

FIELD
TESTED



Fertigation System for a Berry Farm



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 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.

ASPEN GROVE BERRIES | Corvallis



Melissa Allred
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Aspen Grove Berries Snapshot

Location: Corvallis, MT
Operator: Melissa Allred
Acres: 6 acres
Crops: Berries



INTRODUCTION

In 2018, Melissa Allred decided to turn her 15+ years of keeping a large garden, berry patch, and orchard into a farm business so she could focus on her passion of berry cultivation, with an emphasis on honeyberries, strawberries, raspberries. She describes this passion as “a love at first bite”. She currently rents a plot of six acres in Corvallis that previously stood fallow. She planted a majority of the cultivated area with honeyberries, which is commonly known as a Haskap and has a unique flavor which may establish a new niche market. By year four, the bushes will be considered full-grown and will produce 8-12 lbs per bush. She anticipates that at peak production, she will produce an estimated 40,000 lbs of fruit. Allred wants to offer these nutrient rich berries to consumers in the Bitterroot Valley and believes agritourism will ultimately be an impactful piece of

her business. She sells fresh fruits, vegetables, and gourmet jams and jellies at the Hamilton Farmers Market.

PURCHASES FOR A BERRY FARM

Allred planted 5,000 honeyberries in the Fall of 2019 and the focus of the 2020 growing season was to establish the root system and build resiliency of her new crop. In Spring 2020, she planted strawberries and raspberries with a goal of pushing new crop production of the berries.

Fertigation System

She used her Field Tested Mini Grant to purchase a fertigation system which brings nutrients to her entire growing area without creating dead zones or hot spots. The plants are spaced 3 feet apart and the drip is spaced at 18" to encourage root growth. With the help of her fertigation supplier, she calculated how much each plant would need, how many plants are in each row, how much water is delivered per hour and then how many hours each zone would need to run in order for each plant to receive the required nutrients. The applications are timed four weeks apart for honeyberries and weekly for four weeks for strawberries and raspberries.

Based upon the recommendations of other honeyberry and strawberry growers, Allred calculated the appropriate proportions of nutrients per crop. A smart box controller was installed to directly control the delivery of water and nutrients. The fertigation system takes ten minutes to hook up and ten minutes to shut down, an important time consideration as the sole operator of the farm. The applications cost about \$246 per full seasonal treatment round.

The honeyberries were planted in Fall 2019, so they are still establishing themselves. The goal for this year was to grow a healthy root ball and have the plants put out healthy new shoots. Nitrogen was added to help accomplish this goal. The plants before the application were showing

Equipment Purchased

- Fertigation System - \$5,000
 - 1 1/4" 100 PSI poly pipe
 - 1 1/4" oetiker clamps
 - Figure 9 end plug
 - 15 GPH Dostic pump 120v
 - ITC Pump Stand
 - 500 Gallon Storage Tank
 - Plumbing kit for injection pump
 - Poly Reducers
 - LS 15030 Strainer
 - 1/4 turn ball valve
 - Injection coil
- A Smart Box is needed for the system as well, however this was not purchased with grant money



Newly planted honey berries, Summer 2020

some signs of yellowing and the leaves had very little new growth. Three weeks after the first application, the plants had greened up. Allred measured new growth between 4-12 inches, depending on the variety.

The goal for the strawberries and raspberries planted in the spring was to push new fruit production and not as much plant growth. The nutrient blend was heavier in potassium and phosphorus and lower in nitrogen.



Fertigation Tanks

LESSONS LEARNED

Allred initially planned the fertigation system with one large fertigation tank, but now knows that she will need several smaller tanks because the applications vary by plant and the nutrient mix changes depending on what time of year it is applied.

A wire plug was wired directly into the smart box so that the fertigation pump would shut off when the water shut off, otherwise the tank would run dry. This was an oversight Allred was quick to fix! Since this is the first season the fertigation system has been up and running, Allred will continue to monitor the growth and well-being of her crops.



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 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