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Pruning Shade Trees

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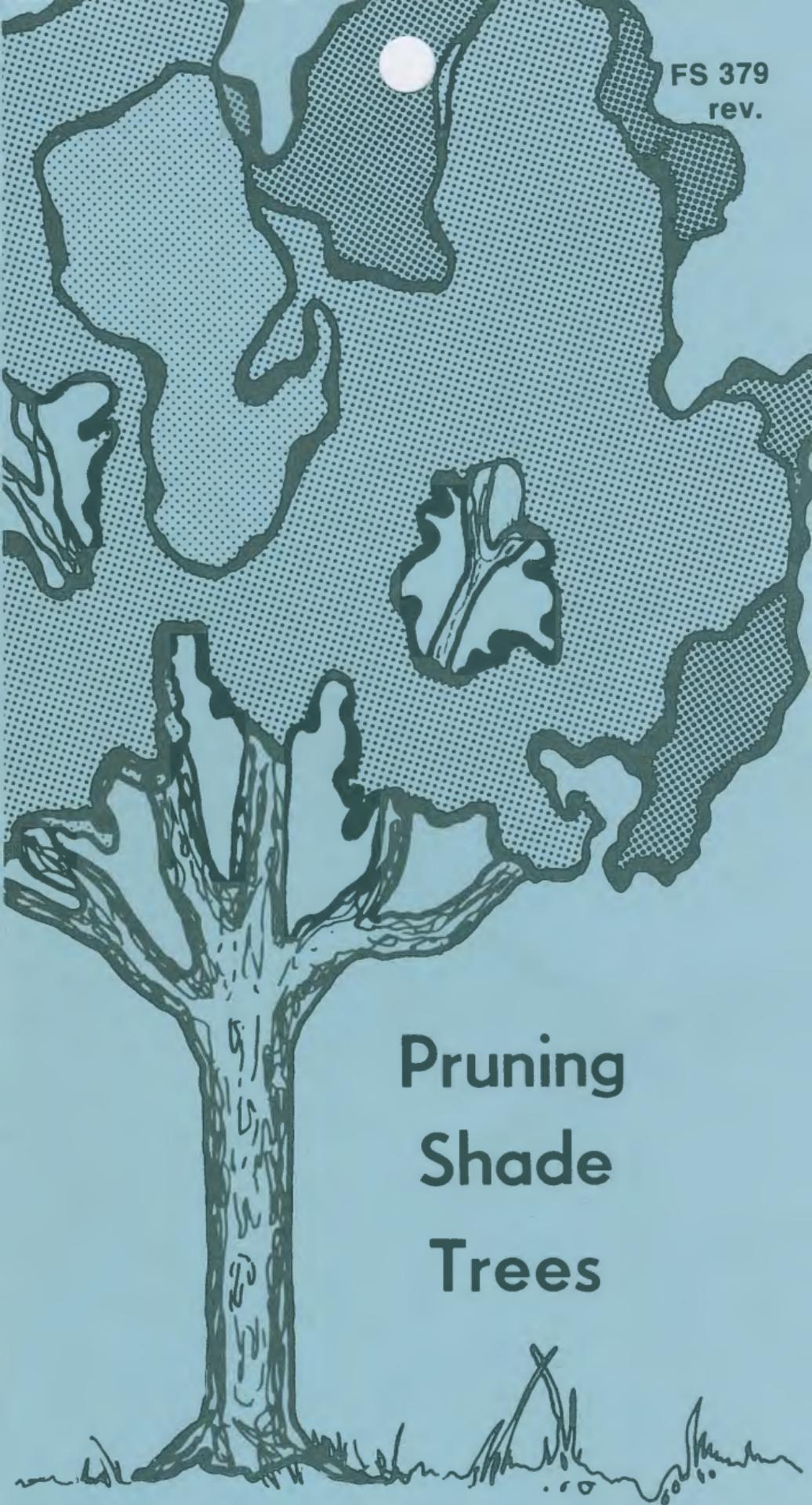
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Pruning Shade Trees

Cooperative Extension Service
South Dakota State University
U.S. Department of Agriculture

Pruning Shade Trees

By L. L. HELWIG, extension forester; DEAN MARTIN, extension horticulturist; and PAUL COLLINS, associate Experiment Station forester

Shade trees may need pruning to promote their health, improve their appearance or remove branches that may injure people or property. Dead, dying, diseased or broken branches need to be removed by pruning. In some cases you may want to remove low-growing or overhanging branches for convenience and safety. Other pruning may be done to restore the balance, symmetry or form to a storm-damaged tree or one that is growing unnaturally.

