Follow These Guidelines To Growing Succulent Sweet Corn

ANDY ANDREWS Lancaster Farming Staff

HERSHEY (Dauphin Co.) -While there are no magic ingredients to growing the tastiest sweet corn, university experts agree on several factors: choose seed wisely, know your customers, take good care of the soil nitrogen that sweet corn demands, and watch the silks.

Follow those procedures, and you could be well on the way to sound sweet corn production, according to several specialists who spoke last week at the Mid-Atlantic Fruit and Vegetable Convention at the Hershey Lodge and Convention Center.

While other factors might measure up, growers could be overlooking some critical stages in their production of corn. One chal-

lenge often overlooked is the neighbor's corn — and field corn plots can end up dramatically effecting sweet corn.

"Depending on what stage your sweet corn is in, if there are fresh silks out there, you will run into real problems from field corn," said Dr. Richard Hassell, vegetable extension specialist from Clemson University, South Carolina.

By far of all vegetables in the state, sweet corn production is the highest. According to the 1997-1998 Statistical Summary published by the Pennsylvania Department of Agriculture, sweet corn was number one, at 19,500 acres in 1997 for fresh market and 2,800 acres for processing.

Despite some of the best efforts on the part of growers, sometimes the corn turns out not very sweet, at times far too bland, and loads at auctions get rejected.

Growers should beware, according to Hassell, that field corn generates a lot of extra pollen. Depending on wind direction and speed, the wind can transport that field corn pollen into sweet corn plots. And if the corn is under drought stress a couple of weeks before silking, the corn can suffer in ear quality and sweetness.

'Sweetness," which can be measured, is actually a byproduct of production. If the plant is under stress, sweetness is directly affected.

That's why it's important to consider fertilization of the plant, according to Hassell.

Like field corn, the nitrogen available to the plant in the soil can be measured with the pre-sidedress nitrogen test (PSNT), according to John Howell, University of Massachusetts, who also spoke at the convention. The PSNT can provide a good indicator of how much nitrogen is available to the plant at the critical stage — leaf 6.

The threshold level of 25 parts per million (ppm) of nitrogen (N) is the cutoff point. If the soil N measures 25 ppm or less, "we recommend sidedressing," said Howell. "Sidedress from 50-60 pounds of nitrogen per acre."

If growers put on more than the recommended amount after the PSNT, "we almost never see a crop response." But an overall soil test can also help growers benefit in a big way. Growers need to look at the soil pH - an item "often overlooked," Howell said.

For a typical sweet com plant to develop ears, a corn acre needs about 55 pounds of nitrogen, 8 pounds of phosphorous, and 30 pounds of potassium. Stalks need about 100 pounds of nitrogen per acre, 12 pounds of phosphorous, and 75 pounds of potassium.

To perform the PSNT, at 12 inches of corn height, the soil needs to be tested with a probe to 12 inches deep (24 inches of depth would be better), in a place where no fertilizer has been broadcast or banded. Fifteen to 20 subsamples or cores need to be mixed together. similar to a regular soil test. In this case, the sample needs to be completely dry before being shipped to the lab. (The dryness is to stop chemical reactions from taking place to break down the nitrogen in the soil).

For growers that have little topsoil to work with, sampling down to six inches may be all that is needed. At that depth, perhaps a 30-35 ppm cutoff level would be sufficient, Howell noted.

For the nitrogen to work, however, soil high in organic matter will provide the energy necessary for microbes to break down nitrogen, especially where organic fertilizer from manures or compost are used. Manure provides about half the nitrogen in soluble, ammonia form, as long as the material is incorporated right away, the first year.

Too much nitrogen at sidedressing can create environmental problems. Howell noted he has seen that a lot of rain in June has leached out nitrogen overapplied at sidedressing.

For the next year, the organic nitrogen, in nonsoluable form, will be available the next year for the crops.

According to Hassell of Clemson University, cultivar selection plays a big role in crop productivity and acceptance.

He said that selection "dictates where you're going to be able to

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