

Growing

Currants, Gooseberries & Jostaberries

*In the Inland Northwest
& Intermountain West*

by Danny L. Barney and Esmaeil Fallahi



Growing

Currants, Gooseberries & Jostaberries

In the Inland Northwest & Intermountain West

Introduction	1
Selecting a site	2
Recommended cultivars	3
Currants.....	4
Gooseberries	8
Jostaberries.....	11
Preparing your site and planting	11
Soil tests and preplant fertilization	11
Preplant weed control.....	12
Amending the soil.....	12
Types of planting stock.....	12
Plant spacing.....	12
Caring for your plants	13
Irrigation.....	13
Fertilization	14
Pruning.....	14
Weed control	17
Pest and disease control	17
Harvesting and using your fruit	18

The authors

Danny L. Barney is an extension horticulturist with the University of Idaho Sandpoint Research and Extension Center.

Esmail Fallahi is a research faculty member with the University of Idaho Southwest Idaho Research and Extension Center in Parma, Idaho.

Illustrations by Katie Old, based on drawings by Danny Barney.

Currants and gooseberries

are closely related fruits that have long been cultivated in Europe and North America. Jostaberries are hybrids of black currants and gooseberries and were first developed in the 1930s and 1940s in Germany. The fruits come in a variety of sizes, colors, and flavors and are used both fresh and processed.

The fruits hang very well on the bushes for 2 to 4 weeks without overripening, providing a long harvest window. The berries also freeze well and are easy to process. The bushes grow about 2 to 5 feet tall and lend themselves well to edible landscaping. Unlike most other small fruits, which generally require full sun, currants and gooseberries thrive under full sun or partial shade. These crops belong to the genus *Ribes*. For convenience in this guide, the term "*Ribes*" refers to cultivated currants, gooseberries, and jostaberries. It is pronounced "rye-bees."

One of the greatest challenges in currant and gooseberry culture has been the fungal disease white pine blister rust (caused by *Cronartium ribicola*). This disease was introduced into North America several times on infected white pines in the late 19th and early 20th centuries on both the east and west coasts.

Like some other rust pathogens, blister rust alternates between two distinctly different plant hosts to survive. Part of its life cycle must be spent on susceptible *Ribes* plants. Spores from these plants are carried by wind to the second host, five-needled pines. Susceptible pines include western and eastern white pines, sugar pine, limber pine, bristlecone pine, and whitebark pine. The blister rust spores that develop on *Ribes* plants are heavy, sticky, and travel, at most, one mile to infect pines. Spores produced on pine trees are light, dry, and can be carried hundreds



Swedish Black currants

of miles by the wind to infect new currant and gooseberry plants. Currants and gooseberries infected with blister rust usually do not suffer serious damage. Infected pines may die.

Faced with the destruction of vast numbers of valuable timber trees, the US Congress enacted a national law in 1944, banning *Ribes*. Efforts were even made to eradicate wild and domestic gooseberries and currants. Canadian breeding efforts to develop blister rust resistant *Ribes* cultivars and pines were successful. The federal ban was repealed in 1966. At that time some state governments, mostly in the eastern US where white pine was a significant economic crop, chose to continue prohibitions or restrictions on *Ribes* plants.

As of 2009, Idaho, Montana, Oregon, Utah, and Wyoming have no restrictions on importing or growing currants or gooseberries. Washington State regulates the importation of fresh currant fruits into certain regions to protect against the introduction of the insect pest, plum curculio. Regulations are subject to change, however, and local officials of the state Department of Agriculture should be contacted to confirm that any agricultural crop can be imported or grown without restriction.



Although states in the Northwest do not regulate currant production, white pine blister rust should still be a serious consideration for commercial and home gardeners. In general, rust-susceptible cultivars should not be planted within one mile of native, cultivated, or ornamental five-needled pines. European black currant cultivars are some of the most rust-susceptible cultivated *Ribes* plants, although rust-resistant cultivars are available. Many red and white currant, gooseberry, and jostaberry cultivars are resistant to the disease under field conditions. The Northwest hosts at least 35 native *Ribes* species. Some of these species are susceptible to blister rust and serve as reservoirs of the disease and sources of inoculum in the wild. Infected wild plants can also infect domestic currants and gooseberries with blister rust.

Aside from blister rust and a few other controllable pests and diseases, these crops are easy to grow in many parts of the Inland Northwest and Intermountain West. Proper cultivar selection and site preparation are important, however, as well as regular pest and disease control.

The nutritional values of currants, gooseberries, and other selected fruits are shown in table 1.

Selecting a site

Ribes crops are quite adaptable in terms of soils and climates. They tolerate heavier soils than blueberries, strawberries, and raspberries. Best plant growth and fruit production, however, usually occur on deep, cool, well-drained loam soils

Table 1. Nutritional value of currants, gooseberries, and other selected fruits (per 100 grams of fruit)^a

Nutritional value	Black currants	Red currants	Gooseberries	Blueberries	Strawberries
Water (%)	84.2	85.7	88.9	83.2	89.9
Calories	54	50	39	62	37
Protein (g)	1.7	1.4	0.8	0.7	0.7
Fat (g)	0.1	0.2	0.2	0.5	0.5
Carbohydrates (g)	13.2	12.1	9.7	15.3	8.4
Vitamins					
A (I.U.)	230	120	290	100	60
B ₁ (thiamin) (mg)	0.05	0.04	--	0.03	0.03
B ₂ (riboflavin) (mg)	0.05	0.05	--	0.06	0.07
B ₃ (niacin) (mg)	0.3	0.1	--	0.5	0.6
C (ascorbic acid) (mg)	200	41	33	14	59
Calcium (mg)	60	32	18	15	21
Phosphorus (mg)	40	23	15	13	21
Iron (mg)	1.1	1.0	0.5	1.0	1.0
Sodium (mg)	3	2	1	1	1
Potassium (mg)	372	257	155	81	164

^a Adapted from B. Watt and A. Merrill. 1963. Composition of foods. U.S.D.A. Agr. Handbook 8.



with good moisture-holding capacity. Avoid poorly drained sites or grow the plants in raised beds to provide drainage. Try to avoid planting where the water table is less than three feet deep. Sandy or otherwise droughty soils can create problems with summer heat damage and premature defoliation in fall. *Ribes* plants also favor high concentrations of soil organic matter.

