

Sweating Nursery Stock to Break Dormancy

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If you have had trouble getting some liners (hawthorn, hackberry, some oaks, black gum, European mountain ash, locust, or hornbeam) to break bud and leaf out in the spring after planting, then you need to read on.

Most tree and shrub genera can be stored bareroot all winter under refrigeration and develop normally once transplanted. However, there are a few plant genera, which become deeply dormant during refrigerated storage. These must be forced out of dormancy before they are planted, or they will simply remain dormant after planting, and eventually die. Conifers should never be sweated.

Sweating is the process that forces bud break and active growth. The main goals are to rehydrate the root systems and to increase the humidity and temperature surrounding the plants. These conditions force growth to begin.

Sweating plants is relatively easy. There are two methods commonly used. The first method merely involves potting the plants and placing them in a poly covered overwintering house. The warm, humid polyhouse environment meets the needs of the plants to bring them out of dormancy.

The other method can be done in a bareroot barn, garage or out-building where the temperature can be maintained between (50) 60 and 70 degrees. (Sources varied)

Lay one or two layers of moistened burlap, straw or similar material on the floor. Soak the roots for several hours. Shake off the excess moisture and lay the plants on the prepared area. Avoid excess moisture, as a mold could grow and might regardless (probably harmless).

Completely cover the plants with several layers of damp burlap, straw or similar material. Cover the pile with a tarp or a sheet of poly and seal around the edges to begin the process.

Check the plants daily to see if the dormant buds have begun to swell and break open (bud break). Also check for moisture and mold. Spray 1.25 teaspoons Cleary's 3336F in 1 gallon of water over the mold (roots and foliage) as a precaution.

Sweating and transplanting outside must be timed for late April in Middle Tennessee. Sweating only requires 3 to 4 days. What happens to the plants next is critical. Once the buds begin to swell, nothing must interfere with the natural progression. Remaining in the bareroot barn will cause what was started to stop. You cannot sweat a group of plants in February and keep them in the barn until March or April. Nor can you sweat a group of plants in February and plant them out immediately. The new sprouts would surely be killed back by the cold temperatures. Sweated plants may be potted and grown in a polyhouse until weather conditions allow moving the plants outside.

Several large bareroot nurseries that ship nationally recommend sweating in their catalog. They agree on the procedure, but vary as to the plant genera that would benefit.

They collectively listed *Acer* (maple), *Amelanchier* (serviceberry), *Betula* (birch), *Berberis* (barberry), *Campsis* (trumpet vine), *Carpinus* (hornbeam), *Carya* (hickory), *Celtis* (hackberry), *Cotoneaster* (spreading cotoneaster), *Crataegus* (hawthorn), *Fraxinus* (ash), *Liquidambar* (sweet gum), *Malus* (apple and crabapple), *Morus* (mulberry), *Nyssa sylvatica* (black gum), *Pyrus* (pear), *Quercus* (oak), *Rosa* (rose), *Salix* (weeping willow specified), *Sorbus* (European mountain ash), *Syringa* (lilac), *Taxodium* (cypress), and *Tilia* (linden). Locust was also listed. I assume they meant the genus *Robinia* and not the genus *Gleditsia* (Honeylocust). No one nursery listed all of these.

Hackberry and Hawthorn are the two genera that I assume would benefit in our area. In the past, complaints of liners slow to leaf out have been blamed on leaving them in the bareroot barn too long or planting in the wrong moon sign. After asking several producers, I was told of 'Winter King' Hawthorn liners that stood dormant most of their first summer, with some slowly leafing out periodically and some leafing out very weakly the second spring.

Plant genera that require sweating cannot be planted outside early. Sort of a kick in the pants. Sweating plants is an easy way to ensure bud break on some plant genera that have difficulty breaking dormancy after cold storage. The sweating process and planting must be delayed until outside conditions are right.

Note: Depending on the time of year and temperatures in transit, plants may break dormancy while in transit from Oregon. If this happens plants are ready to plant and grow and should not be refrigerated again for any extended period.

We would be happy to hear of successes, failures, comments or questions. This may be good information to pass onto your liner customers.

Amy Fulcher, with the Univ of Ky Extension Service at Princeton, and I pulled this information together from the nursery catalogs of Bailey (Minn), Hillis (Tenn), Lawyer (Mont) and Sherman (Iowa).

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