When to Prune

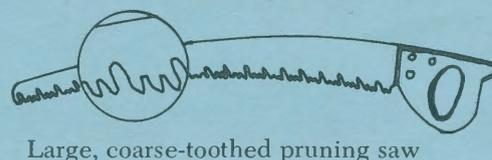
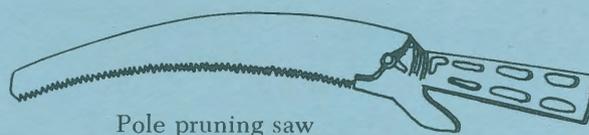
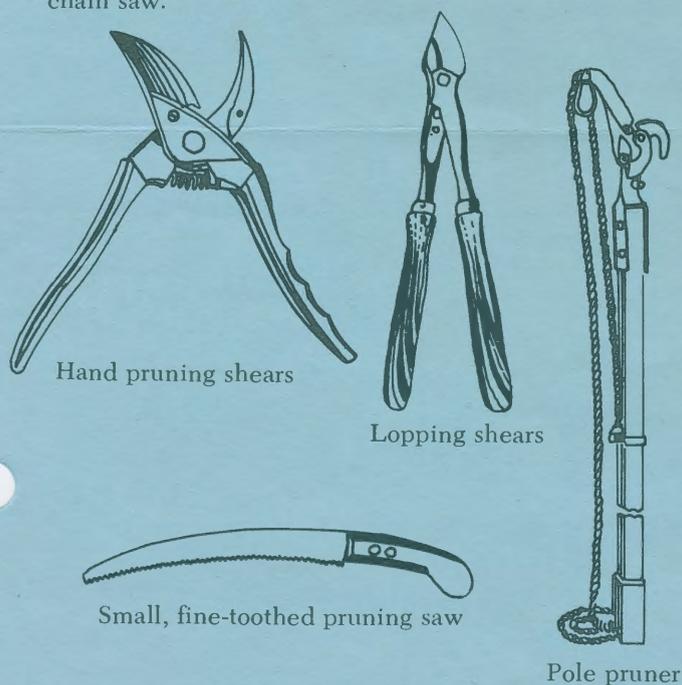
Pruning wounds heal faster if the cuts are made in the early part of the growing season, so most pruning is done in the spring. Practical considerations, however, necessitate pruning at almost any or all seasons of the year. For example, it is good to avoid pruning maples, birches and other bleeders (trees with a heavy sap flow early in the spring) when the leaf buds are breaking. The loss of sap caused by the bleeding of the pruning wounds is undesirable, but the damage to the tree isn't too serious.

If you have to prune later in the season, make the cuts before freeze-up. If some winter damage occurs, apply corrective pruning operations as soon as it is practical. In some cases labor requirements may call for winter pruning.

Pruning Equipment

For most tree pruning that will be done by the homeowner, the equipment shown below should be adequate.

If a homeowner has some major limb or tree removal operations to perform, this may justify the expense of purchasing power equipment such as a chain saw.



Shaping the Cut

Large pruning cuts on the trunk or main branch heal faster if the bark above and below the cut is removed. See the illustration of this procedure in Figure 1 below.

Removing the bark to form an almond-shaped section or wound that is parallel to or in line with the growth direction of the branch or trunk allows the sap to flow around and adjacent to the cut area. This promotes faster callus formation and healing.

Use a regular wood chisel and hammer or sharp knife to remove the bark. A wood chisel or gouge with a rounded blade is helpful in shaping an area where a branch has been removed, so it conforms to the exposed surface of the wounded area.

