

FIELD  
TESTED



# Raspberry Variety Study

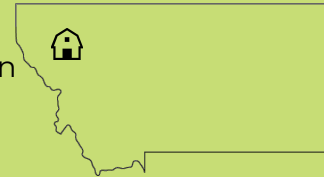


Field Tested is a series of reports about farm tools that have been tested by Montana farmers to enhance their specialty crop production. The reports describe these farmers' findings to help others make informed decisions about their specialty crop businesses. Visit [FarmLinkMontana.org/fieldtested](https://FarmLinkMontana.org/fieldtested) to read more Field Tested reports. This project is administered by the Community Food & Agriculture Coalition with funding from the Montana Department of Agriculture Specialty Crop Block Grant Program.

## Thunder Road Farm | Arlee

### Farm Snapshot

**Location:** Arlee, MT  
**Operator:** Gillian Thornton  
and Bryce Andrews  
**Acres:** 1 acre  
**Crops:** Raspberries



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## INTRODUCTION

While raspberries can be found in many home gardens and farming operations in Western Montana, Thunder Road Farm has struggled to find information about which varieties are most successful in their region. As they researched which berry varieties to plant in their U-pick, they found few resources for berry growers specific to their area, and found themselves relying on resource guides specific to the Pacific Northwest and the Northeast. As part of their Field Tested Project they experimented with a wide variety of raspberries at their U-pick, to determine the best fit for their region and farm.

## FARM BIO

Thunder Road Farm is located in the Jocko Valley and is owned and operated by Gillian Thornton Andrews and Bryce Andrews. The land has been in continuous agricultural production for nearly 100 years, functioning primarily as a cattle ranch. In 2018, they moved to the farm and began custom grazing and managing a neighbor's cattle herd. In the fall of 2020, they took the step of purchasing their own herd, and their pasture-raised, grass-finished beef is available through direct purchase and at the Missoula Farmers' Market. They also established a 2-acre U-pick raspberry patch and orchard, where customers can visit the farm and harvest their own berries.

Gillian and Bryce are committed to practicing regenerative agriculture, making their living from the land while increasing its ecological integrity. They have a conservation easement on their farm, and they are offsetting land used for intensive agriculture with an equivalent space dedicated to ecological restoration.

They intend to make their farm a resource to their community, especially to those who don't readily have access to locally produced food. When COVID-19 first came to Montana, they collaborated with family and neighbors to pool their stimulus checks and purchase three steers that they grass finished on their pastures. They then donated over 1,000 pounds of meat to three local organizations that distribute food to the communities of Ronan, Arlee, and Missoula. As their operation grows, they intend to continue and expand upon their food sharing program. They feel a responsibility to serve their community by helping make it more resilient and food-secure.

### Equipment Purchased

- Raspberry Rootstock Varieties
- Irrigation Tubing
- Irrigation Filter Station
- Automatic Timer
- Trellis Posts and caps



Thunder Road Farm's Raspberry Patch.

## RASPBERRY/BLACKBERRY TRIALS

In their first year, farmers Gillian and Bryce planted 15 different varieties of raspberries, with a mixture of primocane and floricanes fruiting plants, as well as 4 varieties of blackberries. They collected data and reported on the plants' first two growing seasons—how well different varieties survived the winter, harvest times and ripening dates, first-harvest yields—and they also collected data relevant to the success of their U-pick (i.e., sugar content, customer preferences).

As their U-pick operation expands, they will use this data to help them determine which varieties to plant more of, and which varieties are not well-suited for their farm. By sharing their findings, as well as their cultivation methods, they hope this project will be beneficial for other berry producers in Montana and the Northern Rockies.

### Raspberry Varieties

When deciding which varieties to plant for their U-Pick berry patch, they had trouble finding recommendations of varieties specific for Western Montana. They learned that some other local producers had planted Novas and Boynes, but they wanted to explore other varieties that might be well-suited for their zone and climate. They also were concerned about planting just one or two varieties and risk having them not be suitable for their particular farm, and thought it best to test diverse options.

They opted to plant a total of 19 different varieties of raspberries and blackberries on half of the available acreage, with the intention of expanding the patch after seeing how each variety fared. Varieties they planted included:

Red raspberry (floricane): Prelude, Nova, Encore, Boyne, Eden, Killarney

Red raspberry (primocane): Joan J, Himbo Top, BP-1, Polana

Yellow raspberry (primocane): Anne, Double Gold

Black/purple raspberry (floricane): Royalty (purple), Bristol (black), Jewel (black)

Blackberry: Prime Ark Freedom, Chester, Natchez, Caddo



Raspberry varieties by color.

## Thinning, Pruning, and General Maintenance

They planted a combination of floricanes and primocane fruiting varieties to ensure an extended harvest season. Floricane fruiting, or summer-bearing raspberries, ripen between mid-July and mid-August. The canes grow to their full height without producing the first year, and fruit on the second-year cane. Second year canes should be removed following harvest, preferably in late-fall or winter. The benefit of floricanes is that they produce solidly in the middle of summer, and their production does not have the potential of being cut short by an early fall frost.

Primocane fruiting raspberries, on the other hand, produce berries on the first year growth and ripen late summer through frost. Because production occurs only on first-year canes, all of the canes can be pruned down to the ground in late-winter, with new shoots growing fresh each growing season. This makes them very easy to manage, as they can be mowed at the end of each year. In their second summer, they thinned the rows to approximately 6-8 canes per row. They did this on all of the varieties except the black raspberries and blackberries, as they were planted 3 feet apart and did not need thinning at this point. As a general rule, raspberries and blackberries should be thinned annually to 4-6 strong canes per row or hill.

