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TIPSON  
 TREE PLANTING

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 AGRICULTURE  
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By Parker Anderson

**D**OES your farm home need a farmstead shelterbelt? Do your farm crops need the protection of a field windbreak? Have you idle, unused acres that could be put to work growing a productive timber crop?

If so, the varieties of trees and shrubs to plant, their requirements for successful growth, and their adaptability to soil, moisture, and exposure are of utmost importance. Select the trees that will meet your problems and your future needs and that have proven themselves.

After selecting hardy varieties, follow recommended planting methods.

Mixed plantings combining several species are better than solid plantings of only one variety. Mixed plantings establish more natural forest conditions, stimulate better growth, and offer more resistance to insects and diseases.

A few of the common hardy desirable species have been tested for your study and guided selection in this folder.

## *It Is Important to Select Hardy, Suitable Stock*

### **Care of Trees on Arrival**

**O**PEN the package containing the trees on arrival and make sure that the roots are damp. If necessary moisten the roots. If you are not going to plant your trees the day of arrival, store in a cool place such as a basement or root cellar.

If conditions are such that you cannot plant the trees for a week, take them out of the package and "heel them in." To do this:

1. Dig a trench deep enough to take the entire root system without crowding.
2. Spread the trees in the trench individually or in small bunches, side by side, allowing the tops or leaf area to come well above the ground.
3. Pack loose soil firmly against the roots, thus excluding air holes which cause drying out.

Trees properly heeled in can stay in good condition for a week or ten days. When you are ready to plant, large numbers of small trees can be carried at one time by placing them in a bucket half full of muddy water. In the case of larger trees wrap the roots in wet sacks or cover roots with wet moss, carry to planting area, and plant immediately. Under no circumstances allow the roots to dry out. *Dry roots mean dead trees.*



Heel in trees on arrival if planting cannot be done within a few days.

### **Early Planting Best**

Early spring—as soon as the frost is out of the ground—is the best time for planting. The ground is then moist, the rays of the spring sun are mild, and the trees have all spring and summer to become established before summer drouths, weeds, and cold become survival problems.

# WHERE AND WHAT TO PLANT

Adaptability by Zones

Suitable for

## SYMBOLS

- G = Good  
 F = Fair  
 Q = Questionable  
 S = Selective\*

### Tree Species

Green ash .....	G	G	G	G	G	G	G
White ash .....	G	G	—	—	S	F	F
American elm .....	G	G	G	G	G	G	G
Chinese elm† .....	G	F	F	Q	S	F	F
Hackberry .....	G	G	G	Q	G	G	G
Honey locust .....	G	S	—	—	S	F	—
Black locust .....	Q	—	—	—	S	F	—
Black walnut‡ .....	G	S	—	—	S	F	F
Butternut§ .....	G	G	S	—	S	F	F
Cottonwood .....	G	G	G	G	G	G	G
Carolina poplar .....	G	G	G	G	G	G	G
White willow .....	G	G	G	Q	S	F	F
Peach leaf willow .....	G	G	G	Q	S	F	F
Diamond willow .....	G	G	G	G	G	G	G
Soft maple .....	G	G	G	F	G	F	F
Box elder .....	G	G	G	G	G	F	G
Hickory .....	G	S	—	—	S	—	—
Black cherry§ .....	G	S	—	—	S	—	—

### Tall Shrubs

Wild plum .....	G	G	G	G	G	G	G
Choke cherry .....	G	G	G	G	G	G	G
Ural willow .....	G	G	G	G	G	G	G
Golden willow .....	G	G	G	G	G	G	G
Laurel leaf willow .....	G	G	G	Q	G	F	F
Buffalo berry .....	G	G	G	G	G	G	G
Caragana .....	G	G	G	G	G	G	G
Amur maple .....	G	G	G	G	G	G	G
Common lilac .....	G	G	G	G	G	G	G
Tartarian honeysuckle .....	G	G	G	G	G	G	G
Russian olive .....	G	G	G	S	G	G	G

