

# Tahoe Fruit & Vegetable Workshop Series

## Raspberries

Not this kind of Raspberry



Charles Schultz Image

This kind of Raspberry



Nourse Farms Image

# Tahoe Fruit & Vegetable Workshop Series

## Raspberries



This type raspberry is also known as the Bronx cheer – though originally mentioned in 19<sup>th</sup> century England. The sound and term is used to deride a person's action or appearance. It is thought that the name: A. refers to the shape of the lips and tongue when making the sound; B. Relates to a Cockney slang rhyme that enjoins the sound of flatulence.

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## Raspberries



The sound and reference to Bronx, while associated with the Yankees, was initially used in conjunction with sport team performance, with one of the earliest published use of the term by Damon Runyon in 1921. He wrote *Guys and Dolls*.

The sound is considered to be a variation of a bilabial trill – A linguistic feature of a few languages

# Tahoe Fruit & Vegetable Workshop Series

## Raspberries

### Who we are

Master Gardeners are community members who have been trained under the direction of the University of California (Davis) Cooperative Extension.

**50 hours of formal classroom training**

We assist the UC Cooperative Extension by providing practical, scientific gardening information to the home gardeners in the Lake Tahoe Basin.

**The Lake Tahoe Master Gardeners offer research-based information by:**

Answering questions via email hotlines, farmers markets and events.

Offering workshops and classes



Co-operative Extension Tahoe Basin Master Gardeners

University of California  
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# Tahoe Fruit & Vegetable Workshop Series

Raspberries

Master Gardeners

Work with School Gardens



Do workshops



Work with Community Gardens

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Raspberries

Answer Basic  
Gardening questions  
at Farmers' Markets

Plant Sales

Most common  
answer to any  
question:

It depends?



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## Raspberries

### Phenology

Phenology looks at growth and development differences between plant varieties that are due to weather and climate.

**Varietal Comparative Phenology (VCP)** compares growth and development differences between plant cultivars that are due to weather and climate

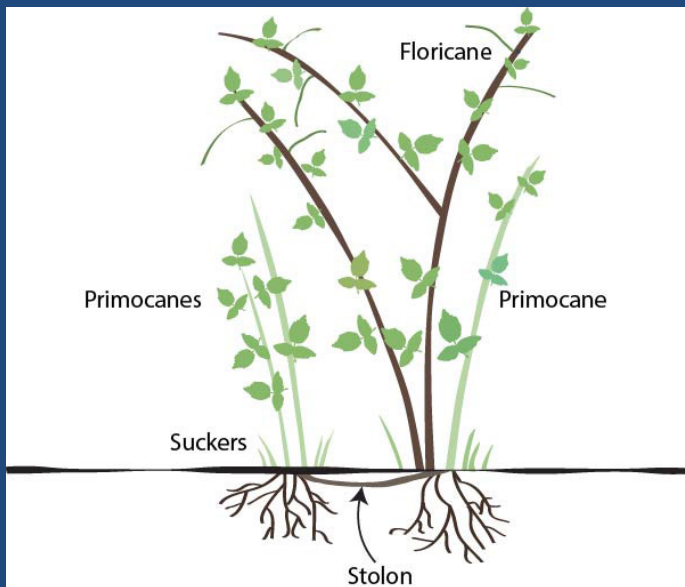
Merriam-Webster on-line Dictionary



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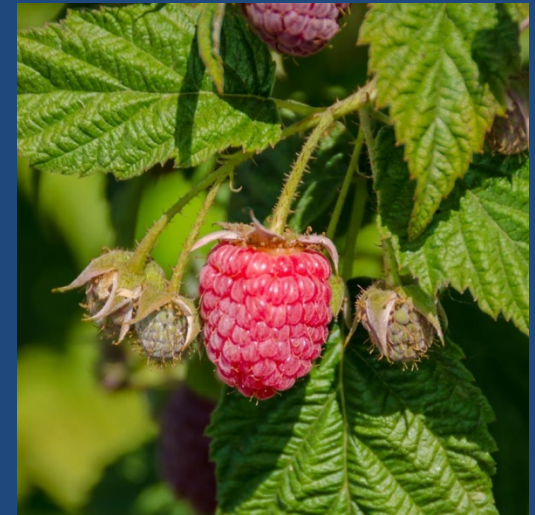
## Raspberries

### Raspberry anatomy



University of Minnesota Image

The fruit are borne on short racemes. Botanically not a true berry but an aggregate of drupelets around a conical core.



