

# currants

RED, BLACK, AND CLOVE

Currants are small red, black, or white berries that grow dangling clusters that resemble grapes. The name "currant" is believed to be derived from "Corinth grape," a small grape cultivar that grew on the Greek island of Corinth.

Currants belong to the genus *Ribes*, which is the same genus as gooseberries. Currants and gooseberries both produce sour fruit on cold tolerant shrubs, but the two types of fruit are distinct. Currants are cold hardy shrubs that grow between two and six feet tall with upright canes, and the canes lack thorns. Currants are borne on small clusters that look like small grapes (Figure 10). Gooseberry fruit is three or four times larger than currants and the fruit is usually borne individually or in small clusters. Gooseberry bushes have a spreading growth habit with prominent thorns sticking out of the canes near the fruit.

Note from Thaddeus:

*Can You Dry Currants for Sale?*

*The dried Corinth grapes came to be called "currants" - a derivative of the word "Corinth" -- and the fruit of the hardy currant shrubs eventually acquired the same name, leading to confusion among American consumers. The "dried currants" sold in many grocery stores and used in specialty baking are actually small dried grapes. Black and red currants are rarely dried due to a combination of intense resinous flavors and prominent seeds.*



**Figure 10.** Fruit of the black currant. **Figure 11.** Fruit of the white currant. **Figure 12.** Fruit of the red currant.

Currants are native to North America, Europe, and northern Asia and were incorporated into local diets wherever they grew. Currently, currant production is most common in Russia, Poland and Germany. There are many different species of currants, and the edible species are grouped into three different

sections: the black currants, the red currants, and the clove or golden currant (Table 6). There are four species of red currants, about ten species of black currants, and one species of clove currant. White and pink currants belong to the red species.

Currant type	Representative species	Number of species	Origin of most cultivars	Primary uses
Black	<i>R. nigrum</i> , <i>R. americanum</i> , <i>R. ussuriensis</i>	10	Eastern Europe	Jelly, wine, juice ingredient
Red and White	<i>R. rubrum</i> , <i>R. multiflorum</i> , <i>R. triste</i>	3	Scandinavia/Holland	Juice, cooking, wine
Clove or Golden	<i>R. aureum</i> *	1	Midwest North America	Ornamental with edible fruit

\*A second species *R. odoratum*, is often mentioned as a clove current, but most scientists classify *R. odoratum* as the cultivar *R. aureum* var. *villosum*.

All types of currants live several decades, producing new canes each year. Canes have few branches and lack thorns. Individual canes can live up to five years, depending on insect and disease pressure. Most fruit is borne on second- and third-year canes.

Black currant bushes reach a maximum height of about 6 feet in rich soils in Minnesota. The leaves have angled lobes that superficially resemble maple leaves (Figure 13). Black currant fruits have a strong, resinous flavor with small edible seeds. Even the leaves produce a pleasant smell similar to the fruit. Black currants, as

a rule, are more susceptible to the disease white pine blister rust than other currant species.

Red currants are slightly shorter than black currants, usually growing to a height of five feet. The leaves have rounded lobes and are smaller than black currant leaves (Figure 15). Red currants are generally more resistant to white pine blister rust. Red currants have a sour taste similar to lemons, without the resinous taste of the black currants. Some red and white currants have large seeds that must be removed during processing.



**Figure 13.** Leaf of a black currant



**Figure 14.** Black currant flowers



**Figure 15.** Red currant leaf.



**Figure 16.** Clove, golden, or buffalo currant, *Ribes aureum* var. *villosum*

Clove currant bushes have branched, arching canes rather than the upright canes of black and red currants. The leaves are small and lobed. Clove currants produce showy, fragrant flowers with a spicy smell that resembles cloves (Figure 16). Clove currants usually produce black berries on small clusters, but there are wild plants with yellow fruit. Clove currants are native to the American Midwest, are resistant to most diseases, and handle hot weather better than black or red currants. Clove currants are more difficult to harvest than black currants and many people do not pick the berries.

Most currant cultivars were developed in Europe, and many cultivars have never been introduced to North America. In the 20th century, currant breeders began to combine traits from different species to develop larger fruit on longer clusters as well as resistance to white pine blister rust and powdery mildew. Scientists in Northern Europe and Russia continue to breed currants, but few new cultivars are reaching the U.S. There is only one registered cultivar of clove currants.

