STARK Bro's

How to Grow Raspberry Plants

Introduction

Growing raspberry plants is one of the easiest and most rewarding endeavors in the fruit garden. The plants grow and establish quickly, they fruit early, and the fruit ripens over a period of time for an extended harvest. Some raspberry plants fruit twice – once in summer and once again in fall before frost. Learning how to grow raspberry plants is as easy as actually doing it. Here you will find advice and understand how raspberry plants grow, so you can feel confident as you grow your own.

In “Getting Started”, learn the importance of choosing a location (/growing-guide/how-to-grow/berry-plants/raspberry-plants/location) for raspberry plants that keeps their best interest in mind. A sunny spot with well-drained soil is going to be the foundation for your growing success. Plan to build supports for your raspberry plants, since the canes can get weighed down by a heavy fruit crop. A simple trellis, fence, or even tomato cage works to keep raspberry plants (and the fruit) up off the ground. Space individual plants according to their mature width to avoid crowding and competing for nutrients. Find out about some common soil types, and when and how to prepare your soil (/growing-guide/how-to-grow/berry-plants/raspberry-plants/soil-preparation) for raspberry plants prior to planting. Learn about planting (/growing-guide/how-to-grow/berry-plants/raspberry-plants/planting) both bare-root and potted raspberry plants and what to expect as they grow under your care.

The “Care & Maintenance” section of growing raspberry plants is where you learn to really take ownership of your raspberry patch. Learn about how much and how often to water (/growing-guide/how-to-grow/berry-plants/raspberry-plants/watering) raspberry plants to keep plants healthy and avoid water-related stress. Discover the fruiting habits of raspberry plants and how pruning (/growing-guide/how-to-grow/berry-plants/raspberry-plants/pruning) can determine their productivity. Learn when to start and stop fertilizing (/growing-guide/how-to-grow/berry-plants/raspberry-plants/fertilizing) raspberry plants to ensure your efforts are most effective. Identify some common raspberry plant pests and diseases (/growing-guide/how-to-grow/fruit-trees/apple-trees/pest-and-disease-control) and how to control them should an issue arise. We even provide suggestions on spraying (/growing-guide/how-to-grow/berry-plants/raspberry-plants/spraying) raspberry plants, which helps control existing issues and preemptively minimize potential problems.

We also include advice in “Other Topics“ for things like harvesting (/growing-guide/how-to-grow/berry-plants/raspberry-plants/harvesting) raspberries, which is arguably the best part of growing your own fruit – second to eating it! Feel free to jump to any specific article in this guide using the “In This Series“ menu, or follow along with the navigation markers at the end of each article.

Getting Started

Acclimate

Acclimate (ac·cli·mate): "To become accustomed to a new climate or to new conditions. Also to *harden off* a plant."

Acclimating raspberry plants helps to avoid stress to new plants and transplants. It is our strong recommendation for plants that are leafed out and not dormant. Some of our raspberry plants arrive to you potted with tender new growth, since they were grown in the controlled environment of our greenhouses. This tender new growth can be sensitive to things like direct sunlight and sudden changes in temperature, so acclimating raspberry plants to their new environment will help provide them with a great start.

Things that may cause injury to tender new growth in transplants:

- temperatures (below 50°F or above 90°F)
- frost snaps
- strong/direct sunlight
- wind

These conditions are more likely to occur during early spring, but can be expected during different times of year in different areas. Here are a few steps we recommend you follow to acclimate (or harden off) your raspberry plants before planting outdoors:

1. Upon arrival, keep raspberry plants in the pots they arrived in and place them in a sheltered, shady spot outdoors — like on a back porch. Leave them there for 3-4 hours and gradually increase the time spent outside by 1-2 hours per day. Bring them back indoors each night.

2. After 2-3 days of this acclimation process, begin transitioning the raspberry plants from their shaded spot to one that provides some morning sun. Return them to the shade in the afternoon. If this conflicts with your schedule, try moving the plants to an area that receives filtered sunlight instead, which is less intense than direct sun. Be sure still to bring them indoors again overnight.

- Water regularly as needed to keep the roots from drying out. If the soil in the pots is dry to the touch, then you know it's time water. You may occasionally mist the leaves with water, since the environment indoors is drier than outdoors.
- Observe foliage daily. If signs of leaf injury appear prior to planting, move those plants back into filtered sunlight and start from the first step again. Proceed to the second step when conditions improve.
- After 7 days, your raspberry plants should be able to handle the outdoor conditions, as long as temperatures are expected to stay between 50ºF and 90ºF. If daytime temperatures are expected to drop within the next day or so, continue to repeat the second step. Monitor your plants, and the weather, until conditions are more suitable for planting outdoors.

3. After 7-10 days, and if the weather conditions are right, your raspberry plants are ready for planting (/growing-guide/how-to-grow/berry-plants/raspberry-plants/planting) in a permanent location. *For best results, try to plant tender plants on a cloudy day.*

Please note: these are general recommendations. Your particular growing environment might require a slight variation on these guidelines, since some plants can take more time (or less time) than others to harden off. Factors like the current year's weather, individual plants, and your location can affect the acclimation process.

Location

The best way to succeed is to plan before you plant. Concerning location: do you know where you want to plant your new raspberry plants? Avoid future obstacles by considering all aspects of the planting site, such as:

- Cross-pollination
- Sun and good soil
- Surroundings
- Spacing

Cross-Pollination

Most raspberry varieties are self-pollinating (or self-fertile), meaning your raspberry plants will fruit when they mature, without requiring the availability of another raspberry variety's pollen. If you are growing all the same variety of raspberry, your plants will have a fruit crop. Similarly, if you are growing several different varieties of raspberry, you may have a larger fruit crop, as is the nature of most cross-pollinated fruit.

Sun and Good Soil

Raspberry plants thrive in a growing location that receives full sun and has a well-drained, fertile soil. Full sun is at least 6 to 8 hours of sunlight during the growing season. Light is vital to fruit production and fruit quality, and also helps minimize the risk of fungal issues, so this is an essential part of choosing a location for your raspberry plants.

A well-drained soil will help keep a raspberry plant's roots healthy and free of rot. Because raspberry plants are rhizomes, they send up new canes from the roots, so root health is especially important for raspberry plants. If your native soil is composed of heavy clay that retains water after rainy weather, first look for a different planting site for your raspberry patch. Similarly, if your site has fast-draining, sandy soil, the raspberry plants may exhibit water-related stress (similar to conditions of drought) and may require more-frequent watering. For your growing success, we do not recommend planting raspberry plants in rocky or heavy, pure-clay soils. If you can't plant elsewhere, you can try amending the soil of your planting site prior to planting your raspberry plants.

Soil amendments greatly depend on your individual location, so communicating with your local county cooperative extension is recommended. In general – to help with water distribution – you can add coir, like our Coco-Fiber Growing Medium (/products/tools-and-supplies/soil-additives/coco-fiber-potting-medium), to your raspberry planting hole, or mix in one-third sphagnum/peat to the soil at planting time. Sphagnum/peat can lower the soil pH, so if your soil pH is already lower than raspberry plants tolerate (6.0 – 6.8), this may not be the best option.

Alternately, to avoid directly dealing with your native soil, you can try planting your raspberry plants in containers. Start with a pot that accommodates each raspberry plant's current root system (with room to grow). Most new raspberry plants can be planted in a 3-gallon container to start, and you can move container-grown raspberry plants into larger containers as the plants outgrow them.

Even if your yard isn't the most ideal location, take heart. Raspberry plants can be very adaptable and they respond well to soil additives like compost or fertilizers, so they can get along well even where the soil is nutritionally poor. Just remember to avoid planting sites with extremely heavy soils and poor drainage and ensure they have the necessary full-sun requirement.

Surroundings

A home raspberry planting can be a landscaping asset, so choose a planting site with this in mind. Imagine your raspberries as full-grown plants and observe the surroundings:

- Are there cables, pipes, or other lines and utilities you should avoid underground?
- Is there a sidewalk or foundation within the range of your raspberry plant's roots?
- Might your raspberry plant block the view of something you want to see once it's fully grown?
- Will neighboring trees be in the way or block sunlight from your raspberry plants as they grow?

Even a year or two after planting, a raspberry plant can be very difficult to move with stress-free success, so take the time to plant in just the right place the first time around.

