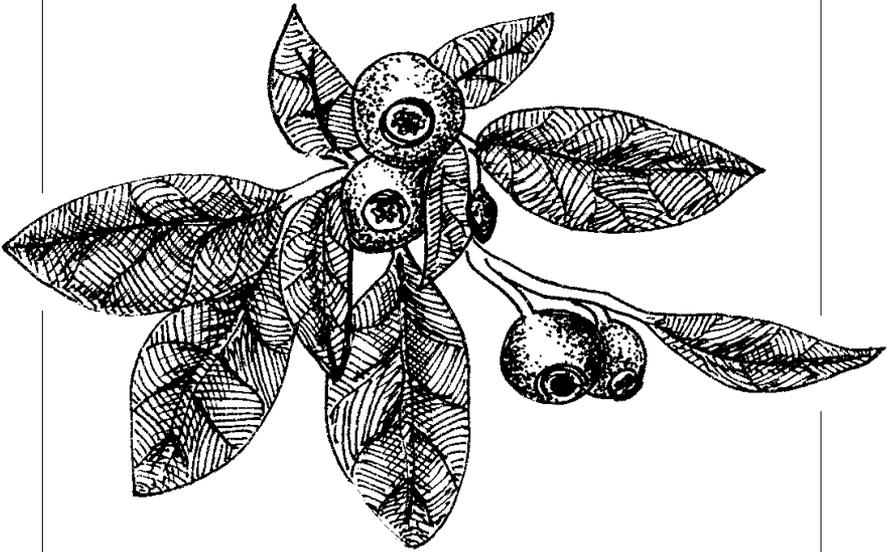


Growing Western Huckleberries



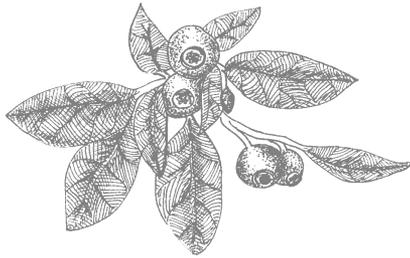
by Danny L. Barney

The author

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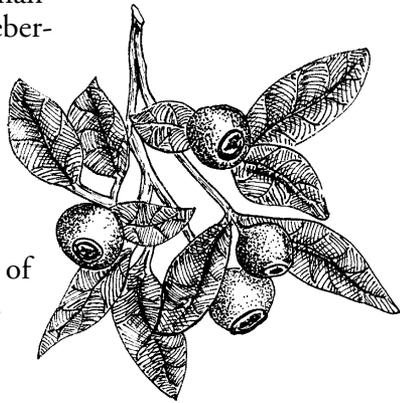
*If all goes well, your huckleberries
should start fruiting 3 to 5 years after sowing or
starting plants from cuttings.*

Growing Western Huckleberries

Huckleberries and their relatives

We use the name huckleberry for many different plants throughout North America. The most widely known huckleberries are native to the eastern and southeastern United States and belong to four species found in the genus *Gaylussacia*. This genus is not found in the western United States.

Western huckleberries belong to the genus *Vaccinium*. Their flowers and fruit resemble those of highbush and lowbush blueberries, which are also *Vaccinium* species. Western huckleberries, however, are in a different taxonomic section (*Myrtillus*) than highbush and lowbush blueberries (*Cyanococcus*). The primary difference is that huckleberries produce single berries in the axils of leaves on new shoots. Highbush and lowbush blueberries develop clusters of berries on 1-year-old wood, producing greater yields than do huckleberries.



The section *Myrtillus* contains eight species, commonly called huckleberries, blueberries, bilberries, and whortleberries. All produce edible fruit, but only two species, *Vaccinium membranaceum* and *V. deliciosum*, are harvested to a large degree. The other species are not widely distributed or have fruits that are small or poorly flavored.

The challenge of huckleberry domestication

Western huckleberries have not yet been domesticated, although they have been harvested from the wild for centuries. Some species were dried for winter food and trade items by Native American tribes in the Northwest.

The main attraction of western huckleberries is their flavor. Advocates proclaim that huckleberries taste better than their close cousins, domestic blueberries. Recent research indeed shows that *V. deliciosum* and *V. membranaceum* are richer in certain flavor chemicals than are domestic blueberries. Flavor, however, can vary greatly from one bush or site to another. Also, not everyone cares for strong, wild huckleberry flavors. Enough do, however, to make recreational and commercial picking from natural stands popular. Huckleberries are sold at roadside stands or processed into many different products.



