

NewsWatch

Weed-seeking technology shows potential

By T.J. BURNHAM

PROBING for a “fit” for WeedSeeker technology in Washington orchards, researchers are hopeful the electronic-eye device will see a bright future in boosting management efficiency.

Working with the unit for a short period of time this summer, the jury at Washington State University Extension is still out on the spray nozzle triggering unit, as researchers are discovering what they like and dislike, says Gwen Hoheisel, Extension educator for Benton and Franklin counties.

In conjunction with her research, she has some observations on the electric utility vehicle she uses to carry the WeedSeeker down the rows.

“We purchased the EUV [for \$12,000] to find out how an electric vehicle would fit as an alternative-energy” vehicle, explains Hoheisel of the four-wheel drive unit being tested. Using a rechargeable lithium ion phosphate battery, the vehicle offers a quiet drive through the trees, she notes. Further tests of battery longevity and how the unit operates in colder conditions are pending for the light-capacity towing implement.

“It is really easy to maintain a certain speed with his vehicle,” she says, although she recommends use of a cruise control since accurate speed is essential to proper action by the electronic weed sprayer. “Going too fast or too slow will result in the sprayer making applications before or after target weeds,” she notes.

The attached WeedSeeker, complete with an electronic eye that sees weeds and a spray nozzle that is activated when the two sensors identify targets, could be a “really good marriage with use of expensive organic herbicides” to help growers save money, she says.

Calibration essential to success

“When we got the calibration correct, the WeedSeeker worked perfect,” she reports. Calibration by growers is necessary to



SEEKING WEEDS: An electric vehicle with a WeedSeeker electronic sensing unit, which applies organic herbicides, may save growers money, early research results indicate.



CRITICAL CALIBRATION: Getting weed sensing calibration right on a WeedSeeker is critical, says WSU Extension educator Gwen Hoheisel (right), as she helps driver and fellow educator Karen Lewis prepare to demonstrate the unit.

help the sensors “learn” the difference between bare ground to turn spraying off and weeds it targets.

Growers who witness demonstrations of the WeedSeeker are often baffled over when the sensor turns on the sprayer, she says, since the unit activates very quickly as it travels down orchard rows.

“Our research in Prosser [WSU’s farm near its campus there] shows about a 20% to 40% reduction in herbicide use,” says Hoheisel, noting that was only in two trials to date.

WeedSeeker manufacturers claim

growers can save much more than this, depending on weed density.

“You can use two sensors and adjust the swath,” she says, noting that in her tests the double-sensor eyes “see” about 30 inches wide (15 inches per sensor) when the boom is mounted 20 inches over the surface.

One concern about the sensors is that they tend to see a lot of things other than weeds, says Hoheisel. “It will spray every green color on the ground and has been observed to be activated by drip lines,” she says. “It is a little less intelligent than

the human eye in terms of sensing just leafy green in the orchard. This is a sensitive unit, and someone who understands the electronics is needed to get it properly calibrated.”

As a device for spot spraying and a way to avoid costly broadcast applications, the electronic weed killer may be a device to consider in the orchard, she says. But as research continues, growers will soon be provided additional data needed to make a proper management decision on whether there is WeedSeeker technology in their future.

Farm’s organic wheat a hot item for cold cereal

By ROBERT WAGGENER

SOUTHEASTERN Wyoming wheat farmers Dennis and Terry Baker have found something hot in cold cereals. That’s a good thing because they were starting to worry that their organic wheat venture wouldn’t succeed.

The couple started growing organic wheat east of Chugwater in 2004. The decision made sense because they routinely grew conventional wheat without the typical chemicals and fertilizers. Plus, Terry says, “We didn’t think we were getting enough return on our conventional wheat.”

Dennis notes, “We struggled for a couple of years, especially with finding markets.” Wheat produced in the area is relatively low in protein, but most organic buyers want high protein. “Our first semiloading went into pet food.”

The couple still believed in their product and remained confident their venture would pay off. “We were very fortunate in that a buyer came to us,” Terry says. Dennis adds, “We were on a growers list in Montana, and the company found us on that list.”

Organic wheat goes into Kashi cereals

Two years after growing their first organic wheat, the Bakers met with Hesco Inc., a specialty grain company with plants in South Dakota and Nebraska. Hesco was seeking additional supplies of quality, low-protein organic wheat for Kellogg’s Kashi line of organic cold cereals. Those talks led to a contract, and the Bakers are now among a

small number of producers supplying organic wheat for the Kashi cereals.

“The people from Hesco and Kellogg’s come out here twice a year, and we sit around the table,” Dennis says. “They want to know who their wheat is coming from, and they want to know how it is grown. It’s been a pretty cool experience.”

Dennis also serves on the Kashi growers advisory board. In addition to being paid a premium price for their organic wheat, Dennis says the wording in their contract with Hesco is appealing. “There is an ‘Act of God’ clause stating that if something happens to our crops, we don’t have to deliver and won’t get penalized.”

Though their decision to grow organic wheat is now reaping financial benefits (the crop has been going to Hesco for five years), it hasn’t come without pains besides marketing. “We have had some trouble controlling weeds,” Terry says. “We tried using organically approved vinegar, but that didn’t work on a large scale.”

Dennis says they were forced to put two organic fields back into conventional wheat. Spot spraying was then used to control bindweed and Canada thistle. “When going organic, the biggest thing is to start with clean fields,” he says. They have since hired a crop specialist to analyze soil and plant samples. The addition of organic soil elements will be based on suggestions from the specialist. “The theory is when the soil is in balance, that will provide ideal growing conditions for crops,” says Dennis.

Waggener writes from Laramie, Wyo.

■ See more about the Bakers on the cover.