

# Water Management

**NC STATE** EXTENSION

## General

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Drip irrigation is strongly recommended for caneberry production. Water is the most critical factor for optimal fruit growth and primocane development. In young plants, water is essential for minimizing plant loss and establishing healthy roots and shoots during the first few months. Any restriction of growth in the production year will negatively affect the crops of the current season and the following year. A shortage of water during primocane development in any year will limit fruit size, and the number and diameter of primocanes.

A newly set plant has shallow roots, and therefore needs frequent irrigation. Nearly all the moisture used by blackberries and raspberries comes from the top 6 in. of the soil, which is the primary rooting zone. If moisture is applied by overhead irrigation, blackberry and raspberry plants generally need at least 1 in. of water during each seven day interval of the growing season. Higher irrigation amounts are required with sandy soils and in southern Georgia.

## Trickle / Drip Irrigation

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Trickle irrigation, or drip irrigation from either a tape or tube, is recommended for caneberry production in the South. It is best to install trickle irrigation systems before or immediately after plants are set in the ground. When using plastic mulch during establishment, it is common to place one drip tape on either side of the row (two lines per row) in some areas. However, other growers reliably establish the plants with only one line of tape per row. Replace drip tape with tubing one to two years after plant establishment. Place drip tubes on wires about 12 to 18 in. above the soil surface. Recommendations for emitter spacing and application rate, often reported in gallons of water per hour (GPM), will vary based on plant spacing and soil type. Consult your local irrigation specialist for recommendations for your site.

Trickle irrigation reduces fruit rot and plant disease because the water is applied to the soil under the plants, which keeps the fruit and leaves dry. The trickle system should also be monitored regularly and maintained properly to prevent clogging. It is important that the irrigation water is clean. Test well water and surface water from ponds or streams for chemical and biological impurities, and provide the recommended treatment and filtration needed for the optimal function of a drip irrigation system. Contact your local Extension center for more information on how to collect a sample and where to obtain an evaluation.

## Mulching

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Mulch can be an important part of your water management regime. Large volumes of material and many hours of labor are required to apply mulch to a field, and some mulch must be replaced each year. Weed-free mulches of small-grain straw or other suitable materials can conserve moisture,

minimize erosion, aid in weed control, and add organic matter to the soil.

Mulches should be chosen carefully, because they can introduce weed seeds and encourage rodent infestation and crown gall, a plant disease caused by the soil-borne bacterium *Agrobacterium tumefaciens*. Mulch can also be a fire hazard. Do not use hay because it may contain the chemicals picloram (Grazon) or aminopyralid (Milestone). Give mulches serious consideration when growing blackberries in lighter soils with low organic matter.

Plastic is a good mulching option in locations where orange velvet algae is a serious problem. Black plastic mulch has been found to reduce algae problems by reducing soil splashing and providing a drier microclimate around the base of the bush. Many growers in Arkansas use landscape fabric which will last the life of the planting. The woven fabric allows rainwater to pass through but reduces weed growth and evaporative water loss from the soil.

For more information about orange velvet algae (orange felt), see the University of Georgia Extension's [\*Orange Felt \(Orange Cane Blotch\) of Blackberry\*](#) factsheet.

Although there are many benefits from using plastic mulch, application of pesticides can be a problem when plastic mulch is used to cover the beds. The pesticides can run down the plastic and concentrate at the edge of the beds. It is best to consult with your local county Extension personnel and to read labels.

For more information on water management in caneberries see [Caneberry Irrigation](#) (PDF, 90.3 KB).

## Authors

### **Gina Fernandez**

Extension Specialist (Small Fruits Breeding and Production) Distinguished Professor, Horticultural Science

### **Amanda McWhirt**

Extension Specialist, Associate Professor Department of Horticulture, University of Arkansas

### **Christine Bradish**

Extension Assistant Horticultural Science

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