Spacing

Ordinarily, planting raspberry plants near structures like patios is not problematic because the soil beneath them is dry and compacted. The raspberry's roots will not be as encouraged to grow into this area; however, it's better to plant with at least 4 to 5 feet of space between these structures and your raspberry plants. A safe distance is somewhere beyond your raspberry plant's estimated maximum spread. By planting raspberry plants far enough away from man-made structures, you can avoid problems in the near or distant future.

Space Between Plants

Depending on the variety you choose, the spacing may vary. As a general rule, most raspberry plants naturally grow (or can be maintained with pruning) within a 4 to 5 foot range, both tall and wide. Use the raspberry plant's mature width as your guide for spacing between plants.

- Plant raspberry plants 3 to 5 feet apart with spacing between rows 6 to 8 feet apart.
- Do not plant Red, Gold or Purple raspberries within 75 to 100 feet of black raspberries. Black raspberries may be more susceptible to viral diseases carried by aphids to and from nearby raspberry plants.

Space for Future Plantings

When you're new to fruit gardening and growing raspberry plants, or you're planting in a location that is new to you, it's wise to start with just a few raspberry plants. Later on, especially after you have reaped the rewards of growing your own raspberries, you may want to expand your home raspberry patch. If you plan ahead and leave room for additional berry plants, or even fruit trees and other garden plants, then the space will be available when you are ready to expand, without hindering the growth and development of your existing raspberry plants.

Planting

Few things are as delicious as homegrown raspberries, and the success of your harvest begins with the planting site and planting method. After your raspberry plants are established, they require very little in the way of assistance to grow and bear fruit; however, for maximum growth and yields later on, make sure to provide your plants with the best foundation possible.

Before Planting

Raspberry plants thrive in fertile soil, so, before you plant, test the soil where your raspberries will be planted – including a test of the soil pH. Refer back to the section on Soil Preparation for tips on soil testing.

If the soil pH where you plan to plant your raspberries is between 6.0 and 6.8, you're in good shape – this is an ideal range for raspberry plants. Observe the established trees and plants around the site. Check to see that they look healthy and are growing well. This will help give you an idea of the success of new plantings in the area. If nearby trees are unhealthy or pest-ridden, they may become sources for pest or diseases issues in your plants. It's best to be aware of the surroundings so you can be equipped with as much information as possible should any issues arise. *And remember to avoid planting in soils that are extremely heavy or poorly drained.*

When to Plant

Raspberry plants may be planted even when if you're experiencing cooler temperatures in your area. If you are planting bare-root raspberry plants, they are already asleep and dormant, so (as long as the varieties you selected are recommended for your area) this type of weather won't phase them. If you are planting potted raspberry plants that may arrive awake and even leafed-out, and your weather is expected to be cool, or if a hard frost is expected, it is advisable to delay planting (/growing-guide/article/how-to-delay-planting) for a while until temperatures become more suitable for planting. Before planting potted raspberry plants, you may need to gradually transition, or acclimate (/growing-guide/how-to-grow/berry-plants/raspberry-plants/acclimate), them to their new environment. When you do plant, do not expose any roots to temperatures that are freezing or below for any longer than it takes to move the plant from its protective packaging and have it planted in the ground. It's beneficial to have the holes pre-dug and prepared prior to planting.

Planting Steps

Generally, as long as your soil is workable, it is fine to plant.

Planting Bare-Root Raspberry Plants

- Before planting: soak bare-root raspberry plants' roots in a bucket or large tub of water for one to two hours. This helps keep the roots from drying out while you prepare the planting hole. Avoid soaking roots for more than six hours. Remember: **do not** expose roots to freezing temperatures (or below) prior to planting.
- Dig the planting hole deep and wide enough to accommodate the current root system without being restricted. When digging the planting hole, make sure it is deep and wide enough so each raspberry plant's root system has plenty of room to easily expand. Keep the more-nutritious topsoil in a pile so you can put it in the bottom of the hole, where it'll do the most good.
- Place each raspberry plant in the center of the planting hole with its roots down and spread out. Holding onto the stems to keep them vertical (gloves are highly recommended, especially if you are planting spined/thorned raspberry plants), backfill the hole, putting the topsoil back in first. You can avoid creating air pockets by working the soil carefully around the roots and tamping down firmly with your hands as you refill the planting hole around your raspberry plants.
- Spread soil evenly around the plants and finish with a layer of mulch to prevent damage from water pooling and injury from freezing around the plants in fall going into winter.
- After planting, be sure to prune the bare-root canes back to about 2 inches above the ground. Do not skip this step! It is a crucial factor in encouraging the roots to send up new growth during the growing season. It is in the nature of raspberry plants to send up new growth as suckers or basal shoots from below the ground. This means the canes that you plant may not be where you find signs of life or new growth. When it's time to grow, you will see new sprouts emerge from the ground around where you planted the cane, and this growth is coming from the raspberry plant's root system.

Read more in our Planting Bare-Root Raspberry Plants (/growing-guide/article/how-to-plant-bare-root-raspberry-plants) article.

Planting Potted Raspberry Plants

Generally follow the same planting steps as mentioned above for bare-root raspberry plants, with a few exceptions:

- Do not soak potted raspberry plants prior to planting. Instead, ensure that the soil around the potted raspberry plants' roots does not dry out.
- Prior to placing the potted raspberry plant in the planting hole, carefully remove the root system from the temporary pot.
- Gently loosen and spread the circling roots to encourage them to grow outward as they establish in the ground during the growing season.

Post-Planting

Thoroughly water your newly planted raspberry plants. A deep, slow soaking is best. If you previously determined you need to fertilize your raspberry plants, this can be done in spring, even at planting time; however, as with any packaged product, follow the printed package label for specific instructions. If planting in the fall, wait until spring instead to make any fertilizer applications. After watering, if soil appears to settle and sinks into the planting hole, just add more soil – enough to bring the hole to ground level again.

Apply a layer of organic material like wood mulch (rather than inorganic material like rocks), about 2 to 3 inches thick, around the root zone of your raspberry plants. Mulching helps discourage weeds while also keeping water from quickly evaporating away from the root zone. In the fall, increase the mulch layer or add a layer of straw for winter protection.

Note: Rodents and other small gnawing critters may take advantage of mulch that is applied too thickly, and they may chew raspberry plants for sustenance. If these animal pests are problematic in your area, consider applying repellents within the mulch layer to keep them out.

Additional Notes

- Raspberry plants should live 8 to 10 years with proper maintenance.
- Suggested number of plants for a family of 5: 20 to 25 plants (4 to 5 plants per person).
- Average yield per plant is 1 to 2 quarts of raspberries.

Soil Preparation

Preparing your soil before you plant will greatly improve your raspberry plant's performance and promote healthy, vigorous growth. We recommend that you have your soil tested prior to planting, and even annually after planting, to determine if there are any deficiencies in necessary nutrients. This will help you determine if you should fertilize to supplement nutrients that may be lacking. You can use one of our digital soil meters to test your soil, including its pH and moisture levels, or collect a soil sample to send to your local cooperative horticultural extension who will be able to run a more comprehensive soil test.

The goal of soil preparation is to give new raspberry plants a strong foundation for their future growth and development. This may include replenishing vital minerals and nutrients with fertilizers or organic matter, and breaking up and loosening currently compacted soils.

Common Soil Types

- Clay and silt soils are made of very small particles. They feel slick and sticky when wet. Clay and silt hold moisture well, but resist water infiltration, especially when they are dry. Puddles often form on clay or silt soils, and these soils easily become compacted.
- Loam soils are loose and look rich. When squeezed in your fist, moist loam will form a ball, which crumbles when poked with a finger. Loam soils normally absorb water and store moisture well. Loam soils can be sandy or clay based, but are a mix of sand, silt or clay, and organic matter. They will vary in moisture absorption and retention.
- Sandy soils contain large particles that are visible to the unaided eye, and are usually light in color. Sand feels coarse when wet or dry, and will not form a ball when squeezed in your fist regardless of water content. Sandy soils stay loose and allow moisture to penetrate easily, but will not retain water long-term.

When to Prepare Your Soil

Soil preparation can be done at any time of year that the ground is not overly saturated with water or frozen. It is most ideal to prepare the soil prior to planting, but, if you need to address any issues even after your raspberry plants are in the ground, it is possible.