Grow Organic Image

The crown of a raspberry plant will live about 10 years



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## What's in a name?

## Raspberries

Raspberries and closely related blackberry, tayberry boysenberry, loganberry, and dewberry are referred to as brambles (at least those with a spreading habit).

**Botology** – The scientific study of the genus *Rubus*, specifically those in with spreading appearance

**Botologist** is a person that studies brambles

Raspberry name is derived from either –

raspise (sweet red wine) - 15<sup>th</sup> century English concoction

vinum raseys (rough vines) - Anglo Latin

raspoie (thicket) - Germanic

rough berry - Old English

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## Raspberries

### A Rose is a Rose

Raspberries are in the rose family (Rosaceae). The genus name is *Rubus*. The red variety is *R. Idaeus*, and the North American subspecies is spp *strigosus*.

The black raspberry or black cap is native to North America, *R. occidentalis*.

The yellow raspberry are red varieties with a gene for red pigment missing.

The purple raspberry is a cross of red and black cultivars.



Jung Seed Image

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Tips and Assistance

Raspberries

Desert Farming Initiative (with Cooperation of Jacobs Family Farm)  
Raspberry and Blackberry Maintenance Guide

<http://farmnevada.org/raspberry-and-blackberry-maintenance-guide/>



Jacobs family Farm Images

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## Raspberries

### Desert Farming Initiative (with Cooperation of Jacobs Family Farm) Raspberry and Blackberry Maintenance Guide

<http://farmnevada.org/raspberry-and-blackberry-maintenance-guide/>



Monrovia Nursery Image

The guide provides step by step instruction for maintaining established black and red raspberry plants. Treat the Double Gold as a red floricane.

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## Raspberries

### Raspberry production

**Russia is the worlds leader in raspberry production 21%**

**The US is second at 17%**

**Poland produces 16%**

**Mexico about 14%**

Faostat – United Nations



Krieger Nursery Image

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## Raspberries

### Selecting and preparing your planting area

1. Select a sunny area, hopefully out of wind
2. Area should not have grown tomatoes, potatoes, or roses for at least a year
3. Soil should be fertile having some organic materials incorporated with good drainage
4. Raised beds or containers (7+ gallons) can be used
5. Berry plants will need support so plan on a trellis, or other support system
6. Consider planting through a weed barrier with mulch placed to maintain rows



Gardeners.com Image

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## Raspberries

### Planting instructions

1. Area should be free of weeds
2. Soak bare root plants in water for 1-2 hours before planting
3. Dig hole large enough to spread out roots.
4. Top of crown (first roots) should be 2-3 inches below surface
5. Tamp down soil around plants to have good soil contact
6. Plants of same variety should be spaced 18-24 inches apart
7. Plant different varieties at least 6 ft apart.
8. Plant black varieties away from other red/yellow cultivars
9. Water well immediately after planting, recheck soil depth
10. Trim all stems to about 3-5 inches



Stark Brothers Nursery Image

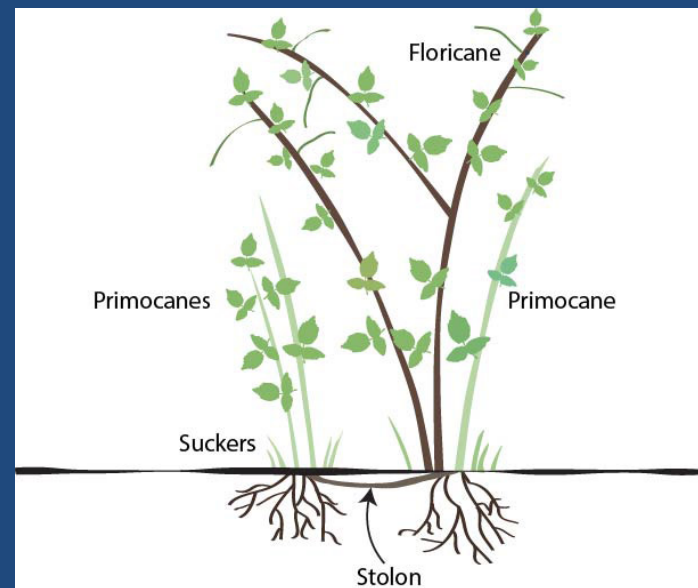
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## Raspberries

### Maintaining your garden space

There is a tendency with new growers to let sucker plants develop wherever they appear.