Soil pH is not critical and the optimum pH level is from about 5.5 to 7.0. (A soil pH of 7.0 is neutral. Soils with pH less than 7.0 are acidic; those with pH values greater than 7.0 are alkaline.) On slightly to moderately alkaline soils, it may be possible to apply sulfur to the soil to reduce the pH to an acceptable level. *Ribes* plants should have at least 1000 parts per million (ppm) of calcium in the soil and can tolerate up to 150,000 ppm (15%) calcium. Total salt and sodium concentrations in the soil should not exceed 15,000 ppm and 500 ppm, respectively.

Ribes plants are noted for their cold hardiness and are grown to near the Arctic Circle. Depending on the cultivar, winter cold hardiness ranges from about -13 to -33°F. While they tolerate cold, however, high temperatures are another matter. Sustained temperatures in the high 90s or low 100s°F can damage leaves and cause the fruits to sunscald, particularly when associated with clear days and intense sunlight. Cool, moist, north-facing slopes are ideal for currant and gooseberry production. High fruit yields and quality generally require full sun exposure, but currants, gooseberries, and jostaberries can be grown in partial shade. On sites where summer temperatures frequently rise into the 90s°F or above, consider growing the crops in partial shade. Full sun in the morning with filtered shade in the afternoon can work well.



These crops, particularly black currants, bloom very early in spring, before blueberries or raspberries, and are susceptible to frost injury. Avoid planting in low-lying frost pockets. Gentle slopes, preferably above the normal inversion layer elevations for your area, are best. Inversion layers form when cold air is trapped against the earth's surface by warmer layers of air above. The depth of an inversion layer varies from one location to another, depending on climate and topography. For commercial production on a frosty site, consider installing some form of frost protection.

Currants, gooseberries, and jostaberries are very well adapted to the higher rainfall areas of the Northwest. Production in arid desert areas can be challenging due to summer drought and high temperatures, as well as desiccating winter winds.

Recommended cultivars

Hundreds of currant and thousands of gooseberry cultivars have been named. Relatively few, however, are available to growers in the United States. Even fewer perform well enough to deserve a place in today's farm or garden. Because currants, gooseberries, and jostaberries are minor crops, few pesticides are registered for their care. For that reason, selecting cultivars that are highly resistant or immune to serious diseases is critically important to success. In the Northwest, powdery mildew and white pine blister rust are the most serious diseases of *Ribes* crops. Fortunately, cultivars are available that are resistant to these diseases. In addition, currant cane borer and gooseberry sawfly can be significant pests.

The cultivars listed in tables 2-6 have performed well, or we believe they will perform well, in the Inland Northwest and Intermountain West. For information on additional cultivars, visit www.ag.uidaho.edu/sandpoint.

Currants

Red and white currants are tart fruits borne in long clusters called "strigs." They are good fruits for jellies, syrups, and relishes and their bright, colorful, translucent skins make them popular as garnishes. White currants are also used for baby food in some parts of Western Europe. Red and white currants are generally self-fruitful and plantings of a single cultivar usually produce well. Self-fruitfulness can vary with cultivar and weather conditions, however, and planting two or more cultivars near one another can help ensure high yields and fruit quality. Commercial fields should include at least 1% to 2% cross-pollinating cultivars. Most red and white currant cultivars are compatible with one another.



White currants

Table 2. Recommended black currants cultivars

Cultivar	Ripens	Fruit size	Powdery mildew resistance	Blister rust	Comments
Ben Alder	1	M	G	HS	Produces high quality juice. Vigorous, late flowering, and somewhat resistant to spring frosts. High yielding under ideal conditions, but yields can be low.
Ben Connan	1	L	G	S	Deep black berries. Suitable for fresh use and processing. Not ideal for juice. Tolerates spring frosts. Can produce high yields. Compact bushes. Suitable for machine harvesting.
Ben Lomond	1	L	F	S	Blooms late and is frost resistant. Consistently high yields. Moderately vigorous. Recommended for commercial fresh and processing markets, U-pick, and home production. Machine harvestable.
Ben Sarek	1	VL	G	R	A compact growing plant that is moderately resistant to white pine blister rust and powdery mildew. It is very high yielding and has very large berries. The flavor is full and this variety is used mainly for pick-your-own and home use. It is not suitable for commercial juice production.
Boskoop Giant	1	L	F	HS	Clusters are long and loose. Berries near cluster tips often abort due to poor pollination. Vigorous. Plants labeled as Boskoop Giant are not always true-to-name. The fragrant leaves and buds are, reportedly, well suited for use in teas.

KEY: Ripens: 1=early summer, 2=midsummer, 3=late summer; Fruit size: S=small, M=medium, L=large, VL=very large; Powdery mildew resistance: P=poor, F=fair, G=good, E=excellent, Unk=unknown; Blister rust: I=immune, R=resistant under field conditions, S=susceptible and HS=highly susceptible under field conditions



Black currants are particularly rich in vitamin C, phenolics, anthocyanins and other antioxidants, and have been used medicinally for centuries. They are popular in Europe for juice, syrups, and liquors. Black currants are also used for coloring and flavoring yogurt and other dairy products. Self-fruitfulness in black currants is variable and plantings should contain two or more cultivars to ensure good fruit set. In commercial fields, blocks of ten rows of one variety followed by ten rows of

another can be used. Planting a pollinizer every 50 feet within staggered rows so that no plant is more than 25 feet from a pollinizer variety also works. In a home garden, one pollinizer plant will cover about a 25 foot radius.

Red, white, and black currants are seldom dried because of their large seeds. The raisin-like fruits called currants that are used for baking are actually a variety of grape.