*Recent research indeed shows that
V. deliciosum and V. membranaceum are richer
in certain flavor chemicals than are
domestic blueberries.*



This publication is not intended to promote commercial production of western huckleberries. While huckleberry domestication shows great potential, most attempts to grow huckleberries commercially in fields have failed.



Also, huckleberries grow slowly, taking up to 15 years to reach full maturity from seed or cuttings. Research is underway to develop plants and cultural practices that will allow huckleberries to be grown domestically. The following recommendations are intended to provide a starting point for your own experiments in home or commercial huckleberry production.

If you are interested in managing a naturally occurring stand of huckleberries, refer to *Ecology and Culture of Montana Huckleberries*, listed in “Further Readings.”



While huckleberry domestication shows great potential, most attempts to grow huckleberries commercially in fields have failed.



Huckleberries in the wild

Vaccinium membranaceum

V. membranaceum Douglas ex Hooker, known as the black, big, or thin-leaved huckleberry, grows throughout forested areas in Idaho, western Montana, western Wyoming, Washington, Oregon, and British Columbia. Small outcrops occur in Utah, California, Arizona, and Michigan. This species is sometimes called the globe huckleberry in Montana, and some taxonomists identify plants in the eastern Rocky Mountains as *Vaccinium globulare* Rydberg.

Black huckleberry grows at elevations between 2,000 and 11,500 feet above sea level, with many productive sites located between 4,000 and 6,000 feet. This species usually grows on acidic, sandy loam soils in association with true firs (*Abies* spp.), hemlocks (*Tsuga* spp.) and bear-grass (*Xerophyllum tenax* Michx.). Look for it in clearcuts and burned areas about 10 years old.



On drier sites, black huckleberries seem to grow best in light shade, but much depends on soil texture and moisture. Some large and productive colonies are found in full sun. In heavy shade, berry production is inhibited. When drought stressed, the plants become stunted with red leaves and reduced berry production.

Black huckleberries usually grow from 1 to 6 feet tall and produce berries up to 1/2-inch in diameter. Berry color ranges from black to purple to red. You can even find white berries occasionally. Some bushes bear glossy berries while others produce fruits covered with a thin, waxy bloom that dulls the skin and may give the berries a bluish tinge.

Vaccinium deliciosum

Cascade or blue huckleberries grow on Washington's Olympic Peninsula and in the Cascade Range from northern California into British Columbia. It is found at elevations between 1,900 and 6,600 feet in subalpine coniferous forests and alpine meadows. Cascade huckleberries can grow on wetter sites than black huckleberries and are often found around the edges of ponds and on dried lake beds. Bushes grow about 2 feet tall and bear bright blue berries as much as 1/2-inch in diameter. As the name *deliciosum* implies, this species produces especially flavorful berries.

Selecting a growing site

Air temperature

Cascade and black huckleberries are naturally adapted to short-season areas and elevations of 2,000 feet and above. They depend on an insulating cover of snow for survival during winter's sub-zero temperatures. Likewise, late-winter cold snaps (temperatures in the teens or single digits) following above-freezing warm spells can damage the bushes.





*The best planting locations are on benches
or other raised sites that allow cold air to drain away
from the huckleberries.*



Although native to mountain sites, *V. deliciosum* and *V. membranaceum* have been field-grown successfully near sea level in Oregon's Willamette Valley and at 2,000 feet in northern Idaho. Huckleberries require a dormant winter period with temperatures around freezing. Production is possible in USDA plant hardiness zones 4-8. Whenever possible, grow huckleberries where 1 to 2 feet of snow persist throughout the winter, where winter temperatures remain above 0°F, or where the plants can be protected when temperatures drop to 0°F or below.

Avoid planting in a frost pocket. Huckleberries bloom in early spring and the blossoms are susceptible to frost damage, although the stems and leaves are quite tolerant of spring frosts. The best planting locations are on benches or other raised sites that allow cold air to drain away from the huckleberries.

If you must grow huckleberries on a frosty site, be prepared to protect the blossoms from frost damage when temperatures fall below 28°F. You can protect plants from frost damage by covering them with tarps, blankets, or row covers. On larger plantings, if you expect temperatures to drop below 28°F, apply water with overhead sprinklers beginning when the temperature drops to 32°F. As the water freezes on the plants, it releases heat, keeping the temperature at or near 32°F. Apply about 1/4 inch of water per hour continuously until the temperature climbs above freezing and the ice begins to melt.

For small plantings on sites with poor air and water drainage, consider growing huckleberries in raised beds. These beds improve cold air and water drainage and reduce



sucker formation between rows. Raised beds are especially suitable for gardens.