It is recommended that suckering plants be removed or replanted into the row. This maximizes space utilization and makes harvesting easier. It makes trellising or supporting easier. And easier to place bird netting.





# Tahoe Fruit & Vegetable Workshop Series

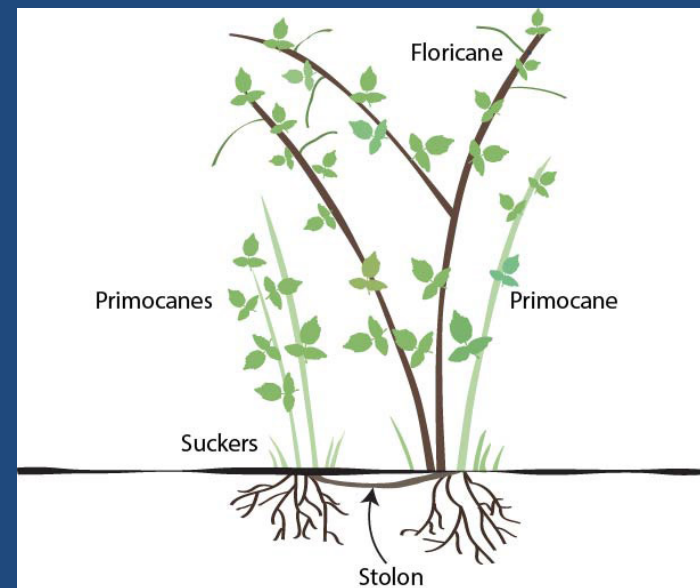
## Primocanes and Floricanes

New growth, or first year shoots are called primocanes. The second year growth are floricanes. Flowers and fruit occur on floricanes (most varieties).

By topping (the cutting off the tip of a primocane stem) you can increase branching and flowers the second year.

Tip removal when primocane is 3-4 inches above your top trellis wire or not more than 48 inches

## Raspberries

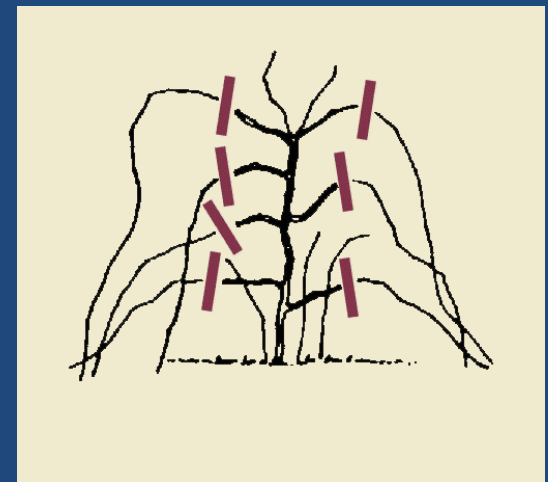


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## Raspberries

### Pruning guidelines

1. Keep 3-6 of the most robust primocanes per crown. Remove the rest.
2. Top off the primocanes when they are about 6 inches taller than the top wire of trellis or about 48 inches.
3. Trim any side branches that develop on primocanes at 12 inches (Black raspberries).
4. Cut all floricanes to the ground following harvest.
5. It is recommended that you remove any flowers from the primocanes (Double Gold).



Stark Bothers Nursery Image

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## Raspberries

### Pests and diseases

**Aphids\***  
**Rabbits**  
**Powdery mildew**  
**Crown borer**

**Leaf Mosaic (virus)**  
**Bacterial Diseases (galls)**  
**Spider mites**  
**Anthracnose (rusts)**



UC IPM Image

**Birds**  
**Chipmunks**  
**Squirrels**  
**Bears**

**Raspberry Crown Borer**  
**Actually a moth but looks like**  
**a yellow jacket!**

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## Raspberries

Nutrition (Raw 100 gm (3.5 oz.))