Gillian and Bryce also set up a drip irrigation system that pulls from their well and passes through a filter station with a pressure regulator. Each row has one line of drip tape, though they are considering adding a second line to each row—one on either side of the canes—for more even distribution of water. At first, they capped each line with Easy Loc end caps, but they had trouble with them blowing off the ends, and have shifted to tying the end of the tape into a square knot with the end caps plugging the tube. Overall, they are pleased with their irrigation system.



Raspberry trellising system.

## Trellising

They used 2 <sup>7</sup>/<sub>8</sub> inch drill stem posts at the ends of each row, driven 4 feet into the ground at an outward-facing angle. Between the end posts, they pounded T-posts every 15-20 feet, fitted with a cross piece to hold the wires apart. The height of the wires depends on the raspberry variety and the height of the canes. For example, they trained their black raspberries and blackberries to a vertical “T” style two-wire trellis, attaching the canes with zip ties.



# RESULTS

Variety	Floricanes/Primo cane	Ripening Season	Grow Notes	Tasting Notes	Berry Type
Prelude	Floricanes	Mid July	Established well. Many small canes rather than a few big ones. Needs good trellising.	Good, medium-firm sweet berry.	Red, large.
Nova	Floricanes	Mid-Late July	Established well. Strong upright canes.	Tart and firm. Not our favorite in taste tests.	Red and mid-sized.
Encore	Floricanes	Early August	Established well.	Good, firm, red berry.	Red and large.
Royalty	Floricanes	Late July	Established very well. Short, hardy canes. Dark foliage.	Soft, jammy berry. Hard to transport without damaging.	Purple and huge. Some people think they're bland. Others really like them.
Killarney	Floricanes	Early August	Struggled to establish. Lots of short canes.	Firm, traditional raspberry.	Red and mid-sized.
Boyne	Floricanes	Early August	Struggled to establish. Lots of short canes.	Tart and seedy.	Red and mid-sized.
Eden	Floricanes	Early August	Not vigorous, totally thornless. Spotty establishment in year 2.	Firm, large berry. Very tasty.	Pink and firm.
Joan J	Primocane	Late August-Early September	Strong and vigorous. Ripens slightly ahead of other primocanes. Strong canes. Few thorns.	One of my favorites.	Red, dark, large, conical.
Himbo Top	Primocane	Early September	Vigorous. Needs good trellising.	Firm, large berry. Very tasty.	Jammy flavor. Firm berry.
Polana	Primocane	Early September	Vigorous. Needs good trellising.	Firm, large berry. Very tasty.	Red, wide and large.
BP-1	Primocane	Late August-Early September	Vigorous. Needs good trellising.	Firm, large berry. Very tasty.	Red and large.
Anne	Primocane	Early September	Vigorous but very floppy canes. Needs good trellising.	Firm, large berry. Very tasty.	Red and large, sometimes forked into two berries.
Double Gold	Floricanes	Mid September	Vigorous with strong canes. Slow to bear in year 2.	Firm, large berry. Very tasty.	Yellow, large, conical, and firm.
Bristol	Floricanes	Late July-Early August	Basically a monster covered with spikes. Plant and get out of the way. Tip at 30 inches and 5 feet.	Medium-sized and soft berry. Very tasty.	Yellow-pink/blush. Medium sized.
Jewel	Floricanes	Early August	Basically a monster covered with spikes. Plant and get out of the way. Tip at 30 inches and 5 feet. Many tiny berries.	Small, seedy, and delicious.	Black
Caddo	Floricanes	September	Slow to establish. Vigorous growth in summer, but canes did not overwinter well. Will need winter protection.	Medium, seedy, and delicious	Black
Natchez	Floricanes	September	Slow to establish. Vigorous growth in summer, but canes did not overwinter well. Will need winter protection.	Haven't tasted yet.	Blackberry
Chester	Floricanes	September	Slow to establish. Vigorous growth in summer, but canes did not overwinter well. Will need winter protection.	Haven't tasted yet.	Blackberry
Prime Ark	Primocane	Unknown	Our only primocane blackberry. Seems to need a longer season than we have. Growing would require a row cover.	Haven't tasted yet.	Blackberry

## CHALLENGES

One of main challenges Gillian and Bryce faced was competition from weeds and other plants. Prior to becoming a berry patch, the field had been used as pasture. They prepared the area by making multiple passes with a rototiller, planted a cover crop, grazed it, and rototilled again. They opted not to spray, as they are considering becoming certified organic and wanted to skip this step if possible. However, perennial grasses and clover have persisted and were very competitive with the early-season canes in their second year. Hand weeding is effective but time-consuming, and the grass and clover will continue to be an issue until their plants are very well established. When they plant the remaining rows, they are considering spraying and then transitioning to organic, as this would save them time and energy, and probably give the berries a better start.

Another issue has been pressure from rodents. Their field has many voles, pocket gophers, and ground squirrels, and they have seen some root damage in some of their rows. So far, they have combated this by keeping the alleys and surrounding areas mowed and trying to keep their rows weeded, but may consider other options if the pressure worsens.

### Additional Resources

**Montana Department of Agriculture Specialty Crop Block Grant Program:** The purpose of this program is solely to enhance the competitiveness of specialty crops in Montana. Visit their website to find funding opportunities and more information. Search [Montana SCBG](#).

**Field Tested Reports, Podcasts, and Videos:** Find more reports about other projects and see videos of tools in action at the [Field Tested webpage, under Resources on FarmLinkMontana.org](#)

**Farm Link Montana:** A project of the Community Food and Agriculture Coalition to connect Montana's beginning farmers and ranchers with the tools they need to succeed: [farmlinkmontana.org](#)