Black Walnut – *Juglans nigra*

Climate								*Soil*						
Min Optimal Temp (°F)	**Max Optimal Temp (°F)**	**Min Absolute Temp (°F)**	**Max Absolute Temp (°F)**	**Growing Degree Days (__°F base)**	**Chilling Hours (32-45 °F)**	**Min Rainfall (in/year)**	**Max Rainfall (in/year)**	**Min pH**	**Max pH**	**Optimal Soil Texture**	**Absolute Soil Texture**	**Optimal Soil Drainage**	**Absolute Soil Drainage**	**Soil Depth (in)**
-20 [a, d, k]	96 [e, l, m]	-27 [a, d, k]	100 [e, l, m]	N/A	N/A	38 [d, k, m]	105 [d, k, m]	4.6 [d, k, n]	8.2 [d, k, n]	clay loam, silty clay loam, sandy clay loam, loam, silt, loam, sandy loam [d, g, k]	sandy clay, silty clay, silt [d, g, k]	well drained [d, g, n]	somewhat excessively drained, moderately well drained [d, g, n]	36 [d, k, n]

	Key Months for Crop Development and Thresholds											
	DEC	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**
Stage of growth *(under current conditions)*	Dormant	Dormant	Dormant	Dormant	Dormant	Bud Break, Leaf Out, Flowering [f, m]	Flowering [f, m]	Nut Development [f, m]	Nut Development [f, m]	Nut Development [f, m]	Nut Ripening, Harvest, Leaf Drop [f, m]	Dormant

Key Cultivars: [c, h, i]

Black walnut has large genetic variation across its native range. For cold hardiness, it is important to choose varieties that have originated from northern regions. Most named black walnut cultivars for nut production have come from the efforts of hobbyist breeders and growers. Purdue University has also developed timber-type walnut varieties that are available for sale. The cultivars below have been tested in other northern states (i.e., Iowa), but not widely in Wisconsin.

Cultivars for Nut Production

- 'Thomas' (first named cultivar, anthracnose resistance, thin shell, large nut size, high yielding, precocious)
- 'Ohio' (anthracnose resistance, easy to crack, high yielding, precocious)
- 'S127' (early ripening, easy to crack)
- 'Kwik Krop' (mid-ripening, vigorous, easy to crack)
- 'S129' (mid-ripening, vigorous, precocious, easy to crack)
- 'Cranz' (late ripening, easy to crack)
- 'Rowher' (late ripening, vigorous, easy to crack, precocious),

Cultivars for Timber Production

- Purdue HTIRC Timber Select

Climate Risk Notes: [b, d, j]

Black walnut is extremely cold hardy and has been documented to survive freezing temperatures of -40°F. The native range for black walnut extends throughout much of central and eastern parts of the U.S., and exhibits a wide genetic variation across this range. Make sure to select plant material from northern sources.

Black walnut is fairly resistant to drought.

Thousand canker disease (*Geosmithia morbida*), a fungal pathogen spread by the walnut twig beetle, is a serious disease causing fatalities for native black walnut populations. It was first found in the western states in 2008 and is moving east. It has not yet been reported in Wisconsin.

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