Common soil amendments for raspberry plants:

- compost
- sand
- manure
- garden lime (if native soil pH is too low/acid)
- baled sphagnum/granular peat moss (if native soil pH is too high/alkaline)

Your lawn can provide you with ideal organic materials such as grass clippings and shredded leaves. Not only will the grass and leaves break down to provide soil nutrients naturally, but they will help loosen the soil as well. You can gather these in the fall with spring planting in mind.

Adding organic matter, such as our Coco-Fiber Growing Medium (/products/tools-and-supplies/soil-additives/coco-fiber-potting-medium) and compost will improve the composition of most every soil type. Organic materials bind sandy soil particles so they retain moisture and nutrients better. They also break apart clay and silt particles, so that water can soak in and roots can spread.

How to Prepare Your Soil

- Prior to planting, dig a hole or trench deep and wide enough so the the future raspberry plants' root systems have plenty of room to easily expand. Keep the nutritious topsoil in a separate pile so you can put it in the bottom of the hole, where it'll do the most good.
- Loosen the topsoil and mix in any soil amendments (dehydrated cow manure, garden compost, etc.) into your pile of topsoil. You can also add a few inches of organic matter like compost and work in evenly with the existing soil.
- Use your mixture to backfill the raspberry plants' roots in their prepared planting holes at planting time.

Care & Maintenance

Fertilizing

Fertilizing is an excellent way to replenish the nutrients in your soil, most commonly nitrogen. Nitrogen encourages the green leafy growth and stems, which ultimately feed and support future fruit when your raspberry plants in their fruit-bearing years. In addition to, or as an alternative for, fertilizers, spring cultivation and summer mulching are also beneficial to the soil.

We strongly encourage you to test your soil prior to applying any fertilizers. Different soils can contain varying amounts of native elements that are necessary to support raspberry plant growth and development. If you test your soil and discover that it lacks any necessary nutrients (nitrogen, phosphate, potassium, etc.), be sure to choose a fertilizer that supplements the soil's nutrient deficiency. Our Stark® Raspberry Food (/products/tools-and-supplies/soil-additives/stark-raspberry-food) is a balanced 20-21-20 formula that is used in early spring to strengthen roots and to stimulate and support increased fruit production.

Learn more about your soil and discover the importance of soil testing (/growing-guide/article/importance-of-soil-testing) prior to adding any fertilizers.

Fertilizer Information

- Fertilizers – both synthetic and organic (naturally derived) – are soil amendments labeled with a "guaranteed analysis" of nutrients like Nitrogen (N), Phosphate (P), and Potash (K).
- Alternately, there are organic soil amendments, like compost and aged/rotted manure. They are used like fertilizers, but they are not technically fertilizers. You can make your own organic soil amendments like compost out of food or garden scraps, or even find compost, manure, and other organic soil amendments from a trusted local source. While these help add nutrients to the soil to support your raspberry plants' growth, they will not have a "guaranteed analysis" value.

When to Fertilize Raspberry Plants

- Typically, fertilizers are used during the growing season, as soon as the soil is workable in early spring and stopping by July 1*. For any specific fertilizer application instructions, always refer to the information printed on your product's label. *Be mindful that local advisories on fertilizing may be in effect during different times of year. For the sake of your local environment, please adhere to these restrictions.*

*To prevent the chance of injury as the growing season winds down, do not fertilize past July 1st (/growing-guide/article/when-to-stop-fertilizing) as a general rule.

Pest & Disease Control

As with all living things, raspberry plants may experience issues as they grow, such as the presence of pests or diseases. Location, weather, and upkeep are factors that weigh in on which issues your raspberries encounter and how well they stands up to them. Determining potentially problematic issues in your area as well as routine maintenance* will help equip you to actively prevent most problems and keep your raspberry plants in good shape.

*Examples of good practices are: adequate watering, fertilizing as needed, seasonal pruning, preventative and active spraying, fall cleanup, and winter protection.

The following issues are merely intended as a means of identification. Don't be alarmed – raspberry plants may experience a few of these in their lifetime, but certainly not all at once.

Raspberry Plant Pests

Aphids

Tiny, pinhead-sized insects, varying in color depending on the type. Will cluster on stems and under leaves, sucking plant juices. Note: ants will "farm" aphids for their honeydew excretion, so ants may also be a sign of an aphid infestation.

Symptoms: Leaves curl, thicken, yellow, and die. Aphids produce large amounts of a sticky residue called "honeydew" that attracts insects like ants. Honeydew becomes a growth medium for sooty mold.

Control: Spray

- GardenTech® Sevin® Concentrate Bug Killer

Control: Natural Spray

- Bonide® All Seasons® Horticultural & Dormant Spray Oil
- Bonide® Insecticidal Soap
- Bonide® Citrus, Fruit & Nut Orchard Spray
- Bonide® Neem Oil
- Monterey Fruit Tree Spray Plus
- Monterey Horticultural Oil

Other Control Options

- Beneficials like ladybugs (both adult beetles and their larvae) feed on aphids.

Cane Borer

Adult is a long-antennaed beetle with a black head and yellow-orange body around 1/2-inch in length. Larvae are grub-like borers with light-colored bodies and can be about 3/4-inch long. Adult females lay eggs in the top 6 inches of raspberry canes, which hatch and grubs emerge inside the cane, making their way down into the soil over a period of a couple years.

Symptoms: Larvae indicated by sawdust. Canes may bulge and die back when pest is present.

Control: Spray

- GardenTech® Sevin® Concentrate Bug Killer

Control: Natural Spray

- Bonide® Captain Jack's™ Deadbug Brew Garden Dust
- Bonide® Citrus, Fruit & Nut Orchard Spray
- Monterey Fruit Tree Spray Plus

Other Control Options

- Cut out infected cane until larvae is found; eliminate.
- Consistent pruning should disrupt borer life cycle enough to avoid having to spray.
- Contact local county cooperative Extension for further advice.

Fruitworm (Raspberry Beetle)

Adult (raspberry beetle) is red-brown beetle, 1/4-inch long, which overwinters in the soil and emerges when the temperatures are ideal (usually in spring). Larvae (fruitworm) are small grubs; cream white with darker bands.

Symptoms: Adults make slits in flower buds and larvae feed on berries. Beetles feed on foliage and deposit eggs in the flower buds/blossoms. Fruitworm larvae feed within the fruit until it drops and they can move into the soil where they pupate and remain until emergence the following spring. Fruitworms can be positively identified when ripe fruit is removed. Signs of the small worm will appear within the open center of the raspberry fruit.

Control: Spray

- GardenTech® Sevin® Concentrate Bug Killer

Control: Natural Spray

- Bonide® Captain Jack's™ Deadbug Brew Garden Dust
- Bonide® Thuricide® BT

Japanese Beetle

Adult is a metallic-green beetle, which skeletonizes leaves. Larvae are cream-colored grubs that feed on turf roots prior to maturity. Turf pest-control may help reduce grub populations; check turf product labels for timing and control of grubs.

Symptoms: Adults are often seen in groups – large infestations can cause stunted growth and stress by skeletonizing a majority of the leaves.

Control: Spray

- GardenTech® Sevin® Concentrate Bug Killer

Control: Natural Spray

- Bonide® Captain Jack's™ Deadbug Brew Garden Dust

Other Control Options

- Manual Removal: If infestation is minimal, knock Japanese beetles into a jar of soapy water solution (they will become immobile when frightened as a defense mechanism).
- Traps are an option for luring adult beetles.

Leafhopper

Small, active, slender-winged insect appearing in various colors. Usually found on undersides of leaves.

Symptoms: Slows new growth; leaves become whitened, stippled, or mottled. Leaf tips may wither and die. Prone to carrying diseases to and from plants and trees; damaged caused by leafhoppers may be greater than the feeding done directly by the insect.

Control: Spray

- GardenTech® Sevin® Concentrate Bug Killer

Control: Natural Spray

- Bonide® All Seasons® Horticultural & Dormant Spray Oil

- Bonide® Insecticidal Soap
- Bonide® Citrus, Fruit & Nut Orchard Spray
- Monterey Fruit Tree Spray Plus
- Monterey Horticultural Oil

Mites

Pinpoint-sized arthropods, appearing in many different colors depending on the type. Often found on undersides of leaves.