Sunlight

Huckleberries need sunlight to produce a full crop of fruit. In forest colonies, the bushes are often productive in lightly shaded areas that have more available soil moisture than do adjacent, drier sites. In moist years, however, colonies in full sun will often be the most productive. Irrigation may allow you to raise huckleberries in full sun or in locations shaded only from the hot afternoon sun.

Soils

In natural colonies, black huckleberries are usually found on well-drained, sandy loam soils that are formed from volcanic ash and that hold moisture well. Typical bulk densities of these native soils are 0.6 to 0.8. This species does not grow well on poorly drained soils and you will need to irrigate on droughty soils.

V. deliciosum is more tolerant of poor drainage, but does not tolerate drought.

Soils on productive wild sites nearly always contain large amounts of rotted wood and surface layers of forest duff. Huckleberries respond favorably to large amounts of soil organic matter (30% or more), and often root in rotted stumps and logs. On sites with poor soils or drainage, create raised beds using soil amended with peat moss, sawdust, bark, compost, and other organic materials.

Huckleberries require acidic soils, the optimal soil pH for *V. deliciosum* and *V. membranaceum* being about 4.0 to 5.5 (7.0 is neutral). In a few cases, huckleberries have been grown successfully on sites with pH values near 7.0. If your soil pH lies between 5.5 and 7.0, consider acidifying the soil before planting by applying agricultural sulfur and regularly fertilizing with an acidifying fertilizer, such as



ammonium sulfate. On sites where the pH is 7.0 or above, grow your huckleberries in containers or raised beds filled with amended soil and monitor the soil pH yearly.

Buying plants

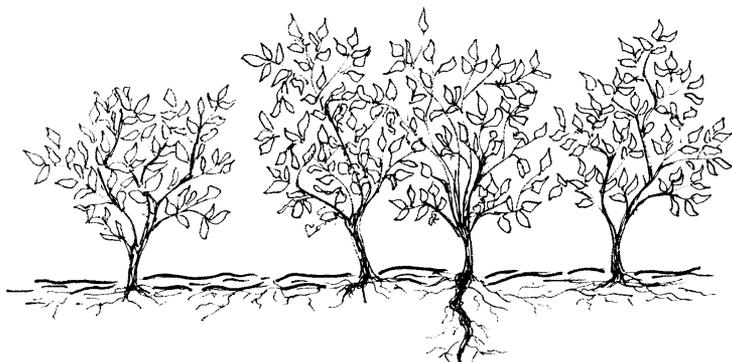
Because huckleberries have not yet been domesticated, few nurseries carry them. Several nurseries in the western United States that specialize in native plants sell seedlings or transplants. Be aware that one species found in the tomato (*Solanacea*) family is sold by some nurseries under the name “garden huckleberry.” Garden huckleberries grow rapidly and produce attractive bushes. They are unrelated to blueberries or huckleberries, however, and produce a very different fruit.

When purchasing nursery stock, ask about the location of the seed source and try to obtain plants from seed sources with elevations and climates similar to your own. The same precaution applies if you are collecting plants, seed, or cuttings from the wild. If huckleberries grow naturally on or near your site, collect from those locations.

Starting your own plants

Transplanting huckleberries from the wild

Black and Cascade huckleberries spread by underground stems called rhizomes. Most colonies consist of one to a few individual plants that produce many “bushes” from rhizomes. Transplanting wild *V. membranaceum* bushes is difficult because they lack dense, centralized root systems. What appears from the surface as a bush is often little more than a branch sticking up from an underground stem. *V. deliciosum* is also rhizomatous, but has a denser root system and transplants more easily.



Transplanting wild bushes is difficult because they lack dense, centralized root systems. What appears from the surface as a bush is often little more than a branch sticking up from an underground stem.

Collect dormant plants for transplanting from late fall through late winter. Dig a root ball large enough to fill a 3- to 5-gallon pot, disturbing the roots as little as possible. Do not prune the stems or branches. Use a peat moss-based potting soil to fill in around the root ball in the pot. Grow the huckleberries in pots for 1 to 2 years before transplanting them to a garden bed or field. Care for your containerized huckleberries as described in “Starting Huckleberries from Seed.” Find out about state and federal regulations and permits before collecting plants from state or federal lands.

Starting huckleberries from cuttings

V. membranaceum can be grown from rhizome cuttings. Stem cuttings usually root poorly, if at all. To start plants from rhizome cuttings, collect rhizomes in late winter or early spring. Cut the rhizomes into 4-inch-long pieces and bury them in sand placed in shallow nursery flats. Do not apply rooting compounds to the rhizomes. Place the flats into a misting bed or cover them with clear plastic film.



