

Growers Believe Proper Timing Helps Ensure Bountiful Tomato Harvest

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Started out dry

In a "normal" growing season, as long as enough rain arrives on a timely basis, the plants will survive and thrive, no matter what the heat stress conditions. But the past growing season started out dry and continued that way throughout.

"At least sometime during the summer you get a significant thunderstorm or something to give you some relief," said Hershey. "But last year we had nothing."

But the growers were prepared. They brought out the irrigation lines. In some cases, they needed only 200 to 400 feet. But a six-inch main line, drawing water from the Conoy Creek, stretched 6,000 feet. And the growers were busy moving the line all season long.

When the rotations were complete, the growers had applied about eight inches of water to all the crops — not all evenly, but the crops received enough water to keep them growing.

Irrigation necessary

The farmers agree that irrigation is absolutely necessary to growing tomatoes. Without irrigation, tomato yields drop severely, and in many cases, farmers lose money.

"Just about every year you can figure you're going to have to irrigate some," said Hershey. "But last year was the first that we had to irrigate them the whole way along. Just constant water on them."

"After a year like last year," said Frank, "you look at that because the guys that couldn't put water on, most of them lost money. There's too much risk involved not to have water available."

The growers use an overhead sprinkler system which distributes the water in a 40-foot radius. Hershey said that, when it comes to

irrigating, it is hard to tell exactly what to do. Often times water is lost to evaporation. "Are you better off slopping them up once or hitting them a lot of times with a little bit?" he said. "You don't know."

Don't repeat cycle

Hershey said that this year they don't want to repeat the cycle. But if another drought occurs, they intend to use the nearby water source if necessary.

The growers were concerned about the water being drawn from the Conoy Creek throughout the season. The creek was running slowly until early spring, and now, because of the rain, "it looks as good as I've seen it in about the last three years," he said. "Fortunately, between Elizabethtown and the river, we're the only guys that are drawing out."

"There're things we should have done last year that we didn't do," said Hershey. "We didn't sidedress any nitrogen at all. But we were moving pipes, so it didn't get done. And so one field had 29 tons, and maybe we could have had 32 out of it. This year we're going to make more of an effort to make sure it gets done."

Frank said that they usually sidedress after cultivation with about 28 pounds of liquid nitrogen.

Crop saves us

Last season, by July, Hershey said, the growers knew what the corn season would be like. A drought was well on the way. So the growers put more emphasis on the tomato crop, which Hershey said was "the one thing that's going to save us."

The plants were irrigated up until harvest time. Some plants could have used even more,

according to Hershey. And while adverse weather affected other nearby tomato growers, Hershey and Frank were fortunate to escape a lot of it.

And the weather reports were often conflicting, according to Hershey. When the weather report called for rain, and it didn't come, the growers decided to irrigate.

As for next season, Hershey is concerned that there be enough to replenish the stream if another drought occurs.

It's scary

"It's scary," he said. "I don't mind putting water on, but is the water going to be there?"

To help the soil retain water, Hershey and Frank follow a strict soil program that involves planting cover crops over the field (barley) and subsoiling. Because of the heavy load from the 20-ton trailers during harvest, the soil is compacted and needs to be V-ripped.

Also, Frank and Hershey soil test every two years. In the past, according to Frank, the growers also obtained nitrogen tests and recommendations from a regional agronomist. The agronomist recommended 80 pounds of nitrogen per acre. But Frank said that only 30-50 pounds of nitrogen were applied.

The growers have been watching the pH steadily to maintain it between 6.3-6.5, and applying lime when necessary. The lime applications are necessary because of the application of broiler manure, which tends to lower the pH.

The growers also apply dairy manure to the fields. To aid in disease resistance, the growers also rotate to other fields — especially to fields that have not grown tomatoes.

