

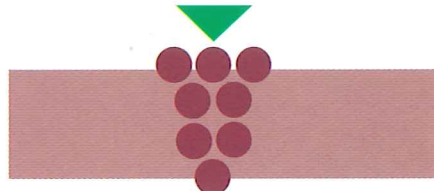
# Grape Grower Adds Insurance Policy to Drip Irrigation

**W**hen Continental Vintners of Paso Robles, Calif., spent \$300,000 to convert from sprinkler to an overhead drip irrigation system in late 1994, owner Herman Schwartz and general manager Ric Fuller decided to take out an "insurance policy"

that it would work as planned. They decided on a water-treatment formulation that enables water to flow freely through the system by preventing biological and mineral fouling that might clog drip emitters covering the operation's 500-acre vineyard.

A free-flowing drip irrigation system reduces maintenance, water-consumption costs and — most important — produce a healthy crop of wine grapes, ultimately sold to major California wineries. "We decided to convert to drip because it would use the available water more efficiently than the sprinklers we'd been using for more than 20 years — a critical issue here in California," explains Fuller, now in his 20th year at Continental Vintners.

"The sprinklers only gave us maybe 55 to 65 percent application efficiency. We did our homework and learned that pressure-compensating drippers would give us 80 to 85



percent application efficiency—but only if the water flows freely through them. For us, that translates into dollars at the other end—more efficient and less water use, more uniformity in the vineyard, the ability to pinpoint-

apply fertilizers and insecticides, and less hazard to nitrate percolation in the water tables below."

Continental Vintners uses a product called Sure Flow from CH<sub>2</sub>O International of Olympia, Wash., at 1.5 parts per million (ppm). Fuller works closely with Rich Bernier, CH<sub>2</sub>O's Fresno, Calif.-based representative, and Mel Roush, of Valley Vineyard & Orchard Supply in Lodi, Calif. They closely monitor Continental Vintners' use of the water treatment chemical to ensure that it keeps the irrigation system clean.

"We draw water from deep reservoirs and use a booster pump to push it through a sand-media filter and from there into the drip system," says Fuller. "A sand-media filter is very important, but it doesn't remove all the algae and other biological organisms that can pass through the sand media filter and clog our system. That's why it's essential — extra insurance — to add a water treatment formulation to the irrigation program."

Fuller says Schwartz insists upon adequate water flow through the drip irrigation system. Schwartz is also the driving force behind other enhancements. They include implementation of a cover crop at the vineyard, as well as a conversion to a 24-inch cross arm quadrilateral cordon system to improve the quality of the grapes.

After using the drip-irrigation system for the entire 1995 season, Fuller measured the results. "The general quality of



**Herman Schwartz, owner of Continental Vineyards, adjusts an injection feed pump that regulates the ratio of water treatment formulation to gallons of water per minute. Photos courtesy: CH<sub>2</sub>O International.**

*A free-flowing drip irrigation system reduces maintenance, water-consumption costs and — most important — produce a healthy crop of wine grapes, ultimately sold to major California wineries.*

our grapes was the best ever,” he says. “A lot of people believe that the vines need to adjust to the new drip pattern in the first year after a conversion from sprinkler to drip. But our vines took off and didn’t even notice the change. One major reason was a free-flowing drip irrigation system that delivered a uniform amount of water to the vines.” □



**Ric Fuller, general manager of the vineyard, inspects a fertilizer and drip hose prior to the 1996 growing season.**