



BLACKBERRY (*RUBUS FRUCTICOSUS* *RUBUS* SPP.)

SHRUB FACTS

With several different species **native to northern temperate regions across the globe** (including PA), the blackberry is a **trailing, perennial bramble with dark, sweet-tart fruit ripening July-August**. Blackberries belong to the rose (**ROSACEAE**) botanical family, which includes other common fruits like raspberries, peaches, apples, cherries and almonds, with the **signature 5-petalled white or pale pink flower**. Blackberries produce **biennial stems** called **canes every two years**. In its first year of growth, the **primocane** can grow up to 6-12 feet long, trailing along the ground unless staked upright. In the second year, the primocane becomes a **floricane** and produces horizontal or lateral branches, thorns, flowers, and eventually fruit. **After fruiting, the cane dies back and can be pruned away**. The flowers are **pollinated by honeybees** and other varieties of **native bees**. Before the fruit is ripe, blackberry fruits are red and firm. The **fruit is ready to be picked when the fruit is deep black and pulls cleanly away without a yank**. Unlike raspberries, blackberries keep their cap!

SEASONAL CARE

Blackberries are easy to establish, propagate, and care for with **seasonal pruning** and trellising. They favor filtered to full sunlight and well-draining, slightly acidic soil (pH 5-7). Blackberries come in a number of varieties: trailing or erect, thorny or thornless. How you care for your plants depends on its growing style!

WINTER/SPRING: Remove all second-year canes (will usually be withered, grey) and thin out to 8-10 strongest new canes. Shorten canes to 7 feet and laterals to 15 inches.

SUMMER: Prune back tips of new canes when they reach 3 feet in height. This ensures that the developing fruit has enough light and air circulation. Harvest fully-ripe blackberries in the morning when the dew has dried. Store berries in the refrigerator.

FALL: Add leaf mulch or optional compost tea to the base of plants to build soil fertility.

NUTRITIONAL BENEFITS

Antioxidant-rich blackberries are extremely healthy and delicious! They can be eaten raw, and cooked in any number of ways! A one cup-serving of blackberries contains 25% daily recommend value of **fiber** (digestive health) and **vitamin C** (heals wounds, boosts immune system) and 19% **vitamin K** (supportive of healthy bones and connective tissue). The seeds also contain **omega-3 and omega-6 acids**, helpful for brain health and nerve signaling. The leaf and root of blackberry contain **tannins, gallic acid, villosin, and iron**, which have been prized in herbal folk medicine for their help with **relieving toothache, diarrhea, and fluid retention related to diabetes and gout**. A tea from the leaves can be used to make a gargle for **sore throats**, and as a wash for scaly skin conditions like **psoriasis**.

ROOTING BLACKBERRY

Blackberries are incredibly easy to propagate through suckers, stem or root cuttings. Oftentimes, blackberries re-rooting themselves where the tip of the cane meets the ground. You can dig up where the plant has rooted, create a quick cut along the stem and repot. In the fall, you can dig up 3-6 inch sections of root, bundle them together, store cold in a dry area or refrigerator for 3 weeks then place in a moist mix of peat and sand. Once new shoots appear, plant in the garden.





SWEET & SOUR BLACKBERRY OXYMEL

A tangy drinking syrup made with a mix of fruit, leaves, shoots, or roots!

1

HARVEST



2

CLIP/DIG



3

RINSE



Harvest blackberries when they are fully ripe and pull easily away from their caps, generally July to August. If using leaves or shoots, which have more tannins than the berries, clip when bright green and tender. If using roots, dig in late fall and plan to combine with frozen blackberries for flavoring your oxymel. Rinse and dry any and all plant materials being used.

4

CHOP



5

MASH



6

COVER



Coarsely chop berries, leaves, shoots, or roots and place in a glass jar. Cover 1 part mix of plant materials (use at least 2 parts fruit to 1 part leaves, shoots, or roots) with 2 parts raw apple cider vinegar, and 1 part raw local honey. Line cap with parchment or wax paper as the vinegar can corrode the metal cap ring.

7

STEEP



8

STRAIN



9

ENJOY!



Allow the mixture to steep for a minimum of 2 weeks and shake daily (as you're able!) to allow the flavors to develop in the oxymel. Strain the oxymel over a bowl and return the liquid to a clean jar, label with the date and contents, and store in the refrigerator. To enjoy, add 1-2 TB of oxymel into soda water to create a tangy, healthy beverage or consider mixing into olive oil to create a homemade salad dressing!