Symptoms: Sap feeding causes a bronze appearance in leaves. Severe infestations exhibit some silken webbing. Droughts or dry spells are advantageous for mite infestations.

Control: Spray

- GardenTech® Sevin® Concentrate Bug Killer

Control: Natural Spray

- Bonide® All Seasons® Horticultural & Dormant Spray Oil
- Bonide® Citrus, Fruit & Nut Orchard Spray
- Bonide® Insecticidal Soap
- Bonide® Neem Oil
- Monterey Fruit Tree Spray Plus
- Monterey Horticultural Oil

Omnivorous Leafroller

Adult is bell shaped, blackish gray snout-like mouthparts, forewings dark rusty brown with tan tips. Over winters in larval stage in mummified berries, in weeds and other trash. Moths emerge in spring and lay egg masses on leaves. Eggs hatch in 5 days and larvae tie two young leaves together to form nest in which they feed. Later nests can be found in flower clusters and in bunches. Damage is not only from feeding on leaves, flowers, and berries, but also in feeding sites which allow other organisms to enter and rot fruit.

Symptoms: Leaves are rolled and webbed together where grubs feed. Foliage eventually becomes skeletonized with prolonged exposure to feeding.

Control: Spray

- GardenTech® Sevin® Concentrate Bug Killer

Control: Natural Spray

- Bonide® All Seasons® Horticultural & Dormant Spray Oil
- Bonide® Captain Jack's™ Deadbug Brew Garden Dust
- Bonide® Citrus, Fruit & Nut Orchard Spray
- Bonide® Neem Oil
- Bonide® Thuricide® BT
- Monterey Fruit Tree Spray Plus
- Monterey Horticultural Oil

Rose Chafer

Beetle has 1/2-inch long, tan wings with reddish-brown edges and long, thin hairy legs. Can be toxic to birds and small animals if eaten.

Symptoms: Skeletonized leaves and flowers. Holes in buds and fruit. Present in large quantities in early summer months (June and July), especially on sandy sites near grassy areas.

Control: Spray

- GardenTech® Sevin® Concentrate Bug Killer

Thrips

Tiny, slender, fringed-wing insects ranging from 1/25-inch to 1/8-inch long. Nymphs are pale yellow and highly active. Adults are usually black or yellow-brown, but may have red, black, or white markings.

Symptoms: Feeding occurs on vegetation by puncturing and sucking up the contents causing appearance to be deformed or discolored (similar to damage by mites and lace bugs).

Control: Spray

- GardenTech® Sevin® Concentrate Bug Killer

Control: Natural Spray

- Bonide® All Seasons® Horticultural & Dormant Spray Oil
- Bonide® Captain Jack's™ Deadbug Brew Garden Dust
- Bonide® Citrus, Fruit & Nut Orchard Spray
- Bonide® Insecticidal Soap
- Monterey Fruit Tree Spray Plus

- Monterey Horticultural Oil

Raspberry Plant Diseases

Anthracnose (Spot Anthracnose)

Caused by *Elsinoe venata* – a fungus that is spread by splashing rain or irrigation. Thrives in warm, wet weather (typically late spring/early summer). Overwinters in lesions on old canes. Commonly found on black raspberry and susceptible red raspberry plants, especially where disease pressure is high. Can be spread to new/healthy raspberry plants from nearby infected plants.

Symptoms: Reddish-brown sunken spots with purple margins and light gray centers on young shoots. Lesions are distributed throughout canes on sections between where the leaves are located. Spots grow together into cankers. Leaves may drop early. Fruit may dry up. May cause winter dieback.

Control: Natural Spray

- Bonide® All Seasons® Horticultural & Dormant Spray Oil
- Bonide® Citrus, Fruit & Nut Orchard Spray
- Bonide® Copper Fungicide
- Bonide® Neem Oil
- Monterey Fruit Tree Spray Plus

Other Control Options

- Remove and destroy old fruiting canes after harvest.
- Maintain growing site. Pruned to improve air circulation, avoid overhead watering, keep area free of weeds.

Botrytis Fruit Rot (Gray Mold)

Caused by *Botrytis cinerea* – a fungus that overwinters in mummified fruit and infected plant debris. Spreads easily in early spring and thrives in warm, wet weather and even periods of prolonged cool, wet weather.

Symptoms: Presents as a gray, hairy mold which decays blossoms, green and ripening fruits, and harvested fruits. Infection may occur early in the season while symptoms may not be obvious until harvest time.

Control: Spray

- Bonide® Captan Fruit & Ornamental

Other Control Options

- Remove and destroy old fruiting canes after harvest. Do not leave mummified fruit in or around the growing area.
- Maintain growing site. Pruned to improve air circulation, avoid overhead watering, keep area free of weeds.
- Contact local county cooperative Extension for further advice.

Cane Blight

Caused by *Leptosphaeria coniothyrium* – a fungus that is spread by splashing rain or irrigation. Thrives in warm, wet weather (typically late spring/early summer). Enters through wounds made by insects, pruning cuts, canes rubbing against other canes/trellises, etc.

Symptoms: Large brown dead areas (cankers). Often first noticed when leaves wilt and wither.

Control: Natural Spray

- Bonide® All Seasons® Horticultural & Dormant Spray Oil
- Bonide® Citrus, Fruit & Nut Orchard Spray
- Bonide® Copper Fungicide
- Bonide® Neem Oil
- Monterey Fruit Tree Spray Plus

Other Control Options

- Cut canes back to below canker; disinfect shears between cuts; dispose of pruning debris.
- Remove and destroy old fruiting canes after harvest.
- Maintain growing site. Pruned to improve air circulation, avoid overhead watering, keep area free of weeds.

Leaf Curl

Caused by a virus spread by the small raspberry aphid, *Aphis rubicola*. Typically fatal to infected plants, which decline over 2 to 3 years.

Symptoms: Leaves thicken and curl much like they do with an aphid infestation only these leaves are small, dark green, and curl downward and inward. Starts as dull, yellow-green leaves on brittle, stunted shoots. As the disease worsens, plants become more stunted, less branched, and produce little-to-no fruit. Before fruit production ceases, it may be small, dry, and crumbly. Plant symptoms may resemble and be confused with herbicide injury so have sample tested to positively identify disease before taking action.

Other Control Options

- Prevent aphids spreading this incurable disease by covering your raspberry plantings with a fine mesh screen or garden netting.
- Plant black raspberry plants at least 75-100 feet away from other raspberry plants.
- Remove potentially susceptible/infected wild berries from the area.
- Remove known diseased plants.
- Contact local county cooperative Extension for positive identification of virus.

Mosaic

Caused by a virus complex consisting of *black raspberry necrosis virus (BRNV)*, *raspberry leaf mottle*, *raspberry leaf spot virus*, and *rubus yellow net virus (RYNV)*. Spread by the large raspberry aphid, *Amophorophora agathonica*. Black raspberry and purple raspberry plants and cultivars are more susceptible to this disease, which can then be transmitted to neighboring raspberry plants by aphids carrying the disease. This is why it is recommended that (susceptible) black raspberry plants in particular be planted away from other raspberry plants.

Symptoms: Fruit production is reduced and quality is lacking (dry and crumbly, flavorless berries). Leaves will thicken, curl, and display with mottled coloring where there may be dark green areas and bright green-to-yellow areas on same leaf. Leaves may also exhibit puckering. Some plants may have curled, blackened cane tips that die. Symptoms appear on new growth in cool spring and fall weather and may seem to disappear in warmer temperatures (like in summer). Even though symptoms may temporarily disappear, note that infected plants cannot be cured.

Other Control Options

- Prevent aphids spreading this incurable disease by covering your raspberry plantings with a fine mesh screen or garden netting.
- Plant black raspberry plants at least 75-100 feet away from other raspberry plants.
- Remove potentially susceptible/infected wild berries from the area.
- Remove known diseased plants.
- Contact local county cooperative Extension for positive identification of virus.

Orange Rust

Caused by *Arthuriomyces peckianus* – a fungus that works systemically throughout the plant and overwinters in diseased roots and canes. Thrives in cool, wet weather. In late spring/early summer (June or July), spores spread to nearby plants by wind. Spores enter through the leaves and spread internally to the canes and eventually the roots. Symptoms may not appear until the following spring in newly infected plants. Infected plants cannot be cured.

