Reducing Height Growth of Fast Growing Species - Marguerite

Except for Ethrel, the treatments in trial 6 will be repeated at Marguerite with larch and white spruce.

Experimental Design

Each treatment consists of 3 PSB 313's. Blocks will be prepared at PFRC and moved to Marguerite after mid-April.

Seedlots to be used are;

- Lc (4010) 8263/B3/2329/1.067 91% - double sow
- Sw (5080) 93L15/B2/1831/0.945 73% - double sow

**Treatment 1** - Control; Standard 3 peat: 1 vermiculte with 3 kg/m³ 12 mesh and finer dolomite lime, 5.85 kg/m³ (4.5 kg/cu. yd.) Osmocote 18-6-12 and 0.13 kg/m³ (0.1 kg/cu. yd.) FTE 503.

**Treatment 2** - Mechanical Stimulation; Standard Osmocote soil mix. As seedlings approach 3-4 cm in height, daily mechanical stimulation should begin. This should be vigorous enough to cause stems to bend and should last about 10 seconds.

**Treatment 3** - Severe Drought Stress; Standard Osmocote soil mix plus 3 kg/m³ Hydrogel 2. When stock approaches acceptable heights, severe drought stressing should be initiated, i.e. reduce soil moisture to wilt point before watering in each cycle.

**Treatment 4** - Shearing tops, early; Standard Osmocote soil mix. When most seedlings of each species exceed 15 cm in height, they should be sheared at the 15 cm level. Seedlings that are too short at the time to be cut should be identified for future reference.

**Treatment 5** - Shearing tops, late; Standard Osmocote soil mix. This treatment should be sheared at 15 cm three weeks after those in treatment 4. Seedlings too short to be cut should be identified.

Evaluation of Results

At the end of the growing season, samples will be assessed for height, root collar, top and root dry weights. The effect of shearing in treatments 4 and 5 will be evaluated for abnormalities such as forked tops, and for establishment of terminal buds.

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