

Growing Gooseberries and Currants



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Gooseberries and Currants



- Currants and gooseberries (*Ribes*) are berry producing shrubs
- Types of currants: red, white, and black
- American and European gooseberries range from green to yellow, or red when ripe





Zante Currant (Black Corinth Grape): Not a Currant

- The "currant" is one of the oldest raisins known
 - the term currant is used to describe its small berry size, but it is a true grape [*Vitis vinifera*] and not a member of the *Ribes* genus.
- In 75 A.D., Pliny writes of a tiny Greek grape, thin-skinned, juicy, and sweet, and with bunches exceedingly small.
- In the eleventh century, trade of this type of raisin between the Greek producers and the Venetians was recorded.



Gooseberry and Currant Products



- Plants are hardy, easy to grow
- Fruit makes excellent juices, wines, cassis, jams, jellies, preserves, and pies



Black Currant Sorbet

Adapted from Dalia Jurgensen

Time: 35 minutes plus freezing time

3 cups granulated sugar

2 3/4 cups fresh black currants.



1. In a medium saucepan combine the sugar with 3 cups water. Bring to a boil, stir until sugar dissolves, and remove from heat.

2. Place currants in a clean saucepan and add 2 cups of the sugar syrup. Bring to a boil, reduce heat to low, and simmer for 15 minutes. Purée using an immersion blender or stand blender. Strain through a chinois or fine sieve, discarding solids. Allow to cool completely; mixture may be chilled in a bowl set in an ice water bath.

3. Stir in 1/4 cup water and 3/4 cup to 1 cup of the remaining syrup, to taste. Freeze in an ice cream maker according to manufacturer's instructions. For firmer sorbet, transfer to a covered container and freeze until solid, several hours or overnight.

Yield: 1 1/2 quarts.

What We Will Taste:



Nutritional Information on Currants

Table 3. Nutritional composition of raw currant, gooseberry, apple, strawberry and orange fruit (per 100-g edible portion).^z

Fruit	Water (%)	Calories ^y	Protein (g)	Fat (g)	Carbohydrate (g)	Vitamins				
						A (I.U.) ^x	B ₁ (mg)	B ₂ (mg)	Niacin (mg)	C (mg)
Black currant	81.96	63	1.4	0.41	15.38	230	0.05	0.05	0.3	181
Red currant	83.95	56	1.4	0.2	13.8	120	0.04	0.05	0.1	41
Gooseberry	87.87	44	0.88	0.58	10.18	290	0.04	0.03	0.3	27.7
Apple	83.93	59	0.19	0.36	15.25	90	0.017	0.014	0.077	5.7
Strawberry	91.57	30	0.61	0.37	7.02	27	0.02	0.066	0.230	56.7
Orange	82.3	40	1.3	0.3	15.5	250	0.10	0.05	0.5	71

^zSource: U.S. Department of Agriculture, National Agriculture Library (2002).

^yFood calorie = 1000 g calories of heat.

^xI.U. = international units; 28.35 g = 28,350 mg = 1.0 oz.

- Black currants are high in anthocyanins, total phenolics and antioxidant capacity (Moyer et al., 2002a, 2002b).

Table 2. World production of currants for 1990, 1995, 2000, and 2001 in metric tons (t).^z

Year	1990	1995	2000	2001
Russia	70,000 ^y	175,000	208,000	212,000
Poland	130,409	154,591	33,522	180,485
Germany	146,538	169,300	140,000	140,000
Elsewhere	131,810	126,255	118,316	126,213
Total	478,757	625,146	499,838	658,698

^zInformation from United Nations, Food and Agriculture Organization (2002).

^y1 t = 1.1 tons.

- North American currant production is small and unreported on the world market.
- Currants were grown widely in the U.S. and during the late 1800s and early 1900s, when production was halted because of white pine blister rust.

