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Shearing and Shaping Christmas Trees
Michigan State University
Cooperative Extension Service
Lester E. Bell, Extension Specialist in Forestry
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Shearing and Shaping Christmas Trees

Michigan markets are demanding higher quality Christmas trees. Shearing and shaping will improve quality and make many otherwise cull trees salable. Follow these guidelines.

- Pine species should be sheared June 20 to July 20 when new growth is succulent. Too early pruning may cause too heavy bud set and irregular growth. Late pruning may cause small buds, few buds and many dead stubs.
- Spruces and firs should be pruned when the tree is dormant — October 1 to April 1.
- Start shaping Christmas trees when their average height is 24 to 30 inches.
- Do not market trees the fall following heavy shearing. Let them grow-out at least one season before marketing.
- Shearing pines helps control shoot moth infestations. Researchers have proven that late shearing reduces shoot moth numbers.
- Wild stands of spruce and fir respond to shaping and shearing.
- **Warning:** do not over-shear your trees. This increases shearing costs and wastes valuable growth.

Shear and shape Christmas trees to:

1. Control height and width and develop uniform taper.
2. Stimulate bud development, thus increasing number of branches and density of foliage.
3. Remove multiple leaders and branch deformities.
4. Remove lower branches to form a handle.

What shape is best

The shape of the tree should resemble an inverted cone, wide at the base and tapering uniformly to the tip. The ideal tree is about two-thirds as wide as it is high, for a taper of 66 2/3%. Thus, a tree six feet high would be four feet wide.

A 40% to 70% taper is acceptable on fir and spruce. In pine, which often have greater taper, acceptable standards range from 40% to 90%. Table 1 is a guide to taper.

What tools are needed

Most people prefer a light weight shearing knife. Others use hedge shears with 8 to 10 inch blades. Those with a rubber bumping block between the handles reduce fatigue.

By Lester E. Bell, Extension Specialist in Forestry

Dates	Age	Height of trees	Practice to apply
Oct. 1 to April 1	1st to 3rd year 4th to 5th year	5 to 20 in. 20 to 30 in.	None First shearing, remove multiple stems and deformities. Cut back leader and shear laterals.
Oct. 1 to April 1	6th to 7th year	30 to 40 in.	Second shearing, clip main terminal and shear laterals. Cut out any abnormal lateral growth.
Oct. 1 to April 1	8th to 10th year	4 to 6 ft.	Same as above
	10th to 12th year	5 to 7 ft.	Allow to grow out and harvest

* On the very good sites, trees will grow rapidly and need shearing in their third year and will be ready for harvest at the end of the seventh or eighth growing season. On poorer sites, the growth may be much slower, the trees will not need shearing until the fourth season, and will require 12 to 13 years to reach harvestable size.



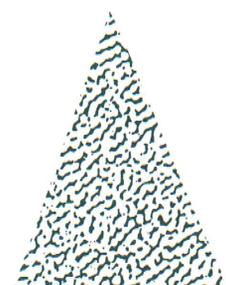
40%
Minimum
Acceptable
Taper



66 2/3%
Ideal
Taper
(all species)



70%
Maximum
Acceptable Taper
(for spruce and fir)



90%
Maximum
Acceptable Taper
(for pines)

Less than 40% — candlestick taper (undesirable);
40% to 70% — normal taper (spruces and firs);
40% to 90% — normal taper (pines);
more than 70% — flaring taper (spruces and firs);
more than 90% — flaring taper (pines).

Keep the blades sharp and free of pitch. Use kerosene, fuel oil or mineral spirits to remove pitch.

Other tools — a machete, corn knife, or sickle will do a fast job, but are rather crude. Pocket knives and hand pruners are considered too slow for large scale operations, except for removing the lower whorl.

Dates for shaping

Shape pine trees in the early summer when new growth is still soft and succulent. Spruces and firs can be shaped any time, but for best results shear when the tree is dormant.

How to shape pines

Start by cutting the leader to desired length (12 to 14 inches is usually best). Then, clip the laterals of the terminal whorl (see Fig. 2) so they are three to five inches shorter than the terminal. Next, proceed around the tree and clip all laterals to shape the tree. Remove lower branches to form an 8" to 12" handle at the base of the tree. This should be done at the time of the first shearing.

Any branches that are too long or irregular can be removed back to the second year wood. Make this cut just ahead of a side branch so a stub of dead wood is not left.

When shearing lateral branches, cut the branches at an angle that lines up with the contour of the cone.

Second and third shearings should be done similar to the initial shearing, but more care should be taken to select and insure a main terminal leader.

Closely sheared or cropped trees do not sell as well as those with some growth. Therefore, all trees should be allowed one season of growth after shearing before marketing.