An **oxymel** -- from the Latin 'oxymeli' meaning 'acid and honey' -- is a preparation that's been made for centuries in many cultures worldwide as a way to mellow or mask strongly flavored herbs. Both vinegar and honey have preservative qualities, and when used as a steeping base along with mineral-rich plants like blackberry, help extract plants' medicinal compounds to extend their seasonal enjoyment, use, and shelf-life! **Blackberries** (*Rubus fruticosus*) are prized for their rich antioxidants and astringent tannins which act as an antimicrobial, antidiarrheal, and anti-inflammatory. **Consult a licensed medical professional before using this or other any other new plant in one's diet.**



BLACK WALNUT (JUGLANS NIGRA)

TREE FACTS

Black walnut (*Juglans nigra*) is a **perennial, stone fruit tree** native to Eastern North America, commonly found in riparian zones (area between water and land). Technically the walnut produces a fruit called a “drupe” and is not a true nut! The **drupes are harvested in the fall**, de-hulled and dried to allow the nut meat to cure for consumption.

This tree can grow very large, eventually reaching over 100 ft. in height and 6 ft. in diameter. The black walnut is a member of the **Juglandaceae** family. Careful consideration should be made before planting or growing around this tree as it is **allelopathic, suppressing growth of many other plant species by releasing a chemical called juglone**. The black walnut contains the highest concentration of juglone in the nut hulls, roots, and leaves and is **commonly used as an herbicide**. This tree has numerous uses, such as: nutritional, medicinal, dye, structural/decorative, antibacterial, and herbicidal.

SEASONAL CARE

The black walnut tree grows well between zones 5a-9a. Commonly found natively near water, these **trees prefer deep rich soil**, moist yet well drained. Black Walnut is **self-fertile**, but **puts on a better fruit set with two trees**. It is generally easy to grow with little attention needed.

WINTER/SPRING: Pruning is generally not necessary. Compost or organic fertilizer can be added in the Spring to maximize nut production.

SUMMER: The first year, a Black Walnut tree should be irrigated every week with 3-5 gallons of water. Once established, the tree generally only needs watering during severe drought.

FALL: Fruit is generally harvested from the ground, de-hulled and allowed to dry for a few weeks before cracking the nut and consuming/storing the nut meat.

NUTRITIONAL BENEFITS

Black walnuts are packed with nutrients and are considered a superfood. **They contain one of the highest protein contents of any nut (7 grams per serving), as well as high levels of Manganese, Omega-3, antioxidants and other nutrients**. The nutritional content supports metabolism and bone structure, and can help protect against cardiovascular disease, diabetes, and certain neurodegenerative conditions.

GROWING BLACK WALNUTS

As previously noted, **black walnuts are toxic to a variety of plants** and research should be done prior to planting to understand the effects that Black walnut will have in that area. Black walnuts are **best propagated by seed, collecting the fruit in the fall de-hulling and immediately placing 5-6 whole nuts, 5-6” in the ground**. Protect the nuts from animals, by placing chicken wire or cloth over the nuts and securing to the ground. Cover with leaves/mulch and be sure to properly label location. In the spring remove the protective cover and water the sapling every week with 3-5 gallons of water.





NATURAL DYEING WITH BLACK WALNUTS

Follow the instructions below for creating a natural dye for fabric and yarn from the green outer hulls of the black walnut, producing a brown or olive green dye!

1

IDENTIFY

2

COLLECT

3

GLOVE UP!

In late summer / early fall, collect the black walnuts that are encased in their green outer hulls. Black walnut trees grow through much of central-eastern U.S. and identified by its tall heights of 30-150 ft, dark furrowed bark, and compound serrated leaves. You can pick from the tree directly if the branches are low enough, or collect the bruised and fallen nuts from the sidewalk. You may want to wear gloves as the *juglone* compound can stain your hands.

4

MASH

5

BAG

6

BOIL

Then, smash the hulls open with a hammer. Next, place the hulls and nuts in a mesh bag, place in a pot with water, and boil for about an hour. Black walnuts contain *tannins*, an astringent compound that acts as a great mordant or compound that helps to bind color to the cloth.

7

PRE-SOAK

8

SIMMER

9

RINSE

Soak your un-dyed yarn or fabric in 5 parts hot water with 1 part vinegar for at least 30 minutes. Then, transfer your soaked fabric to the cooled dye bath and heat it up again to simmer for 30 minutes. You can use rubber bands to tie the fabric in interesting patterns if you'd like! Remove the yarn or fabric from the dye pot and and rinse it multiple times in cool water to remove excess dye. Dry and enjoy!

