

BLACK LOCUST/FALSE ACACIA

Black Locust, False Acacia

Robinia pseudoacacia

Fabaceae

ECHO® PLANT INFORMATION SHEET

Origin

Deciduous tree, native to Eastern and Midwestern USA, elevations to 1070 m (3500 ft), height to 25 m (80 ft), often forms thickets by suckering. White, pendulous pea-like flowers have a sweet aroma and alternate, pinnate leaves have 7-20 leaflets with 2 strong thorns at the base of the petiole. It ranges throughout the temperate regions of the Americas, Europe and Asia to the subtropics to the cooler elevations of the tropics. Originating in the Appalachians, it is now naturalized in the Himalayas. It thrives on a wide range of soils, can grow in climates with 400 mm to 1,500 mm (15 in-60 in) rainfall and survives temperatures from -40° C to +40°C (-40° F to 104° F). Reputation for hard wood, rapid growth and beauty has contributed to its spread throughout the world.

Uses

Black Locust is Cultivated as an ornamental in the U.S. and throughout Europe; common in parks. High-density wood is used for fenceposts. With flavonoids in the heartwood, Black Locust fence posts last over 100 years in the soil. The fragrant flowers are rich in nectar for honey production. As a nitrogen-fixing legume with fibrous roots, *R. pseudoacacia* is useful for erosion control and reforestation on difficult sites. The wood is suitable for lumber, paper pulp and fuel wood. The nitrogen-rich leaves make *R. pseudoacacia* an important fodder tree, useable fresh, as silage or hay, or processed into commercial feeds. Many traditional medicines have been made from the tree, and the leaves are reported to have insecticidal properties.

Common Names

- French
 - acacia blanc

Cultivation

Easily propagated by seed, stem or root cuttings, *R. pseudoacacia* will grow well in nutrient-poor and acidic soils. It grows from 0.5 m to 1 m per year. Direct seeding is the best method when planting for biomass or forage. Seedling transplants are economical for plantings with wider spacing such as for erosion control or timber uses. The seeds have hard, impermeable outer coats, which are relatively impervious to water. They must be softened by 20-50 minutes in concentrated sulfuric acid, soak in hot water, or scarification. Due to hard seed coats the seeds stay viable for many years. A kilo will contain roughly 35,000-50,000 seeds. *R. pseudoacacia* is moderately specific in its *Rhizobium* requirements. Although it will form nodules with many strains, for effective N-fixation, strains from native trees work best. Newly introduced trees require inoculation; inoculum may be gotten from the soil of Black Locust stands, or from the Nitrogen Fixing Tree Association. The tree's fine roots are also colonized by VA (vesicular-arbuscular) mycorrhizae.

Harvesting and Seed Production

Harvest the red-brown leathery seed pods when they are on the verge of drying, and place them in the shade to complete drying. They contain 4-10 kidney-shaped seeds. Protect the pods by placing into an empty mesh feed bag until the pods have opened. Then shell and store in closed containers in the refrigerator until marketing or planting.

Pests and Diseases

Locust stem borer (*Megacyllene robiniae*) attacks the stem of the young trees, resulting in crooked stems, multiple trunks, vulnerability to wind damage, and entry points for fungal pathogens such as *Fomes rimosus* (heart rot). (Note:) If the roots are damaged for some reason, i.e. from tillage or digging, the growth of root suckers will increase. In the right conditions, it can spread fast via suckering and may become an invasive pest.

Cooking and Nutrition

The beans, flowers and leaves once cooked are safe and nutritious for human consumption. However, there is a toxin (Robin) under the cambial layer of the stem and root and in the uncooked leaves and seeds which possess strong emetic and purgative properties and should not be eaten.

References

<https://smallfarms.cornell.edu/2018/01/08/black-locust/>

<http://ecocrop.fao.org/ecocrop/srv/en/dataSheet?id=9297>

http://www.worldagroforestry.org/treedb/AFTPDFS/Robinia_pseudoacacia.PDF