Table 2. Recommended black currants cultivars (continued)

Cultivar	Ripens	Fruit size	Powdery mildew resistance	Blister rust	Comments
Champion	1	M-L	F-G	S	The mild-flavored berries have good quality but are variable in size and do not ripen evenly. Vigorous.
Consort Crusader Coronet	1	S-M	P	I	Resistant to blister rust but highly susceptible to powdery mildew. Poor fruit quality. If blister rust is a concern, Titania and Ben Sarek are better choices.
Crandall	3	VL	E	R	A selection of North American golden currant. Used as an ornamental. Weak canes droop under crop loads, making trellises desirable. Ripe berries have a mild, pleasant flavor that is different from European black currants. Performs well in areas having hot summers.
Kerry	1-2	M-L	F	S	Canes are vigorous and productive.
Strata	1	VL	F	S	Berries are sweet and suited for fresh use or processing. Canes are moderately vigorous. Yields can be low.
Swedish Black	1	L	F-G	HS	Berries are very sweet and have excellent flavor. Canes are moderately vigorous and sprawling, making management somewhat difficult. Yields can be low.
Titania	1-2	VL	G	I	Ripens uniformly. Mild-flavored, but bitter fruit flavor can occur. Highly self-fertile. Vigorous and high yielding. Suitable for commercial and home production. Immune to blister rust but susceptible to botryosphaeria cane dieback.
Topsy	1	L	F	HS	The fruits are thick-skinned, and ripen during mid-season. Canes are vigorous.

KEY: Ripens: 1=early summer, 2=midsummer, 3=late summer; Fruit size: S=small, M=medium, L=large, VL=very large; Powdery mildew resistance: P=poor, F=fair, G=good, E=excellent, Unk=unknown; Blister rust: I=immune, R=resistant under field conditions, S=susceptible and HS=highly susceptible under field conditions



Table 3. Recommended red currants cultivars

Cultivar	Ripens	Fruit size	Powdery mildew resistance	Blister rust	Comments
Cascade	1	L	F	R	The berries are high in sugar and have good flavor. Moderately vigorous.
Jonkheer van Tets	1	M	F	R	The berries are variable in size, of average quality, and can split in wet weather. Vigorous. Very popular in Europe.
Laxton's No. 1	1	M-L	F	R	Berries have good quality and are tightly bunched on the strigs. Very productive. Popular commercially in Europe.
Minnesota No. 71	1-2	M-L	G	S	Consistent fruit quality. Vigorous. Popular for commercial use in England. One of the best cultivars in North America.
Perfection	1-2	L	F	R	Good flavor but sunscalds easily. Long, easy-to-pick clusters. Vigorous canes are susceptible to breaking. Very cold hardy. For commercial production in colder areas.
Portal Ruby	1	L	F	S	The berries are tart. The canes are moderately vigorous.
Prince Albert	2	S-M	F-G	S	Berries hang well without overripening. Long, easy-to-pick stems. Moderately vigorous. Excellent late-season cultivar, particularly for U-pick.
Red Lake	2	M-L	F	S	Good flavor. Moderately vigorous. Clusters are long and easy to pick. An excellent choice for commercial and home production.
Rondom	2	S-M	G	I	Berries hang well without overripening. Long, easy-to-pick clusters. Vigorous. Popular commercially in Europe. Immune to blister rust.
Rosetta	2	L	F	S	Berries are tart. Long, easy-to-pick clusters. Moderately vigorous. A promising recent introduction.
Rovada	2	L	G	R	Late ripening. Long, easy-to-pick clusters. Moderately susceptible to fruit run off. Resistant to leaf spot. High yields. Popular commercially in Central Europe.
Stanza	1-2	M-L	F	R	Long, easy-to-pick stems. Suitable for fresh use and especially for juicing. The flavor is acidic. Canes are moderately vigorous and reliably productive.
Stephen's No. 9	1-2	L-VL	F-G	R	Canes are vigorous. One of the most popular red currants in North America.
Tatran	2	L	Unk	R	Berries have good quality and are borne on exceptionally long clusters. High yields reported. Vigorous, cold hardy.
Victoria	1-2	S-M	F	Unk	Small, firm berries hang well without overripening. Vigorous, productive, and very cold hardy. With mechanical harvesting, may be suitable for commercial processing markets.
Wilder	1	S-M	G	S	Berries are variable in size, have good quality, and hang well without overripening. Long, easy-to-pick clusters. Vigorous. A good commercial or home choice.

KEY: Ripens: 1=early summer, 2=midsummer, 3=late summer; Fruit size: S=small, M=medium, L=large, VL=very large; Powdery mildew resistance: P=poor, F=fair, G=good, E=excellent, Unk=unknown; Blister rust: I=immune, R=resistant under field conditions, S=susceptible and HS=highly susceptible under field conditions

Table 4. Recommended white currant cultivars

Cultivar	Ripens	Fruit size	Powdery mildew resistance	Blister rust	Comments
Blanka	1-2	M	F-G	S	Late ripening, very productive, and very resistant to frosts. Persistent for long season. New to North America. From Slovakia. Fruit run-off can be high.
Gloire des Sablons	1	M-L	F-G	R	Fruits are pinkish-white and have average flavor and quality. European heritage cultivar.
Primus	1	S-M	F	S	Berries have good flavor and are whiter than some other white currants. Yields can be high. New to North America. From Slovakia.
White Currant 1301	1-2	M	F-G	R	The berries are medium-sized and borne on moderately vigorous canes that are somewhat resistant to powdery mildew and resistant to blister rust. From Sweden.
White Dutch	1	S-M	G	S	Berries have excellent quality, ripen early, and are darker than other white currants. Vigorous and very productive. The small, uneven size of the berries is the main limitation of this cultivar. European heritage cultivar.
White Imperial	1	M-L	E	S	Moderately vigorous and productive. An excellent choice for commercial and home production. European heritage cultivar.
White Versailles	1-2	M-L	G	S	Berries have good quality and are borne on long clusters. Vigorous. European heritage cultivar.

KEY: Ripens: 1=early summer, 2=midsummer, 3=late summer; Fruit size: S=small, M=medium, L=large, VL=very large; Powdery mildew resistance: P=poor, F=fair, G=good, E=excellent, Unk=unknown; Blister rust: I=immune, R=resistant under field conditions, S=susceptible under field conditions



Gooseberries

Gooseberries range in size from a large blueberry to a medium-sized plum, depending on the cultivar and growing conditions. They are primarily used fresh or for pastries. Many gooseberry cultivars bear fruits that resemble grapes in size, shape, color, and flavor. In areas where harsh winters or short, cool summers make grape growing difficult, gooseberries are excellent substitutes. Most gooseberry cultivars are self-fruitful and plantings of a single cultivar usually produce well. Self fruitfulness is variable, however, and planting two or more different cultivars close to each other can help ensure good fruit set. Commercial fields should include at least 1% to 2% cross-pollinating cultivars. Most gooseberry cultivars are compatible with one another.

