

# Growing Cranberries

Cranberry growers monitor their beds to make sure the plants are healthy. IPM, or Integrated Pest Management, is a method by which growers take care of their plants.

In winter, growers flood the beds to protect the buds from the cold. When the water freezes, ice forms. A thin layer of (1) \_\_\_\_\_ is spread over the ice. When Spring arrives the (2) \_\_\_\_\_ melts and the sand filters down through the cranberry vines. This motivates the vines to grow and destroys many insect eggs and cocoons that are hiding on the ground beneath the vines.

Once Spring arrives, the cranberry plants need to be jump-started from their dormant, winter sleep. The growers apply (3) \_\_\_\_\_ to give the plants some extra nutrients that they need.

Also in the spring, other plants begin to compete with the cranberry plant for space, water, and sun. If other plants (lumped together by the word “weeds”) grow too much, they can crowd out the cranberry vines and eventually take over the area causing the cranberry vines to die. The grower protects the vines by removing the weeds, or applying chemicals that (4) \_\_\_\_\_ the weeds but do very little harm, if any, to the cranberry vines. Some chemicals are not always good for the environment, however, so there are also many other materials growers can put on the weeds that are less harmful to the environment. For example, (5) \_\_\_\_\_ is a type of chemical element that occurs naturally in the environment, and is very good for cranberries but not so good for weeds.

During the growing season, the grower continues to check the vines. If they appear unhealthy, the grower must try to find out what is wrong. If a (6) \_\_\_\_\_ has attacked the plants, the bed may be flooded with water to help eliminate it, or a type of chemical called a (7) \_\_\_\_\_ may be applied to protect the plant against any further infection.

In the summer, bees are brought in by the grower to help pollinate the cranberry flowers. Other insects can also be found throughout the bed. The grower must determine what insects are there, how many there are, and whether they are (8) \_\_\_\_\_, neutral, or harmful to cranberries. One way the grower does this is to use a net to sweep over the vines. The insects are then counted and identified. There are also (9) \_\_\_\_\_ that can be set up in various locations that will attract certain harmful insects and capture them in a sticky substance. This helps the grower to know if those insects are on the bed or not, and if a lot of them are found in the traps, it could be a sign of trouble because only a small amount of the insects are caught in the traps and the rest are probably eating the cranberries.

If only a few harmful insects are found anywhere, the grower can save time and money and leave those few insects alone. If too many are found, however, there are many tools a grower can choose from for killing the harmful insects. (10) \_\_\_\_\_ the bed with water will kill many types of cranberry insect pests. Caterpillar pests can be controlled with a safe material called *B.t.* that makes caterpillars sick but does not harm any other type of animal. The caterpillars must eat the *B.t.* in order to become sick, but it only takes a few bites before they stop eating. *B.t.* is a favorite choice with growers because it does not harm bees which are trying to pollinate the cranberry flowers.

The use of water is very important to a cranberry grower. In winter, it covers the (11) \_\_\_\_\_ and protects the buds. In the spring and fall, water is sprinkled on the plants during cold nights and mornings in order to protect the buds from the cold air. When the irrigation water freezes, it actually releases a tiny amount of (12) \_\_\_\_\_, which is just enough to keep the cranberry buds from freezing.

Growers have (13) \_\_\_\_\_ on their beds to keep track of the temperature and they are connected to alarms that will alert them whenever the temperature gets too low. They will also alert the grower in the summer months if the temperature gets too (14) \_\_\_\_\_ (usually over 92° F). Water is used in both cases to protect the plants.

Water is also important during harvest. The grower uses a gravity system to flood each section of the bed when the berries are ready to be harvested. The water is moved from one (15) \_\_\_\_\_ to another by a system of ditches and flumes to let the water in and out. Once all of the beds are harvested, the water is returned to the (16) \_\_\_\_\_ from which it came. Water is also usually (17) \_\_\_\_\_ over the berries during the harvest in order to wash away any leaves, dirt, or twigs that may be on them.

### Word Bank

pond	ice	traps	thermometers
bed	plants	poison	flooding
fertilizers	fungicide	sprayed	disease or fungus
heat	sulfur	beneficial	high (or hot)
sand			

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