Propagation



- What is a Cultivar?
- Cultivar = refers to a named group of plants within a cultivated species that is distinguishable by a character or group of characters and that maintains its identity when propagated either asexually (e.g. 'Jonathan' apple) or sexually (e.g. 'Tendercrop' snapbean)

Methods of Clonal Propagation

- grafting and budding
- stem cuttings
- root cuttings
- tissue culture
- air layering
- mound layering
- trench layering
- pot layering

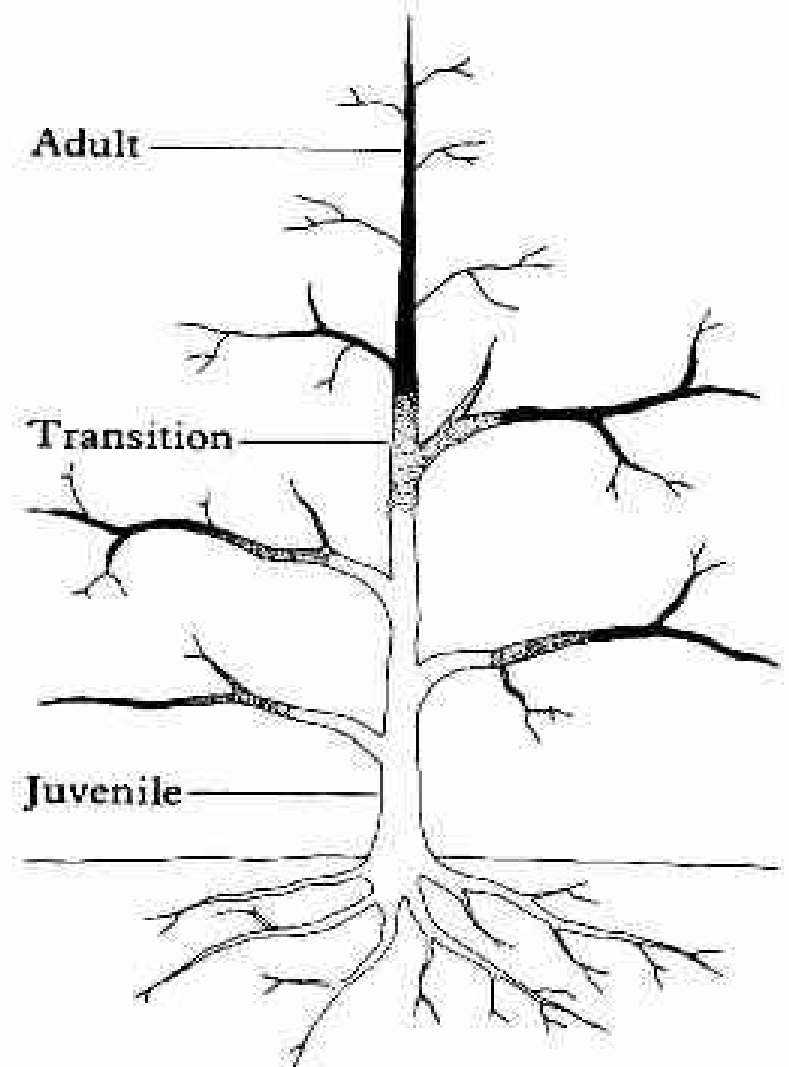


Clonal propagation

- Stable reproduction of a superior variety
- Shorten time to flower and fruit if mature tissue used for propagation
- Reduce problems with seed production, storage, and germination
 - ◆ Recalcitrance and chilling
- Many woody fruit species are propagated by grafting or budding onto seedling or clonal rootstock (e.g., 'Gala' on M9)
- Clonal propagation on own roots eliminates graft incompatibility problems

