

Lyis: Honey Locust (*Gleditsia triacanthos*)

Golden honey locust forms for landscape, pod-bearing forms for fodder

Nursery in Owen Sound, run by

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 LyisForestry

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1 Introduction to *Gleditsia triacanthos*

1.1 Description of the Plant

Honey locust is a hardy, fast-growing, nitrogen-friendly legume tree reaching 12–25 m at maturity with an open, high canopy that lets grass grow beneath. Leaves are finely pinnate, casting dappled shade that reduces heat stress on livestock while maintaining pasture productivity. Wild types can bear stout thorns on trunk and branches; many nursery selections are thornless. Fragrant flowers in late spring are visited by pollinators. Female and some hermaphrodite trees produce long brown pods in late summer to fall. Pods contain sweet pulp and seeds that cattle readily consume on pasture.

1.2 Historical and Cultural Context

Native to central and eastern North America, honey locust has long been valued for durable wood, living hedges, shade, and livestock feed from naturally dropped pods. Hedge planting and silvopasture with honey locust were common on mixed farms before synthetic feeds were widespread. Modern interest is rising due to low-input fodder, microclimate benefits, and farm resilience.

1.3 Edible, Medicinal, and Useful Properties

Fodder: Pods provide a sweet, energy-rich supplement that complements hay and pasture. Leaves and tender shoots are palat-

able browse in moderation. **Agroforestry:** Light, filtered shade benefits cool-season grasses, reduces wind, and improves animal comfort. **Wood:** Dense and rot resistant for posts and craft. **Pollinators:** Nectar supports bees and beneficial insects.

Important distinction: Do not confuse honey locust (*Gleditsia triacanthos*) with black locust (*Robinia pseudoacacia*). Black locust contains toxic compounds for livestock; honey locust pods are used safely and traditionally as fodder.

2 Planting Outdoors

Site: Full sun is best. Tolerates a wide range of soils from loams to clays, pH about 6.0–8.0. Avoid waterlogged sites.

Soil prep: Remove sod and weeds in a 1 m circle. Incorporate up to 5% compost if soil is very poor. Do not overfertilize.

Hole: Dig wide, loosen sides. Plant so root flare sits at or just above finished grade. Backfill and firm gently. Water in thoroughly.

Mulch: 5–8 cm wood chip ring, keep 5 cm away from bark.

Protection: Use a sturdy stake and a 1.2–1.5 m tree guard or wire mesh to prevent rub, browse, and trunk damage. Thornless selections still need protection until established.

3 Silvopasture for Cow Fodder

3.1 Choose the Right Trees

For reliable pod production, plant **thornless, pod-bearing** cultivars or seedlings selected from good pod parents. Golden-leaf ornamentals like 'Sunburst' are usually seedless and are not ideal for fodder. Maintain at least some pollen-bearing trees nearby for good fruit set.

3.2 Layout and Spacing

Row orientation: North–south rows distribute light evenly.

Alley width: 8–12 m between rows for tractor access and good pasture growth.

In-row spacing: 3–5 m for pod-bearing

trees. This yields about 170–400 trees per hectare depending on layout.

Hedgerow option: For wind shelter and browse, use double rows 1.5–2.5 m apart, trees 2–3 m in-row, with 12–20 m alleys.

3.3 Planting and Establishment Steps

1. **Mark rows and install temporary exclusion:** Use step-in posts and polywire or cattle panels to exclude animals from new trees.
2. **Plant seedlings or whips:** Spring or early fall. Water to settle soil. Mulch as above.
3. **Guards:** 1.5 m ventilated tree shelters or 1"x1" mesh cylinders 40–50 cm diameter. Stake firmly.
4. **Water:** First season, 10–15 L per tree weekly in dry spells. Second season, water during droughts only.
5. **Weed control:** Keep a 1 m weed-free circle for 2–3 years to speed growth.
6. **Training:** Select a central leader. Raise canopy slowly to 2.4–3.0 m over 3–6 years for equipment and animal clearance.

3.4 Integrating With Cattle

Grazing access: Exclude cattle until trees are well above browse height and guards are removed. Reintroduce with temporary fencing if needed.

Pod season: Pods drop late summer to fall. Cattle glean pods on pasture which reduces waste.

Feeding guidance: Introduce gradually. As a rule of thumb, allow pods to contribute up to 10–20% of daily dry matter during drop season. Provide free-choice water and mineral. Maintain adequate fiber from pasture or hay.

Managing spread: Where you want to limit volunteers, feed pods in sacrifice areas, compost manure hot, or mow seedlings.

3.5 Safety and Practical Notes

Thorns: Avoid thorny types in active alleys. If using thorny seedlings, keep rows fenced

off and lift the canopy early.

Species ID: Confirm you are planting honey locust, not black locust.

Machinery: Prune lower limbs over time to maintain clearance. Keep trunks protected from rubbing.

4 Ongoing Plant Care

Watering: Deep soak in dry spells the first two seasons. Established trees are drought tolerant.

Fertilization: Usually unnecessary. If growth is weak on very poor soils, apply a light-balanced fertilizer in early spring.

Pruning: Winter or very early spring. Remove dead, crossing, or low limbs, maintain a strong central leader, and develop a high, open crown for pasture light.

Pests and disease: Generally tough. Watch for cankers or borers on stressed trees. Good airflow and proper planting depth prevent most problems.

5 Winterizing

Hardy in Ontario. Young trees benefit from: **Mulch:** Maintain a winter mulch ring for root insulation.

Wraps: In windy or sunscald-prone sites, wrap the lower trunk with a breathable tree wrap for the first 2 winters.

Water: Late fall deep watering before ground freeze if autumn is dry.

6 Harvesting and Storage of Pods

6.1 Signs of Maturity

Pods turn brown and begin to rattle as pulp dries, late summer into fall. Trees begin bearing in 3–6 years depending on vigor and provenance.

6.2 How to Harvest

Let animals glean under trees or hand-pick from the ground for storage. For off-pasture use, collect into breathable sacks.

6.3 Storage and Use

Storage: Keep dry, cool, and rodent safe. Dry pods store for months.

Feeding: Offer on pasture or in a feeder mixed with hay. Break or crush if you need to limit whole seed passage and volunteers. Always introduce changes slowly.

7 Propagation

Seed (most common): Seeds have a hard coat. Scarify by nicking with a file and soaking 12–24 h in hot water that cools to room temperature. Optional cold stratification 30–60 days at 1–5°C improves uniformity. Plant 1–2 cm deep in spring once soils warm. Note that seed-grown trees may be thorny and variable in pod traits.

Vegetative: Thornless, pod-bearing selections can be propagated by grafting onto seedling rootstock. This preserves desirable traits and reduces thorns.

Suckers: Occasional; transplant with a root section while dormant.

8 Human Uses and Ideas

The sweet pod pulp has been used historically for syrups and beverages. Roasted seeds have been tried as a coffee substitute. Primary modern value on farms is shade, wind moderation, and livestock feed from pods with low external inputs.

9 Quick Start for Fodder Rows

- Layout alleys 10 m apart, in-row spacing 4 m.
- Plant thornless, pod-bearing stock. Include a few pollen trees nearby.
- Guard each tree 1.5 m tall and mulch a 1 m circle.
- Exclude cattle 2–3 seasons, then reintroduce with temporary fencing if needed.
- Raise canopy to 2.7 m over time. Let pods drop and let cows glean.