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Seamless drip tape gains in popularity among growers

IRRIGATION

By Kathy Coatney

More farmers in California are turning to seamless drip tape for irrigation of their crops. Seamed and seamless drip tape are derived from different manufacturing methods that produce very different products, but manufacturers say seamless drip tape is stronger and more durable.

The closeup photo of seamless drip tape shows the opening where an emitter would be placed.

The manufacturing process for seamed drip tape requires that the plastic film be folded and then glued together, and the flowpath is formed within the glue at the same time. To dry the glue, the tape edges must be ironed.

The drip tape technology falls into three categories. First, there is seamed drip tape that starts out as a flat sheet of plastic that is folded over and glued. The second category is the extruded drip tape that is a continuous round pipe. There is an extruded tube, but because there is no seam and no glue, the emission device is made a different way. The older technology created the emission device with an injection molded emitter, called a discreet emitter, or an emitter tape.

A discreet emitter is injection molded. The emitter is attached to the extruded tape wall. In the past, this equaled a higher cost for closer emitter spacing. A vegetable crop, for instance, that needed an emitter every six or eight inches, rather than the standard 18- or 24-inch spacing, had to pay an additional cost for the closer spacing.

The third category is a hybrid of both. It is an extruded tape, but instead of the discreet emitter, it is a rotary-molded emitter strip that is inserted into the tube. The price is the same for all emitter spacing, whether it's an eight-inch or a 24-inch.

The irrigation sector has been changing over to seamless tape.

"This change has been gradual, but ongoing for the past 10-12 years," Claude Corcos, marketing manager for Toro Micro Irrigation, said. "The other two really big trends are closer emitter spacing and lower flow-rate emitters, giving growers the ability to have greater control over the placement of the water in their drip system."

This is important when the growers want to increase pressures to flush the system and for maintenance.

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Also, lower-flow emitters equal less expensive pumping systems.

"Low-flow tapes can go longer lengths of run and still get great uniformity. They require smaller piping, and they can use smaller filters and pumping systems," Corcos said, adding the entire system is less expensive.

Steven Ponce with Cal Pacific Berries and Sun Valley Berries in Watsonville, has seamless drip tape on about 250 acres of strawberries, raspberries and blackberries.

They are an organic operation, and they use fish emulsion fertilizers, which means plugging is more likely.

"We run a pretty aggressive fertility program, and we would always have plugging on the ends," Ponce said, adding they tried products to help with scale, but it didn't solve the plugging problem.

"It gets pretty expensive once you have to start changing out the drip tape, especially in the strawberries," Ponce said, adding they decided to go 100 percent seamless in one year, and they haven't had plugging problems since.

"Being seamless, there's not going to be any fertilizer leftover in those seams," Ponce explained, adding along with the seamless drip tape, the emitter back flushes itself out, and he said both have helped to solve the plugging issues.

"This is our third year now," Ponce said, since they switched to seamless drip tape, and they haven't had any more plugging problems.

Jesus Marquez, field operation manager for Durst Organic Growers in Esparto, said they just installed seamless drip tape this year, and they currently have 70 acres of it in operation.

Next year they will have two asparagus fields, one with seamed drip tape and one with seamless drip tape, in order to do a comparison.

Jason Holman, a director at Abbott & Cobb Seed, a seed research company in Esparto, said the company has been using seamless drip tape since it started using drip irrigation in 2006. The seamless drip tape is used on a variety of crops.

"We do primarily watermelons and melons," Holman said, adding they also grow a variety of crops from cucumbers to sweet corn to peppers.

Holman has worked with seamed and seamless drip tape, and he prefers to use the seamless. "The difference between seamless and seamed tape is the leak issue," he said.

Durability of the seamless drip tape was a definite advantage for Holman.

"I think the seamless drip tape gives us an advantage because seam splitting is one less thing to think about when checking for leaks in the field," he said. "I believe that it (seamless) minimizes the amount of leaks we have to fix because seams won't split. It makes me more confident in our uniformity of irrigation."

Seamed and seamless drip tape are close in price.

"All the tapes are probably within 10 percent of each other," Corcos said, adding that the market is definitely trending towards an extruded tube.

"Most of the capacity that's been installed worldwide in the last 10 years has been on a platform for extruded tube. So that's where most of the growth has been, making the seamed tapes take a secondary position in the marketplace," he said.

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