There are two types of gooseberries, American and European. European types were developed primarily in England and have the advantage of large fruit size. Many European gooseberries, however, are very susceptible to American powdery mildew which affects the leaves, stems, and fruit. Infected berries become covered with grayish-brown mold, rendering them inedible. Infected canes can be killed. Controlling this disease can be difficult, as there are few fungicides registered for gooseberries. European gooseberries are not recommended for commercial production in Idaho. The European cultivar Lepaa Red is quite resistant to powdery mildew, but has small fruit.

Gooseberry canes typically have sharp spines at their nodes. These spines range from about $\frac{1}{4}$ inch to about $1\frac{1}{2}$ inches long, depending on the cultivar. Some cultivars have many spines while



Captivator gooseberry

others have very few. While the spines require growers to take a little extra care when pruning or picking, they should not discourage anyone from growing this excellent fruit.

American gooseberries represent North American gooseberry species or crosses between European cultivars and North American gooseberry species. The American gooseberries have smaller fruit but are much more resistant to powdery mildew. Given reasonable care, American gooseberries are easy to grow and produce excellent fruit.



Table 5. Recommended American gooseberry cultivars

Cultivar	Ripens	Fruit size	Powdery mildew resistance	Blister rust	Comments
Captivator	2	M	G	R	Greenish-red to red. Good flavor. Moderately vigorous and less spiny than some other cultivars. Excellent for commercial and home production.
Glennedale	2	S	F	R	Moderate quality berries are dark red to purple. Can produce high yields. Canes are very thorny and vigorous. Tolerates bright sun and high temperatures.
Jahn's Prairie	2	L	G	R	A red-pink, high quality dessert gooseberry. High yields. Thorny. Somewhat slow to mature. For home use and commercial testing. Resistant to blister rust, leaf spot, stem Botrytis, aphids, and sawflies.
Jeanne	3	M	G	R	Newly released dark red, late ripening, disease resistant dessert gooseberry.
Oregon	2	S	F-G	R	Also known as Oregon Champion. Tart berries are white to pale green. Best suited to processing. Vigorous.
Pixwell	2	S-M	E	R	Pale green to pinkish-red. Berries hang below the canes, facilitating hand picking. Can become bitter when over-ripe. Vigorous. Very reliable. Best suited to processing.
Poorman	2	S	G	R	Red berries are sweet, aromatic, and begin ripening in midseason. Vigorous with fewer spines than some other cultivars. One of the best gooseberries for North America.
Stanbridge	2	S	G	Unk	Fruits are yellowish-green. Yields are moderate. Canes are erect, vigorous, and develop few or no spines.
Welcome	2	M	F-G	S	The fruit is red. Canes are initially weak and spreading, but become more vigorous and erect as the plant matures. Widely available in the United States.

KEY: Ripens: 1=early summer, 2=midsummer, 3=late summer; Fruit size: S=small, M=medium, L=large, VL=very large; Powdery mildew resistance: P=poor, F=fair, G=good, E=excellent; Blister rust: I=immune, R=resistant under field conditions, S=susceptible under field conditions, Unk=unknown



Table 6. Recommended European gooseberry cultivars

Cultivar	Ripens	Fruit size	Powdery mildew resistance	Blister rust	Comments
Chautauqua	2	L	F	Unk	Green fruit has good flavor and quality. The canes are dense, spreading, and moderately erect. One of the most promising European gooseberries for North America.
Green Hansa	2	M-L	F	Unk	The green fruits are suitable for dessert use. The canes are below average in size and vigor.
Greenfinch	2	M	G	R	Mid-season ripening with green-yellow fruit.
Keepsake	2	S-M	F-G	R	Berries are greenish-red and variable in size. Fruit quality is good, but the variability in size limits its commercial value. Moderately vigorous.
Lepaa Red	2	S	G-E	Unk	The small, red berries have good flavor. Plants are small, vigorous, and productive. Highly reliable. Best suited for processing but the desirable flavor of the fresh fruit may make this cultivar a good choice for farmers markets.
Malling Invicta	2	L	F	R	Early ripening, very high yielding, with large yellow fruits (5.9 g/berry).
May Duke	2	M-L	F	Unk	The berries are green to dull red when ripe and pleasantly flavored. Vigorous.
Speedwell	2	M-L	F-G	R	The berries are red, sweet, and have fair quality. The canes are moderately vigorous.

KEY: Ripens: 1=early summer, 2=midsummer, 3=late summer; Fruit size: S=small, M=medium, L=large, VL=very large; Powdery mildew resistance: P=poor, F=fair, G=good, E=excellent; Blister rust: I=immune, R=resistant under field conditions, S=susceptible under field conditions, Unk=unknown



Jostaberries

The thornless canes of the jostaberry (pronounced "yostaberry") are very vigorous and generally resistant to diseases. The fruits are typically medium to dark purple and mild-flavored, without the characteristic strong black currant flavor. Fruit set can be a problem with jostaberries and the crop has not proven particularly popular in North America.

Three jostaberry cultivars are available commercially. At the present time, only Josta is widely available in North America. While Josta is reported to be self-fertile, North American growers have reported problems with poor fruit set. The cultivars Jostine and Jogranda (the latter also known as Jostagranda and Jostaki) have been imported into the United States but have not yet become widely available. These latter two cultivars are at least partially self-sterile, and should be planted together for good fruit set. Josta has proven resistant to blister rust under field conditions.

Preparing your site & planting

Soil tests and preplant fertilization

Soil tests are highly recommended before setting out your currant or gooseberry field or planting beds. It is far easier to correct soil problems before planting than afterwards.

Phosphorus (P_2O_5) and potassium (K_2O) soil analyses values of 100 and 150 ppm, respectively, generally indicate sufficient concentrations of these nutrients. Soil concentrations of less than 30 ppm of soluble magnesium indicate that magnesium is deficient. Add 1 pound per 100 square feet of either magnesium sulfate (Epsom salts) or potassium-magnesium sulfate (sul-po-mag). When soil pH is low, dolomitic limestone, which



Jostaberries

contains magnesium, can be used to offset magnesium deficiencies.