		RDA
<u>Calories</u>	<u>53</u>	
<u>Carbohydrates</u>	<u>11.94 gm</u>	
<u>Sugars</u>	<u>4.42gm</u>	
<u>Dietary Fiber</u>	<u>6.5 gm</u>	
<u>Fat</u>	<u>0.65 gm</u>	
<u>Protein</u>	<u>1.2 gm</u>	
<u>B1</u>	<u>0.032 mg</u>	<u>3%</u>
<u>B2</u>	<u>0.038 mg</u>	<u>3%</u>
<u>B3 Niacin</u>	<u>0.598 mg</u>	<u>4%</u>
<u>Folate</u>	<u>21 µg</u>	<u>5%</u>
<u>Vitamin C</u>	<u>26.2 mg</u>	<u>32%</u>
<u>Manganese</u>	<u>22 mg</u>	<u>32%</u>
<u>Water</u>	<u>85.8 gm</u>	

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## Boyne Red Raspberry

**A floricanne. This is an early season producer of medium sized fruit. Very cold tolerant. Excellent for fresh eating or freezing. Variety developed in 1960 from Manitoba Canada. Produces many robust suckers.**

## Raspberries



DeGroot Wholesale Nursery Image

# Tahoe Fruit & Vegetable Workshop Series

## Encore Red Raspberry

**A floricane. A very cold hardy variety developed at Cornell University. Consistent producer. Berries ripen later in the summer and into early fall. Does well in a variety of soil types. Upright habit may require less support. Few thorns. Developed in 1998 at Cornell.**

## Raspberries



Nourse Farm Image

# Tahoe Fruit & Vegetable Workshop Series

## Raspberries

### Nova Red Raspberry

Generally a floricaner. A very consistent producer over a long period each summer. Berries are firm with good taste. Developed at the Nova Scotia Plant Breeding program in Canada. First released in 1981. Fewer thorns. In a mild autumn may produce a small fall crop.



Johnny's Selected Seeds Image

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## Double Gold Raspberry

This is a primocane variety. Treat as a floricane, removing late summer flowers. Not as cold hardy as red varieties, but should do well in most locations in Tahoe/Truckee. Introduced by Courtney Weber of Cornell University in 2012. Plants need support but are upright.

## Raspberries



Nourse Farm Image



# Tahoe Fruit & Vegetable Workshop Series

## Raspberries

### Double Gold Raspberry

Not to be confused with the Golden Raspberry award that denotes an especially bad performance by an actor or actress in a play or movie. The Production may also win a Golden Raspberry award. The Award was initiated in 1981 by John Wilson and Mo Murphy



Image – This week tonight with John Oliver

# Tahoe Fruit & Vegetable Workshop Series

## Raspberries

### Fun Fact:

Sagittarius B2, a dust cloud at the center of the Milky Way, includes the molecule ethyl formate, which is one of the compounds behind the flavor of raspberries and the scent of rum.



NASA Image

# Tahoe Fruit & Vegetable Workshop Series

## Raspberries



Chambord Liqueur is a raspberry infused Cognac that is based on a 17<sup>th</sup> century formula that uses both black and red raspberries. In addition to the berries, vanilla, citrus peel and honey are part of the formula. The product was originally made in the Loire Valley in France

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## Suppliers

## Raspberries



Nate, Tim and Mary Nourse

The Nourse Farm was established in 1722 and is the 10<sup>th</sup> oldest continuously operated family farm in the US.

Joel Nourse invented the Nourse Eagle Plow in 1842 that allowed for even tilling in difficult soils. One is in the Smithsonian

Benjamin who farmed in later half of the 1800's kept detailed notes on the farm that are of value to climate researchers today.

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## Raspberries

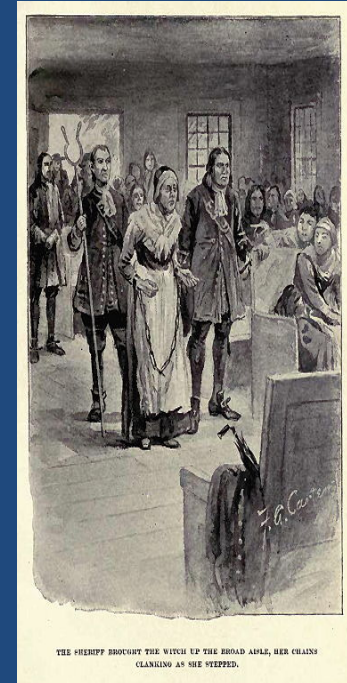
Rebecca Towne married Francis Nurse in 1640 when Rebecca was 18  
Raising 8 children on a farm in Salem

In 1692 at the age of 71  
Rebecca was accused of  
being a witch

At her trial in June 1692 she was  
found innocent

At the announcement of the  
verdict the accusing girls  
began having fits

And at a second  
proceeding was  
found guilty and  
was hung on July  
19, 1692