**Table 7. Black currant cultivars suitable for testing in Minnesota**

Name	White Pine Blister Rust	Powdery Mildew	Height	Other
Ben Alder	Susceptible	Resistant	4 feet	Late ripening, good juice quality
Ben Lomond	Susceptible	Moderate Resistance	4.5 feet	Uneven ripening, good juice
Ben Sarek	Resistant	Mod. Susceptible	3 feet	Very large fruit, productive
Black Down	Susceptible	Resistant	4 feet	Large fruit, strong, musky flavor
Black September	Susceptible	Resistant	4 feet	Large, mild fruit, late
Consort	Resistant	Susceptible	4 feet	Small fruit, possible poor fruit quality
Crusader	Resistant	Susceptible	5 feet	Needs pollinator, preferably Consort
Hilltop Baldwin	Susceptible	Resistant	4.5 feet	Old English cultivar, heavy yields
Invigo	Susceptible	Resistant	4 feet	New German release, even ripening, late
Titania	Resistant	Resistant	6 feet	Large fruit, good fruit quality

All listed currant varieties belong to the species *R. nigrum*, except Consort and Crusader, which are hybrids between *R. nigrum* and *R. ussuriensis*.

**Table 8. Red, pink, and white currant varieties suitable for Minnesota**

Name	Color	White Pine Blister Rust	Powdery Mildew	Fruit Size	Comments
Jonkheer van Tets	Red	Resistant	Mod. Susceptible	Medium	Vigorous
Rovada	Red	Mod. Susceptible	Susceptible	Large	High yielding and easy to pick
Red Lake	Red	Susceptible	Mod. Resistant	Medium	Bred in Minnesota
Tatran	Red	Resistant	Mod. Resistant	Large	Long fruit clusters, late ripening
Blanka	White	Susceptible	Resistant	Large	Heavy yields
Pink Champagne	Pink	Mod. Resistant	Mod. Resistant	Med	Considered best for fresh eating
Primus	White	Susceptible	Resistant	Medium	High yielding, sweet

## CLOVE CURRANTS

'Crandall' is the only registered cultivar of *R. aureum* and is often listed as *R. odoratum*. 'Crandall' has large black berries on small clusters, but was primarily selected for fragrant, yellow flowers. Many

nurseries list 'Crandall' as a black currant, but the fruit tastes very different, and is more suitable for fresh eating.

# HISTORY

Europeans domesticated black currants about 400 years ago, while red currants were domesticated 500 years ago. Red currants were commonly grown in Scandinavia and the Netherlands, while black currants were more common in Germany, Eastern Europe, Russia, and Siberia. From Eastern Europe through Siberia, black currants became a staple part of the diet and a critical source of Vitamin C prior to the widespread consumption of orange juice and other citrus products. Cultivars of both red and black currants were brought to North America by the first European settlers. For several hundred years currants were planted in homesteads as European settlers moved west.

In the Great Plains, Native Americans regularly put clove currants into pemmican, a mixture of lard, dried meat and berries that was a winter staple. Clove currants were domesticated in the 19th century as an ornamental. In the first half of the 20th century, the cultivar 'Crandall' was widely planted in yards across the United States for its fragrant flowers, but lost favor with landscapers towards the end of the century.

In the 19th century the disease white pine blister rust came to North America on infected white pine seedlings, and by the early 20th century, the disease was killing whole white pine forests across

the northern U.S. White pine blister rust infects five-needle pines, including economically important eastern white pine, western white pine, and sugar pine. The fungus that causes white pine blister rust needs to spend part of its life cycle on a *Ribes* leaf in order to complete its life cycle. Early control efforts concentrated on eliminating currants and gooseberries. Laws were passed restricting transport of any *Ribes* plants in 1916, followed by prohibitions against *Ribes* production in the 1920s and a nationwide law prohibiting all production enacted in 1933. During the Great Depression, the U.S. Forest Service hired large groups of men to march through white pine forests in Idaho, the Midwest, and Northeast and pull every *Ribes* plant. Neither the prohibition nor attempted eradication of *Ribes* stopped the disease, and after 1966, states were free to permit or outlaw the planting and cultivation of currants and gooseberries. While several northeastern states continue to restrict *Ribes* to this day, Minnesota now has no restrictions on currant production.