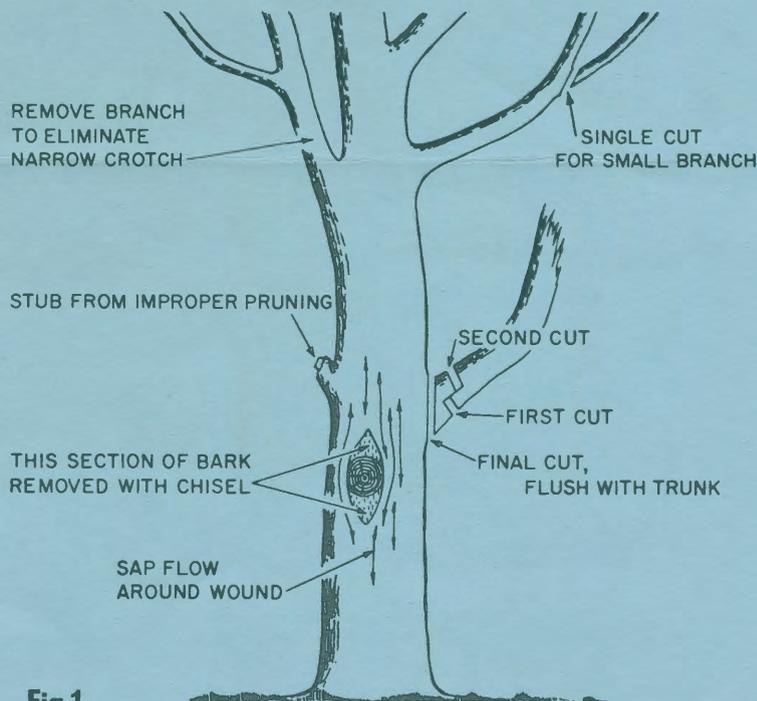


Fig 1

Removal of V-crotches

It is usually recommended to remove one of two limbs or trunks which have developed parallel to each other in such a way to create a very tight, "V-shaped crotch." The apparent junction of the limbs may be one or two feet from the actual point of intersection. To heal properly, the pruning cut must be made at this real point of intersection. (See Figure 2.)

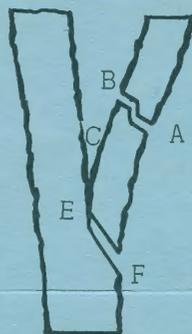
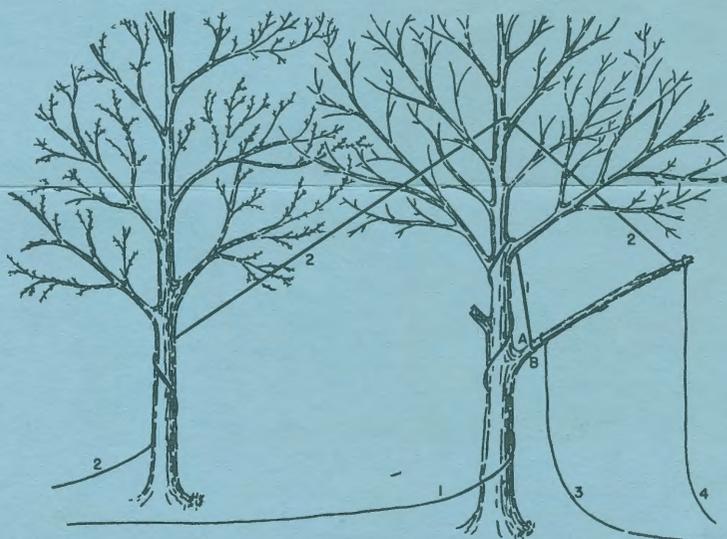


Fig 2

Make preliminary cuts at A and B. The line C-E represents an area of bark where the limbs have grown together; E represents the true point of intersection. The final cut should be made from point F, sawing toward E. Treat the resulting wound as previously discussed.

Roping Heavy Limbs

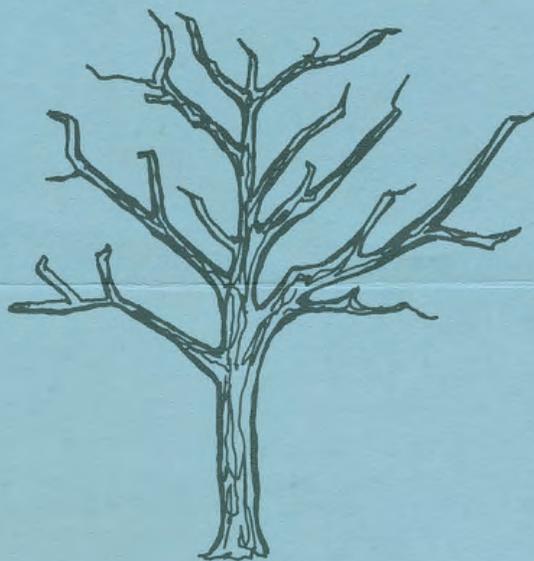
In removing very large limbs, it's often necessary to lower them to the ground in sections, using a system of support and pull ropes to avoid damage to nearby structures.



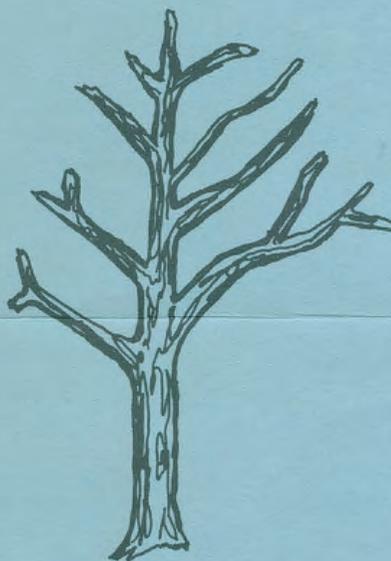
The above diagram illustrates a useful roping system for lowering large limbs. Line 1 is the butt rope; line 2 the top rope; and lines 3 and 4 are the pull ropes for directing the limb that will be lowered.

