

Propagation of Black Locust from Seed

USDA Natural Resources Conservation Service
Big Flats Plant Materials Center
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The propagation of black locust (*Robinia pseudoacacia*) from seed at the Big Flats Plant Materials Center has followed the following protocols:

1. The day before seeding, scarify the black locust seed by placing the seed into hot water (almost boiling water) and let it sit for 24 hours. (Acid stratification was used in the past, but similar germination results can be obtained using hot water. All propagators we talked with use the hot water soak scarifying method). The black locust seed will swell when scarified.
2. Black locust is a nitrogen fixing legume and rhizobium inoculant would normally be applied. After checking numerous sources for inoculant and talking with the US Forest Service National Tree Seed Lab in Georgia, there are no known commercial sources of black locust inoculant (Spec. 1). If you have grown black locust in your nursery, the rhizobia is already in the soil. Rhizobium inoculant can be had by collecting surface soil from under healthy black locust trees and mixing this in with your potting media. The rhizobium is not needed for germination, but needed for good seedling growth.

Mycorrhizal fungi in powder form can be applied to the seed (after draining off the water) prior to seeding. This product (from Sheffield Seeds in Locke, New York) contains concentrated spore mass of endomycorrhizal fungi, ectomycorrhizal fungi, *Trichoderma*, and beneficial bacteria. This application is optional, but can assist with seedling growth.

3. Place the seed ¼ inch deep into a media consisting of 1 part perlite to 2 parts potting mix. You want a media that is fairly well drained. If you have surface soil collected from around a black locust tree, this could be added to the mix for the rhizobium inoculum.
4. Be sure the media can drain well. If the media is too moist, fungus gnats were found to be a problem and can adversely affect your survival of the seedlings. Application of Gnatrol may be needed to control the fungus gnats and apply according to the label.
5. The seed should germinate in 7 to 14 days. At the plant materials center, we sow the seed of black locust into tree tubes with three seeds per tube. Once germinated, we thin to 1 seedling per cell. The seedlings that are removed can be planted in another tube. For accelerated growth, heated tray/bench could be utilized. Seed started in early spring should have seedlings of adequate size for planting out in the fall or the following spring. If a grower has the facilities, seed could be seeded in the fall (September/October) and have seedlings for a June planting.
6. It is important to protect the black locust seedling from deer browsing by utilizing tree tubes/tree shelters. If protected, the black locust can typically be 5 to 9 feet tall after two growing seasons.