



# FORESTRY EXTENSION NOTES

## CHRISTMAS TREE SHEARING

Proper shearing or shaping is the most important cultural practice in Christmas tree production. By trimming the top and branches of a tree to control the shape and density of the foliage, the producer can produce a more marketable product.

Most consumers in Iowa expect a tree to have uniform spacing between branches, dense foliage and a symmetrical shape. Trees which are not sheared or improperly sheared will not have these characteristics.

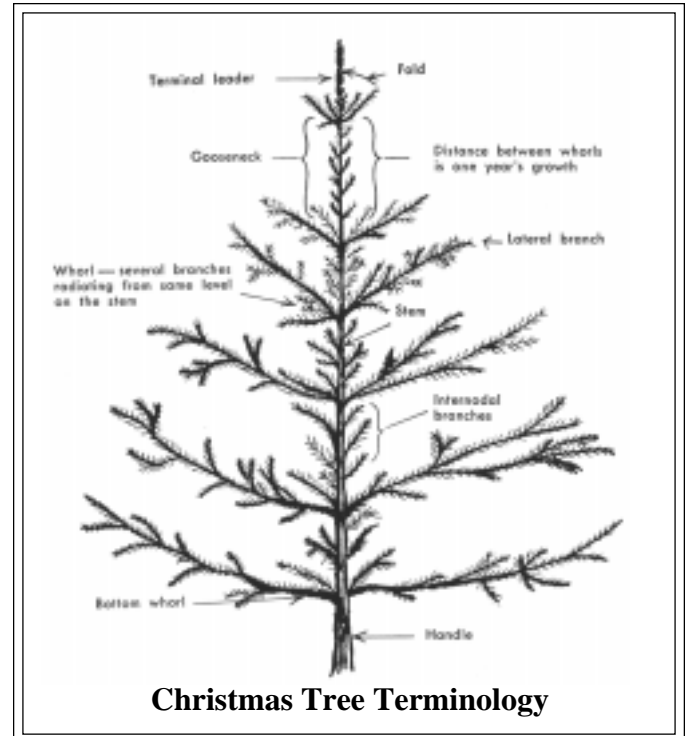
Shearing does three things to make the trees more marketable. First, the trees can be shaped to meet local demands; broad and rounded or narrow and columnar. Most producers may end up with a combination of shapes but tend to shear to match local customer preferences. Second, sheared trees have more branches resulting in a denser, thicker foliage. Third, shearing controls the distance between whorls of branches. This is critical because growth rates vary between years and different species of trees.

### TIMING

Shearing usually starts 2 to 3 years after planting or as soon as growth of the terminal leader exceeds 10 to 12 inches. Corrective pruning of multiple leaders is done annually until the actual shearing for shape and density is begun.

The conifers used in Christmas tree production are *determinant* growers; spring growth results in rapid elongation growth followed by bud set and, in most cases, no additional growth in height. Buds are visible on spruces and firs, while on pines the buds are dormant and hidden beneath the bark. When branch leaders or terminals are cut in the shearing process, growth stops and within a period of 1 to 3 weeks a cluster of new buds is formed. On the

terminal, one of them then usually develops as the new terminal bud.



**Christmas Tree Terminology**

Spruces and firs can be sheared any time during the year, but the best time to shear is probably from June to October. This extended shearing period is possible because spruces and firs produce visible auxiliary buds along the stems and branches as the tree grows. These buds are fully developed and form clusters whenever the stem or branch immediately above is removed.

