



Planting Pawpaw Trees

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Common Planting Questions

What is a pawpaw?

- The pawpaw (*Asimina triloba*) is a native tree fruit commonly found in the forest understory in the eastern U.S.
- Trees grow well in USDA Hardiness Zones 5–8.
- The ripe fruit has yellow to orange flesh with a tropical flavor often described as a blend of banana, mango, and pineapple.

Where should I plant pawpaw trees?

- Pawpaw trees grow best in slightly acidic soils (pH 5.5–7.0).
- They prefer moist, well-drained sites but should not be planted in areas that remain flooded for long periods. Avoid heavy clay soils.

Should I plant grafted or seedling trees?

- Seedling trees are less expensive but have unknown fruit quality and may take 5–7 years to flower and fruit due to juvenility.
- Grafted trees cost more but produce fruit of known quality and often begin bearing in 3–4 years.

Should I plant more than one tree to get fruit?

- Yes. Pawpaws are generally self-incompatible and require cross-pollination.
- Plant at least two genetically different trees. Two grafted trees of the same cultivar will not effectively cross-pollinate.

When is the best time to plant pawpaw trees?

- Dormant trees can be planted in spring (March–April in Kentucky) or fall (early November).
- Trees with leaves should be planted after the last frost date, typically in May.

Can pawpaw trees be planted in full sun?

- Young trees establish best in light to moderate shade.
- Mature trees produce the most fruit in full sun. Heavily shaded trees will produce few fruit.

Should I use a tree shelter or grow tube?

- Yes, especially for trees less than 2 feet tall.
- Tree shelters provide shade, reduce wind stress, conserve moisture, and protect trees from animals and herbicides (Fig. 1).
- They can significantly improve survival during establishment.

On planting day, what should I do?

- Remove perennial weeds before planting.
- Dig a hole deep enough to accommodate the taproot, usually about 1 foot deep.
- Avoid planting in excessively wet or dry soil. Fill the hole carefully, eliminate air pockets, and water thoroughly after planting.
- Space trees at least 8 feet apart and rows about 20 feet apart in orchards.

Should I fertilize my tree?

- Yes. Apply a water-soluble fertilizer through fertigation at 500 ppm once in May, June, and July.
- Alternatively, apply urea, Nature Safe®, or 10-10-10 at 1 oz of actual nitrogen per tree annually during establishment.
- Apply 3–4 oz of actual nitrogen per tree in late winter after the 2nd year as tree matures.

Can I transplant trees or root suckers?

- Transplanting pawpaws can be difficult because of their deep taproot.
- Dig as much of the root system as possible and keep the root ball intact.
- Root suckers often lack sufficient roots to survive on their own, but success may improve if they are partially separated from the mother tree several weeks before transplanting.

Do I need to water my trees?

- Water trees immediately after planting.
- Young trees are sensitive to drought and should receive about 1 inch of water per week during the growing season.
- Drip irrigation works well in orchards.

How can I control weeds around my trees?

- Weed control is critical during establishment.
- Use wood-chip mulch or weed-barrier fabric to suppress weeds and grass around trees.
- Glyphosate may also be used according to label directions, but avoid contact with tree bark, stems, root suckers, and leaves.

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Figure 1. Example of a grow tube or tree shelter and mulch

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Sources

Layne DR. 1996. The pawpaw, *Asimina triloba* (L.) Dunal: A new fruit crop for Kentucky and the United States. HortScience. 31:777–784. <https://doi.org/10.21273/HORTSCI.31.5.777>

Pomper KW, Layne DR. 2004. The North American pawpaw: Botany and horticulture. In: Janick J, editor. Horticultural Reviews. Wiley, Hoboken, NJ. p. 349–382. <https://doi.org/10.1002/9780470650882.ch7>

Pomper KW, Crabtree SB, Layne DR., Peterson RN., Masabni J., Wolfe D. 2008. The Kentucky pawpaw regional variety trial. J. Amer. Pom. Sci. 62:58-69. DOI: <https://doi.org/10.71318/apom.2008.62.2.58>



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