

## PROPAGATION OF TAXUS CUTTINGS

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We start our cuttings in the fall after 2 to 4 killing frosts. The spreading types we make 6" long, the uprights 8", using the current year's growth. The cuttings, depending on cultivar, are treated with Hormo Root B (15% thiram, 0.40% IBA). For hard-to-root kinds we use Hormo Root C (15% thiram, 0.80% IBA). Easy cultivars are *Taxus cuspidata* 'Densiformis', *T. cuspidata* 'Compacta', and *T. 'Green Mountain'*. The harder ones are *Taxus* × *media* 'Wardii', *T. × media* 'Hicksii', *T. × media* 'Hatfieldii', *T. brevifolia* 'Nana', our patented *T. 'L.C. Bobbink'*, a globe-shaped taxus, and the only real troublemaker, is *T. baccata* 'Repandens'.

All cuttings are stuck in pure perlite about 1½" to 2" deep. Spacing is ½" × 2". The medium is kept at 65° to 68°F. I believe bottom heat is very important. The cuttings are lightly syringed 2 to 3 times a day to maintain high humidity in the greenhouses. They are dusted with Captan every 2 weeks, especially for damping-off. We have found that it is best to finish all our taxus cuttings before January 1; cuttings taken later develop a heavy top growth and callus, poor rooting, and are often attacked by damping-off organisms.

When roots first develop watering is gradually cut down; and the costly heat is cut by about 10°F. Most cuttings are planted in June, into beds 5 feet wide, spaced 6 × 10 inches. The harder to root cultivars are potted in 3" Jiffy Pots and kept in cold frames. We undercut the stock in our field beds the second and third year to establish a compact root system. The feeding is very light and the trimming is done with a 5 foot rotary mower.

In the fourth year we line out a heavy 8-10" liner and are able to finish a 15-24" plant of most cultivars in 2 years. The plants are spaced 2 × 3½ feet. The pH is kept around 6.5. Feeding is done by mechanical side dressing with a 10-6-4, 50% organic fertilizer. Trimming is done once in the winter and once in the summer. We use Freunde hedge shears. Weed control is done in late February with 50 lbs/A granular Simazine applied with a Lilly spreader. We cultivate at least every 2 weeks mechanically; hard to control weeds are hoed out.

JAMES WELLS: I have a couple of questions for Jim Sabo. Do I understand correctly that you're rooting these taxus stuck in ground beds at a consistent 40°F air temperature?

JIM SABO: We set our thermostat at 40° and use no bottom heat. Of course, during the day when the sun is out the temperature will go above this.

JOHN MCGUIRE: What is the canning mix in which you grow these taxus?

JIM SABO: A few years ago we ran a growing mix study and at the end of 2 years we couldn't see any difference in the six mixes we were testing and so we went back to our standard container mix which is 50% bark and 50% peat moss; to this we add superphosphate and other nutrients.

JOHN MCGUIRE: How much water do they get?

JIM SABO: A lot. I feel the key to growing taxus is nutrients and keeping the roots cool and it takes a lot of water to keep the roots cool.

JACK GARTNER: Do you grow your taxus under shade?

JIM SABO: Yes, we use 50% Saran. In comparing plants grown in full sun and those grown under shade, those under shade are always much darker green.

CARL ORNDORFF: Why don't any of you use straight perlite as a rooting mix, then you wouldn't have to use all of the fungicides you are putting on?

GERRY VERKADE: I tried using straight perlite but the roots went out rather than down and it made them difficult to transplant; by using 1/3 perlite, 2/3 sand, I get the roots to go down.

CARL ORNDORFF: I use straight perlite all the time and have never had a problem with the roots.