Mist the sand with a spray bottle frequently enough to keep the cuttings moist.

After the cuttings develop 1- to 2-inch-long roots and shoots, transplant them into 1-gallon nursery pots filled with a peat moss-based potting soil. Completely bury the rhizomes and roots while keeping the leaves exposed. Care of containerized huckleberries is described under “Starting Huckleberries from Seed.”

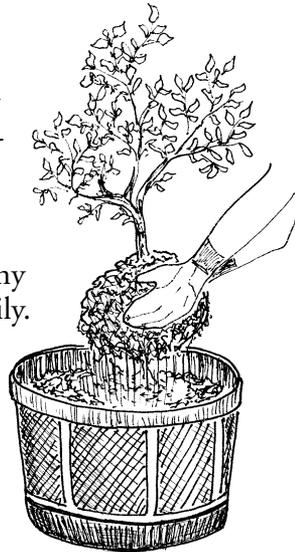
V. deliciosum can also be propagated from rhizome cuttings as described above. Some nurseries report that softwood and semi-hardwood stem cuttings collected in late spring and early summer root when they are stuck in a light rooting medium and placed under mist.

Starting huckleberries from seed

Both *V. deliciosum* and *V. membranaceum* can easily be grown from seed and begin flowering 2 to 5 years after sowing.

Extracting seeds. Extract the seeds by squashing ripe berries through a fine-mesh kitchen strainer into a pan or dish tub. Spray or pour water through the pulp to wash the seeds through the strainer. The seeds are tiny and pass through most strainers readily. Strain off the skins and debris.

Next, using two drinking glasses, pour the water and seeds from one glass to the other. After each transfer, allow the seeds to settle for



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several seconds, then pour off the dirty water, pulp, and floating seeds, which are not viable. Add more clean water and continue until all that remains are the heavy seeds at the bottom of the glass.

Freshly extracted seeds may be planted immediately. To save seeds for later planting, spread them on a coffee filter and allow them to dry for 1 week in subdued light at room temperature. Seal the seeds inside a small, airtight plastic bag and store them in a refrigerator at about 35°F (do not freeze them). Seeds extracted and stored this way remain viable for at least 7 years.



To maximize growth and survival during the first year, sow your seeds about the first of January and grow them indoors or in a greenhouse.



Sowing seeds. Huckleberry seeds do not require any pre-treatment before sowing. To maximize growth and survival during the first year, sow your seeds about the first of January and grow them indoors or in a greenhouse.

Fill pots about 4 inches in diameter with fine-textured, moist, peat moss-based potting soil that contains 25 to 50 percent sand, pumice, or perlite for drainage. Potting mixes designed for rhododendrons and azaleas work well for huckleberries. Firm the soil in each pot, creating a level surface. Place three or four seeds on the soil surface in each pot and cover them with 1/8 inch of clean sand.

Germinating seeds. Set the pots in a location with daytime temperatures between 70° and 80°F and night temperatures between 50° and 60°F. Mist the pots as frequently as necessary to keep the soil moist but not soaked. Use a hose-end misting nozzle or hand-held spray bottle; a direct



stream of water will wash the tiny seeds out of the soil. The more sand, pumice, or perlite in the mixture, the more frequently you must water. If the soil dries out, set the entire pot into a sink and let water soak in from the bottom.

Caring for your young plants. The seedlings will begin emerging in 4 to 8 weeks. When they do, place them inside a greenhouse, on outdoor benches, or indoors under fluorescent lights for 12 to 16 hours per day. For greenhouse and outdoor growing, use shade cloth or slats to provide about 50 percent full sun intensity.

For indoor growing, cool white, wide-spectrum, and plant-grow fluorescent tubes all give good results. Position the lights about 2 to 4 inches above the seedlings. Keep the daytime temperature between 70° and 80°F and the nighttime temperature between 50° and 60°F.

When the seedlings are about 1/2-inch tall, thin them to leave the largest plant per pot. Continue daily or twice-daily watering to ensure the potting soil does not dry out.

Fertilize young seedlings every 1 to 2 weeks with a water-soluble fertilizer. The following schedule has proven effective in University of Idaho research: During early spring, use a fertilizer with an analysis of about 9-45-15. This formulation, consisting of 9 percent nitrogen, 45 percent P₂O₅ (phosphorus), and 15 percent K₂O (potassium), encourages early root development. From mid June through July, apply a 20-10-20 fertilizer to stimulate shoot growth. During August apply a 5-11-26 or similar fertilizer to help acclimate the plants for winter. If these particular fertilizer formulations are not available, garden centers sell water-soluble fertilizers suited for containerized plants. Encapsulated, slow-release fertilizers are also available. Table 1 lists fertilizer options.