Symptoms: Undersides of leaves appear covered with orange-yellow spores. Weak, spindly growth appears in spring. Plants may have a short, bushy appearance. Disease may not prove fatal to infected raspberry plants, but it will stunt growth and can cause low-to-no fruit production. Not problematic for red raspberry plants but can be problematic for other types of raspberries (especially black raspberries).

Control Options

- Remove and destroy infected raspberry plants.
- Contact local county cooperative Extension for further advice.

Powdery Mildew

Caused by *Sphaerotheca macularis (Podosphaera aphanis)* – a fungus that overwinters in canes (tips) and buds and emerges during humid, cool-to-warm weather progressively throughout the growing season. Spreads by wind. Fungicide control sprays can be applied as symptoms appear, from summer to fall.

Symptoms: Whitish-gray powdery mold or felt-like patches on buds, young leaves, and canes. Leaves may crinkle and curl upward. New shoots are stunted.

Control: Natural Spray

- Bonide® All Seasons® Horticultural & Dormant Spray Oil
- Bonide® Citrus, Fruit & Nut Orchard Spray
- Bonide® Copper Fungicide Spray or Dust
- Bonide® Neem Oil
- Monterey Fruit Tree Spray Plus
- Monterey Horticultural Oil

Other Control Options

- Clean up fallen leaves and other debris.
- Maintain growing site. Pruned to improve air circulation, avoid overhead watering, keep area free of weeds.

Spur Blight

Caused by *Didyimella applanata* – a fungus that is spread by wind, splashing rain, or irrigation. Thrives in warm, wet weather (typically late spring/early summer).

Symptoms: In late spring, purple or brown discoloration appears just below the leaf or bud, often on the lower areas of the canes where leaves emerge. Spots increase in size, expanding up and down the cane sometimes covering the area between the leaves but stops before reaches the next leaf or bud. Leaves may turn yellow and fall off. Overwinter in infected canes.

Control: Spray

- Bonide® Captan Fruit & Ornamental

Control: Natural Spray

- Bonide® All Seasons® Horticultural & Dormant Spray Oil
- Bonide® Citrus, Fruit & Nut Orchard Spray
- Bonide® Copper Fungicide
- Bonide® Neem Oil
- Monterey Fruit Tree Spray Plus

Other Control Options

- Remove and destroy old fruiting canes after harvest.
- Maintain growing site. Pruned to improve air circulation, avoid overhead watering, keep area free of weeds.

Other Raspberry Plant Issues

Crown Gall & Cane Gall

Caused by *Agrobacterium tumifaciens* (crown gall) and *Agrobacterium rubi* (cane gall) – each a bacterium that inhabits the soil and causes rapid, abnormal growths which then develop into galls. Crown galls can spread through injury to roots in the soil as well as through gardening tools carrying the bacterium. Cane galls may appear more frequently after harsh winters and winter injury.

Symptoms: Plants appear stunted and slow growing. Leaves may be reduced in size, plants may produce little or no fruit. **Crown Galls –** Not visible above ground, but symptoms may present as water stress and nutrient deficiency. If plant is dead, inspect roots for hard, woody tumors (galls). **Cane Galls –** White growths on canes in early summer. Growths turn brown or black as season progresses. Infected canes become poorly fruitful and brittle. Affects black and purple raspberries more frequently than red raspberries. *Note: many things can cause stunted plants, so rule out other causes for proper diagnosis.*

Other Control Options

- Contact local county cooperative Extension for further advice.

No Blossoms or Fruit

Symptoms: Raspberry plants can take about 1 to 2 years after planting (on average) before they bloom or bear fruit. Depending on the variety, flowers and fruit may appear on 1-year canes that ripens in the fall or appear on 2-year canes that ripens in the summer. If enough time has been allowed to pass, and the raspberry plants are otherwise healthy, but you're still seeing no blossoms or fruit, then there are a few things to do to help it become fruitful.

Control: Manual

- **Prune to remove weak, spindly canes** to ensure the strongest, healthiest canes have the best chance at fruiting.
- **Know your soil**. Soil conditions, and the presence of necessary nutrients, help keep a raspberry plant's roots supplying nutrients through its vascular system. If the soil is poor, or poorly drained, this affects the health and viability of the plant as a whole. If the soil is being over-fertilized, especially with a fertilizer high in nitrogen, it may develop lush, vegetative growth (leaves and canes) instead of developing fruit buds or blooming.

Additional Resources

- Contact local county cooperative Extension for further advice

Sunscald and Sunburn

Clear, sunny days and high temperatures of summer can lead to sunburn on some plants and their fruit.

Symptoms: Yellow and browned leaves especially those exposed to unfiltered, intense sunlight. Fruit may appear white in spots, particularly on the sun-exposed side. Fruit is still edible, but may not appear appetizing in desserts or for selling in farmers' market fruit stands.

Control: Manual

- Protect from intense summer sun with a temporary shade structure like that which can be provided using shade cloth.

Water Stress

Symptoms: Can relate to overwatering or underwatering. Overwatering commonly presents as pale green to yellow leaves and leaf drop. Can weaken a plant, lead to issues with root rot, and ultimately be fatal. Underwatering often presents as discolored – often yellowed – dry leaves. Plant may appear to wilt overall and prolonged lack of water can be fatal.

Control: Manual

- Water every 7- to 10-days during the growing season (if no rain within the week) or as needed (as the soil becomes dry to the touch).
- If planted in a location where the soil does not adequately drain water after heavy rains (leading to standing water), relocate the plant as soon as possible.
- If drought-like conditions persist, consider slow-trickle drip irrigation to allow water to reach the roots rather than wash over soil surface.

Additional Resources

- Plan Ahead for Rainy Weather (/growing-guide/article/plan-ahead-for-rainy-weather)

Wind Injury

Symptoms: Can involve injury such as leaning plants, broken or torn canes, and wind-burned foliage. Depending on the severity of the injury, a raspberry plant can either bounce back from minor damage or succumb to constant wind-related harm. This is determined on an individual basis and the health of the plants before the damage occurred.

Control: Manual

- Adequately tamp soil around the plant's roots (and thoroughly water) at planting time to remove air pockets and ensure good contact with the soil. Air pockets and loose soil around the roots can cause the plant to rock easily in its planting hole, leaving it vulnerable to becoming uprooted.
- Construct a trellis using an existing fence, galvanized wires, or even tomato cages, especially in high-wind areas, to help support upright growth and avoid breakage issues and canes being bent to the ground under the weight of the fruit.
- If tender new foliage is blown or whipped around by the wind, it may appear discolored (dark – like a burn or bruise). This damaged growth can be pruned off to encourage healthy, new growth to take its place.

Pruning

Pruning is not only an important part of proper raspberry plant care and maintenance, it is also a way to ensure and improve the development of the fruit crop. Here are a few things to remember when pruning your raspberry plants:

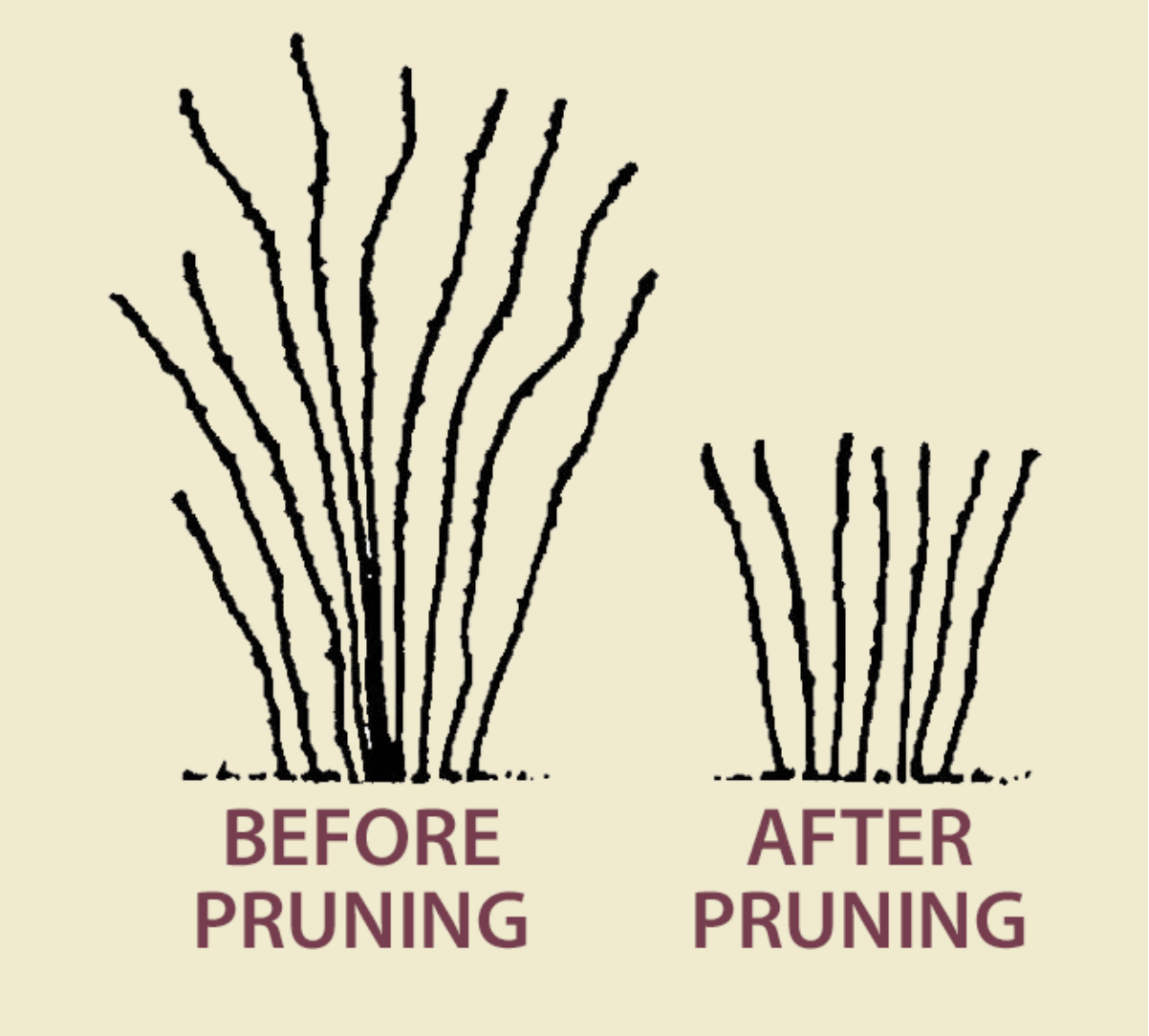
- Not everyone will prune the exact same way – including the experts.
- It is preferable to do some pruning rather than no pruning.
- If a raspberry plant is left unpruned, it may become tangled and overgrown and may even be unfruitful as a result.

Pruning Advice for Raspberry Plants

Pruning may vary depending on the raspberry varieties you plant. The best approach is to understand the bearing nature of the varieties you're growing so you know how to prune when the time comes. That said, regardless of growth habit, *some* pruning should be done every spring to keep raspberry plants from becoming tangled and to improve their ability to bear.

- *Consider staking or trellis-training your raspberry plants to keep them more upright.*

Pruning Raspberry Plants



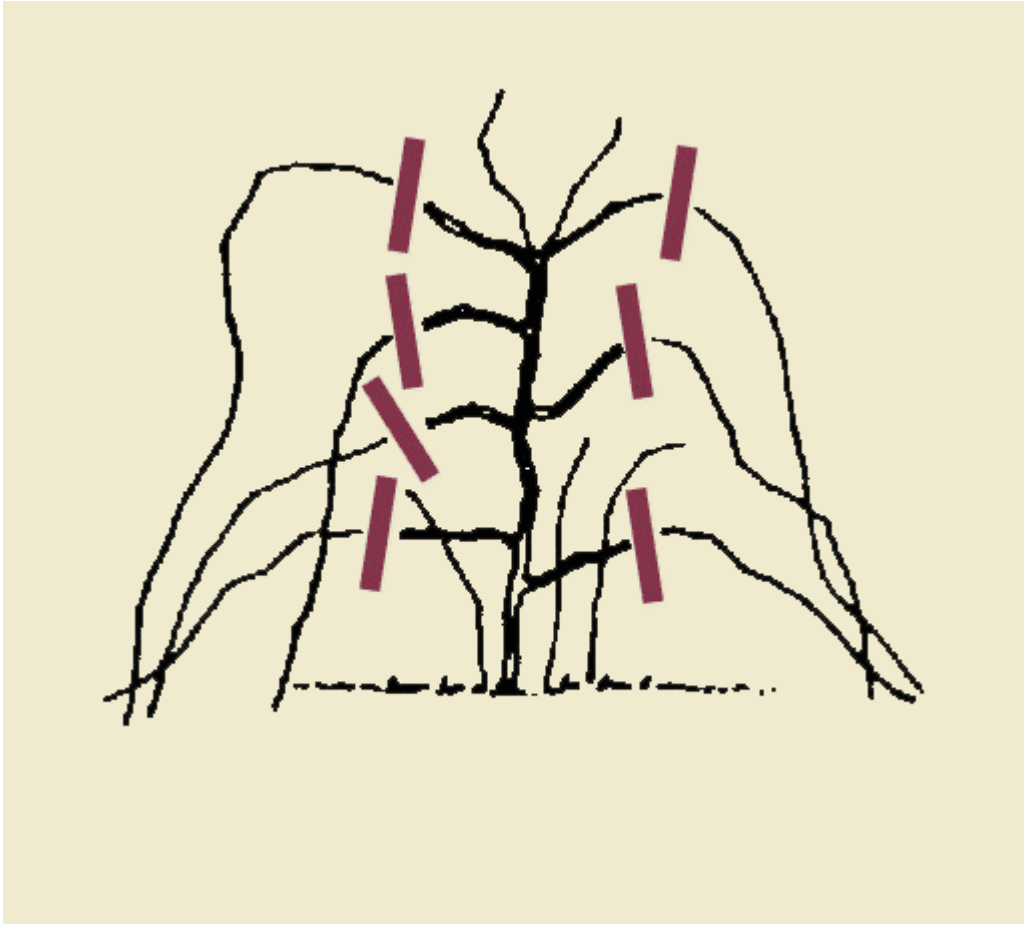
This information is geared toward typical red, gold, and purple varieties of raspberries. Black raspberries are a little different, and pruning advice for those is located in the next section.

When to Prune Raspberry Plants

Once your raspberry plants have put on enough growth (which may not be until after their first year with you), aim to prune in the early spring, just as new growth emerges.

- Prune young canes back until they are around 4 to 5 feet tall. This will discourage overgrowth and shading and will improve fruit production and quality.
- Completely prune back and remove all skinny, dead, damaged, diseased or otherwise weak canes. As your raspberry plants mature, it is recommended that you cut back the small, thin canes to leave only about 8 to 10 of the strongest ones.

Pruning Black Raspberry Plants



Black raspberry plants have a slightly different growth habit, so pruning is slightly different as a result.

- When new shoots are 3 feet tall, prune off the tips. Tipping the canes stops the vertical growth and results in more vigorous side branching, where the fruit develops. These lateral branches should be pruned so that they are kept at about 10 inches long.