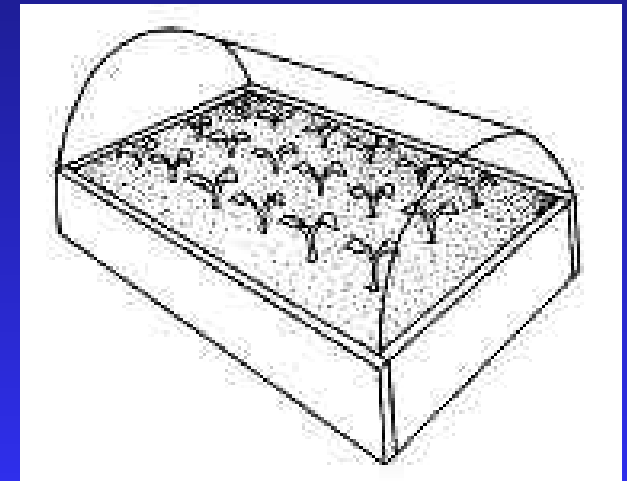
‘Cone of Juvenility’

- Not all woody plants can be propagated by cuttings.
- Shoots arising from nearest to the roots are ontogenetically more juvenile and have greater rooting potential



Propagating Currants

- Currants are easily propagated by hardwood cuttings of one-year old wood.
 - ◆ Take one-foot cuttings of dormant wood in late winter, dip the base in rooting hormone and pot in ordinary soil.
 - ◆ Cuttings will quickly root and are best kept in part shade for the first year.

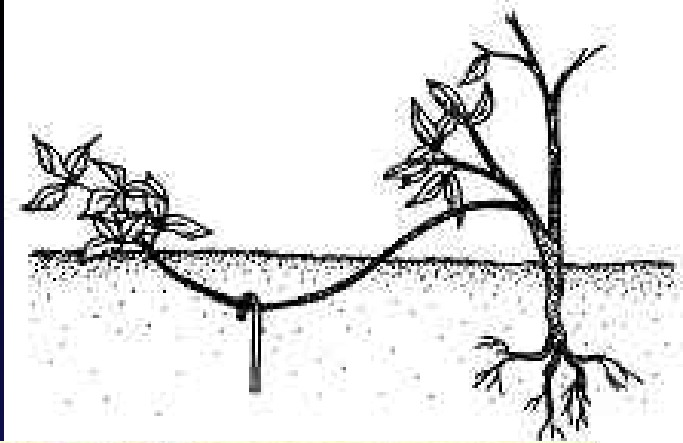


Currants: Field Propagation (fall)



Propagating Gooseberries

- Tip layering is a surer method of propagation of gooseberries than cuttings.



