

What's New in Weed Technology

Speakers:

Tom Wolf
Ian Epp
Dallas Mench

Agrimetrix – Research & Training
Canola Council of Canada
Gaber Distributors - Pommier America, Inc

Objectives:

How to use WEEDit for

- 1- Spot Spray
- 2- Dual Spray
- 3- Full Coverage

Collaborator: Agrimetrix – Research & Training

Demonstration Treatments:

1. Canola (Plot Dimensions = 5mX1.2m)
2. Wheat (Plot Dimensions = 5mX1.2m)
3. Soybeans (Plot Dimensions = 5mX1.2m)
4. Plot space (30mX30m) to run weed-it; tilled on June 24, 2019 (1-month prior to event)
5. Plot space (30mX30m) to run weed-it; tilled on July 10, 2019 (2 weeks prior to event)
6. Plot space (30mX30m) to run weed-it; tilled on July 17, 2019 (1 week prior to event)

Demonstration Summary:

The private sector was also involved in the displays, which included a sprayer demonstration. Sprayer expert and farmer favourite Tom Wolf, with Agrimetrix Research and Training, was on hand to promote a new spraying option. WEED-It, developed by Dutch company Rometron, is similar to other sprayer sensors, sensing green foliage and automatically turning sprayer nozzles off when no greenery is detected, allowing for less chemical use. WEED-It sensors, Wolf explained, can be retrofitted onto most farmers' existing sprayers for about \$1,500/foot, depending on the length of the existing sprayer boom.

Tom Wolf of Sprayers 101 spoke about the possible in crop use of WEEDit, although the green on brown technology is largely used for burn off, since it doesn't differentiate between the green of a crop and green of the weeds. Jesper Voois, product specialist with Rometron, goes over the specs of the WEEDit system, how the spot sprayer is designed to only spray individual weeds – illustrated by using water-reactive paper next to weeds in a demonstration plot – and how much the system costs.

WEEDit is a selective spray system of sensors and pulse-width-modulated (PWM) spray nozzles that can sense plants and trigger the right amount of spray for the intended target. WEEDit achieves this by using sensors that emit a red light that return a near-infrared signal

when striking chlorophyll. Spray nozzles located at 8-inch intervals along the boom are activated to spray the sensed plant. The system is designed to work at speeds of up to 24 kmh.

With PWM capability, the system allows a simultaneous broadcast spray of a low herbicide dose in the background, activating the full dose for larger weeds, ensuring that weeds too small to be detected receive a controlled dose. The ability to selectively spray green material has additional potential in desiccation and pre-harvest treatments.

“I’ve been watching both weed sensing and PWM with interest for over 20 years”, says Tom Wolf, co-owner of Agrimetrix. “I believe that this technology is part of agriculture’s future. It addresses many economic and agronomic needs of producers, while also advancing agriculture’s commitment to environmental protection.” In some provinces, WEEDit may be eligible for Canadian Agriculture Partnership (CAP) rebates.