Pruning Floricane-Bearing Raspberry Plants

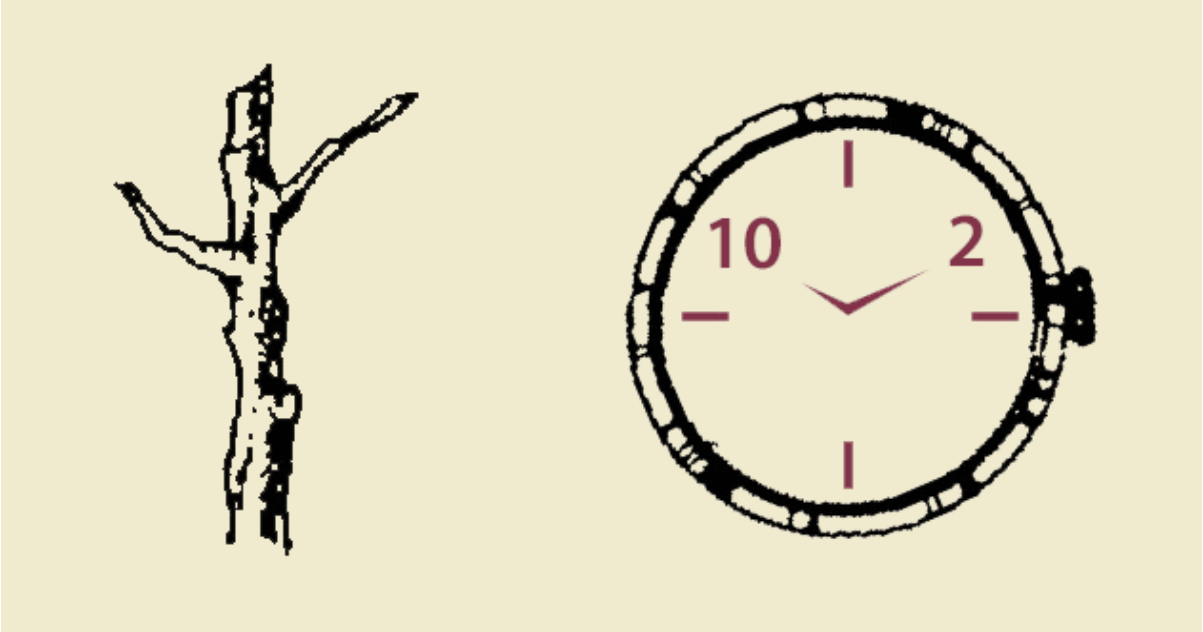
Also known as “summer-bearing” raspberries. These plants have the more typical fruiting habit, bearing one fruit crop on the lower part of their two-year-old canes (called floricanes). After fruitset and harvest in the summer, these canes will die back. You should prune them back to ground level in order for the one-year-old canes to thrive and become strong and fruitful second-year canes the next growing season.

Pruning Primocane-Bearing Raspberry Plants

Also called “everbearing” or “fall-bearing” raspberries. Primocane-bearing raspberry plants are unique in that they tend to bear fruit on the tips of their one-year-old canes, which ripens in fall in milder climates. In addition, as these primocanes become floricanes in their second year, they will fruit again, this time on the lower part of their canes the following summer. Other than that, these can be pruned and maintained in a similar fashion to the typical raspberry plants mentioned above.

- If one large crop is desired, cut all canes back to ground level after the fall crop. This will result in a single, large primocane crop the following fall. Not recommended for northern gardens with short growing seasons and early fall frosts.
- In areas with short growing seasons, a primocane-bearing variety’s fall crop may not ripen, so northern gardeners may prefer to treat primocane-bearing varieties as summer-bearing varieties and forego the fall crop.

Additional Notes



- Be sure to prune at the proper angle to allow the raspberry plants to easily heal over the pruning cut.
- A good reference book like Pruning Made Easy (/products/tools-and-supplies/books/pruning-made-easy) will answer pruning questions and guide you through the pruning process for raspberry plants.

Spraying

Familiarize yourself with potential pest and diseases issues for raspberry plants in your area. Your local cooperative horticultural extension is an excellent resource for this information. Documents for identification and control (put together by your local state universities) may already exist online, free of charge. Your nearest independent garden centers and local growers are also invaluable sources of pest and disease control in your area.

In high-density areas, a spray schedule consisting of the right sprays and applying at the right times (per the spray's label) can be paramount to the survival of your raspberry plants. Many potential issues can be prevented with sprays before they become problematic. To get the most return on the investment of your time and energy, spraying raspberry plants should be done consistently and thoroughly following the guidelines below.

General Maintenance

Before you begin, read and follow all instructions on the labels of the products you have in hand. **Do not** combine any chemicals unless the labels on each chemical spray involved specifically state that you can safely do so.

A proactive home spray program for raspberry plants includes dormant-season as well as growing-season sprays for pests and diseases. Research your location and learn about any pests or disease that are common in your area. If you know certain diseases are common in there, consider planting disease-resistant varieties if possible.

Note: Contact your local county Cooperative Extension for alternative suggestions and advice on cultural and chemical control methods if certain sprays offered by Stark Bro's are not recommended for use in your area.

When to Spray Raspberry Plants

- Dormant Season (late winter/early spring, before bud break)
- Growing Season – Bud Break (emergence of new growth)
- Growing Season – After Blossom (after petals drop*)

*gives bees and other beneficials a chance to safely pollinate the blossoms

It bears repeating: Always follow instructions printed on container label for more detailed information, such as timing and application instructions specifically for caneberries like raspberry plants.

Pest Control Sprays for Raspberry Plants

Bonide® All Seasons® Horticultural & Dormant Spray Oil (/products/tools-and-supplies/pest-and-disease-control/bonide-all-seasons-horticultural-and-dormant-spray-oil)

- **For**: Overwintering eggs, larvae, and pests including mites, adelgids, scale, aphids, moths, leafrollers, psylla, blister mites, whitefly larvae, and mealybugs.
- **Timing**: Dormant Season, Growing Season – Bud Break, Growing Season – After Blossom
- **Type**: Mainly preventative. Controls overwintering pests and their eggs.
- **Application**: Follow the label. Apply as directed when temperatures are between 40ºF and 90ºF.

Bonide® Captain Jack's™ Deadbug Brew Garden Dust (/products/tools-and-supplies/pest-and-disease-control/bonide-captain-jacks-deadbug-brew-garden-dust)

- **For**: Moths, leafminers, leafrollers, borers, drosophila, Japanese beetle, thrips, worms, caterpillars, flies, and more.
- **Timing**: Growing Season – After Blossom
- **Type**: Active. Controls pests on contact. Pests must be present for spray to be effective.
- **Application**: Follow the label. Apply as directed, every 10 days, up to 6 times per season (max) as needed. Can be applied up to 7 days before harvest.

Bonide® Insecticidal Soap (/products/tools-and-supplies/pest-and-disease-control/bonide-insecticidal-soap)

- **For**: Adelgids (woolly aphids), aphids, lacebugs, mealybugs, mites, grasshoppers, leafhoppers, scale, plant bugs, sawfly larvae (pear and rose slugs), psyllids, tent caterpillars, thrips, spider mites, earwigs, and whitefly.
- **Timing**: Growing Season – After Blossom
- **Type**: Mainly active. Controls pests on contact. Pests must be present for spray to be effective.
- **Application**: Follow the label. Apply as directed, weekly or bi-weekly as needed.

Bonide® Thuricide® BT (/products/tools-and-supplies/pest-and-disease-control/bonide-thuricide-bt)

- **For**: Leafrollers, moths, caterpillars, worms, and more
- **Timing**: Growing Season – Bud Break or After Blossom
- **Type**: Active. Controls pests on contact. Pests must be present for spray to be effective.
- **Application**: Follow the label. Apply as directed when eggs or newly hatched larvae first appear.

GardenTech® Sevin® Bug Killer (/products/tools-and-supplies/pest-and-disease-control/gardentech-sevin-bug-killer)

- **For**: Aphids, mites, worms, scale, leafhoppers, leafrollers, borers, moths, Japanese beetles, grasshoppers, stink bugs, lacebugs, spittlebugs, thrips, caterpillars, sawfly, rose chafer, and more.
- **Timing**: Growing Season – After Blossom
- **Type**: Active. Controls pests on contact. Pests must be present for spray to be effective.
- **Application**: Follow the label. Apply as directed, every 7 days, up to 8 times per year (max) as needed. Can be applied up to 3 days before harvest.

Disease Control Sprays for Raspberry Plants

Bonide® Captan Fruit & Ornamental (/products/tools-and-supplies/pest-and-disease-control/bonide-captan-fruit-and-ornamental) (wettable powder)

- **For**: Anthracnose, brown rot, blight, leafspot, botrytis rot (gray mold), mummy berry, spur blight, phomopsis cane and leaf spot, downy mildew, and more.
- **Timing**: Growing Season – Bud Break (pre-bloom, bloom, petal fall), Growing Season – After Blossom
- **Type**: Mainly active, also preventative. Controls and prevents fungal diseases.
- **Application**: Follow the label. Do not use in conjunction with wettable sulfur, hydrated lime, or oil sprays. Apply as directed, every 10 to 14 days as needed. Can be used up to 1 day before harvest. Not for use in California (contact local county Cooperative Extension for recommended alternatives).

