Drip Irrigation Means Reduced Water Use and a Smaller Carbon Footprint

Drought. No member of California Tomato Farmers is immune to it. In fact, drought is simply a part of farming in California. While some years are worse than others, the past few have been very tough as water supplies have gotten tighter in California's Central Valley. And this is certainly not the first time — nor will it be the last time — that California farmers have to conserve all the water they can.

"We started using drip irrigation during the drought of the late 1970s," says Bob Giampaoli, farm manager for California Tomato Farmers member Live Oak Farms of LeGrand, located in the heart of California's central San Joaquin Valley. "Today we have about two-thirds of the acreage in Live Oak Farm's operations that produce crops grown using drip irrigation."

Besides the significant savings in water use, there are other advantages to using drip irrigation.

"Everyone is concerned these days with reducing their carbon footprint," said Giampaoli, who explained that drip-irrigated fields require about 66 percent less land preparation than flood-irrigated fields. Giampaoli estimates that a tractor must pass through the field about six times in order to prepare the land in a flood-irrigated field, while drip requires about two. This translates into reduced fuel needs and fewer vehicle emissions. "Drip irrigation helps in our efforts to farm sustainably," he said.

Sustainability is something Live Oak Farms knows much about. The company was founded about 80 years ago by three Italian immigrants, including Bob's grandfather, Marino Giampaoli. The company originally specialized in growing tomatoes, which were hand-packed in the shade of a large Live Oak tree that grew on the farm. The company named its tomato brand and eventually its company after that tree — and it still stands on the farm today. The third generation of this founding family is still farming in the small community of LeGrand, with the fourth generation now involved as well.

Today, Live Oak Farms produces bell peppers, almonds, wheat and alfalfa with crop rotation being an important practice in ensuring that the health of the soil and the environment are maintained.

"Crop rotation is important to our operations because the practice kills root diseases and reduces the need for fumigation with chemicals," Giampaoli said. "We have actually eliminated the use of soil fumigants entirely."

Giampaoli said when a drip field is planted with tomatoes, they remain there for three to four years and are then rotated with wheat or alfalfa. With this practice, the drip system for the tomatoes can remain in place without having to be replaced each year.

Giampaoli said modern technology has greatly assisted efforts to increase the amount of acreage Live Oak can put under drip irrigation systems. By using a GPS system installed on the tractors that lay drip tape, it is much easier to line up and center the tape. "The computer always knows where the center of the row is and it is much easier to prepare a field," Giampaoli said.

Giampaoli concludes that drip irrigation is something Live Oak Farms is happy to have used over the years, and today, the water savings has become critical to their farming operations. Droughts in California will likely always come and go, but the family farming operations that make up California Tomato Farmers must be able to farm year after year, no matter what the conditions. Operations like Live Oak Farms have remained sustainable for generations by adapting and utilizing resources to ensure their survival. It is a way of life that will always be important as Live Oak Farms continues to farm for future generations.