Black Walnut: *Juglans nigra.*

**Origin:** Black walnut is used for furniture, gunstocks, and veneer, and is considered one of the scarcest and most coveted native hardwoods. It is the most commonly planted nut tree in North America, and has been cultivated since 1686.

**Lifecycle:** Black walnut trees are perennials. Most seedlings germinate from nuts buried by squirrels. Black walnut trees mature in about 150 years, but may live for 250 years.

**Identification:** Often a large tree with a massive, round, somewhat open, symmetrical canopy appearance. Leaves are composed of 11 to 13 leaflets that are long and toothed. The bark is dark brown to nearly black and deeply furrowed. Black walnut flowers generally appear in April through June. The large edible nut ripens in September or October, dropping shortly after the leaves fall. Black walnut shavings are much darker than light pine shavings (see photo).

**Distribution:** Eastern half of the United States except the northern border; Massachusetts south to NW Florida, west to central Texas; north to SE South Dakota.

**Habitat:** Prefers moist, well-drained soils, especially along streams and rivers; usually found scattered in mixed deciduous forests.

**Control:** Black walnut shavings should not be used in horse bedding. Black walnut shavings are commonly associated with furniture manufacturers.

**Toxin:** Experimentally, signs of toxicity usually occur after oral exposure to the black walnut heartwood (inner most wood), but toxicity after dermal exposure is commonly believed to occur as well. The chemical structure of the toxin is not known. Juglone was initially believed to be the toxin, but toxicity has not been reproduced with either oral or dermal dosing of juglone.

**When Toxic:** Use of black walnut shavings for bedding.
Toxicity: Clinical signs may be observed within a few hours of horses bedded with as little as 20% fresh black walnut shavings made from either new or old wood.

Signs and Effects of Toxicosis: Depression, limb edema (stocking up), warm hooves, acute laminitis (founder), stiff gait, and reluctance to move can be seen within a few hours of exposure. Flared nostrils, abdominal pain (colic), edema (swelling) of the neck and chest, elevated heart and respiratory rates, and high body temperature may be seen as the toxicity progresses. Laminitis may result in rotation of the coffin bone in severe cases.

Treatment: Clinical signs often subside within hours of removing bedding containing black walnut shavings. A mild sedative and mineral oil may be useful in some cases. Non-steroidal, anti-inflammatory drugs such as phenylbutazone (Bute) or flunixin meglumine (Banamine) are often used. Adrenergic blockers such as prazosin, and calcium channel blockers such as nifedipine may be used in rare instances.

Other Information: Black walnut roots and leaves excrete a compound called juglone which inhibits the growth of other susceptible plant species growing nearby. This inhibition is referred to as allelopathy. See the oak fact sheet for a discussion of kidney effects that may occur from ingesting the outer green hulls of the nut.