Controlled weeds

Last year, according to the processor reports, Hershey and Frank controlled weeds with a preplant incorporated treatment of Devrinol at three pounds per acre. Post applications of Lexone DF at 0.33 pounds per acre and Poast at 1 pint per acre were applied for broadleaf (velvetleaf in particular, according to Hershey) and grass weeds. The crop was on a 10-day spraying schedule.

Fungicides were applied (for anthracnose control), including Champ at four pints per acre, Bravo 720 at three pints per acre, and Asana XL at 6 ounces per acre. Butacide was applied at 0.75 pints per acre for Colorado potato beetle control.

Ethrel, to improve yield, was applied at three pints per acre during clear weather.

Hershey said that not all of the chemicals were used by the growers. Because of the drought, at least 25 percent of the pesticides available were not used.

Cultivate twice

Normally, the growers cultivate twice during the season. This year, Hershey said they intend to get some cultivation in.

Harvest, using about 8-10 laborers, began August 8 and lasted through September 3. Most of the harvest was completed in a 15-day period, according to Hershey.

After harvest, some of the acreage was chisel plowed. The stalks are a problem, however. Hershey said piles of the stalks were difficult to shred.

Some of the best acreage yielded as much as 29 tons per acre. Hershey said that a combination of factors contributed to a good yield.



Steve Hershey inspects the transplants at the Dale Frank farm.

Loose and fluffy

One field "had been in soybeans the year before, and it had cow manure," he said. "The ground would have been in perfect condition — soybeans tend to make it really loose and fluffy."

But having good yields depends on many factors, including good transplants and loose, healthy soil.

"Tomatoes are a detail crop," he said. "It's like the cows. I mean, you can't skimp, you can't cut corners." If you do, said Hershey, "In the long run you're saying 'I'm saving a little money,' but in the long run, I don't think you're doing yourself a favor."

The tomato growers will be trying a new variety this year, OX-4. The Early Pear, a prevalent plant in the operation, is a peeler variety for canning. The LaRoche variety, according to Hershey, was his favorite because of its standability.

"Everything last year did within

range," he said. Nothing stood out from the rest.

Hershey believes the award, sponsored by Penn State and Furman Foods, Northumberland, honors their work and helps them set goals. "It's the same thing with DHIA and cows," he said. Hershey said the year-end DHIA averages are published every year, which list, in order, the top milk-producing herds in the state. He looks at the award as a challenge.

"It's an encouragement," said Frank. "You always try to best yourself."

Frank said timing will dictate the success of any operation. And keeping up with the details and managing the ground and plants in the right ways are essential and mean more than awards.

"It's nice to try to be better," he said. "I'm not really out there to make awards, I'm out there to make a living."



Working to set the timing mechanism, Dale Frank makes adjustments to the six-cup carousel.



Dale Frank, left, and partner Steve Hershey (not pictured) were honored at the Vegetable Conference earlier this year in Hershey for outstanding tomato yield. James F. Kohl, vice president, Furman Foods, presented the award.

Western Cows Make More Milk

DOYLESTOWN (Bucks Co.) — In 1961, for the first time, an entire state's dairy herd averaged over 10,000 pounds of milk per cow. The state was California.

Now a state has exceeded an average of 20,000 pounds per cow. That state is New Mexico. In 1961, New Mexico ranked 33rd in output per cow among the lower 48 states.

For 1991, the top nine states in output per cow are in the western U.S. Connecticut is the only non-western state to make the top ten by this measure of dairy productivity.

Pennsylvania ranks 16th, with a 1991 average output per cow of 15,106 pounds of milk. The U.S. average for all states is 14,868 pounds.

Top Ten States in Output/Cow 1991

State	1991 Output/Cow (lbs)	Rank in 1961
1. New Mexico	20,394	33
2. Washington	18,814	8
3. California	18,623	1
4. Arizona	18,032	2
5. Nevada	17,461	21
6. Colorado	17,338	25
7. Oregon	16,590	26
8. Idaho	16,461	13
9. Utah	15,975	9
10. Connecticut	15,879	6

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