Natural dyeing is an ancient art that is thought to have arisen out of cooking practices. Natural dyes contain none of the chemicals found in synthetic dyes, and also offer ways to be creative with the colors seen in the natural world. Most natural dyeing practices require consideration of three key factors: fiber (plant or animal based), colorant (color/shade found in your plant part - whether seed, nut, flower, fruit, root, bark and how the dye is processed) and your mordant & heat (the compound that fixes the pigment to your fabric). Some plants like black walnut and berries like chokeberry contain tannins that are a natural fixative and don't *require* an additional mordant like baking soda, iron, salt, or vinegar, though it can help!



**PHILADELPHIA
ORCHARD PROJECT**

ORCHARD-INSPIRED Fruit & Nut Energy Bites

A SIMPLE, SWEET,
NO-BAKE SNACK



Photos right to left:
figs, almonds, hazelnut,
energy balls, blueberries,
energy bars, strawberries
mint, dried apple, cherries

MATERIALS NEEDED:

- Food processor
- Bowl
- Spatula & spoon
- Parchment Paper
- Measuring cups
- Cookie sheet or tray

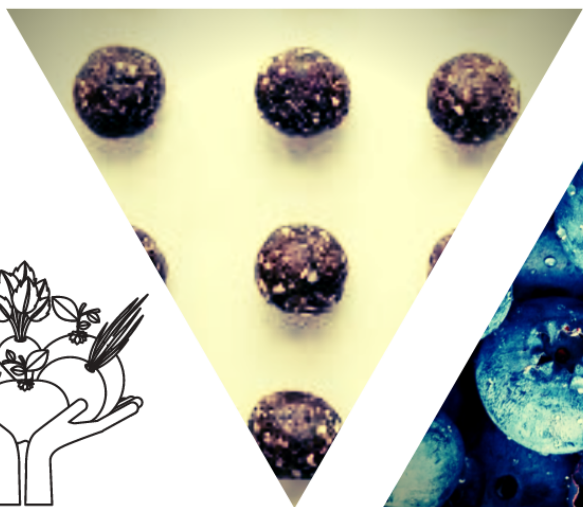
HOW-TO / BASE BATTER:

- Soak 1 cup of raw almonds, walnuts or hazelnuts in water for 10 minutes. Drain and dry.
- In a food processor combine 1 cup of dried figs, 1 cup of the soaked, drained nuts, 1/4 tsp cinnamon, 1/8 tsp salt.
- Process until a thick paste forms as the batter.
- Spoon and roll into balls on a parchment-lined tray or press into bars to cut, serve, or wrap.

TRY THESE DELICIOUS COMBINATIONS!:

*Prepare according to the recipe above,
substituting the following ingredients:*

- **APPLE PIE:** 1 cup dried apples, 1/4 cup dried figs, 1 cup walnuts, 1-1/2 tsp cinnamon, 1/8 tsp salt
- **BLUEBERRY COBBLER:** 1 cup dried blueberries, 1/4 cup figs, 3/4 cup walnuts, 1/2 cup oats, 1/2 tsp lemon zest, 1/8 tsp salt.
- **CHERRY PIE:** 3/4 cup dried cherries, 1/4 cup dried figs, 1 cup almonds, 1 tsp cinnamon, 1/8 tsp salt.





MAKING HERBAL SALVES

an ointment, cream, or balm made with healing herbs to soothe or protect the skin. Often made with infused herbal oils and beeswax.

HEALING ORCHARD HERBS:

HARVEST TIP: Tie stems in bundles and hang upside down until dry, or place stripped leaves & flowers in a paper bag until dry and crunchy!



COMFREY
astrigent, wound-healer
topically can help skin regeneration, helps heal bruises, ulcers, inflammation



CHAMOMILE
soothing anti-inflammatory
topically can relieve itchy, red skin, psoriasis, eczema & heal wounds



OREGANO
anti-bacterial, anti-fungal,
topically can help cold-sores, acne, dandruff

PROCESS:

1. Start by making an **INFUSED HERBAL OIL**:
 - In a dry, pint-size jar, crumble 1/2 cup dried herbs and cover with 1 cup of olive oil (**ratio 1 part dried herbs : 2 parts oil**).
 - Cap and place the jar in a soup pot filled with water. Bring to a boil, reduce heat, then **simmer for 1 hour**.
 - **Strain** the herbs from the oil with a piece of clean cloth.
2. To make the **SALVE**:
 - Combine 8 ounces of infused oil with 1 ounce of shaved beeswax in a glass bowl (**ratio 8 parts infused oil: 1 part beeswax**).
 - Place the bowl overtop a soup pot filled with water over medium-high heat until the beeswax melts into the oil.
 - **Mix in 10-15 drops of essential oil** if you like!
 - **Pour into clean containers.** Allow to cool and harden.
3. To **APPLY**:
 - Spread the salve on your skin any way you might use lotion!

