The Use of Tree Shelters with *Picea Orientalis* and *Fagus Orientalis*

Fahrettin Tilki¹, Aşkın Göktürk², Fatih Bayraktar³ and Murat Sabri Sadıklar⁴

¹Prof., Artvin Coruh University, Faculty of Forestry, Artvin, Turkey; ²Assist Prof., Artvin Coruh University, Faculty of Forestry, Artvin, Turkey; ³Res. Assist., Artvin Coruh University, Faculty of Forestry, Artvin, Turkey; ⁴Sp., Artvin Coruh University, Faculty of Forestry, Artvin
E-Mail: fahrettintiliki@yahoo.com

**Abstract:**

Tree shelters are plastic tubes that are placed around tree seedlings when they are planted. Tree shelters protect young trees from animal, mechanical and/or herbicide damage. Additionally, tree shelters improve the survival and growth by providing a mini-greenhouse environment that reduces moisture stress, channels growth into the main stem and roots and allows efficient control of weeds that can rob young seedlings of soil moisture and sunlight. Many variations of tree shelters exist. There is considerable debate among treeshelter manufacturers as to the ideal color, size, shape and texture for optimal plant growth. Tree shelters, used in conjunction with good planting stock, proper planting techniques, and adequate weed control can result in improved survival, better growth and less damage from wildlife. Today, tree shelters are made of light stabilized polypropylene or polyethylene; tubes come in various heights from 60 to 180 cm. In general as diameter increases the shelter effect declines but within the range 5-20 cm this is not important. Shelters now come in a variety of proprietary colors with tan and blue being the most common. At the end of three growing seasons, survival and growth of *Picea orientalis* and *Fagus orientalis* seedlings protected by tree shelters in various heights (40, 60, 100 and 120 cm) with and without vent holes compared to unprotected seedlings were evaluated in this study.

**Key words:** Oriental beech, oriental spruce, seedling growth, seedling survival, tree shelter