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By E. K. Ferrell, Extension Forester, and James A. Brown, Farm Forester, Department of Game, Fish and Parks

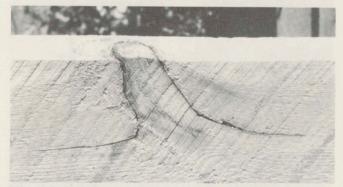
> Cooperative Extension Service South Dakota State University Brookings, South Dakota

## Pruning Black Hills Pine

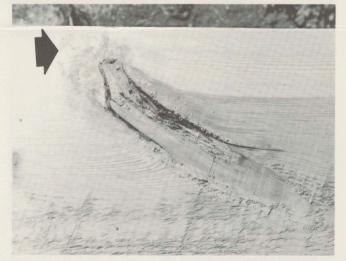
Black Hills timber stands are especially well suited for intensive timber management because: (1) timber is largely of one species (90% Ponderosa pine); (2) good road systems exist; (3) there is a market for various kinds of products; and, (4) stable markets are available in some areas.

Pruning is one of the timber management practices that can increase the value of your timber. Pruning excess branches produces better wood with fewer and smaller knots. In the past, the main reason for pruning trees was to increase the quality of sawlogs by reducing the number of knots in the butt log. Now, with new roundwood markets opening, plus markets for other wood products in the offing, interest in tree pruning is increasing.

New pole specifications adopted in 1963 by utility companies call for fewer and smaller knots in the lower half of the poles. This means that pruned trees will be in demand.



The defect produced in boards by branches. This is a loose knot.



Growth made by the tree after pruning is all clear lumber (arrow).



A crop tree selected for pruning: it is straight, 4-8 inches thick at  $4\frac{1}{2}$  feet from the ground, and has small branches.

Production of Ponderosa pine plywood is another industry in the planning stage that will create a demand for trees of better quality.

All signs indicate that the timber owner who produces high grade trees will increase the value of his timber crops.

#### SELECTING CROP TREES

Special care in selecting the type of tree to be pruned is the **most important step.** Select the best trees in your stand for pruning. These "crop trees" should have as many good qualities as possible. Here are five points to assist you in selecting trees to be pruned:

1. Select trees that are from 4 to 8 inches in diameter at  $4\frac{1}{2}$  feet above the ground line.

2. Select fast growing "dominant" or "codominant" trees. Dominant trees are those whose crowns extend above the general level of the crown cover and receive full light from above and partly from the side. They are larger than the average trees in the stand, and with crowns well-developed but possibly somewhat crowded on the sides. Codominant trees are those whose crowns form the general level of the crown cover. They receive full light from above, but comparatively little from the side. Usually they have mediumsized crowns more or less crowded on the sides.

3. Select straight trees.

4. Select trees that are free of diseases, insects, forks or other defects.



A tree pruned to a height of 17 feet. Note the saw—a curved blade attached to a long pole.

5. Select trees that are properly spaced throughout the stand. This will insure the best possible growth on these crop trees.

Pruning produces a tree of higher quality and of more value if the proper tree is selected in the first place.

#### PRUNING

Once you select the proper tree, the following steps will complete the pruning job:

1. Prune to a height of 17 feet where possible.

2. Leave two-thirds of the live branches on the tree.

3. Remove all dead branches and stubs.

4. Cut each branch off with a smooth surface that is flush with the trunk.

5. Remove fallen branches from the base of the

tree. In case of fire these branches may burn hot enough to kill the tree, so kick them away.

#### EQUIPMENT NEEDED FOR PRUNING

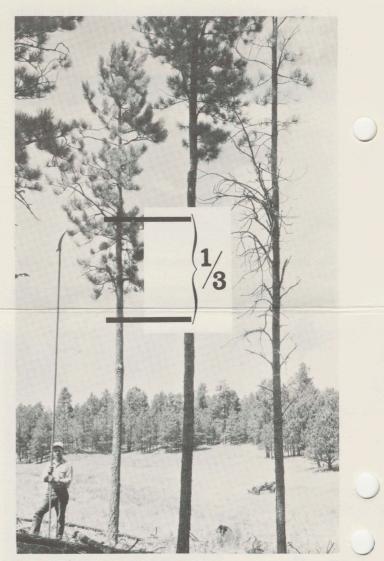
Like any other timber job, pruning must be done with sharp tools. To do the best job in the least amount of time use a regular pruning saw. This is a curved saw blade attached to a long pole.

#### SAFETY

Use a hard hat and safety glasses while pruning.

#### **GOVERNMENT COST-SHARE**

The Federal Government has a cost-share program to assist landowners in meeting part of the cost of pruning. This program is administered by the Agricultural Stabilization and Conservation Service. State Farm Foresters provide technical assistance in carrying out the program. The cost-share practice must be signed for **before** the pruning operation is started.



Remove about one-third of the live crown.

For additional information about pruning, timber harvesting and management contact:



The tree at the left has been improperly pruned with more than one-third of the live crown removed. Enough of the live crown remains on the tree at the right. Removal of too much of the live crown retards growth or kills the tree.



(Above) Clear branches away from the base of the tree after pruning. (Right) Keep the pruning saw close to the bark and turn the bottom in slightly to insure a smooth cut. (Below) Proper branch removal which leaves a smooth surface flush with the trunk.





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