Because currants were outlawed in Minnesota from the 1920s to the 1960s, many of the traditional recipes that would have been transferred from immigrants to their children and grandchildren were lost. When restrictions for growing currants were lifted, few people even knew how to use them.

# USES AND HEALTH BENEFITS

Currants are rarely eaten raw. Black currants are sour with a strong, resinous taste that turns many people off. Red currants are sour, and some cultivars have large seeds. Clove currants also have a resinous, sour taste, although not as intense as black currants. There are a few white cultivars such as the champagne currants that were selected for fresh consumption, but even champagne currants are best used as a garnish rather than eaten in large quantities.

Processed currants have a wide variety of uses. Black and red currants can be made into jellies, jam, or

wine. Currant syrup can be used to flavor and color ice cream. Black currants are used to make the cassis liqueur or crème de cassis. Both black and red currants can make juice rich in Vitamin C. Red currant juice has a tart flavor similar to pink lemonade, while black currants are added to other juices to add color and flavor. Purple candies in the U.S. are grape-flavored, but in other parts of the world, purple candies are typically currant-flavored because currants are so popular and well-known. All currants are sour, so a sweetener and water are usually added to currant juice. Both black and red currants can be made into flavorful

wines. In Europe, black and red currants are used in a variety of cooking recipes, from braised meat to cooked cabbage.

Currants are among the most nutritious of all commonly cultivated fruits, containing a rich assortment of vitamins, minerals, and unusual phytonutrients. Black currants were commonly used in traditional medicine across Eastern Europe and Russia. Before phytonutrients were described by modern chemists, the health benefits of currants were attributed to their high Vitamin C content. Currants have three times as much Vitamin C per ounce as oranges, and they have high levels of Vitamin A and folic acid.<sup>18</sup>

When phytonutrients were first being discovered, scientists realized that the health benefits attributed to black currants could be due to their high levels of antioxidants and other compounds. Black currants have some of the highest levels of antioxidants measured in any cultivated fruit, and the antioxidants in currants are highly diverse. Black currants contain over twelve types of anthocyanins along with gamma linolenic acid. The primary health benefit of black currants appears to be associated with improvements in blood flow, especially to extremities. In clinical trials, patients who ate black currants or black currant extracts had improved circulation. Currants are even believed to improve vision in the dark, which is attributed to increased blood flow to the eyes.<sup>19</sup>

## PROPAGATION

Currants are easy to propagate vegetatively. Nearly all currant species send out canes close to the mother plant. Homeowners can dig up and transplant young dormant canes. For growers who want to propagate large numbers of plants, both hardwood and softwood cuttings will root and transplant easily. For hardwood cuttings, canes can be cut in late winter, cut into sections containing two or three buds and placed into potting soil or damp peat moss. After a few weeks, the cuttings will sprout and start forming new roots. The new plants can be transplanted into the field after they develop a root system.

Growers can sometimes skip the nursery by cutting dormant currant canes and placing hardwood cuttings directly into the field. If placing dormant cuttings directly into the field, only use dormant first year canes and make sure that the soil is properly prepared and free of weeds. About three inches of the cane should be placed in the soil, and there should be anywhere from 1 to 4 buds above the soil. The soil needs to remain moist until a sufficient root system is established. Good references for propagating currants can be found in the publications "Uncommon Fruits for Every Garden"<sup>20</sup> or "Growing Currants, Gooseberries and Jostaberries in the Inland Northwest and Intermountain West".<sup>21</sup>

## PLANTING AND CARE

Most currant cultivars are hardy through USDA Zone 3. Red and black currants grow best in a cooler soil, and mulch can help keep soils cool in a warm climate. Currants will survive and produce crops on poor soil, and they are one of the few crops that can be grown in partial shade. In order to obtain the highest yields, currants should be grown in good soils and in full sun. Currants grow in soils with a pH from 5.5 to 7.5.