Table 1. Recommended fertilizers for huckleberries growing in containers.

Time of application	Typical formulations ^a	Comments
	Option 1	
Bud break-mid June	9-45-15	Water-soluble fertilizers.
	10-60-10	Apply as soil drenches once every 1 to 2 weeks. Follow label rates.
Mid June-July	20-10-20	
	20-20-20	
	20-30-20	
August-leaf fall	5-11-26	
	Option 2	
Bud break-mid August	10-15-10	Water-soluble fertilizers. Apply as soil drenches once every 1 to 2 weeks. Follow label rates.
	15-30-15	
	20-20-20	
	20-30-20	
	Option 3	
Bud break	14-14-14	Encapsulated, slow-release fertilizers. Various formulations are available for 4-12 month continuous feeding. Ensure the manufacturer recommends the material for containerized plants. Make one application per season. Sprinkle on the surface of the potting soil for established plants. For new containers, mix thoroughly with potting soil before transplanting or sprinkle on the soil surface after transplanting. May be used to supplement liquid fertilization, especially for plants in 1-gallon or larger pots. Follow label rates.
	18-6-12	

^a The numbers in the fertilizer description, or analysis, refer to the percentages of nitrogen (N), phosphorus (P₂O₅), and potassium (K₂O), respectively. Various formulations are listed. For each application period, select one of the formulations listed for your option.

Be cautious when using acidifying fertilizers marketed for acid-loving plants. Overuse can drive the potting soil pH too low. Huckleberry seedlings seem sensitive to fertilizer salts. Avoid overfertilizing, and water heavily every 2 to 3 weeks to rinse excess salts out of the potting soil.

In mid August, move greenhouse and indoor-grown plants to outdoor benches under 50 percent shade cloth or slats. Stop fertilizing the seedlings and stop using artificial lights, if you have been using them outdoors. Slowing their growth and exposing the huckleberries to short days and cool nights will help them acclimate for winter. You will notice the leaves turn bright red. This is a normal part of acclimation. Continue to water as often as necessary to keep the soil moist but not waterlogged.

Overwintering your potted plants. Keep the plants outdoors until nighttime temperatures drop to around 30°F. One option for winter storage is to place containerized plants into a cooler. A refrigerator works well, provided you prevent the plant temperature from dropping below freezing if the refrigerator is outside or in an unheated building. An unheated porch or garage may also serve. Try to keep the container temperatures between about 30 and 35°F. Dormant huckleberries do not need light. Check your plants regularly to monitor temperatures and irrigate, as necessary, to prevent the soil from drying out.

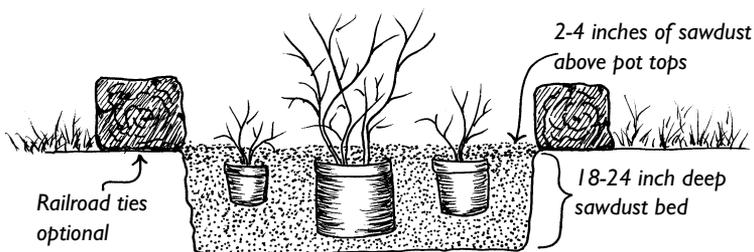


Seedlings normally remain in pots for 2 to 3 years before transplanting to fields or garden beds.



You may also overwinter containerized huckleberries outside by burying them in sawdust, preferably on the north side of a building. Cover the potting soil surface with several inches of sawdust, but leave huckleberry leaves and





To overwinter containerized huckleberries in a sawdust bed, create a bed 18-24 inches deep filled with sawdust to or above ground level. Dig holes into the sawdust large enough to hold the containers and 2 inches deeper than the containers. Set the containers in the holes. Bury the containers, piling several inches of sawdust over the top of the potting soil, leaving the huckleberry canes exposed.

stems exposed. This method works better with established plants several years old than it does with young plants. Do not bury the plants in straw or grass clippings unless you want to feed your huckleberries to the neighborhood mice! Even with sawdust mulch, placing rodent traps and baits in and among the huckleberries is a good practice. Water the plants well before putting them into outdoor storage, and protect the huckleberries from deer and rabbits.

