

4-H FORESTRY FACT SHEET

Extension Forestry

Growing Tree Seeds and Seedlings



Growing tree seedlings is similar to growing garden plants. Under natural conditions seeds drop to the ground in the fall and winter months and undergo actions that prepare them for germination in the spring. Those that fall on a suitable seed bed, usually mineral soil, will germinate and establish young trees in the early spring.

If you want to collect your own tree seed, find out what the different tree seeds look like when they are ripe. Most seeds ripen in the fall.

Seeds may be planted in the fall, winter, or early spring. Some will begin pushing through the soil in about 2 weeks.

Growing trees from seed should duplicate or improve on the stratification and sowing practices found in nature. Growing trees from stored seed involves three practices: stratification, sowing and seed and tree care. The following instructions describe these practices.

Stratification (of seeds)

The storing of seeds in layers with a moistened medium (for example, peat or sand), so as to maintain viability and overcome dormancy. When done in conjunction with near-freezing temperatures, it is termed cold stratification even if no medium is used.

1. Seed planted in the late fall or early winter will stratify naturally and start growth in the spring.
2. Seed planted in the spring should be prepared for planting as follows:
 - a. Place seed in porous cloth and seal or tie off the ends. Soak seeds 24 hours in cool (about 60°F) water. Drain, dry and store



in polyethelene bag in vegetable crisper of refrigerator about 6 weeks. Do not store seed in freezer. (If possible, mix seed in damp layers of peat moss or vermiculite while in the polyethelene bag.) When seed is ready to be sown, separate it from the other material.

Planting the seed

1. Soil for the seed bed should be deep, loose, sandy loam. Heavy soils containing a large amount of clay can be made usable by mixing sand, peat moss, or possibly sawdust to a depth of at least 10 to 12 inches. Soil fertility may also need to be checked. Check with your county Extension office if you want to test the soil.
2. Soil should be loose and spaded to a depth of about 12 inches. Materials such as rocks, sticks, and large, hard lumps should be removed.
3. After the soil is worked, the seed beds should be raised 6 to 8 inches to provide maximum drainage.
4. Surface should be raked smooth and gently pressed down with a board to provide the uniform surface for planting.
5. Plant about 10 seeds per square foot, uniformly spaced. Press the seed into the soil, and cover with a thin layer of fine topsoil, sand, or peat moss.

Seed and tree care

1. Protecting the seed and young trees up to 8 weeks old from insects, birds, and mice should be done by constructing a seedbed frame 6 to 8 inches high and by covering the top with window screening. The lower edge of the frame should be buried an inch or so in the ground.
2. Watering during the first summer should be a light spray in amounts to assure moderate moisture content on the surface and first 12 inches

- of soil. Do not flood the area. Watering should be stopped after mid-August to allow the seeds to harden before the cold weather begins.
3. Shading for first year seedlings should be about 50 percent shade during the hot weather. Shade can be provided by brush, or lath over the seedbed.
 4. Seedlings should not be left in the seedbed longer than 2 years. At the end of the second year's growing season, transplant them to a bed 6 inches apart in rows 18 inches apart.

Planting seedlings in pots

Members may want to plant seedlings in pots to observe at 4-H meetings as well as at home.

1. Use a flower pot 6 inches deep for each seedling.
2. Dig the trees out of the seedling bed; be sure to keep the tree roots moist at all times. (Wrap seedlings in moist newspapers.)
3. Place roots of tree into pot with the lowest needles on stem just higher than rim of cup.
4. Fill pot with fine textured topsoil. Shake pot to be certain the sand is filled in around all the roots.
5. Saturate soil with water at first: then keep moist, but not flooded.

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