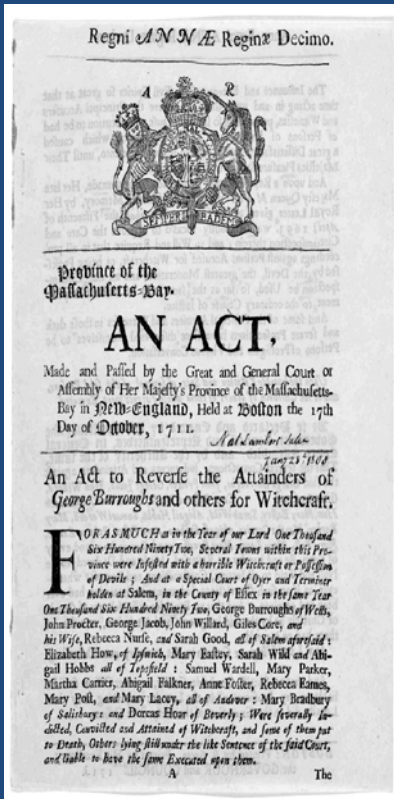


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## Raspberries



In 1711 an act was passed that recanted the conviction and provided the family some compensation

Ebenezer and William Nurse (Rebecca's grandchildren) in 1722, having moved about 40 miles west of Salem established the farm in what is now Westborough.

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## Raspberries

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## Raspberries and a Gooseberry

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## Gooseberry

Maybe not this Gooseberry



Truckee River Guide Image

Ok maybe this Gooseberry



University of Wisconsin Image

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## Gooseberry

The gooseberry is in the *Grosulariaceae* family and the genus *Ribes*. The European cultivated species is *R. uva-crispa*.

There are many North American species. The common species used for crosses is *R. hirtellum*.



*Ribes hirtellum* – Cornell University Image

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## Gooseberry

### Cultivation

Germany is the world's leading producer of gooseberries 170,000 tonnes followed by Poland at 168,00 tonnes. Third place is Russia at 50,000 tonnes. In the US only about 50 tonnes are produced on an only 120 acres.

FAOSTAT United Nations



Lonely Planet Image

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## Raspberries

### New Logan Black Raspberry

A florican. This is an early season producer of small to medium sized fruit. Black Raspberries have a unique taste and more seeds than red varieties. The new Logan has a strong trailing habit, requiring aggressive pruning and trellising. Developed in the 1920s out of Illinois. Not as cold hardy as many red varieties.



Awald Farm Image

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## Raspberries

### Fall Gold Raspberry

This is a primocane variety. Treat as a floricanne, removing late summer flowers. Not as cold hardy as red varieties, but should do well in most locations in Tahoe/Truckee. Introduced by E.M. Meader of NH in 1968. Plants need support but are upright.



Monrovia Nursery



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## Raspberries

### Latham Red Raspberry

A floricane. A very cold hardy variety with medium sized fruit. Consistent producer. Does well in a variety of soil types. Upright habit may require less support. Developed in 1914 at The Minnesota Experimental Station.



Nature Hill Nursery Image

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## Raspberries

### Mammoth Red Raspberry

A floricane. This variety a bit earlier than Latham. It produces very large fruit. The plants are nearly thornless, with fewer suckers developing. Sweet fruit does not freeze as well as Latham. Does well in soils with high organic content.



Henry Fields Nursery Image

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## Gooseberry

### Gooseberry Planting Instructions I

**Keep roots moist until planting**

**Select a sunny location**

**Dig a hole 2 times the depth and width of the planting**

**Amend soil with compost and/or manure.**

**Place plant into the hole spreading roots.**



Stark Brothers' Nursery Image

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## Gooseberry

### Gooseberry Planting II

Plant so the crown section is 2-3 inches below ground surface. Note this might put the lower portion of branches below ground level which is ok.

Water frequently the first few weeks but do not let the plant become waterlogged.

Fertilize with manure or a general purpose fertilizer after the first month. About 3 pounds manure/plant or 4 ounces of a 10-10-10 per plant.