Calcium should be present in the soil at between 1,000 and 5,000 ppm. When calcium is deficient, add it to the soil as either lime (calcium carbonate) or gypsum (calcium sulfate). Lime will raise the soil pH, while gypsum has no effect on pH. When a soil test indicates less than 1,000 ppm of calcium, add 4 pounds of actual calcium per 100 square feet. For values between 1,000 and 5,000 ppm, growers may add 2 pounds of actual calcium per 100 square feet. No additional calcium is recommended when soil test values are greater than 5,000 ppm.

Soils should have at least 10 ppm of sulfur for optimum plant growth. When a soil analysis shows lower concentrations, add 1 ounce of actual sulfur per 100 square feet. Gypsum is an excellent source of both calcium and sulfur, and 6 ounces per 100 square feet will provide the needed sulfur. If boron is also deficient, borated gypsum can be used to supply calcium, sulfur, and boron at the same time. Boron, although essential, is toxic to plants at low concentrations. Do not add more than 6 ounces of borated gypsum per 100 square feet of row or raised bed.



Preplant weed control

Ribes crops are shallow-rooted and do not compete well against aggressive weeds. Weed control is challenging with currants and gooseberries, however, because few herbicides are registered for these crops. The key is to get weeds under control before planting. Annual weeds are usually easy to control with cultivation, herbicides, cover crops, and other practices. Perennial weeds that form rhizomes, such as quackgrass and Canada thistle, can be particularly troublesome and difficult to control. Cultivating with a rototiller or by hand often increases the weed problem by chopping the rhizomes into small pieces, each of which can then grow into a new plant. Sod-forming grasses are especially difficult to eliminate once they become established in berry rows.

Weed control also helps control pests and diseases. For example, sedges are alternate hosts for the cluster cup rust that infects gooseberries. Native, escaped, and abandoned currants and gooseberries can serve as reservoirs for many pests and diseases. Eliminate these natives and escapees in and around your fields or garden before planting.

For weedy sites, strongly consider taking from 1 to 3 years to get weeds under control before planting currants and gooseberries. This practice is especially valuable for commercial and organic growers. During the 1- to 3-year period, weed control may include cultivation, fallowing, planting rotation and green manure crops, and/or herbicide applications. Where perennial weeds are a problem, translocatable herbicides, such as glyphosate, can be valuable.

Amending the soil

Ribes crops respond well to organic soil amendments. Approximately 40 pounds of well rotted manure or compost per 100 square feet is

recommended for home production. Adding such large amounts of organic material to a commercial field can be cost-prohibitive. Growing and incorporating one to several green manure crops before planting currants and gooseberries can prove beneficial.

Types of planting stock

Currants, gooseberries, and jostaberries break dormancy very early in spring and it is difficult for nurseries to dig them for spring shipping. Most nurseries dig and ship their bare root plants in late fall. While it is possible to overwinter bare root plants at about 32°F, the plants can break dormancy and begin to grow even inside a dark cooler. For bare root plants, fall transplanting is generally recommended. Container grown plants that are acclimated to your site can be transplanted at any time. These crops produce vigorous root growth and should not be kept in containers for more than one growing season. When transplanting container-grown stock, cut through circling roots on the outsides of the root balls before planting.

Plant spacing

Currants typically grow 3 to 5 feet high with a spread of 3 to 4 feet. For landscape beds, set the plants at least 4 to 5 feet apart. For commercial, hand-harvested rows, space the plants 4 to 5 feet apart in rows 10 feet apart. For mechanical harvesting, plant the bushes 3 to 4 feet apart. Black currants can also be grown in hedgerows, rather than as individual bushes. In this case, set the plants 2 feet apart or plant as usual and stick cuttings into the ground between bushes during spring pruning to fill in the hedgerow. For home gardens, rows can be spaced as closely as 8 feet, particularly when trellis wires are run about 2 feet above the ground along each side of the crop rows to keep the plants from bowing out into the alleys.



Gooseberries range from 2 to 5 feet tall and vary greatly in spread. For vigorous cultivars, set the plants 4 to 5 feet apart in rows 10 feet apart. For less vigorous cultivars, space plants 3 to 4 feet apart. Jostaberries are vigorous and spreading. Set the plants 5 feet apart in rows 10 to 12 feet apart.

Caring for your plants

Irrigation

Currants, gooseberries, and jostaberries are tough plants that can tolerate rather dry soil conditions. They perform best, however, in cool, moist, well-drained soils and require regular irrigation to remain healthy and productive. The amount of water to apply will depend on your soil type, drainage, sun exposure, and temperatures.

Irrigate often enough to keep the soil moist, but not waterlogged.

Organic mulches can help keep soils moist and cool. Black plastic film or landscape fabrics can also help keep soils moist and control weeds. Be sure to provide for drip irrigation under the mulch when using plastic film mulches, as rain and overhead irrigation will not penetrate the plastic. On soils that are naturally cold and wet, mulches can slow soil warming and drying, and may not be advisable.

Ribes crops are susceptible to several foliar, fruit, and stem diseases. Keeping the leaves and fruit dry is important in managing disease problems. If possible, apply irrigation water to the bases of the plants, keeping the water off of the foliage. If you must apply irrigation water using overhead sprinklers, irrigate early in the day to

Table 7. Recommended amounts of commonly available fertilizers to apply annually to *Ribes* crops

Year	Composted manures (pounds (kg) per bush)		Commercial fertilizers (ounces (g) per bush)			
	Cow or horse ^a	Rabbit or poultry ^b	10-10-10 ^c	18-5-10 ^d	21-0-0 ^e	46-0-0 ^e
1 (planting)	5 (2.5)	1.5 (0.6)	4 (115)	2.2 (64)	1.9 (55)	0.9 (25)
2	5 (2.5)	1.5 (0.6)	4 (115)	2.2 (64)	1.9 (55)	0.9 (25)
3	8 (3.5)	2.0 (1.0)	6 (170)	3.3 (94)	2.9 (81)	1.3 (37)
4	10 (4.5)	3.0 (1.3)	8 (225)	4.4 (125)	3.8 (107)	1.7 (49)
5+	13 (6.0)	3.5 (1.7)	10 (285)	5.6 (158)	4.8 (136)	2.2 (62)

NOTE: Other manures and commercial fertilizer formulations can also be used to apply needed nutrients. Any one of the first four listed fertilizers and amounts provides all required nutrients. This table simply presents fertilizer options for growers to choose from.

^a Cow and horse manures contain approximately 0.5% N, with varying amounts of P, K and other nutrients.