Currants can grow either as individual shrubs or as a hedge. Black currants are more vigorous than red currants and should be placed further apart. When growing currants as shrubs, place red currant plants 3 feet apart in the row and black currants 4 to 5 feet apart in the row. If growing as a hedge, currants should be planted 2 feet apart. Rows can be planted 8 to 10 feet apart depending on space required for any equipment that will be used for spraying, weeding, etc. A typical mature shrub will be 4 to 5 feet high and 3 to 4 feet wide. Some black currant varieties are self-infertile, which means that the flowers of one cultivar cannot pollinate flowers of the same cultivar. Two or more varieties should be planted in a patch to ensure pollination.

Currants will survive with no care, but in order to have good quality fruit every year, the plants should be fertilized and pruned. Pruning is critical to maintain consistent production. Currants send up new canes from the crown each year, and each cane can live up to 5 years, but the most productive canes are second- and third-year canes. In order to keep new canes sprouting, some old canes should be cut

near ground level each year in late winter or early spring. A healthy currant plant should have between 5 and 12 canes per plant, and one fourth to one third of the canes should be removed each year.

On rich soils, currants can grow for years with no fertilizer. Fertilizers should be added if canes are too short (less than three feet tall) or if the plants are not producing enough canes. There should be about 12 canes per plant. If vigor is starting to lag, plants should be given about two ounces of actual nitrogen each year. Conventional growers can supply two ounces of nitrogen with eight ounces of ammonium sulfate or ten ounces of calcium nitrate per plant. Organic growers can supply two ounces of nitrogen with two pounds of high quality compost or one pound of feather meal per plant. All fertilizers should be spread six inches away from the plant. Granular fertilizer should be added in early spring, while organic fertilizers can be added in late fall or early spring.

Note from Thaddeus:

*About Actual Nitrogen...*

*"Actual nitrogen" is a common agronomic term referring to the amount of pure nitrogen. Ammonium sulfate is about 25% nitrogen, so two ounces of actual nitrogen would be eight ounces of ammonium sulfate.*

## EDIBLE LANDSCAPING

Several currants are sold as ornamentals. The most common currant used in Minnesota landscaping is the alpine currant (*R. alpinum*), which produces no fruit. In other parts of the country, currants selected for flowers are grown, but those species are not hardy in this area. Black and red currants can be incorporated into landscaping as a hedge, but lack showy flowers. Some cultivars lose all their leaves to powdery mildew or white pine blister rust in late summer.

The golden currant or clove currant (*Ribes aureum*) has great potential for edible landscaping, as it is the only currant species suitable for Minnesota with both showy flowers and edible fruit. Clove currants have arching canes compared to the upright canes of other currant species, which works well as a shrub in a lawn. The cultivar 'Crandall' was selected for large, fragrant flowers that emit a pleasant scent so strong it can be detected twenty yards from the plant. In late summer,

The shrub produces edible berries that can be used in pies or juice. 'Crandall' is found in many garden

catalogs, but fruit quality and productivity varies from plant to plant.

## PRODUCTION ISSUES

All species of currants grown for fruit production are extremely hardy, and can survive even the coldest Minnesota winters. Many growers in the far northern reaches of the state report having no insect or disease problems, which gives currants a high potential for organic production in northern and western Minnesota. Even deer seem to mostly avoid currants although deer browsing in late winter has been reported. Disease and insect pressure increases in southern and eastern Minnesota.

The two most important diseases in currants are white pine blister rust and powdery mildew. Both diseases can cause the leaves to fall off by the end of summer. White pine blister rust is easy to identify because infected leaves develop prominent red pustules. White pine blister rust is most common in forested regions and primarily infects black currants. White pine blister rust shows up in farms that are surprisingly far from any white pine forests because the type of spores that move from pines to infect currants can travel much farther than the spores that move from currants to pines.

Powdery mildew often infects young leaves, causing the leaves to be deformed. In the late stages of infection, the leaves are partly covered with a powdery substance. Powdery mildew is found statewide and primarily infects red currants. Leaf spot also appears to defoliate some plants.

The best way to control leaf diseases is to plant

resistant cultivars. Diseases can also be reduced by rigorous pruning and removing leaves that fall from currant plants to prevent the fungi from overwintering. Leaf diseases do not occur every year. Currants can produce a crop even after being defoliated the previous summer.