The second and third years. Seedlings normally remain in pots for 2 to 3 years before transplanting to fields or garden beds. During their second and later years, grow containerized plants outdoors or in a greenhouse in partial shade to full sun and fertilize them as in table 1.

Growing huckleberries in the field or garden bed

Preparing the soil

Adding rotted sawdust or bark to the soil a year before planting will improve huckleberry performance. Spread a layer of sawdust or bark about 6 inches deep in the row or



planting bed and till it into the soil with a rototiller or shovel. Include 1 pound of 10-10-10 fertilizer for every cubic foot (13 pounds) of sawdust or bark. One authority recommends partially burying 12-inch-diameter or larger, rotted conifer logs (except cedar) in the rows alongside where the huckleberries will be planted. The rotting wood enhances huckleberry growth. Also, the huckleberry rhizomes tend to grow along and within the logs, creating narrower, more easily managed rows.

Planting

When the plants you've grown from seeds or cuttings are about 6 inches tall, transplant them into the field or garden bed. You may also choose to grow the huckleberries for an additional year in 1-gallon containers if you want larger plants for setting into the field.

Containerized plants grown or overwintered outdoors can be transplanted any time from early spring through late fall, although spring or fall planting is generally recommended. If the soils on your site frost heave, plant in the spring. Greenhouse-grown plants or those coming out of refrigerated storage should be planted after the danger of a killing frost (28°F) is past. Plants that have been growing in partial shade will sunscald and suffer stress if transplanted directly to a full-sun location. To reduce sunscald, gradually decrease the shading of your containerized plants beginning 2 weeks before transplanting.



When the plants you've grown from seeds or cuttings are about 6 inches tall, transplant them into the field or garden bed.



Plant your huckleberries just deep enough to cover the potting soil with garden or field soil. Set the plants 3 feet apart in rows 8 to 10 feet apart, depending on the mower,



tiller, and other equipment you will use. Immediately after planting, water to settle the soil. Mulch around each bush with about 4 inches of sawdust or fine bark.

Huckleberries are prime deer, moose, and elk feed. In some western areas, you may need to protect your plants from browse damage. If you believe browsing may be a problem, install a fence before planting.

Ensuring cross pollination

Huckleberries may produce more and larger berries when they are cross pollinated. Plant several individuals of the same species together to ensure cross pollination and good fruit set. This will not be a problem if you start your plants from seed. If you propagate your huckleberries from rhizome or stem cuttings that are all collected from the same plant, however, all of the mature plants will be identical and no cross pollination will occur. To avoid this situation, collect cuttings from several different colonies separated by at least several hundred yards. When planting into the garden or field, ensure that some plants originate from different colonies.

Table 2. Recommended granular fertilizers and manures for field- and garden-planted huckleberries.

Year	Composted manure (pounds per plant)		Commercial fertilizers ^a (ounces per plant)		
	cow or horse ^b	poultry or rabbit ^c	10-10-10	20-20-20	21-0-0
1 (planting)	5.0	1.5	4	2	2
2	7.5	2.0	6	3	3
3	10	3.0	8	4	4
4+	12.5	3.5	10	6	5

^a The numbers in the fertilizer description, or analysis, refer to the percentages of nitrogen (N), phosphorus (P₂O₅), and potassium (K₂O), respectively. 21-0-0 is ammonium sulfate.

^b Cow and horse manures contain approximately 0.5 percent N.

^c Poultry and rabbit manures contain approximately 1.8 percent N.

Encouraging symbiosis

Huckleberries appear to form symbiotic relationships (relationships in which both partners benefit) with soil fungi called mycorrhizae. You can provide these fungi for your plants by mixing a shovelful of soil collected from a native huckleberry site with the backfill from each planting hole. When collecting native soil, scrape off the duff layer and collect the soil from the surface to about 8 inches deep. Include pieces of buried, rotted wood from the site, if available. The downside of this practice is that you may be importing weeds along with the soil.

Fertilizing

Field-grown huckleberries respond well to granular, liquid, and slow-release fertilizers and also to manures (table 2). Do not use weed-and-feed fertilizers. For granular fertilizers, divide the yearly recommendation by three and apply one-third of the total amount at the beginning of May, June, and July. Apply manures anytime, preferably after the soil begins to warm in the spring. Split applications need not be made for manures. Follow label directions for liquid and slow-release fertilizers.

If you incorporate sawdust or rotted logs into the soil, add extra nitrogen to offset that tied up by soil microorganisms as they decay the woody materials. Doubling the recommended amount of fertilizer for 2 years after incorporating sawdust or bark should suffice. Extra nitrogen is not usually required if sawdust or bark are placed on the surface as mulches. As a rule, if huckleberry leaves are red during the spring or summer despite proper irrigation, the plants are deficient in nitrogen and need more fertilizer.