^b Poultry and rabbit manures contain approximately 1.8% N, with varying amounts of P, K and other nutrients.

^c 10-10-10 contains 10% each nitrogen (N), phosphorus (P₂O₅), and potassium (K₂O).

^d 18-5-10 is often formulated as a slow release fertilizer containing 18% N, 5% P₂O₅, and 10% K₂O.

^e Ammonium sulfate (21-0-0) and urea (46-0-0) contain 21% and 46% N, respectively, but no P or K. These nitrogen-only fertilizers can be used to supplement complete fertilizers or are appropriate when soil and foliar tests indicate P and K are already adequate.



allow the plants to dry off before night. Do not overhead irrigate on cool, cloudy, or rainy days.

Fertilization

Currants and gooseberries have the reputation of thriving on poor soils. This misconception probably arises because neglected bushes can survive for years. In order to maintain healthy bushes and consistently high yields of quality fruit, however, proper fertilization is required. Nitrogen and potassium (potash) are the nutrients most often limiting in *Ribes* production. Fertilization guidelines are shown in table 7.

Pruning

Except for cordon-trained plants, most *Ribes* plants are pruned while they are dormant during the late winter and early spring, but you can prune any time after the leaves have dropped in the fall. Fall pruning improves air circulation around bushes during wet months and decreases disease problems. Remove unwanted canes as close to the ground as possible and always remove drooping canes that lie close to the ground.

Unless they are damaged or diseased, do not shorten or head back canes. When you must do so, cut immediately above a side branch or strong bud. Be careful while pruning red currants, white currants, gooseberries, and jostaberries not to damage the spurs. Most of the fruit for these crops is borne on short spurs on 2- and 3-year-old canes. Black currants bear most of their crop at the base of 1-year-old shoots and spurs on 2-year-old wood.

Currants and gooseberries are normally trained to bushes. When growing mature red and white currants, gooseberries, and jostaberries as free-standing bushes, your goal should be to keep 3 or 4 strong, new canes per plant each year, and to remove an equal number of the oldest canes. In this

system, mature plants have 9 to 12 canes after pruning; 3 to 4 each of 1-, 2-, and 3-year-old wood. Remove all wood that is 4 years old or older.

When saving space is important, currants and gooseberries can be trained to wire trellises, forming a wall of fruit about 6 to 12 inches wide. Gooseberries can also be trained to tall, single-stemmed cordons spaced about 1 foot apart in rows. Cordon-trained gooseberries are used commercially in Europe to produce high-quality, fresh, dessert fruits. Because of their vigorous growth, training jostaberries to a trellis or cordon can be difficult. Both methods save space while adding visual interest to a garden or edible landscape. Trellising is somewhat easier and less technical than creating cordons, but any gardener can easily learn to use either method. The greatest risk of cordons is that the entire plant depends on a single stem. If that stem is lost to pests or disease, the plant may die. These training methods are shown in figures 1 and 2.

Black currants are more vigorous than other currants and gooseberries, and you normally leave more canes. As a general rule, leave 10 to 12 vigorous canes per bush. If the bushes are very vigorous, leave a few more canes. About half of the canes left after pruning should be 1 year old, with the remaining half being vigorous 2-year-old canes that have an abundance of 1-year-old shoots. Remove all canes that are more than two years old.

Commercially, black currants can be grown in hedgerows and/or pruned and cropped in alternate year systems. The details of these systems are beyond the scope of this guide. Commercial growers are encouraged to refer to *Currants, Gooseberries, and Jostaberries: A Guide for Growers, Marketers, and Researchers in North America* for detailed information on these crops. See “For further reading” at the end of this guide.