Planting Gooseberries and Currants

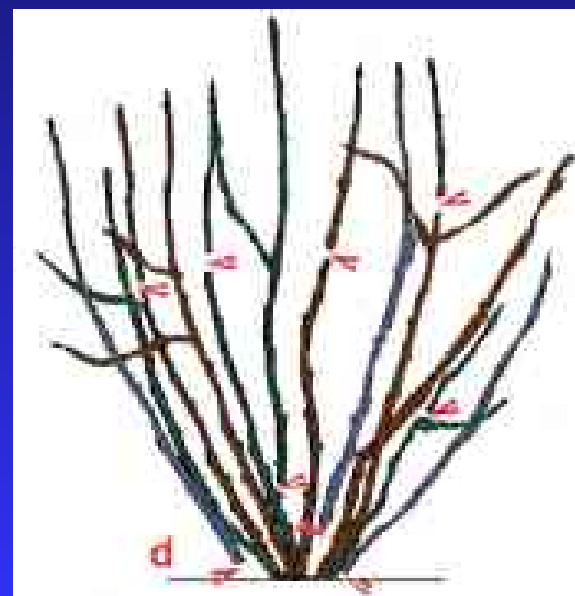
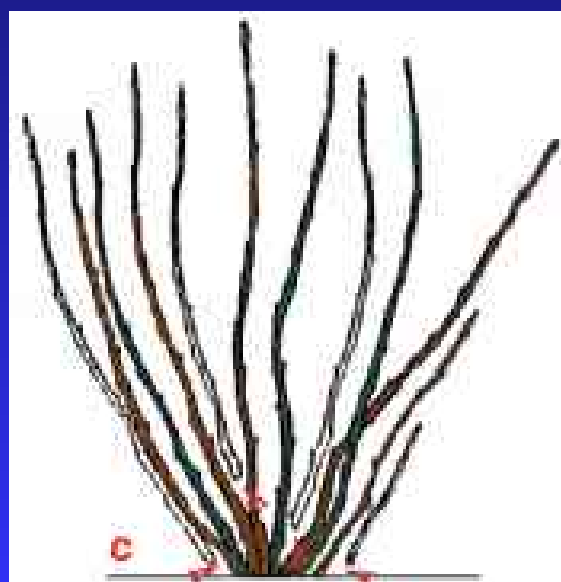
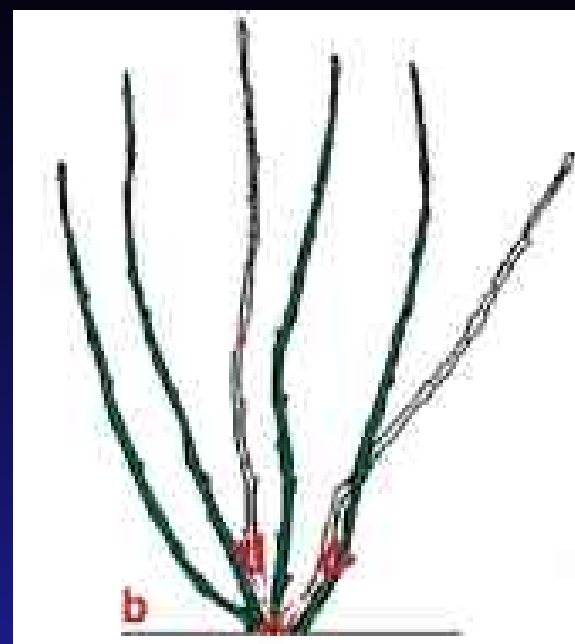
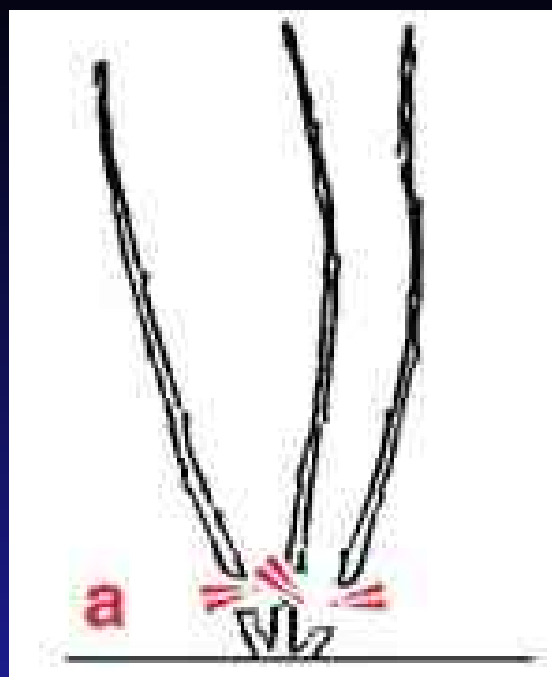


- Plants prefer a cool moist soil, well-drained, or a rich clay loam soil (pH 6 to 7.5)
- Currants: 2-4' spacing
Gooseberries: 4-5' spacing
- Irrigation is helpful in summer in Kentucky

Pruning Gooseberries and Currants

- Produce the majority of their fruit on 2 and 3-year-old shoots, and shoots 4 years and older produce very little fruit.
- After the first growing season, remove all but 6 to 8 vigorous, healthy shoots.
- The following year, leave 4 or 5 one-year-old shoots and 3 or 4 two-year-old canes.
- After the third growing season, keep 3 or 4 shoots each of one-, two-, and three-year-old growth.
- Prune in late winter or early spring





Tree Training



Gooseberry and Currant Yields



■ Gooseberries

- ❖ 4 years to full production
- ❖ about 4-5 quarts per bush

■ Currants

- ❖ 4 years to full production
- ❖ about 3-4 quarts per bush

Gooseberry and Currant Pests



Red Lake Currant with mildew

■ Diseases and Pests

- ◆ White pine blister rust
- ◆ Powdery mildew
- ◆ Septoria leaf spot
- ◆ Currant aphid
- ◆ Currant fruit fly
- ◆ Currant borer