Dehorning

Dehorning, the practice of severely heading back the main limbs of an old tree, is a procedure that's rarely justified. But, the practice does have some merit and may be desirable under extreme conditions. When cutting back severely, the cut should be made about one-half inch beyond a branch that points in a more desirable direction.



THIS- But only when highly necessary

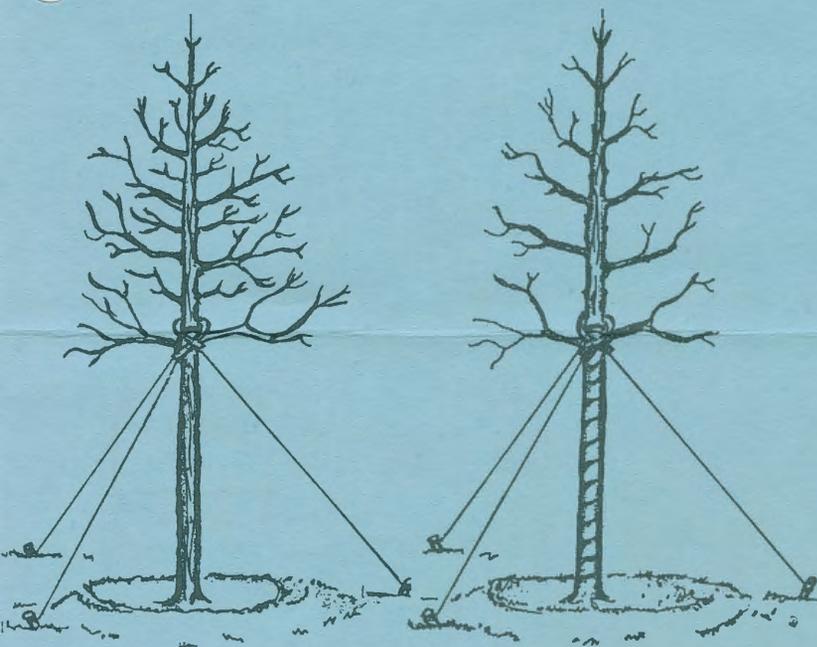


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Pruning Transplanted Trees

The pruning of recently transplanted trees or those which are going to be transplanted may be necessary if the trees are going to thrive. The essen-

tial reason for this practice is to compensate for the root loss, which the tree always suffers, no matter how carefully the moving is done. Remove the V-type crotch branches, but leave branches with a U-type crotch.



A newly planted shade tree indicating proper planting, bracing and pruning cuts to make (at left). Same tree after pruning (at right).

Paints and Wound Dressings

Wound dressings have been a controversial subject for many years. It's now fairly well-established that a tree wound should be adequately protected until healed. An efficient wound dressing should disinfect, prevent checking (a splitting of the exposed wound) and the entrance of fungus spores, and encourage healing or callus formation.

Commercial tree paints are available. Check the ingredients for the qualities listed above. The easiest and least-messy wound dressing is applied with an aerosol can. A water-base asphaltum emulsion, which is used to patch eave troughs or water tanks, is also available and sold at building supply stores.



Pruning wounds larger than a silver dollar should be covered with a wound dressing. Smaller wounds may be left alone.

Safety



Pruning trees can be hazardous.

A list of safety reminders follows.

1. Keep tools in good condition.
2. Handle tools with care, whether on the ground or in a tree.
3. Avoid working in trees when they're wet and slippery.
4. Watch out for electric lines passing near or through trees.
5. When using a ladder, have a helper steady it.
6. If you have to climb in the tree, be careful not to put your weight on weak branches.
7. Look out for "widow-makers" (loose branches hanging in the tree which may become dislodged and fall on you).
8. Use power equipment with extreme caution.
9. Be sure no one is under the tree when large limbs are dropped.
10. Remove pruned material from the area being worked as soon as it's taken from the tree.

Summary

1. Prune at the best time necessary for the tree.
2. Understand the reason or purpose for the pruning.
3. Specially designed equipment makes the job easier.
4. Proper shaping of the cuts hastens healing.
5. Dehorning an old tree is rarely justified.
6. Pruning recently transplanted trees compensates for the loss of roots.
7. Storm-damaged trees usually require special attention.
8. Approved wound dressings protect the tree while pruning wounds heal.
9. All final cuts should be made flush with the remaining limb or trunk.
10. Use the three-step method for removing large limbs.
11. Hire an arborist for large, heavy and difficult jobs.
12. Proper pruning helps to maintain the trees' healthful, attractive appearance.

Other Extension publications:

FS 580 - Dutch Elm Disease
EC 566 - Trees for South Dakota

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