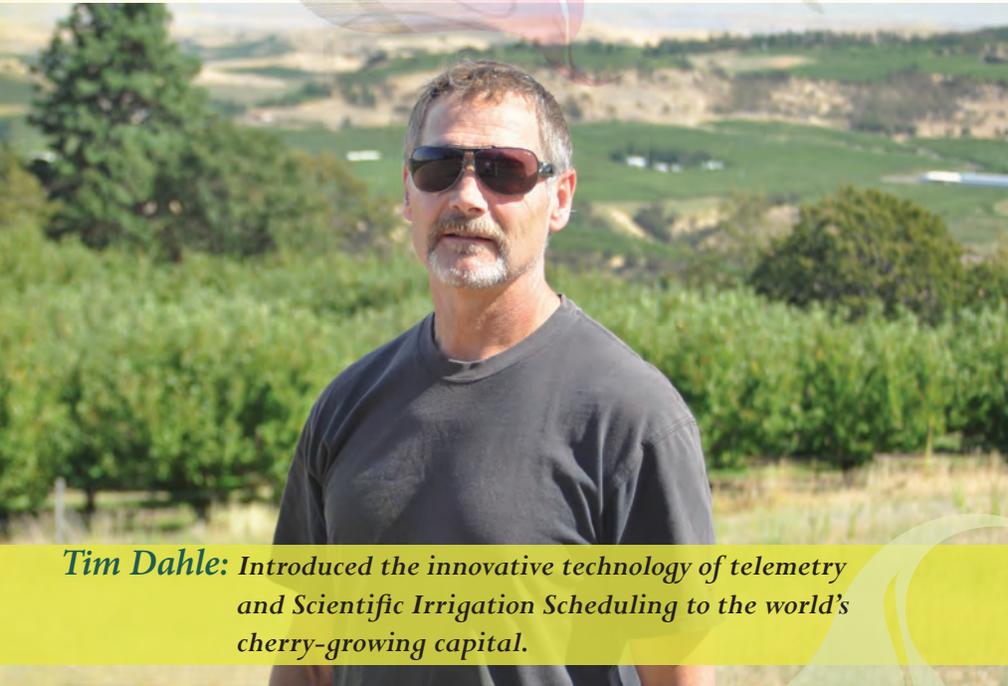


O · R · E · G · O · N *Conservation* SHOWCASE



Tim Dahle: *Introduced the innovative technology of telemetry and Scientific Irrigation Scheduling to the world's cherry-growing capital.*

The Dalles, Ore. —

The Dalles, Oregon is the Sweet Cherry Capital of the World, and that crown for nectarous fruit is the result of not just suitable soils and a hot, dry climate, but an efficient irrigation system. Thanks to a partnership of local landowners, eight organizations and USDA-Natural Resources Conservation Service's (NRCS) Agricultural Water Enhancement Program (AWEP), intensive irrigation water management will meet water quality and supply challenges of the future and growers will produce even plumper fruit.

According to Merlin Berg,

Coordinator for the Wy'East Resource Conservation & Development Council, the five-year AWEP project will save 10 to 20 percent of the water used while producing high-quality crops on 5,500 acres. On average, 10,513 acres of water are diverted annually from the Columbia River and pumped more than 1,000 feet in elevation to the top of the orchard land. "By the time the project is fully implemented 1,051–2,103-acre feet of water will be saved each year," says Merlin.

When water is used more efficiently, there is less need for energy-hungry pumps. "Irrigators can save electricity and save energy, and in today's economy that's important to everyone's bottom line," explains Dusty Eddy, NRCS District Conservationist. The average annual savings of power is anticipated to be 880,000–1,210,000 kWh. "We've also found that proper application of irrigation water can reduce the amount of fertilizers and soil amendments that run off or leach into surface and ground water," Dusty adds.

The AWEP project was proposed by cherry grower Tim Dahle, whose edgy perspective on agriculture production makes him an asset to fellow landowners locally and an educator in other

*Cooperative
Conservation
Produces Scientific
Irrigation
Scheduling for
Irrigation
water management.*



Weather Station: *Weather stations relay wind and weather information from IFP.net to landowners via the internet.*

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— **Dusty Eddy**
NRCS District Conservationist

parts of the world. Tim explains the origin of his idea was need-based: “I knew our water meters in the irrigation district were 40 years old and were wearing out. Since we would need to replace them, it seemed the right time to explore the latest technology.” Tim’s research suggested that by using telemetry, a technology that allows remote measurement and reporting of information, water management in The Dalles region could be greatly enhanced.

In his capacity as vice president of The Dalles Irrigation District (TDID), Tim pitched the idea of telemetry and a program of Scientific Irrigation Scheduling (SIS) to the irrigation district board 15 years ago. According to Dusty, “SIS works on improving the

efficiency of irrigation scheduling by making use of the information collected; and tempering it with the advice of an irrigation consultant.”

Over the years the SIS idea gained support as a partnership of organizations including TDID, USDA-NRCS, Wy’East, OSU Extension Service, The Dalles Area Watershed Council and the Wasco Soil and Water Conservation District formalized a plan and sought funding for their cooperative conservation effort which they called “Save Water-Save Energy.” Bonneville Power Administration (BPA) came on board to fund “Save Water-Save Energy” as an agriculture energy conservation practice. A year ago, TDID received AWEF funding for a “Save Water-Save Energy” effort with their growers and put the SIS project on the ground. And in the ground.

On each 10 acres of orchard land, two probes were buried: one to measure soil moisture at an average 12 inches deep and a second to measure soil moisture at an average 36 inches deep. The sensors relay soil moisture information, while a weather station in the orchard relays wind and weather information, via radio to IFP Network (IFPnet) at Wy’East. IFPnet makes it possible for all the growers, the Irrigation District and others to access the information via internet.

The moisture sensor provides real time data on the water needs of the trees in each 10-acre plot so growers know immediately if they should increase or decrease the application of irrigation water. “It also shows us if there has been a blow-out from a leak in the

irrigation pipes,” says Mike Omeg, a grower who also worked for Wy’East developing the adoption of telemetry in the area. The rate and amount of irrigation water flow is measured by automated telemetry flow meters that are located at each irrigation turnout. This flow information is also sent via radio to IFPnet.

Irrigation consultant Jac le Roux regularly tends each sensor station during the growing season. Jac uses a neutron tube to verify the accuracy of the buried sensor. With the first year of the program now complete, Merlin observes that the management of the irrigation water appears to be “part science and part art. Use of the neutron tube assures the grower that the information is accurate while use of the experienced irrigation

consultant ensures the excellence,” says Merlin.

“The AWEP program is something we can do to really help the grower with their stewardship of the land and I’m really excited about that,” notes Merlin with a smile. His enthusiasm is shared by the initial group of growers who participated in the SIS program and who report excellent quality fruit as a result of the precision watering. Dusty indicates the program size will double this next year as a new wave of growers has come on board to add SIS to their farm management practices.

And so it seems Tim Dahle’s legacy of conservation will continue to grow and the central Oregon town of The Dalles will remain the Sweet Cherry Capital of the World for the foreseeable future.

“Water
management is...
part Science and
part Art.”

— Merlin Berg
Coordinator, Wy’East RC&D

Helping People Help the Land NRCS



Orchard Health: Precision watering and improved irrigation practices have significantly improved orchard health and fruit growth, report AWEP participants.