White Pine Blister Rust

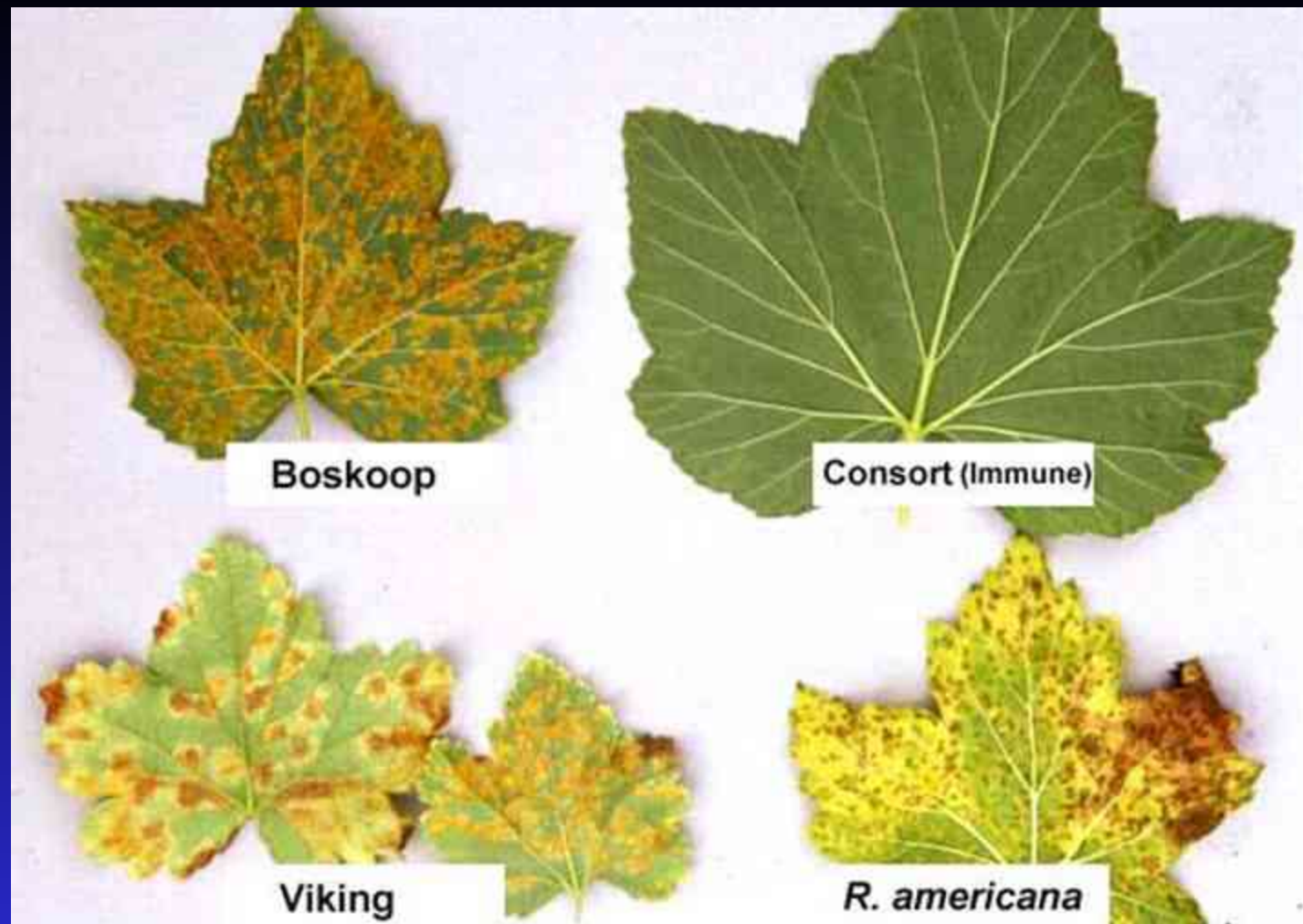
- Early in the 1900's, white pine blister rust became a serious disease problem in the United States
- White pine blister rust requires both a Ribes species and white pine to complete its life cycle
- In an attempt to prevent the spread of white pine blister rust, the federal government banned the planting and cultivation of currants and gooseberries early in the twentieth century
- The federal government lifted the ban in 1966 and there are now currants and gooseberries that are resistant to white pine blister rust