Red and Austrian pine normally grow shorter leaders than Scotch pine, and should not be sheared as heavily as Scotch pine. Just nip the tips of new growth on Red and Austrian pine.

How to shape spruce and fir

Start by cutting back the terminal leader to 8 to 12 inches. Make the cut at an angle 1/4 to 3/8 inch above a good live single bud. This bud will develop into the terminal shoot.

WARNING — Making this cut just above two or more buds in a cluster can encourage development of multiple leaders.

After the main terminal is shortened, shear and shape lateral branches into a cone-shaped tree without regard to individual branches. Cut back extra long branches to shape.

Dormant buds will develop and new growth from these buds will cover the shearing wounds. Second, third and fourth shearings on these trees should be similar to the first but with special emphasis on maintaining a single terminal leader.

De-budding pines

Nurserymen have used this practice for many years. Thumb-out or remove certain buds early in the spring before new growth starts. Combined with shearing, it can slow growth of certain branches to form a better shaped tree. However, this practice is too slow for large scale Christmas tree producers.

Approximate Time Schedule for Shearing the Pines (Slight variations may occur due to site quality)*

Dates	Age	Height of trees	Practice to apply
June 20	1st year	4 to 10 in.	None
to	2nd year	10 to 20 in.	None
July 20	3rd year	20 to 30 in.	First shearing, remove multiple stems and deformities. Cut back terminal and laterals. Remove lower branches to form a handle.
June 20	4th year	3 to 4 ft.	Second shearing, select main terminal, cut back; then shear laterals.
to			
July 20			
June 20	5th year	4 to 6 ft.	Third shearing — may need little work. Pay special attention to terminal leader. Cut to length, then clip any extra long growth from laterals.
to			
July 20			
June 20	6th year	5 to 7 ft.	Allow to grow out. Little to no shearing.
to			
July 20			
Dec. 1	6th year	5 to 7 ft.	Harvest
to 20			

* On the very good sites, trees will grow rapidly and need shearing in their third year and will be ready for harvest at the end of the sixth growing season. On poorer sites the growth may be much slower, the trees will not need shearing until the fourth season, and will require 7 to 8 years to reach harvestable size.

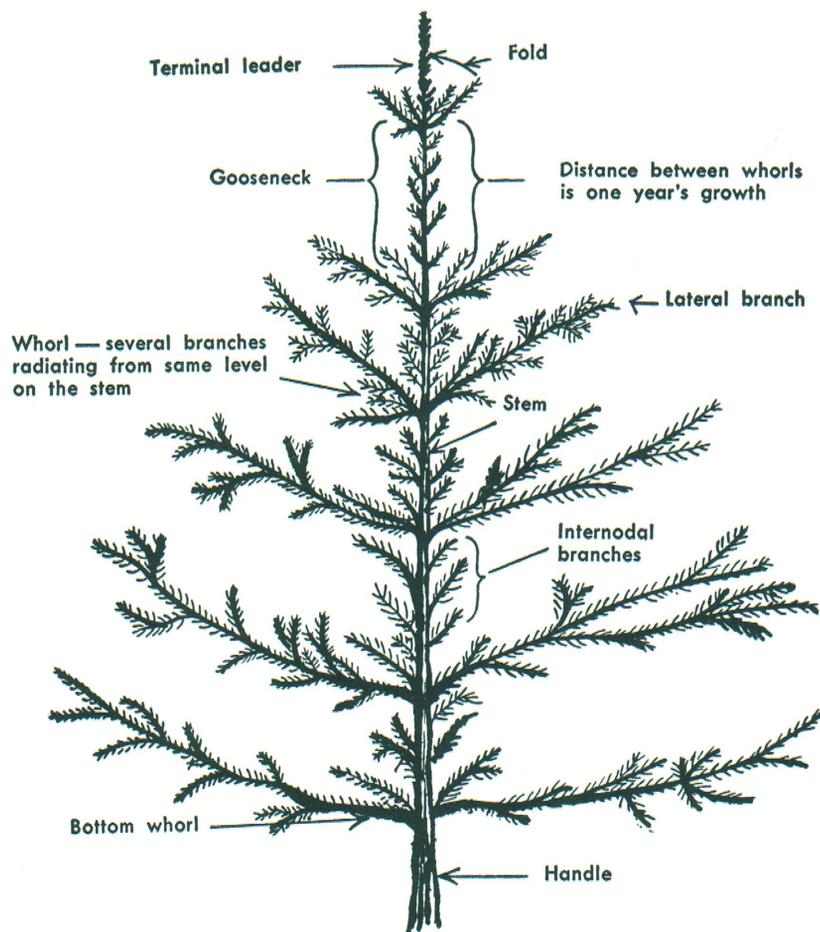


Fig. 2. Christmas tree terminology.