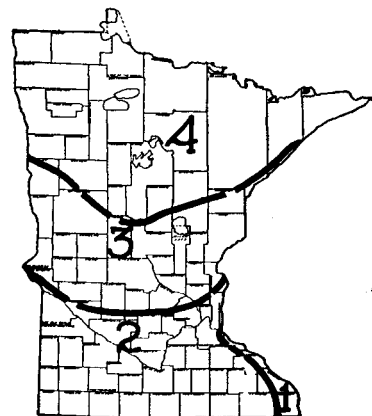
### Evergreens

White pine .....	G	S	S	G	S	—	—
Red or Norway pine .....	G	S	S	G	G	F	G
Jack pine .....	G	S	S	G	G	G	G
Western yellow pine .....	G	G	G	—	G	G	G
Scotch pine .....	G	S	S	—	G	F	F
Colorado spruce .....	G	G	G	G	G	G	G
White spruce .....	G	S	S	G	G	F	F
Black hills spruce .....	G	G	G	G	G	G	G
Norway spruce .....	G	F	F	—	S	—	—
Red cedar (Juniper)   .....	G	G	G	F	G	G	G
White cedar .....	G	G	G	F	F	Q	Q

	1	2	3	4	Variety of soils	Drouth	Exposure
Green ash .....	G	G	G	G	G	G	G
White ash .....	G	G	—	—	S	F	F
American elm .....	G	G	G	G	G	G	G
Chinese elm† .....	G	F	F	Q	S	F	F
Hackberry .....	G	G	G	Q	G	G	G
Honey locust .....	G	S	—	—	S	F	—
Black locust .....	Q	—	—	—	S	F	—
Black walnut‡ .....	G	S	—	—	S	F	F
Butternut§ .....	G	G	S	—	S	F	F
Cottonwood .....	G	G	G	G	G	G	G
Carolina poplar .....	G	G	G	G	G	G	G
White willow .....	G	G	G	Q	S	F	F
Peach leaf willow .....	G	G	G	Q	S	F	F
Diamond willow .....	G	G	G	G	G	G	G
Soft maple .....	G	G	G	F	G	F	F
Box elder .....	G	G	G	G	G	F	G
Hickory .....	G	S	—	—	S	—	—
Black cherry§ .....	G	S	—	—	S	—	—
Wild plum .....	G	G	G	G	G	G	G
Choke cherry .....	G	G	G	G	G	G	G
Ural willow .....	G	G	G	G	G	G	G
Golden willow .....	G	G	G	G	G	G	G
Laurel leaf willow .....	G	G	G	Q	G	F	F
Buffalo berry .....	G	G	G	G	G	G	G
Caragana .....	G	G	G	G	G	G	G
Amur maple .....	G	G	G	G	G	G	G
Common lilac .....	G	G	G	G	G	G	G
Tartarian honeysuckle .....	G	G	G	G	G	G	G
Russian olive .....	G	G	G	S	G	G	G
White pine .....	G	S	S	G	S	—	—
Red or Norway pine .....	G	S	S	G	G	F	G
Jack pine .....	G	S	S	G	G	G	G
Western yellow pine .....	G	G	G	—	G	G	G
Scotch pine .....	G	S	S	—	G	F	F
Colorado spruce .....	G	G	G	G	G	G	G
White spruce .....	G	S	S	G	G	F	F
Black hills spruce .....	G	G	G	G	G	G	G
Norway spruce .....	G	F	F	—	S	—	—
Red cedar (Juniper)   .....	G	G	G	F	G	G	G
White cedar .....	G	G	G	F	F	Q	Q

	Windbreaks— shelterbelts	Farm woodlots	Game, food, and cover	Erosion control
Green ash .....	G	G	G	G
White ash .....	F	Q	G	G
American elm .....	G	—	G	G
Chinese elm† .....	G	—	G	G
Hackberry .....	G	G	G	G
Honey locust .....	F	F	F	G
Black locust .....	F	F	G	G
Black walnut‡ .....	G	G	G	G
Butternut§ .....	G	G	G	G
Cottonwood .....	G	G	G	G
Carolina poplar .....	G	G	G	G
White willow .....	G	G	G	G
Peach leaf willow .....	G	—	G	G
Diamond willow .....	G	F	G	G
Soft maple .....	F	F	G	F
Box elder .....	G	F	F	G
Hickory .....	F	F	F	—
Black cherry§ .....	F	F	G	—
Wild plum .....	G	—	G	G
Choke cherry .....	G	—	G	G
Ural willow .....	G	—	G	G
Golden willow .....	G	—	G	G
Laurel leaf willow .....	—	—	—	—
Buffalo berry .....	G	—	G	G
Caragana .....	G	—	G	G
Amur maple .....	G	—	G	G
Common lilac .....	G	—	G	G
Tartarian honeysuckle .....	G	—	G	G
Russian olive .....	G	—	G	F
White pine .....	F	G	G	F
Red or Norway pine .....	G	G	G	G
Jack pine .....	G	G	G	G
Western yellow pine .....	G	G	G	G
Scotch pine .....	F	F	G	F
Colorado spruce .....	G	G	G	G
White spruce .....	G	G	G	F
Black hills spruce .....	G	G	G	G
Norway spruce .....	F	F	G	F
Red cedar (Juniper)   .....	G	F	G	G
White cedar .....	G	F	G	F