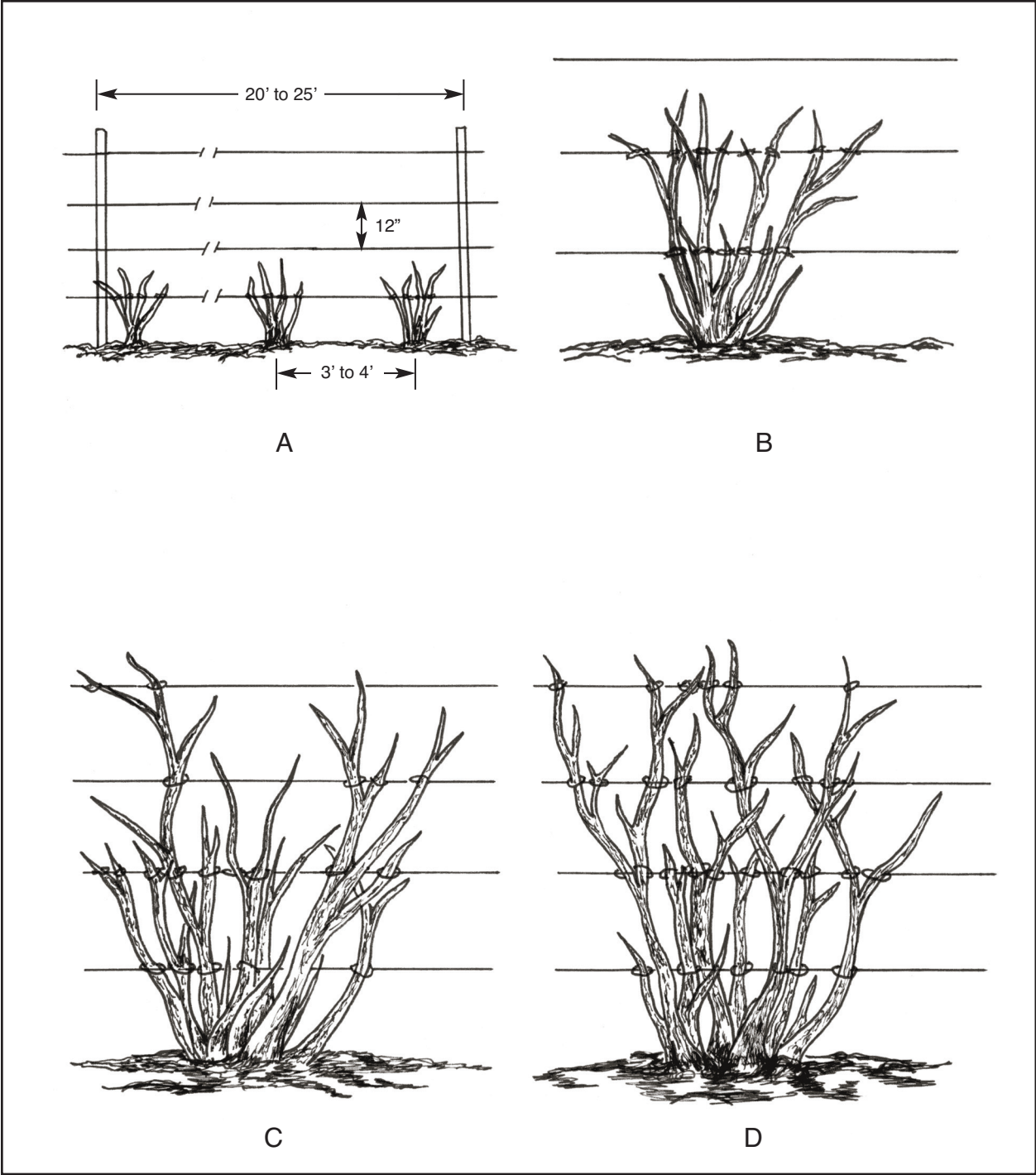


Figure 1.

Trellising for currants and gooseberries. A) Plant bushes 3 to 4 feet apart. Tie the canes to the bottom wire. B-D) As side branches develop, tie them to the trellis wires. Prune using the methods given for freestanding bushes.



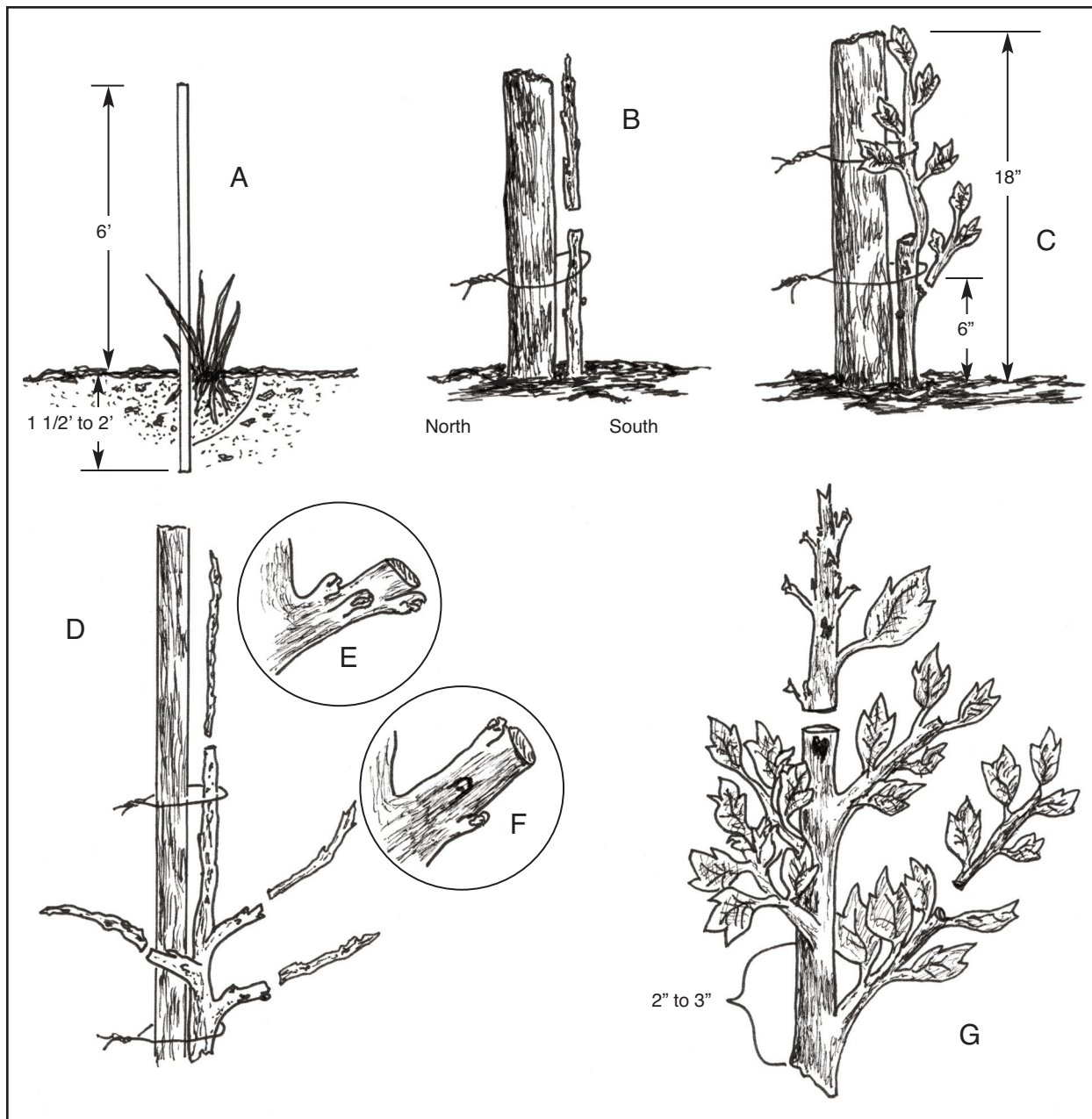


Figure 2.

Training gooseberries to cordons. A) Plant bushes on the south sides of stakes. B) Select a straight, upright, vigorous, 1-year-old cane. Cut off all other canes at the ground. Cut off about $\frac{1}{2}$ of the selected cane, making the cut just above a strong bud. C) When the central leader is about 18 inches tall, remove all side branches within 6 inches of the ground. D) During the dormant seasons, cut off about $\frac{1}{2}$ of the central leader shoot which formed during the preceding growing season. Shorten new lateral shoots to about 3 buds each.

For vigorous cultivars (E), cut to a downward-pointing bud. For less vigorous cultivars (F), cut to an upward-pointing bud. G) During July or August, pinch lateral shoots to about 5 leaves each. Begin summer pruning the central leader when it grows to about 6 feet tall. When the central leader reaches the desired height, pinch off all but 1 bud on the current season's shoot of the central leader during summer pruning. (Acknowledgement and thanks to Alexander Eppler for describing cordon training in the 1989 *Ribes Reporter*).



