



Jim Tiede
American Falls, Idaho
United States of America

Embracing the innovations of plant science

Jim Tiede's century-old farm in American Falls, Idaho has come a long way since his grandfather's start in 1908. Instead of the backbreaking work of harvesting each potato by hand, today an automated potato harvester can pick up 12 rows at a time and harvest 30,000 pounds every seven minutes.

In fact, Tiede has embraced many advancements that not only benefit his family farm and the processors who turn his potatoes into French fries, but the environment is a winner, too. Innovations in farming equipment and plant science have allowed Tiede to take a precision approach to farming that helps ensure he is a responsible steward of the land.

Living in a high mountain desert that gets little rainfall, he has a good appreciation and respect for water sources.

As his potato plants start growing each spring, Tiede puts small dykes down each row to keep the water from running off. "We are very cognizant about water run-off and water quality. So the dykes help hold the water in the soil," he says.

Fortunately, Idaho has a good aquifer that allows for irrigation when needed. "With pivot irrigation, we have the ability to put the exact amount of water down on the crop when it needs it," says Tiede. "We use water measuring devices all throughout the field so we don't





over-water. We want to conserve the water we do have and put it to the best use for the crop.”

As potatoes are very vulnerable to disease, Tiede employs a consultant to monitor the fields twice a week. “We take weekly samples of the petiole [the stem that connects the leaf to the plant] to check for nutrient levels and only the required amounts of fertilizers and pesticides are put on.”

Tiede uses variable rate technology to apply crop protection products that enable him to achieve a high-quality crop and provide his consumers with an economically priced product. For instance, he uses an aeroplane applicator to spray a fungicide that prevents devastating diseases such as blight.

“These applicators, with GPS locators, have tremendous accuracy,” says Tiede. “They only put the right amount of chemical in the right place, at the right time. It basically saves the potatoes from having the same disease that caused the Irish potato famine.”

Tiede also takes this precision approach when it comes to fertilizer application. “The soil texture, where we grow the famous Idaho potatoes, is volcanic in nature,” he explains. “It goes from a silt loam to a sand base. The high points in the field are generally a little more acidic so we use variable rate technologies on our fertilizers.

This brings those weaker areas up to the level of the lower ground, which is usually a little better for the potatoes.”

Crop rotation plays a key role on Tiede’s farm as well. “We have a four-year rotation,” he says. “We’ll grow potatoes, sugar beets, corn and wheat. By only growing potatoes every four years it naturally holds down the weed and pest problems, which saves us some money as well.”

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There’s little doubt that Tiede’s son, the fourth generation to work the land, will continue the family tradition of stewardship in order to continue producing food for a growing population.

“We have to feed a hungry world out there,” says Tiede, who by embracing innovations in technology and plant science is already doing his part to help address the issue of food security. “A lot of people need our produce to live. Thanks to plant science, I can help deliver consumers a good healthy product.”



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