Keepers Nursery Image

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## Gooseberry

### Captivator Gooseberry

This is a European (or a cross with American natives) variety that is cold tolerant and productive. The fruit when ripe will be red in color. Resistant to powdery mildew and pine blister rust. Fruit may drop to ground when ripe. Very cold hardy. Developed at Central Experiment Farm, Ottawa in 1949



University of Wisconsin Image

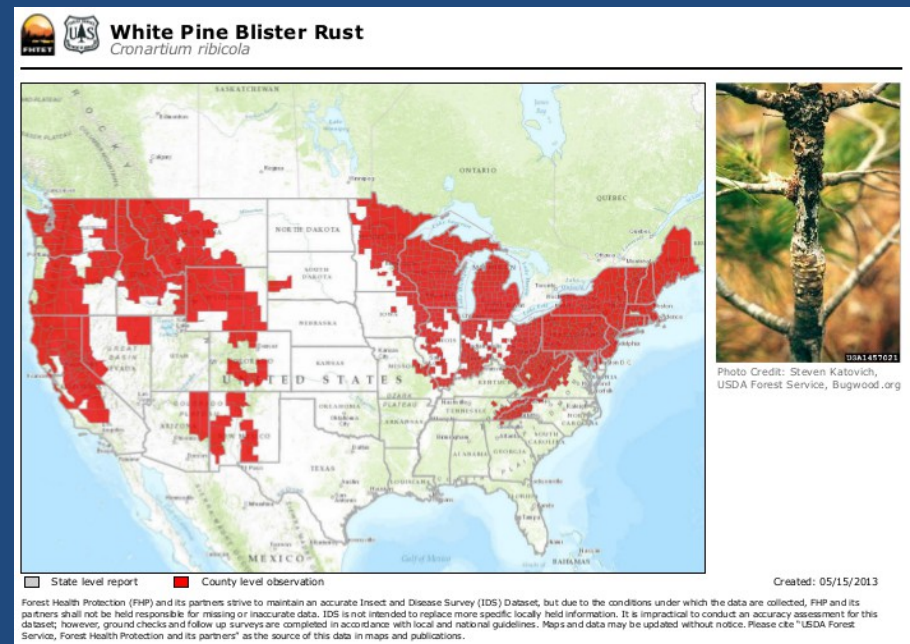
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## Gooseberry

### White Pine Blister Rust I

White Pine Blister Rust is a fungal infection (*Cronartium ribicola*) that affects 5 leaved pines like Sugar Pine and White Bark Pine.

The disease also affects *Ribes*, Indian Paint Brush and Lousewort plants



USDA Image

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## White Pine Blister Rust II

White Pine Blister Rust has a life cycle that requires infecting the pines followed by the return to the shrubs.

In late summer spores are carried to the pines during cool moist periods. The spores affect pine needles if sufficient moisture exist.

The fungus moves from needle to branch to trunk forming cankers as it moves through the tree's xylem tissue eventually killing the tree. Rate of movement is averages 3 inches/year.

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## Gooseberry



University of Minnesota Extension Images



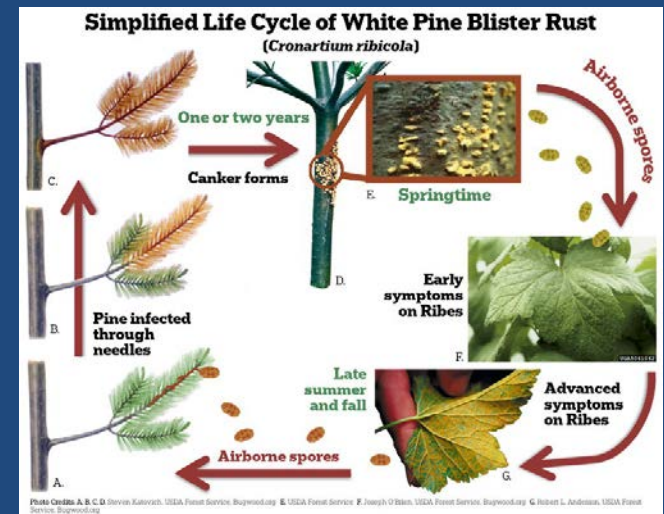
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## Gooseberry

### White Pine Blister Rust III

The cankers develop blister like structures at their margin, which erupt releasing powdery yellow orange spores called aeciospores which affect the *Ribes*.

It is recommended not to plant *Ribes* within 100 yards of a 5 needle pine tree.



Plant Heroes Image



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## White Pine Blister Rust IV

White Pine Blister Rust originated in Asia, where many pines and Ribes developed a resistance to the fungus.

By the 18<sup>th</sup> Century it had become established in Europe.

It was inadvertently introduced to North America through European white pine seedlings grown for the nursery trade.

The US government and many state forestry Departments prohibited planting of Ribes and had an active eradication program. In 1967 the Federal Government eliminated the prohibition as did many states.

Development of resistant cultivars, inability to remove all host plants, and removal or pruning of infected trees lessened the need for prohibitions.

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## Gooseberry



Calscape Image