WPBR on currant



WPBR on Pine



WPBR on currants

White Pine Blister Rust

- Plant 1000 to 3000 ft from the nearest susceptible pines.
- The black currant cultivars: Consort, Coronet, Crusader, and Titania are rust-immune.



Anthracnose




Powdery mildew

Birds



- Robins love black currants and pink gooseberries
- Netting
- Bird alarms, CDs and pie tins tied to poles

■ Curr
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Currants, Gooseberries, and Jostaberries

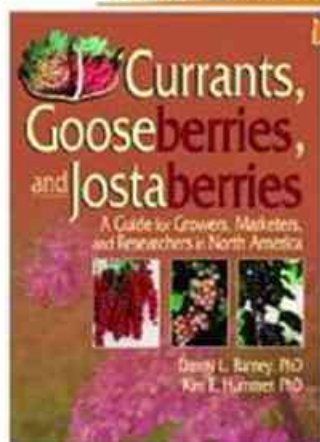
A Guide for Growers, Marketers,
and Researchers in North America



Danny L. Barney, PhD
Kim E. Hummer, PhD

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SEARCH INSIDE!



Currants, Gooseberries, And Jostaberries: A Guide For Growers, Marketers, And Researchers In North America (Paperback)

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Gooseberries

‘Hinnomaki Red’

- Excellent raspberry flavor-tart
- Red berry when ripe
- Crunchy texture
- Good disease resistance



‘Hinnomaki Red’

- Low growing habit
- Wire?



‘Amish Red’

- Good flavor
- Red berry when ripe
- Good texture?
- Good disease resistance
- Limited availability



‘Poorman’

- Good flavor
- Red berry when ripe
- Good fruit texture?
- Less disease resistance
 - ◆ Leaf spot



‘Pixwell’

- Red-pink when ripe
- Berries hang below thorns, easier to pick
- Not much flavor
- Mushy texture



Other Gooseberries Planted at KSU

- ‘Invicta’ –green berry-poor survival
- ‘Jahns Prairie’-red berry-leaf spot problems
- ‘Captivator’-red berry-leaf spot problems



New Gooseberries to Try:



- **Tixia™** (Rafz Switerland, 1990) has large (similar to Invicta), bright red fruit; elongated and quite smooth that ripens mid-season. In addition to the attractive fruit, Tixia one year shoots have few thorns and the thorns are relatively soft; usually as single thorns with very few, if any, on the upper part of shoots. Growth is medium to strong, upright. NY

Other Selections To Try:

■ Friend™

- ◆ A unique, thornless, Ukrainian variety, Friend™ bears good crops of medium to large, reddish-pink berries, good for fresh eating and for making delicious jam and pies. A unique disease resistant gooseberry from the Ukraine. (One Green World and Raintree Nurseries)

■ Red George™

- ◆ features abundant crops of striking, very dark red, sweet and delicious fruit, which turns almost black when ripe. A valuable Ukrainian variety, Red George™ is an attractive, disease-resistant, easy to grow shrub. (One Green World and Raintree Nurseries)

■ Jewel™

- ◆ Selected from a group of Polish seedlings, Jewel™ has rapidly become one of our favorite varieties. We like it for its profuse crops of unique, intensely flavored, peach colored berries. These sweet, delectable berries are great for eating fresh and for preserves and baked goods. We also appreciate its disease resistance and attractive, compact growth habit.