Bonide® Copper Fungicide (/products/tools-and-supplies/pest-and-disease-control/bonide-copper-fungicide)

- **For**: Anthracnose, powdery mildew, cane spot, leaf spot, leaf scorch, leaf blight, stem canker, and more.
- **Timing**: Growing Season – Bud Break (may include bloom period), Growing Season – After Blossom
- **Type**: Mainly active, also preventative. Controls and prevents fungal diseases.
- **Application**: Follow the label. Apply as directed, making sure to adhere to specified intervals to avoid phytotoxicity and other issues.

Ferti-Lome® Fire Blight Spray (/products/tools-and-supplies/pest-and-disease-control/ferti-lome-fire-blight-spray)

- **For**: Fire blight, bacterial wilt, stem rot, leaf spot, crown gall
- **Timing**: Growing Season – Bud Break (may include bloom period), Growing Season – After Blossom
- **Type**: Mainly preventative, also active. Controls and prevents bacterial diseases.
- **Application**: Follow the label. Apply as directed, every 3 to 4 days during bloom time and every 5 to 7 days as needed after blossom period. Do not apply when fruit is visible. For use as a foliar and/or blossom spray.

Combination Sprays for Raspberry Pests & Diseases

Bonide® Citrus, Fruit & Nut Orchard Spray (/products/tools-and-supplies/pest-and-disease-control/bonide-citrus-fruit-and-nut-orchard-spray)

- **Pests**: Ants, aphids, beetles, mites, moths, leafhoppers, leafrollers, leafminers, caterpillars, whiteflies, spittlebugs, mealybugs, scale, thrips, psyllids, plant bugs, fruit flies, earwigs, and more.
- **Diseases**: Scab, powdery mildew, rust, blight, brown rot
- **Timing**: Growing Season – After Blossom
- **Type**: Mainly active, also preventative. Controls pests on contact. Pests must be present for spray to be effective. Controls and prevents fungal diseases.
- **Application**: Follow the label. Do not apply when temperatures exceed 90ºF. Do not use within 21 days of an oil spray. Apply as directed, every 7 to 10 days, or after rain as needed. Can be used up to 1 day before harvest.

Bonide® Neem Oil (/products/tools-and-supplies/pest-and-disease-control/bonide-neem-oil)

- **Pests**: Aphids, spider mites, scale, whiteflies, beetles, leafrollers, and other insect pests.
- **Diseases**: Powdery mildew, black spot, downy mildew, anthracnose, rust, leaf spot, botrytis, blight, and alternaria.
- **Timing**: Dormant Season, Growing Season – Bud Break, Growing Season – After Blossom
- **Type**: Mainly preventative, also active. Controls overwintering pests and their eggs, and pests on contact. Controls and prevents fungal diseases.
- **Application**: Follow the label. Oil-based, so apply in early morning/late evening to minimize the potential for leaf burn. Apply as directed, every 7 to 14 days as needed.

Monterey Fruit Tree Spray Plus (/products/tools-and-supplies/pest-and-disease-control/monterey-fruit-tree-spray-plus)

- **Pests**: Aphids, mites, scale, whiteflies, beetles, leafrollers, loopers, mealybugs, leafhoppers, leafminers, thrips, borers, grasshoppers, crickets, ants, hornworm, earwig, chiggers, worms, and other insect pests.
- **Diseases**: Powdery mildew, black spot, brown spot, dollar spot, snow mold, downy mildew, anthracnose, rust, leaf spot, botrytis, needle rust, blight (flower blight, twig blight, and tip blight), scab.
- **Timing**: Growing Season – Pre-Bloom (for early disease prevention), Growing Season – After Blossom (for pest and disease control on contact).
- **Type**: Mainly active, also preventative. Controls pests on contact. Pests must be present for spray to be effective. Controls and prevents fungal diseases.
- **Application**: Follow the label. Apply as directed, every 7 to 14 days, as needed. Do not use more than 1 time per day on the same plants. Do not use more than 10 times per season. Do not apply when temperatures are below 45ºF. Do not apply to wilted or otherwise stressed plants. Apply in early morning or late evening to minimize potential for leaf burn. Test for plant sensitivity prior to broad use.

Monterey Horticultural Oil (/products/tools-and-supplies/pest-and-disease-control/monterey-horticultural-oil)

- **Pests**: Aphids, mites, scale, whiteflies, sawflies, loopers, leafhoppers, leafminers, leafrollers, psylla, mealybugs, thrips, worms, and more.
- **Diseases**: Black spot, powdery mildew, rust, sooty mold
- **Timing**: Growing Season – Pre-Bloom, Growing Season – After Blossom, Dormant Season
- **Type**: Mainly preventative. Controls overwintering pests and their eggs.
- **Application**: Follow the label. Apply as directed, as needed. Do not apply when temperatures are below 32ºF (no heat restriction for use – unique for an oil spray). Do not apply during drought or to wilted or otherwise stressed plants. Test for plant sensitivity prior to broad use.

Watering

Unless your raspberry plants are growing in an area where irrigation is usually needed for growth (desert areas, drought areas, containers, etc.), you probably won't need to water your raspberries more than what the rain naturally provides after the first growing year. Until then, follow these guidelines to watering raspberry plants efficiently.

General Watering Guidelines

- If the growing season brings about an inch of rainfall every 7 to 10 days or so, you shouldn't need to provide any additional water; however, if it gets really dry in a week's time, you can give your raspberry plants a good, thorough soaking. The best way to do this is to let your garden hose trickle slowly around the root zone. This gives the water a chance to soak in and down to the roots instead of running off over the soil surface. It is less wasteful, and you can even use something like a soaker hose to water several raspberry plants at once.
- If you're in the midst of a "brown-lawn drought", you still shouldn't water raspberry plants too much or too often. Worse than dry, thirsty roots is waterlogged, drowning roots.

Note: These guidelines are far from strict, so just be sure to water only when it is needed. Raspberry plants do not need lots of water every day like people do; however, if you discover that your soil or your location's environment requires more frequent watering to avoid drought-stress to your raspberries, adjust your watering schedule accordingly. Rely on your plants and the soil they're planted in as the best reference for when they need water.

Keep in mind, many parts of the country have restrictions on water usage. Be sure to adhere to your county or state's restrictions when watering your raspberry plants, and contact your local department in charge of water usage for more information.

Other Topics

Harvesting

Harvest time celebrates the results of your hard work. Are you ready to enjoy your delicious homegrown raspberries? Here are a couple of things to consider as you reap the fruits of your labor: the best time to pick the fruit, and how to store your harvest. How you eat it is up to you!

When to Harvest

For the best flavor and texture, harvest your raspberries when it is dry and cool – when it's not raining, and ideally after the heat of the midday sun has passed. The exact timing will vary by variety and location, but it's usually around summer and into early fall in many areas. Each ripe fruit's coloring should be a deep shade of red, black, purple, or gold, also depending on the variety. You can expect a few raspberries the year you plant if your variety is a primocane-bearing raspberry plant, but, for most raspberry plants, you can expect to harvest starting in the summer of the second year after planting.

Average yield per plant is 1 to 2 quarts of raspberries.

To harvest, grasp the berry (don't squeeze) and give a gentle tug. If they release from the stem easily and the core remains on the plant, the fruit is ripe. If you have many ripe berries all at once, avoid placing harvested fruit all in one container, otherwise you may risk dealing with squashed berries. Carefully remove any visible leaf, soil, or other debris, but do not wash raspberries until you are ready to use them. For short-term storage (refrigeration), washing raspberries makes them more prone to spoiling.

Storage

Keep fresh-picked raspberries out of the light, and refrigerate immediately after harvest. It is best to harvest ripe raspberries every 2 or 3 days to avoid over-ripe and rotting fruit. Raspberries do not keep long after picking – usually about 2 or 3 days in the refrigerator at most.

If you are unable to utilize your raspberry harvest right away, you can gently rinse them in cold water and allow them to dry. Then place the fruit (in a single layer) on parchment or wax paper on a baking sheet and freeze until firm. Place frozen raspberries into labeled and dated freezer bags to store and enjoy any time. Frozen raspberries will keep in proper storage for about 10 to 12 months without losing quality.