

# Grower uses grant money to improve irrigation with Valley Scheduling



<b>LOCATION:</b>	Evans and Son Joint Venture Near Moses Lake, Washington
<b>SITUATION:</b>	<ul style="list-style-type: none"> <li>— 5,000 acres on a hilly, desert plateau</li> <li>— Mostly dryland farming, with 2,000 acres of rangeland</li> <li>— Two Valley® pivots on a half section, with 700-foot-deep well</li> <li>— Grows wheat and canola under irrigation</li> </ul>
<b>CHALLENGE:</b>	<ul style="list-style-type: none"> <li>— Limited, expensive water for irrigating rocky soil</li> <li>— Providing data for Conservation Stewardship Program</li> <li>— Determining proper water amounts for different crops</li> </ul>
<b>DEPLOYMENT:</b>	<ul style="list-style-type: none"> <li>— Installed soil moisture monitors</li> <li>— Employed Valley® Scheduling™ for data and irrigation recommendations</li> </ul>
<b>EFFECT:</b>	<ul style="list-style-type: none"> <li>— Gained insight about how different crops use water</li> <li>— Improved crop health and yield</li> <li>— Saved time planning irrigation</li> </ul>

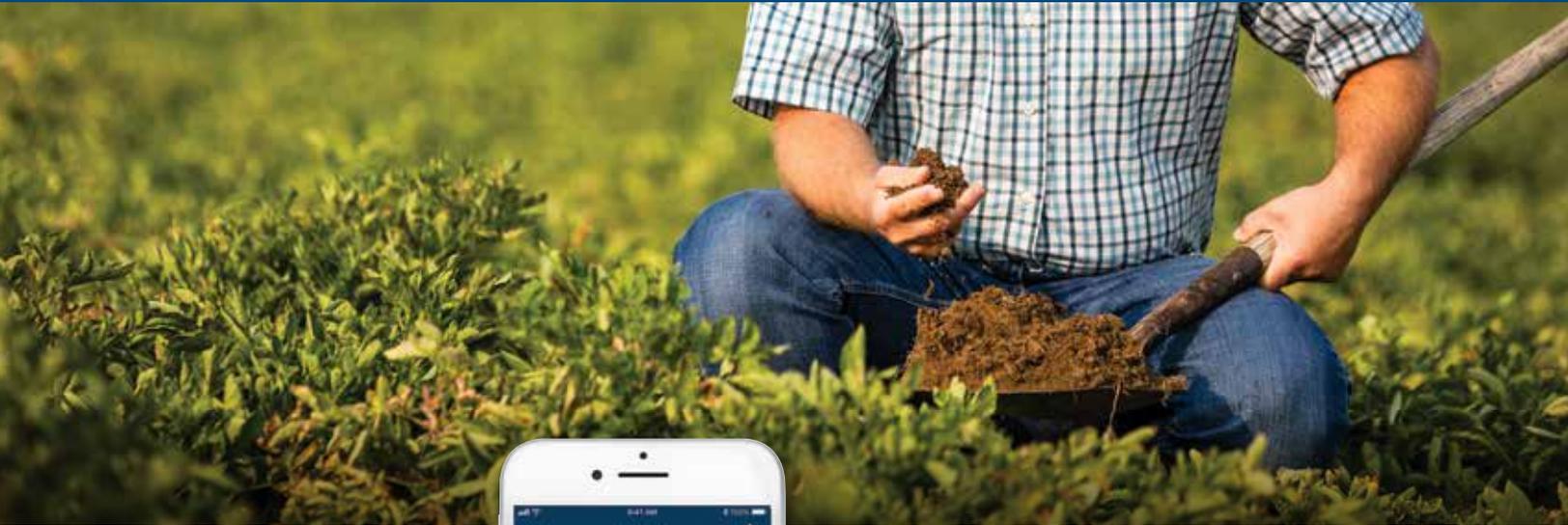
Fred Evans of Evans and Sons Joint Venture grows wheat and canola on a dry plateau in eastern Washington. Water is hard to come by, and what water they have available is expensive.

Due to the circumstances, Evans volunteered to sign on with the Conservation Stewardship Program (CSP) through the USDA Natural Resources Conservation Service to find new ways to conserve water.

The CSP is a federally funded farming program that provides grants to help farmers become better managers of land, water and other resources through technology and improved farming practices. Part of the program requires the grower to provide data about their operation and the improvements they make.

“We chose to use money from the CSP grant to purchase our probes and Valley Scheduling software to use in two fields for the year,” Evans says.

Valley Scheduling is an advanced irrigation management software that gathers and analyzes data such as soil type, stage of crop development, automatically updated weather data and more to calculate irrigation recommendations.



### Technology pays off

Before using Valley Scheduling, Evans used a low-tech method to determine his crops' water needs. He went out to the fields with a shovel and tried to figure it out, or he just guessed. He says neither method worked well.

"Valley Scheduling paid for itself in time savings and accuracy of decisions," he says. "It's a reasonable price, and Dan Burgard from Cascade Earth Sciences (CES) helped with the probe installation and explained the software so I could start using it right away."

Evans spends most of his day in the tractor, so he often looks at his Valley Scheduling data on the mobile app on his tablet. However, cellular service is sketchy in the area. So at the end of the day, he'd get all the details on the Valley Scheduling website to plan irrigation application for the following day.

"I could get the real picture," he says. "I mainly used the graph scale showing depths, where the water was moving and how fast it was going. The line graph followed the speed of moisture loss. It's all color coded so I could follow and compare pivot circles and fields."



### Unexpected findings and improved yields

Evans followed the Valley Scheduling recommendations, and found a few surprises in the data it provided.

"I planted wheat and canola at the same time," Evans explains, "and the wheat roots went deeper than canola, and drained the water more quickly at depth. I didn't expect that. I needed to put more water on my wheat than I thought I would."

"I also thought canola would have more transpiration, but it actually required less water than I predicted."

As a result of those discoveries – and changing his irrigation practices according to Valley Scheduling recommendations – Evans had better production of both crops.

"I didn't save water, but I definitely made more in crops," he says. "I netted more profit because I used water more efficiently. There was no runoff, because I wasn't irrigating more than my crops needed."

Evans plans to rotate his crops next year, and he looks forward to seeing the difference in the water his crops will need.

"I plan to continue using Valley Scheduling, because it provides accurate, trustworthy information and recommendations," he says. "I don't have to sit down and think about whether I'm over-watering or under-watering, because it's done for me."