Gooseberries at KSU

Cultivar	Approximate harvest date	Years in the field	Yield ^z	Berry weight (g) ^y	Vigor ^x	WPBR resistance ^w	Resistance to powdery mildew ^v	Septoria Leaf Spot at KSU ^u
<u>Gooseberries</u>								
Amish Red	Mid-June	5	7	2.4	VG	R	G	G
Captivator	Mid-June	4	2	3.5	VG	R	G	P
Invicta	Mid-June	5	1	3.5	P	R	G	P
Jahns Prairie	Mid-June	4	2	3.8	VG	R	G	P
Hinnomaki Red	Mid-June	5	8	2.9	VG	R	VG	G
Pixwell	Mid-June	5	7	1.3	EX	R	VG	P
Poorman	Mid-June	5	4	3.1	VG	R	G	F

Black Currants

Black Currants

■ **Titania**

*(US Plant Patent No. 11,439)
(Altajskaja Desertraja x
[Consort x Kajaanin Musta] -
Tamas)*

- Titania is immune to White Pine Blister Rust and has resistance to powdery mildew. Fruit size is large, similar to Ben Lomond, and fruit quality is good.



Black Currants

■ Ben Lomond

- ◆ ([Consort x Magnus] x [Brodtorp x Janslunda] - SCRI, 1972).
- ◆ The "standard" for commercial juice production.
- ◆ Some resistance to mildew.
- ◆ Susceptible to White Pine Blister Rust.



Black Currants

- Ben Sarek
- (Scandinavia, 1984) is somewhat resistant to white pine blister rust.
- Its compact bush size, productivity, very large fruit and ease of hand harvest.



Black Currants

◆ 'Consort'

- ◆ introduced in 1952. Fruit quality is fair to poor and berry size small to medium. Yields low. Has the Cr gene for immunity to white pine blister rust but, is very susceptible to powdery mildew

◆ 'Crusader'

- ◆ Similar to Consort, needs pollinizer



Black Currants at KSU

■ 'Crandell'

- ◆ Discovered by R.W. Crandall, Newton, Kansas, introduced in 1888.
- ◆ North American native species, *Ribes aureum* var. *villosum*, also known as the clove currant.
- ◆ Bright yellow spring flowers.
- ◆ Fruit is mild, sweet, pleasant, and very different from European black currants.
- ◆ Performs well in hot summers, resistant to white pine blister rust, and no damage from powdery mildew.



Black Currants at KSU

Cultivar	Approximate harvest date	Years in the field	Yield ^z	Berry weight (g) ^y	Vigor ^x	WPBR resistance ^w	Resistance to powdery mildew ^v	Septoria Leaf Spot at KSU ^u
<u>Black Currants</u>								
Crandall	Early-July	5	8	1.3	VG	R	VG	G
Ben Sarek	Late-June	5	8	1.4	VG	S	VG	G
Ben Lomond	Late-June	5	8	1.4	VG	S	VG	G
Consort	Mid-June	5	7	0.8	EX	R	P	G
Crusader	Mid-June	5	7	0.8	EX	R	P	G

(Titania is the best bet for planting)



■ **Blackcomb**
(*Ojebryn x Titania*)

Blackcomb is a high yielding new variety that has high levels of resistance to foliar diseases – mildew, White Pine Blister Rust – , vigorous growth habit and tolerance to late spring frost. Blackcomb has produced yields in replicated B.C. trials that were more than 50% higher than Titania and Ben Alder. Fruit size is 20% larger than Titania. Flowering is late mid-season and this variety has demonstrated better tolerance to late spring frost than Titania. Well suited to machine harvest.



■ Whistler

(Ben Tirran x Bieloruskaja Slodkaja)

Whistler has high yields of small to medium sized high quality fruit. It has fair resistance to mildew and good resistance to White Pine Blister Rust. Growth habit is slightly spreading with medium vigour. Flowering is late-mid season with good tolerance for late spring frost. Yields in replicated B.C. trials were more than 50% higher than Titania and Ben Alder. Fruit size is smaller than Ben Alder, .8 grams per berry. Juice quality is excellent. Well suited to machine harvest.