## Plant Zones



Good survival depends upon:

1. Ground preparation
2. Hardy varieties (proven origin)
3. Prompt and correct planting
4. Protection from livestock
5. Periodic cultivation

\* Selective—recommended for selected or sheltered sites only.

† Chinese elm can be used for some prairie planting depending on variety, exposure, and climatic conditions. The Harbin strain has proved very desirable for a variety of conditions.

‡ Black walnut can be used in some selected portions of prairie regions where it is not too exposed, or where alkaline and drouth conditions are not too severe.

§ Wood is too valuable to be used for fuel or posts.

|| Do not plant where apples are grown. Host plant of apple rust.

## Planting the Trees

Success in tree planting depends mainly on *good soil preparation*, proper handling and good planting, plus protection and cultivation of the trees throughout the growing season.

Never plant trees on "soddy" ground or in heavy vegetation without first preparing the ground a year ahead of time. If trees must be planted in sod, plow a furrow about 3 inches deep or "scalp" off the sod. If scalping by hand, cut away the sod in an 18-inch square and plant in the open space.

Dig the planting hole deep enough and wide enough to take the entire root system without crowding. Hold the tree upright until the soil is well tamped around the roots. Plant trees the same depth as they were formerly in the ground. Mechanical tree planting machines, available in many counties, do an excellent job.

Proper summer cultivation is essential to prevent grasses and weeds from robbing small trees of soil moisture and food.



Plant trees to proper depth, spread roots well, and tamp soil as it is filled in.

## Small Conifers

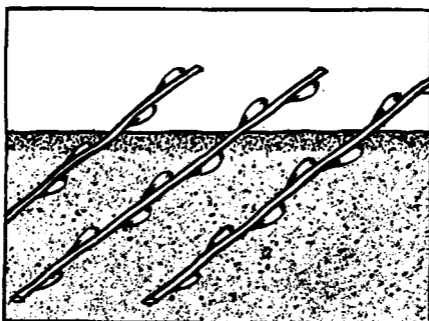
Select those species which are adapted to your soil, climatic conditions, and planting needs.

Only trees with good sturdy root development should be planted. A well-formed, strong root system is more important than a big top. Trees with large tops and spindly root systems are not apt to grow because the top demands more food and moisture than the poorly developed roots can supply. Evergreen transplants 4 years old with 10- to 14-inch tops and sturdy stems are favored. Four-year-old conifer transplant stock is known as 2-2 stock, which means a two-year seedling and a two-year transplant.

## Planting Cuttings

Cuttings are easily made from willow and cottonwood. They are most successful when cut early in spring before growth starts. Cover with moist sand; store in a cool place until ready to plant.

Cuttings should be taken from the young and healthy portion of the tree. The best size is 12 to 14 inches long and one-fourth to one-half inch thick. It is a good practice to soak them 24 hours before planting. Rooted cuttings are best.



Plant cuttings at a 45-degree angle with two buds above the ground.

Do not push the cuttings into the ground. Make a good opening and insert the cutting carefully so as not to peel the bark. Tamp the soil firmly against the lower end. Plant most of the cutting below the ground, leaving only two buds above. This insures greater root development and, as a result, better top growth.

Tree planting machines do a fine job of planting and packing.

## Planting Native Stock

One- to three-year-old seedling hardwood trees that have naturally reseeded themselves on or near your farm may be successfully transplanted. However, be sure to select open-grown trees with well-formed crowns and well-developed, healthy root systems. Nursery-grown, two-year-old stock with good root and stem diameter is preferred over wild stock.

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