



Conifer Seedling Selections for Georgia

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Nature of Work: Conifers are important landscape plants in many parts of the United States, but have been overlooked in the Southeast. In 1997, a conifer evaluation project was initiated at the Tifton campus. Seed from promising conifers such as *Chamaecyparis obtusa* var. *formosana*, *Cryptomeria japonica* 'Ben Franklin', *Cupressus glabra* 'Carolina Sapphire' and *Platycladus orientalis* (Xian Shan selection) were collected during the winter of 2002-2003, germinated, and grown in #1 containers. Seed from other selections were gathered from various sources and were grown in liners. Plants in #1 containers were shifted into #7's at the CANR on February 17, 2004, whereas liners were shifted to #3's on April 7, 2004. The substrate consisted of 6:1 pinebark and sand amended with (in lbs. per cu. yd.) dolomitic limestone (4.0), Micromax (1.5), Gypsum (1.5), Osmocote Pro 18-8-8 (14.0), and Talstar (2.0). Plants were topdressed with Scotts 17-6-8 + minors on August 5 at the rate of 18 g/pot on #3's and 36 g/pot on #7's. Final growth measurements were recorded on October 1, 2004. Observations are noted below. Plants will be evaluated during the winter of 2004-2005. Plants with good form that remain green thru the winter will be selected.

Results and Discussion:

- Chamaecyparis obtusa* - 34 seedlings were raised from this Formosan variety. Mean height was 48 in. with a range from 32 in. to 61 in. Plants are full and uniformly green.
- Cryptomeria japonica* - eight seedlings were raised from the cultivar 'Ben Franklin'. Four of the seedlings have yellow-variegated foliage similar to 'Sekkan' and one has twisted foliage.
- Cupressus glabra* - 24 seedlings were raised from the cultivar 'Carolina Sapphire'. Foliage color ranges from gray-green to gray-blue. Cercospora blight has been noted on one seedling. Mean height was 55 in. with a range from 37 to 77 in. Seedlings will be selected for form and color.
- Platycladus orientalis* - from nine seedlings of 'Golden Surprise', six have variegated foliage. Of the 48 seedlings from the Xian Shan mountains in China, the average height was 48 in. with a range from 30 to 60 in. The height to width ratio on these plants was 2.4.

Thuja occidentalis

- seedlings from the cultivars 'Brandon', 'Dark Green', and 'Malonyana' show little variation. Of 22 seedlings from 'Golden Globe', four are variegated and one is dwarf. Seedlings from 'Holmstrup' (35) have produced seven dwarfs. Seedlings from 'George Washington' show some variation while seedlings of 'Ada' are slower growing.

Significance to Industry: Seedling germplasm has shown a great deal of variation for form and foliage color. Another crop of seedlings will be evaluated in 2005. Advanced selections will be vegetatively propagated and evaluated further under container and field conditions.