Red and White Currants

Currants Planted at KSU

- White Currants
 - ◆ 'Primus'
 - ◆ 'White Imperial'-susp. WPBR- old variety that was introduced in 1895.
- Red Currants
 - ◆ 'Red Lake' -susp. WPBR, quite susceptible to mildew
 - ◆ 'Jonkeer Van Tets'
 - ◆ 'Redstart'





Red Currants to Consider

■ ‘Rovada’

- ◆ Introduced from the Netherlands, in 1980. Susceptible to powdery mildew and somewhat susceptible to white pine blister rust.

■ ‘Viking’

- ◆ Introduced from Norway in 1945.
Moderately resistant to powdery mildew.
Hypersensitive resistance to white pine blister rust.



Currants to Consider:

- Pink Champagne has beautiful translucent pink fruit of good quality and flavor. It is best suited for home gardens as it is easy to grow but not a terrific yielder. It has a vigorous upright growth habit and is resistant to leaf diseases. NY
- Powdery mildew susp.



Red and White Currants at KSU

Cultivar	Approximate harvest date	Years in the field	Yield ^z	Berry weight (g) ^y	Vigor ^x	WPBR resistance ^w	Resistance to powdery mildew ^v	Septoria Leaf Spot at KSU ^u
<u>White Currants</u>								
Primus	Mid-June	5	3	0.6	VG	R	F	G
White Imperial	Mid-June	5	4	0.6	VG	S	F	G
<u>Red Currants</u>								
Jonkeer Van Tets	Mid-June	5	3	0.8	G	R	F	G
Red Lake	Mid-June	5	3	0.6	G	S	P	G
Redstart	Mid-June	5	3	0.5	G	R	F	G



Jostaberries

Black Currant-Gooseberry Hybrids

Jostaberries

- **Josta** (Germany, 1977)
- This thornless plant is resistant to gray mold, mildew and white pine blister rust.
- Net-like russeting on the leaf surface has not been associated with any insect or pathogen.



Jostaberries

- ORUS 10 (Oregon, 1960)
- The plant is vigorous, thorny, and is resistant to gray mold, mildew, and white pine blister rust.
- Good flavor



Jostaberries

- ORUS 8 (Oregon, 1960)
- The plant is vigorous, thorny, and is resistant to gray mold, mildew, and white pine blister rust.
- Susceptible to leaf spot!



Jostaberries at KSU

Cultivar	Approximate harvest date	Years in the field	Yield ^z	Berry weight (g) ^y	Vigor ^x	WPBR resistance ^w	Resistance to powdery mildew ^v	Septoria Leaf Spot at KSU ^u
<u>Jostaberry</u>								
Josta	Mid-June	5	2	1.7	EX	R	G	G
ORUS8	Mid-June	4	2	1.5	EX	R	VG	G
ORUS10	Mid-June	5	4	1.5	EX	R	VG	G

Summary

- Gooseberries and currants have potential for sale at farmers markets in Kentucky.
- Kentucky recommendations:
 - ◆ The gooseberries cultivars **Hinnomaki Red** and **Amish Red** perform well with low input culture
 - ◆ **Poorman** should also be considered.
 - ◆ The black currant cultivars **Titania** (with 5 needle pines nearby) and **Ben Lomond** (W/O Pines).
 - ◆ The red currant cultivars **Rovada** and **Jonkeer Van Tets**.
 - ◆ The white currant cultivar **White Imperial** or **Primus**.
 - ◆ The Jostaberry cultivar **ORUS 10**.

- **Web sites:**

- **USDA-NCGR, Corvallis, OR:**

- <http://www.ars.usda.gov/Main/docs.htm?docid=11353>

- **Ribes Diagnostic Tool:**

- <http://www.ars-grin.gov/cor/ribes/ribsymp/ribsymp.html>

- **Commercial sources cultivars-**

- <http://www.fruit.cornell.edu/Berries/nurseries/index.html>

- **UK New Crops Center**

- <http://www.uky.edu/Ag/NewCrops/introsheets/currants.pdf>