Pines are sheared during the active growing season—June to early August in Iowa. Pines have no visible buds between the whorls. These non-visible

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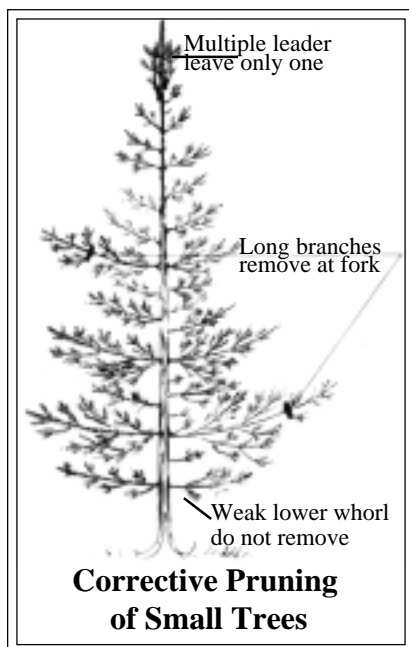
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buds will develop and form clusters when the branch is cut off, but only during the active growing season or before the terminal bud has hardened off or becomes mature. Pines sheared too early may continue to grow resulting in too much distance between branches; pines sheared too late may result in no bud set, fewer buds or dieback of the terminal leader. The long needled pines (Scotch and red) should be sheared early to promote more bud development and because buds are slower to develop on these species. If pines are setting too many buds, shearing later in the season may result in less bud formation.

**METHODS**

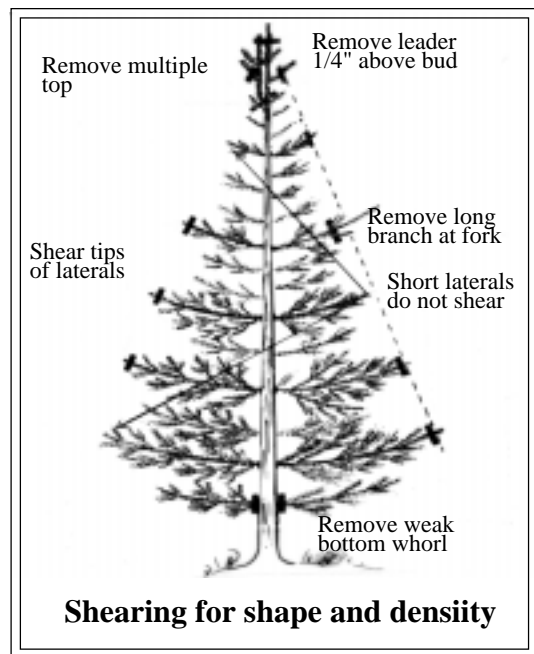
Several different tools can be used for shearing including hand clippers, hedge shears, power trimmers and shearing knives. Hand clippers are precise but quite slow. They have the greatest utility when shearing spruces and firs or when trying to shear back to existing buds without leaving stubs. Hedge shears are faster but they require more energy to use for long periods of time. Power trimmers require a power source, are heavier, and more expensive. Shearing knives, sharp blades 12 to 20 inches long, are perhaps the fastest but most hazardous; metal or plastic guards should be used for maximum safety. Growers have reported that serrated knives are easier to use and require less sharpening.

For the first shearing, cut all side branches necessary to give the tree the desired shape and taper. Desired taper varies from 1/2 to 2/3 as wide as the tree is tall.



Begin cutting the terminal when it is longer than 10 to 12 inches. Shearing should usually be done only on the current year's growth. Occasionally it may be necessary to cut older growth to correct a shape problem. Spruces and firs are generally sheared in the shape of a cone, while pines may be sheared for a more rounded shape,

especially at the bottom. Long-needled pines should be sheared with a hand clippers or a shearing knife. This is done to avoid cutting off needles adjacent to the sheared branch. Once shearing is begun, it is done annually until the tree is harvested.



Practice and experience is critical to good shearing. Experienced growers will usually produce a higher proportion of top quality trees. Good shearers can shear approximately 60 trees per hour. Shearing is probably the most labor intensive practice in Christmas tree production, but it is necessary for the production of top quality trees.

**BASAL PRUNING**

Basal pruning is the removal of all branches below the first good whorl of branches creating a handle 8 to 14 inches long. It may also have some benefit in reducing insect and disease damage to the tree. Basal pruning should be done during the dormant season at the time of the first or second shearing.

For more information on Christmas tree production, obtain Iowa State University extension pamphlets Pm-1499 and Pm-1500 from your county extension office. Technical assistance is also available from your district forester.

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