

Valley Insights™

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LOCATION:

Schneider Farms
Pasco, Washington

PROFILE:

2,000 acres rented land
Sandy loam in desert conditions

Depend entirely on irrigation from the Columbia River

Grow mostly processing potatoes, with some specialty potatoes, grass seed, sweet corn and peas

EQUIPMENT:

- 30 pivots, approximately 3/4 Valley, 1/4 a variety of brands
- No telemetry because land and pivots are all leased
- Continued use of infrared imaging
- Valley Insights™

VISUAL DETECTION:

- Under-watering due to plugged nozzles
- Over-watering and over-fertilizing from a crack in a pipe and improper sprinkler packages and plates

ACTION TAKEN:

- Repaired plugged nozzles
- Fixed cracks in pipes
- Changed sprinkler packages and plates

Valley Insights™ Provides Knowledge in Arid Conditions

Growing anything in arid desert is difficult, but Schneider Farms near Pasco, Washington, has been growing potatoes successfully for more than 50 years. They grow on 2,000 to 3,000 acres every year, depending on how much land they lease.

According to Schneider Farms owner and farm manager Grant Morris, every crop depends on the water they pull from the Columbia River.

"We only get seven inches of rain a year, and it all comes in winter," Morris says. "Water is number one for us. That's our foundation. Without proper water, we can't grow anything."

Schneider Farms has succeeded for so long partly because they take a conservative approach to their business. They gather as much knowledge as they can every year so they can build on what works and reject what doesn't.

"Sometimes too much water is worse than too little water in potatoes," Morris says. "You have to know what's going on out there. As technology gets better, so does the information that's available."

He agreed to try Valley Insights last season for just that reason. Valley Insights uses imagery to determine crop health concerns related to irrigation and other factors. It does this by feeding the imagery into algorithms with artificial intelligence technology to detect anomalies, and then notifies the growers about what's happening so they can take proper action.



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Grant Morris



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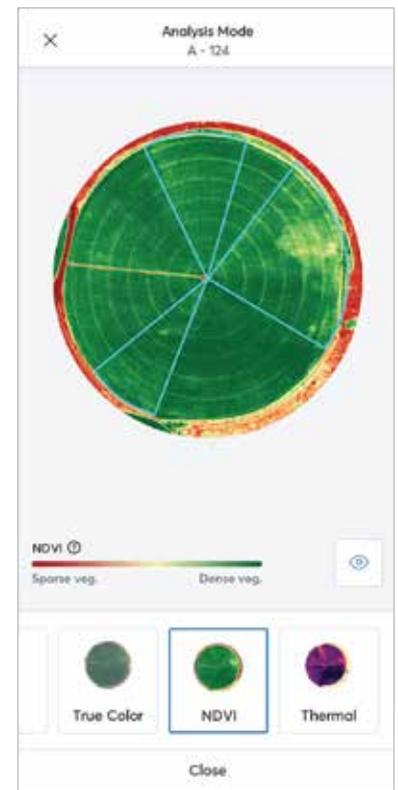
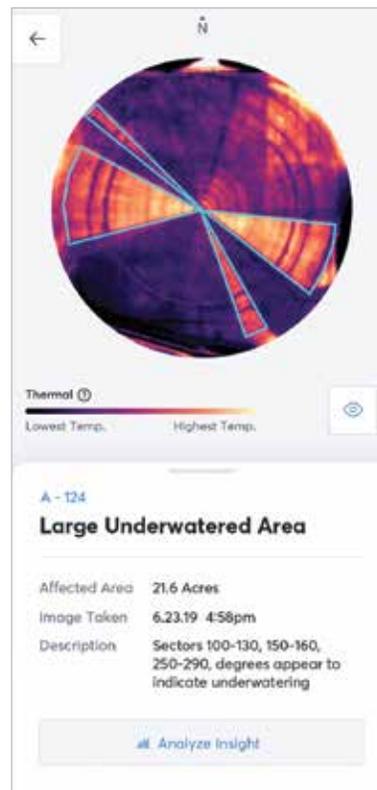
Intelligent Insights

“We are out in the fields every day, but we can miss plugged sprinklers and leaks for days at a time,” says Morris. “If you have a plugged sprinkler on the last tower, that’s almost \$6,000 of potatoes under that one sprinkler. And if you have a plugged nozzle for a week, you might lose that crop. It might not die, but it will never catch up. So, for crops that are graded on size, uniformity and other factors, to get information that could represent that much value in the crop is really crucial for us ... Valley Insights really pays off in that way.”

Some of the insights Morris received alerted him to crops that were being under-watered due to plugged sprinklers. He also found areas that were being over-watered and over-fertilized due to a cracked pipe or improper sprinkler packages. “If you over-water to catch up, on the rest of the field you get lenticels and everything gets worse,” he says. “Once a lenticel opens on a potato, it’s just a way for disease and bacteria to get in that potato and cause it to rot.”

“I was glad to get all of the information,” he adds. “It could have affected many acres, especially if we didn’t spot those stressed crops soon enough. We could have lost crops.”

Morris also uses infrared imagery in his operation. He says he needs to examine the infrared images closely and that even so, his eye can miss some things. Valley Insights



sends alerts when there’s an anomaly. He says using this kind of technology provides more information, which is always better.

“Imagery is a must,” he explains. “It’s good to try something new if it fits your farm. It leads to less loss. We also use soil moisture monitors, and use soil specialists to help us make good decisions. I always say that if you have a good year and you don’t know why, you’re lucky you did so well. If you have a bad year and don’t know why, you’re lucky you didn’t do worse. I try to learn as much as I can every year, and technology is the best way to help with that.”