Controlling weeds, insects, and diseases

Huckleberries do not compete well with weeds. Quackgrass and other perennial weeds create serious problems and are best eliminated before planting huckleberries by using a translocatable contact herbicide such as glyphosate.

Although western huckleberries are related to domestic blueberries, herbicides registered for use on blueberries have not been tested on huckleberries. At present, we have no data to support the use of herbicides on western huckleberries.

Use mulches and hand weeding to control weeds. Huckleberries are shallow-rooted plants. Avoid hand or mechanical cultivation deeper than 2 inches.

Huckleberries are susceptible to blueberry pests and diseases, such as mummy berry and leafrollers. As with herbicides, insecticides and fungicides registered for domestic blueberries have not been tested on huckleberries.



At present, we have no data to support the use of herbicides on western huckleberries.



Pruning

Huckleberries grow slowly. Pruning is not needed or desirable in young plantings other than to remove dead or damaged branches. We do not yet know how older cultivated huckleberries respond to pruning. Dense plants, however, may benefit from occasional light pruning that opens the bushes to light penetration and air movement. Although eastern lowbush blueberry fields are burned every 2 years and fires are common in the forests where huckleberries grow wild, burning is **NOT** recommended for western huckleberries. Burned huckleberry fields can take 10 to 15 years to return to full productivity.





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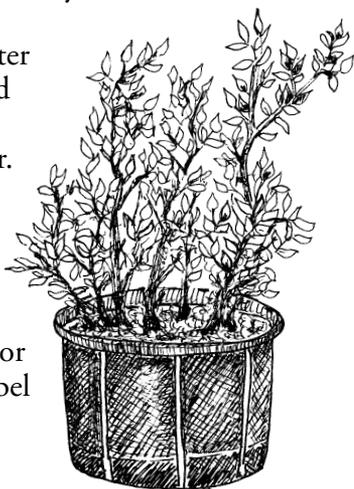
Irrigating

Huckleberries do not tolerate drought and often die after becoming severely wilted. Install and test your irrigation system before planting. Irrigate enough to keep the soil evenly moist but not waterlogged. If possible, avoid overhead irrigation; rather, apply water directly to the soil at the bases of the plants. Keeping the leaves and fruit dry reduces disease problems. If you must use sprinkler irrigation, water early in the morning to allow the plants to dry before evening. Note that irrigation increases berry size, but can reduce the intensity of the berry flavor.

Growing huckleberries in pots

Huckleberries can be grown permanently in 3- to 5-gallon pots. Protect the roots from freezing during the winter by placing them inside an unheated porch or garage or by burying the pots in sawdust, as described earlier.

For all containerized huckleberries, use either liquid or slow-release fertilizers designed for container plants. Granulated fertilizers formulated for field use can injure or kill containerized plants. Follow label directions for application rates and timing.



Huckleberries can be grown permanently in 3- to 5-gallon pots.



Harvesting and storing your berries

If all goes well, your huckleberries should start fruiting 3 to 5 years after sowing or starting plants from cuttings. Expect to begin picking a few berries 1 to 3 years after transplanting to garden or field beds. Full production may require 10 to 15 years.

Pick berries when they are fully ripe but before they begin to shrivel. Refrigerate the berries as quickly as possible after harvest. Unlike domestic blueberries, huckleberry skins tear when the berries are picked. The torn skins allow juices to leak and promote rotting. If the berries are dusty or contaminated with insects, leaves, or debris, rinse the fruit in potable water and refrigerate the drained berries. Use or freeze the fruit as quickly as possible to avoid loss of quality and rotting.

To freeze berries individually, spread the clean, dry fruit one layer thick on waxed paper-lined cookie sheets and place them into a freezer. The berries will freeze separately and can then be poured into plastic bags or pails. Simply shake out the berries you need and return the remainder to the freezer.

Using huckleberries

Huckleberries are processed into many products. Among the most popular are syrups, jams, candies, pies, muffins, pancakes, and salad dressings. Usually, huckleberries can be substituted for blueberries in recipes. If the wild huckleberry flavor is too strong for a particular recipe, use half blueberries and half huckleberries.

Extracting huckleberry juice for syrups is quite easy as huckleberries have little pulp. Three cups of berries produce about 2 cups of juice. Straining the juice through a jelly bag or several layers of cheesecloth removes seeds and skins.



