

Tree of Heaven vs. Black Walnut vs. Sumac Smooth/Staghorn

1. **Look at the base of each leaflet.** (*Best character.*)
 - **Tree of Heaven:** 1–2 conspicuous glandular lobes ("teeth") at the base.
 - **Black walnut:** No glandular lobes.
2. **Look at the leaflet edges.**
 - **Tree of Heaven:** Almost entirely smooth, except for the basal lobes.
 - **Black walnut:** Finely serrated along nearly the entire margin.
3. **Crush a leaflet.**
 - **Tree of Heaven:** Strong, unpleasant odor.
 - **Black walnut:** Pleasant, spicy, walnut-like aroma.
4. **Look for fruit.**
 - **Tree of Heaven:** Clusters of tan, winged samaras.
 - **Black walnut:** Round green walnuts.

A memory aid that many foresters use is:

- **Tree of Heaven = Smooth edge + Basal glands + Bad smell.**
- **Black Walnut = Serrated edge + Walnuts + Good smell.**

Quick comparison

Feature	Tree of Heaven	Black Walnut	Sumac
Leaflet edge	Mostly smooth	Serrated	Serrated
Basal glandular lobes	Yes	No	No
Fruit	Tan winged samaras	Green walnuts	Red fuzzy berry clusters
Twigs	Smooth	Smooth	Velvety/fuzzy
Growth habit	Single fast-growing tree	Large forest tree	Colonies of many stems
Odor when crushed	Unpleasant	Walnut-like	Mild

A simple field mnemonic

- **Tree of Heaven:** *Smooth leaves, bad smell, glandular lobes.*
- **Black Walnut:** *Serrated leaves, walnuts, aromatic.*
- **Sumac:** *Serrated leaves, fuzzy twigs, red berry torches.*

For your Virginia farm, I would also emphasize one management point:

- **Tree of Heaven:** Remove aggressively (invasive).
- **Black Walnut:** Usually retain as a valuable native hardwood.
- **Sumac:** Usually retain unless it's interfering with a planting. It is an excellent wildlife species, providing nectar for pollinators, fruit for birds, and cover for small mammals.

Tree of Heaven vs. Black Walnut vs. Sumac Smooth/Staghorn

1. Tree of Heaven (invasive)

- 11–41 leaflets per leaf. *Smooth leaves*
- Each leaflet has **1–2 glandular "teeth" (lobes)** at its base. This is the easiest identifying feature.
- Crushed leaves have a strong, unpleasant odor (often compared to rancid peanut butter or burnt rubber).
- Smooth gray bark on younger trees.
- Produces large clusters of tan, winged seeds (samaras).

2. Black walnut

- Usually 15–23 leaflets.
- Leaflets are *finely serrated* along the entire edge.
- Terminal leaflet is often small or absent.
- When crushed, leaves have a spicy, citrus-like walnut smell rather than a foul odor.
- Mature trees produce walnuts in green husks.
- Bark becomes dark and deeply furrowed.

3. Staghorn sumac (or other sumacs)

- 11–31 sharply *serrated* leaflets.
- *Twigs are often fuzzy ("staghorn").*
- Produces upright clusters of red fuzzy berries.
- Usually forms colonies from root sprouts.