

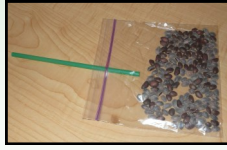
Planting Seeds

You can plant seeds indoors any time! If you wish to plant your seeds outdoors, it's best to store the seeds in the freezer so that they remain dormant until January, when you can start the germination process.

5 Steps for Seed Germination & Planting

1. Soak the seeds in a bowl for 3 days. This simulates the fall rains.

2. Stratify Put the seed in the refrigerator for 60 to 90 days. This simulates the seeds lying underneath the snow during the winter. Place one layer of seeds in a Ziploc bag lying on its side, then insert a straw and close the seal around it so that the seeds will have oxygen (snowpack has about 90% oxygen). This process is called "stratification."



Lay seeds flat in a Ziploc bag and insert a straw to aerate.

3. Plant the seeds! After the stratification process, you may plant the seeds in soil. The best soil mixture is: 50% peat moss, 40% vermiculite and 10% perlite. Seeds can be planted in pots indoors or directly in the ground outside. If you plant outside, choose a spacious location away from utility lines or buildings where trees can grow happily over time. You may want to cover your seeds with a screen to help keep animals out.

4. Water your seeds every other day until the seedlings sprout. Once a seedling has sprouted, you can water it twice a week.

5. Transplant If you've planted indoors, you can transplant your seedlings to a more permanent location outdoors when they are 1-2 years old.



Seedlings growing in a nursery.

Planting Seedlings

When: Planting in spring and fall is best, although planting in summer is okay if seedlings will be watered regularly.

Where: Pick a spot with partial shade that is at least 20 ft from your house and any utility lines. If planting more than one tree, space them at least 10 ft apart. Remember, sugar pines are the tallest pines in the world and they will need lots of room to grow!



Planting a sugar pine!

Planting Instructions:

1. Clear your planting area of leaves, rocks, pine needles down to bare mineral soil.
2. Dig a hole 8-10 inches deep and twice as wide as the roots. Place the soil you remove beside the hole for easy re-filling.
3. Check to make sure that the hole is deep enough! The roots should be fully below the surface of the surrounding soil.
4. Holding the roots straight, re-fill the hole with soil and pack it firmly around the roots to remove air pockets. The soil should entirely cover the roots and about halfway up the seedling's stem. You may want to gently step or "tree dance" around your seedling to properly compact the soil.
5. Do the "tug test" by gently but firmly pulling on the stem of the seedling to make sure it does not come out easily.
6. Mulch around the seedling's base to keep the soil moist and discourage competing vegetation.
7. Water your seedling—it deserves a drink!



From left to right: Digging a hole. Filling in and compacting the soil. Soaking the ground (notice the berm and moat system trapping water).

Special Considerations

If you are planting in a very **dry area** or in a place with well-drained or dry soil, make a small berm and moat (1 to 2 feet in diameter) around the base of the tree. The berm and moat will trap and hold water to help feed your seedling.

If you are planting in a **wet area** or in poorly draining soils, plant the tree on top of a mound of soil so that water drains away and does not waterlog the root system.

In general, unless you are planting in a wet area, **mulching** around the seedling is a very good idea. A "mulch blanket" of 2-4 inches of wood chips, pine straw or shredded bark will help insulate the ground, discourage weeds, and retain moisture around the roots. Make sure that the mulch blanket does not pile up on or touch the base of the tree.



A nice "mulch blanket."

Care Guidelines

- * Once the tree is in the ground, its success depends on your taking good care of it! Mostly, this means watering and feeding it (with fertilizer).
- * Soak the soil completely when watering, but make sure that it does not remain saturated and let it dry out between waterings.
- * In the spring and fall, water your seedling about twice a week.
- * In the summer, water your seedling about 3 times a week.
- * When there is snow on the ground, you don't need to worry about watering the seedling!
- * Fertilizing occasionally (MiracleGro, compost tea, etc.) is good for your seedling, but not necessary.
- * **It takes about 5 years for a tree to reach 2-3 feet in height and be fully "established."** Once your tree is established, you will only need to make sure that it is getting enough water in the summer months. You may want to water it twice a month in the summer to keep your young tree happy.

Enjoy watching your sugar pine grow!