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# Dry year hasn't pinched valley farmers ...yet

Irrigating by sprinkler is a way to save water

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(Last in a two part series)

While some Santa Cruz County residents are hanging up their lawn sprinklers in the struggle to save water, Pajaro Valley growers say that sprinkling their crops can conserve water.

Usually, the first thing to go when water districts ask their residents to restrict water use, sprinkler systems can mean considerable water savings for the grower when used on orchards and row crops, according to University of California agricultural advisors.

Norman Welch of the UC extension office here says only three or four years ago few growers used sprinklers for irrigation in the valley. Now about 40 per cent of the fields in the valley are irrigated at least in part by sprinkler systems.

"We are doing everything we can to conserve water," J. J. Crosetti says. Crosetti, owner of Crosetti Orchards and the J. J. Crosetti Company, says that he uses the "simulated rain" on about 80 per cent of his orchards and also on his row crops while seeds are germinating.

Crosetti knows first hand that the groundwater supply in the valley is a finite commodity. He says he has had one small well go dry on him and has several that lose suction occasionally, which means that the water level has dropped below an adequate pumping level.

The furrow method of irrigation used previously meant a lot of wasted water, according to Crosetti. The irrigation water was left in furrows between the seed beds and much of it evaporated or seeped into the ground without reaching the tiny plants.

With sprinklers, the irrigator can calculate exactly how much water is needed and apply it accordingly, says West Coast Farms irrigation engineer Frank Doughty.

According to a recent study for the city by Brown and Caldwell, growers use about 50,000 acre feet of water a year in the valley. And while the return of the summer fog after the early summer heat wave meant less water consumption for domestic water suppliers, the biggest demand for agricultural water is yet to come.

Jim Palabay, Santa Cruz County public works engineer, is worried about what the August demand for irrigation water will do to the level of the valley's water table. This year the level of some wells in Santa Cruz County dropped three feet from the level measured at the same time last year, while some in Monterey County have dropped as much as four-and-a-half feet.

While there are few areas where water use restrictions are enforced in the valley, Palabay and other county water officials have asked sanitation and water districts to help the county buy and distribute water saving devices for the home. Any reduction of water use helps the strain on agricultural wells, according to Palabay, since often city wells draw on the same acquifer, or under-

ground stratum of watercarrying sand and gravel.

Some of these gadgets of frugality include shower and faucet heads that reduce water flow, and devices that lessen the amount of water used when a toilet is flushed. The state department of water resources reports that about 35 per cent of the more than 1.2 million gallons of water used in California homes every year could be saved with the use of these devices.

Meanwhile, growers, like West Coast Farms, have started to use surface pipe instead of earth ditches to convey water to plants after the seeds have germinated and the plants are thinned. Like the sprinklers the pipes reduce evaporation and underground water loss, Doughty says.

Harvey Voth at the Monterey Bay Academy is experimenting with drip irrigation on the school's strawberry fields. Drip irrigation is the newest method for saving water. Although it's a more expensive process, growers could save up to 50 per cent of their irrigation water with the drip method, UC advisor Ronald Tyler says.

Both Voth and Doughty say their wells are holding up but admit that another year with little rain could mean problems.

"So far so good," Doughty says, "But no one'll be unhappy if we get 25 inches of rain next year." The average for the valley is about 23 inches.

Short of reclaiming wastewater from north Santa Cruz County or sea water from the bay, and pumping it into agricultural wells, growers look to the San Luis reservoir as a future source of water, according to Santa Cruz County Supervisor Cecil Smith.

Both Monterey and Santa Cruz Counties have each reserved 10,000 acre feet of the water held in the dam near Los Banos, which is part of the federally-funded San Felipe division of the Central Valley Water Project. Each county contributed $1,000 to this year's project budget and in return, they have the option to contract for the water once conveyance facilities are built, Smith says.

The 10.3 mile underground pipeline through Pacheco Pass is only partially built and further construction has been held up by a court order obtained by environmental groups. The environmentalists maintain the public has not had a chance to comment on the way the water will be brought from the San Joaquin River delta.

Construction was scheduled to begin later this year but neither Smith nor county public works director Don Porath, who both sit on the project's board of directors, will predict how long the legal dispute will last.

It is expected to take seven years to complete the construction for conveying water to the Santa Clara County Water District, which has a contract for more than 200,000 acre-feet of the dam water. It will be several years after that before the two counties could complete hook-ups to the main pipe, Porath says.

"It's so far in the future, I don't even like to think about it," Porath says.

Although most of the water will probably be used for irrigation because the growers will "feel the need first" Porath says that decision will be made when the water arrives.

But Royce Bolton, who faces a water shortage in the Aromas water district he manages, has other ideas.

"It would be much simpler to use the water for domestic purposes because once it is used for agriculture, it would be very difficult to reclaim and treat sufficiently for human consumption," Bolton says.

However, the federal government prices its water to make it less attractive to municipalities, according to Porath. The U.S. Bureau of Reclamation has priced water taken from the dam and used for irrigation at about a fourth of the cost of what it will charge municipalities for domestic water use. According to Porath, the grower would pay about $7 an acre foot while Watsonville would pay about $30 an acre foot for residential use. Nevertheless, it is still much cheaper than reclaiming waste or sea water, Porath says.

"The San Felipe water is really cheap insurance for Pajaro Valley agriculture," Smith says. "Thank goodness we don't have a critical situation in our groundwater supply because San Felipe is pretty far down the road."

But grower Bob Tafton wonders if the water situation is that stable. Trafton says he is more worried about dropping well levels from lack of rain than about salt water intrusion, even though his land lies near the ocean.

"It's just like a time bomb ticking under us," Trafton says.