Weed control

Weed control is important in growing *Ribes* crops. Not only will weed control reduce competition for water and nutrients and make picking easier, it can also help reduce pest and disease problems. While some herbicides are registered for currants and gooseberries, a combination of weed control strategies is best. For a list of current herbicides and application recommendations, visit the PNW Weed Management Handbook at <http://pnwpest.org/pnw/weeds>.

Organic mulches, such as bark and compost, can help control weeds, particularly annual weeds. According to research in Europe, however, these organic mulches do not necessarily increase soil organic matter concentrations. Black plastic is an effective weed control strategy. When combined with bare alleys, black plastic produced greater yields than other methods in Canadian research. Weed barrier fabrics can also be used and may last longer than black plastic film.

Hand or mechanical cultivation has long been used for currant and gooseberry production. Keep the cultivation shallow, no more than about 2 inches deep, to avoid damaging the shallow roots. The old practice of deep cultivation does not appear to force the roots deeper; it simply damages them.

Pest and disease control

Several diseases and pests can create problems for currant and gooseberry growers in the western United States. A serious problem in growing these crops is American powdery mildew. Cultivars differ tremendously in their susceptibility to the disease, so careful cultivar selection is the most effective way to combat mildew. In general, European gooseberries are the most susceptible *Ribes* crop, followed, in order, by European black currants, American gooseberries, red and white



Powdery mildew on currant leaves

currants, and jostaberries. Dormant applications of lime sulfur and/or Bordeaux fungicides help control powdery mildew, as do spring and summer applications of sulfur to the foliage and stems. Practicing good sanitation by raking up and disposing of leaves and prunings helps reduce new infections. Note that applying sulfur to foliage when temperatures are above about 80°F can damage the plant tissues. Besides powdery mildew and blister rust, which was discussed earlier, several other diseases occasionally affect *Ribes* crops in the Northwest. These are described in the on-line guides below.

Common pests include aphids, currant borer, imported currant worm, and currant fruit fly (also known as gooseberry maggot). The most important tool in controlling pests and diseases is frequent scouting. Examine your plants at least



weekly for signs of disease or pest damage. For help in identifying your pests and diseases, the following on-line guides are available to you. Please note that the pesticide recommendations in the Pacific Northwest guides apply to Idaho, Oregon, and Washington only. For other states, ensure the pesticides are registered for your crop and location. Always read and follow pesticide label directions carefully.

- Currant and Gooseberry Pests and Diseases - www.ars-grin.gov/cor/ribes/ribsymp/ribsymp.html
- An Online Guide to Plant Disease Control - <http://plant-disease.ippc.orst.edu/> (look up "gooseberry")
- Pacific Northwest Insect Management Handbook - <http://pnwpest.org/pnw/insects>

Harvesting & using your fruit

There has long been a misconception that currants and gooseberries must be harvested before they are ripe, or they will not process well. That misconception has discouraged the use of these fine fruits because green currants and gooseberries are unpalatable, to say the least. In England, gooseberries are harvested before they are fully ripe and used in pastries and desserts. Commercially, this is called the green berry trade. The flavor of both currants and gooseberries is far better if the berries are allowed to ripen on the bushes. Even fully ripe fruits make excellent preserves when you follow standard canning procedures.

Black currants are the first to ripen, typically around the first week of July in northern Idaho and late June or early July in warmer areas. Red and white currants begin ripening about a week or two later and ripen over a 2-week period. Some currant cultivars ripen later than others.

Currants may be harvested 2 or 3 times, but all of the fruit from a particular cultivar is usually harvested at one time. Wait until all of the berries on the bush are ripe. Berries at the tops of the fruit clusters ripen before those at the tips. Harvest the fruit after it softens and is fully ripe, but before it begins to shrivel. Pick the berries into $\frac{1}{2}$ or 1 pint flats. Pick the fruit by pinching off the fruit clusters where they attach to the stems. Particularly with red and white currants, do not strip the berries from the clusters. Black currants are firmer than red and white cultivars, and are sometimes stripped individually from the bushes.

Unless you plan to use them immediately, do not wash the berries before refrigerating them. Doing so increases fruit rot. Wash the berries just before use. If you are making juice by pressing the berries, you do not have to remove the stems. If you cook the fruit before straining, strip the berries from the stems into a large pot and remove the stems to prevent the development of a grassy flavor during cooking.

Gooseberries ripen 2 to 4 weeks after most black currants and ripen over a 4-week period. For hand-harvested fresh fruit, the berries are often collected in three pickings. During the first picking, remove one-third of the ripe or nearly ripe fruit evenly from throughout the bush. A week later, remove half of the remaining ripe fruit, leaving the rest on well-exposed spurs on the outside of the bush. Finally, harvest the remainder of the fruit when it is fully ripe. The fruit from the first two pickings is normally used for processing. Fruit from the last picking is usually larger and sweeter, and is good for fresh use or processing. For commercial processing, gooseberries are normally only harvested once. Remove the stems and tails from the gooseberries before cooking. Jostaberries ripen and are used similarly to gooseberries.



For large, commercial operations where fruit is destined for processing, currants are now almost exclusively harvested using over-the-row mechanical harvesting machines. Gooseberries are also sometimes harvested mechanically, although the fruits tend to be punctured by thorns during harvest.

For further reading

Currants, Gooseberries, and Jostaberries : A Guide for Growers, Marketers, and Researchers in North America by D.L. Barney and K.E. Hummer. 2005. Available from Taylor and Francis: <http://www.taylorandfrancis.com>.

Many other guides on berry, grape, and tree fruit production are available from:

Educational Publications Warehouse phone: (208) 885-7982
University of Idaho fax: (208) 885-4648
PO Box 442240 email: calspubs@uidaho.edu
Moscow, ID 83844-2240

Visit our online catalog for a complete list of publications, pricing, and downloadable pdfs
<http://info.ag.uidaho.edu/catalog>



University of Idaho Extension

Issued in furtherance of cooperative extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Charlotte V. Eberlein, Director of University of Idaho Extension, University of Idaho, Moscow, Idaho 83844. The University of Idaho provides equal opportunity in education and employment on the basis of race, color, national origin, religion, sex, sexual orientation, age, disability, or status as a disabled veteran or Vietnam-era veteran, as required by state and federal laws.