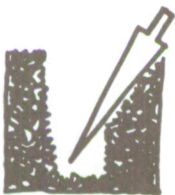
The planting hole or slit should be deep enough so that the roots are not curled or bunched. They should be placed in the soil in as natural a condition as possible. Long roots should be trimmed, or you must dig a deeper, bigger planting hole.

PLANTING WITH TILE SPADE OR PLANTING BAR



- 1.** Insert bar straight down and push forward.

- 2.** Lift bar slightly and then push down at the same angle to get a new bite.



- 3.** Pull bar to original vertical position.

- 4.** Remove the bar and set tree in hole at correct depth.



- 5.** Insert bar about 2" from first hole.

- 6.** Pull bar back and forth to pack soil around roots.



- 7.** Close new hole with boot heel. Wear hard soled boots.

With ideal soil conditions and small root systems about 500 trees per day can be planted.

PLANTING BY MACHINE

If you are planning to plant 3,000 or more seedlings you should investigate the possibility of using a tree planting machine. Contact your District Forester for information concerning the availability of a machine. Consulting foresters, planting contractors, and some Soil and Water Conservation Districts also have planting machines.

CARE AFTER PLANTING

Your plantation must be protected from fire, livestock and insects or diseases.

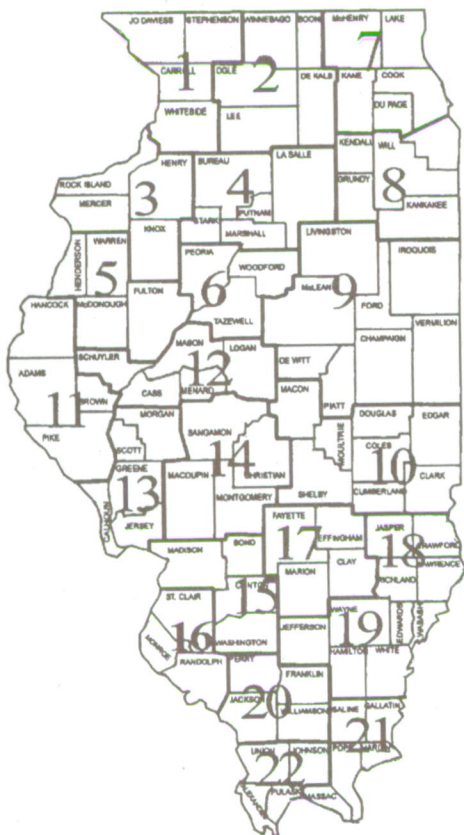
Competing weeds can be controlled best with herbicides. Herbicides are preferable because nesting birds are not disturbed and the site is not exposed to excessive sunlight, evaporation and soil erosion.

If herbicides are not feasible it is best to mow or disc in late June. This time of year is a compromise that offers protection to nesting birds and seedling trees. Mowing in late Fall may be needed to reduce damage from mice, gophers, and rabbits.

Your District Forester can provide technical advice. Fill out the card on the back cover and mail it.

District boundaries and address are on the map on page 10. The forester will arrange an in-the-field meeting with you to discuss your planting plan. Consulting foresters can also help you. See page 9.

If one of your goals is high quality wood products, the trees may need pruning. Almost all plantations will need to be thinned to maintain a healthy vigorous stand.



FOREST RESOURCE DISTRICTS

Consultant Foresters are self employed, professionals with college degrees, who work for clients on a fee basis providing technical advice and services.

Planting Contractors are self employed workers who contract tree planting on a per job or per acre basis.

For referrals, contact the District Forester.



**DEPARTMENT OF
NATURAL RESOURCES
DIVISION OF FOREST RESOURCES
DISTRICT FORESTER OFFICES**

1. 205 East Seminary
Mt. Carroll 61053
815/244-3655
2. Castle Rock State Park
1365 W. Castle Rd.
Oregon 61061
815/732-6184
3. 116 North East Street
Cambridge 61238-0126
309/937-2122
4. IVCC E. Campus-Bldg.11
815 North Orland Smith Ave.
Oglesby 61348
815/224-4048
5. Wigwam Hollow & Tower Rds.
Macomb 61455
309/837-1124
6. 215 North 5th Street, Suite D
Pekin 61554
309/347-5119
7. Moraine Hills State Park
914 S. River Rd.
McHenry 60050
815/385-1644
8. 30550 Roathouse Road
Wilmington 60481
815/476-0109
9. 301 S. Date Street
Gibson City 60936
217/784-4730
10. 1660 West Polk Ave.
Charleston 61920
217/348-0174
11. Route 36 West
Pittsfield 62363
217/285-2221
12. 700 South 10th
Havana 62644
309/543-3401
13. 202 North 5th Street
Carrollton 62016
217/942-3816
14. 1112 Vandalia Road
Hillsboro 62049
217/532-3562
15. Eldon Hazlett State Park
Carlyle 62231
618/594-4475
16. Route 154 East
Sparta 62286
618/443-2925
17. Stephen A. Forbes State Park
6924 Omega Road
Kinmundy 62854
618/547-3477
18. 1231 South West Street
Olney 62450
618/393-6732
19. R.R. #3, Box #979
Fairfield 62837
618/847-3781
20. Lake Murphysboro State Park
52 Cinder Hill Drive
Murphysboro 62966
618/687-2622
21. Dixon Springs State Park
R.R. #2, Box #177
Golconda 62938
618/949-3729
22. Ferne Clyffe State Park
Goreville 62939
(618/995-2568)

STATE NURSERIES

Mason State Nursery
309/535-2185
17855 North CR 2400 E.
Topeka, IL 61567

Union State Nursery
618/833-6125
3240 State Forest Road
Jonesboro, IL 62952

STATE HEADQUARTERS

Illinois Department of Natural Resources
Division of Forest Resources
600 North Grand Ave., West
P.O. Box 19225
Springfield, IL 62704-9225
217/782-2361

FINANCIAL ASSISTANCE

Several federal and state cost share programs are available to help you afford forestation. All of these programs require prior approval before planting.

Ask your District Forester about the ILLINOIS FORESTRY DEVELOPMENT COST SHARE PROGRAM and other state and federal programs.

An important aspect of the IFDA is to guarantee landowners the lowest possible tax assessment on reforested land and on forest land.



Equal opportunity to participate in programs of the Illinois Department of Natural Resources (IDNR) and those funded by the U.S. Fish & Wildlife Service and other agencies is available to all individuals regardless of race, sex, national origin, disability, age, religion or other non-merit factors. If you believe you have been discriminated against, contact the the funding source's civil rights officer and/or the Equal Employment Opportunity Officer, IDNR, 524 S. Second St., Springfield, Ill. 62701-1787; 217/785-0067; TTY 217/782-9175.

This information may be provided in an alternative format if required. Contact the DNR Clearinghouse at 217/782-7498 for assistance.

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Illinois
Department of
Natural Resources

**REQUEST FOR STATE
FORESTRY ASSISTANCE**

Type of service desired:

Woodland Management _____

Reforestation _____

Marketing assistance _____

Referral to a Consultant _____

Other _____

Date _____

Name of Owner _____

Address _____

Phone: _____ Zip _____

Legal Description of Land: Section _____ T _____ R _____

County _____