Hucklebuckle

Serves 6

Preheat oven to 375°F

Cream together

1/4 cup butter or margarine

1/2 cup sugar

Add to the creamed mixture

1 cup sifted flour

1 teaspoon baking powder

1/4 teaspoon salt

1/2 cup milk

Mix well and spread the batter into a greased 8-inch-square pan.

Blend and pour over the batter

2 1/2 cups fresh or frozen huckleberries

3/4 cup sugar

Mix until the butter melts

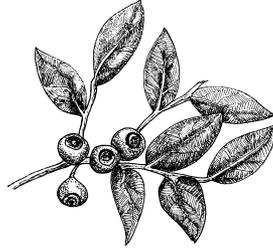
1/2 cup boiling water

1 tablespoon butter or margarine

Pour over the berries.

Bake 45 to 50 minutes.

Serve warm with whipped cream or ice cream.



Recipe from K. Wallenhaupt and V. Parker-Clark. 1990.

Edible Wild Berries in Northern Idaho

Available from: University of Idaho, Cooperative Extension System,
Kootenai County, 106 E. Dalton Avenue,
Coeur d'Alene, ID 83815-7333. Cost \$1.00.

Huckleberry syrup

Because the sugar, pectin, and acid concentrations in huckleberries can vary, start with a small test batch and allow it to cool thoroughly before you test for syrup thickness and flavor.

1 1/4 cups huckleberry juice (about 2 cups of berries)

1 tablespoon lemon juice (optional)

1 3/4 cups sugar

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Crush the fruit and press out the juice, straining it through cheesecloth or jelly bags. (Heating the crushed berries to simmering for 5 minutes will assist in juice extraction.) Fruit presses are available for large volumes. Steamer juicers also give acceptable results.

If you will not be making syrup immediately, pasteurize the juice by heating it to 194°F (90°C) for 1 minute, and refrigerate.

Mix the huckleberry juice, sugar, and lemon juice in a large pan and bring the mixture to a rolling boil that cannot be stirred down. Continue to boil for 1 minute. Remove the pan from the stove and skim off any foam.

Pour the syrup into clean, hot canning jars leaving 1/2 inch of headspace and follow the manufacturer's directions for sealing the jars. Process the jars in a boiling water bath for 10 minutes (15 minutes between 1,000 and 6,000 feet), making sure the tops of the jars are covered by at least 1 inch of water. Allow the jars to cool before labeling and storing them on a cool, dark shelf. Refrigerate after opening.

Note: This recipe produces a thin syrup. If you want a thicker syrup, replace the 1 3/4 cups sugar with 1 1/2 cups of sugar and 1/4 cup of corn syrup. Do not add more sugar or boil longer to thicken the syrup; both can cause the syrup to jell.

Further readings

Special Forest Products. 1992. College of Agriculture, University of Idaho, Moscow, ID 83844-2240. To order, phone 208-885-7982, e-mail cking@uidaho.edu or fax 208-885-4648. Ask for CIS 952 (order #396), 50 cents.

The Ecology and Culture of Montana Huckleberries: A Guide for Growers and Researchers. 1992. Miscellaneous Publication 52. School of Forestry, The University of Montana, Missoula, MT 59812.



*Gardening publications
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Strawberry Production: Overview (CIS 931)	50¢
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Selecting Grape Cultivars and Planting Sites in Idaho (CIS 1043)	\$1.00
Growing Strawberries in the Inland Northwest and Intermountain West (BUL 810)	\$2.50
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Market gardeners, home gardeners,

Imagine the luxurious ease of skipping the hike and instead picking cultivated huckleberries from your own backyard. Imagine growing a whole field of huckleberries for easy picking to sell at market. This vision is motivating Northwest researchers and growers to work out methods for growing the stubbornly wild huckleberry in backyard gardens and commercial fields.

In *Growing Western Huckleberries* author Danny L. Barney, horticulturist and superintendent of the University of Idaho Sandpoint Research & Extension Center, shares the wisdom he has accumulated in 12 years at the forefront of work to domesticate the wild mountain huckleberry. Let his knowledge serve as a starting point in your own experiments with growing huckleberries.

Did you know?



Western huckleberries contain more flavor chemicals than blueberries, explaining their more intense flavor.



Although huckleberries thrive high in Northwest mountains, they often die of winter cold when transplanted to lower elevations. That's because they need an insulating layer of snow to survive cold snaps.



Western huckleberries grow best in soils rich in organic matter and low in pH.



Western huckleberries easily grow from seed, but take 2 to 5 years to flower.



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