So far, two insect species have caused problems with currant plants: the imported currant worm or currant sawfly and the currant borer. The currant sawfly hatches in early to mid-May in the Twin Cities area, and small green larvae quickly start devouring the leaves. The currant sawfly has one generation per season. Because the plants are defoliated early, the plants will sprout leaves after being defoliated, but there will be no crop on defoliated plants. Sawflies don't appear in large numbers most years, but in peak years they can defoliate an entire field. In southern Minnesota currant borers are quite common, but there are few reports of currant borer in northern Minnesota. Borers lay their eggs in the young currant canes. The larvae hatch, burrow into the canes and slowly kill the canes over the following growing season. Canes with currant borer will often have yellow leaves, and sometimes the holes can be seen in the cane where the borer entered. The best way to control currant borers is to remove and burn infested canes, and by consistently removing 4-year-old and older canes. Stumps can be sprayed with a *Bacillus thuringiensis* (Bt) solution to enhance control. For detailed information on currant pests, see USDA publication "Currant and Gooseberry Pests".<sup>22</sup>

## HARVESTING

In Europe, currants are usually harvested with machines that shake the canes and gather the falling fruit. The tall, straight canes of the black currant make the crop ideal for mechanical harvest, but the

industry in North America is not large enough to justify the cost of expensive equipment.

Picking currants is slow, but not so slow as to be cost

<sup>22</sup> Hummer, Kim and Joseph Postman. *Currant and Gooseberry Pests*. USDA-ARS National Clonal Germplasm Repository, March 2000. Web. 03 March 2017. <https://www.ars-grin.gov/cor/ribes/ribsymp/ribsymp.html>

prominence. Currants can be picked either as whole clusters or individual berries. Black currants are often stripped off the strigs, because they ripen unevenly in the cluster. Red currants are often picked as whole clusters, especially if they are being sold for fresh markets, because picking can damage the fruit and

lower the shelf life. Estimated average harvest time for a good crop of currants is 4 pounds per hour for black currants to 8 pounds per hour for red currant.<sup>23</sup> Harvesting will be faster if all the berries on a cluster are ripe and the berries on the cluster can be stripped at one time; or if the fruit is large.

## COMMERCIAL POTENTIAL IN MINNESOTA

Currants have the potential of becoming a large, commercially important crop in Minnesota. Northern Minnesota has some natural advantages for growing currants, with cooler summers and lower disease pressure than in surrounding states. The market for currants is small but growing. The demand for currants jumped dramatically in the 1990s with the arrival of immigrants from Eastern Europe and the former Soviet Union. Immigrants primarily buy black currants. American-born customers are more likely to buy red currants, but red currants remain largely unknown for most consumers. Interest in red and black currants among people who were born in the United States is growing as customers look for novel flavors and healthful foods. Growers who want to raise currants commercially have opportunities to build markets by giving potential customers samples of currant products like pies and jellies. Some people have started putting black currants in smoothies to add color, flavor, and health benefits.

There are a handful of growers producing currants for local markets throughout Minnesota and in surrounding states. Most currant growers are enthusiastic supporters of this little-known crop, due to relatively low pest pressure and potential health benefits. Some grow black currants for immigrants who pick their own fruit. Others grow red and black currants for sale at local farmers' markets. Many growers are seeing rising sales with the increased interest in local foods. Because of their superior resistance to white pine blister rust, and the tendency for consistent ripening within clusters, most growers prefer to raise red currants.

### Safe Food Sampling

Vendors providing samples at farmers' markets must comply with the 2014 Minnesota Safe Food Sampling Law. More information and resources can be found at UMN Extension: <http://www.extension.umn.edu/food/food-safety/food-entrepreneurs/>

Note from Thaddeus:

*I have shared many meals with friends from Russia, and they rarely served an evening meal without black currants incorporated in some way. Russians go beyond the pies and jams used by Americans when using their favorite fruit. They make a paste of black currants that is put on cooked cabbages or meat the same way others use ketchup or salsa. A staple in the German diet is red cabbage, which is cabbage cooked in the juice of red currants, apples and spices.*

<sup>23</sup> Hummer, K.E. and D.L. Barney. 2002. Currants. *HortTechnology* 12: 377-387