

Crop Optics Australia Pty Ltd

www.cropoptics.com.au | sales@cropoptics.com.au

P. 02 6760 7756 or 0428 664 318

22 Marathon Street, Tamworth NSW 2340

Selectively apply herbicides, insecticides, fertilisers and fungicides to plants

WeedSeeker[®]
Selective Spot Spray System



WeedSeeker®

Efficient, cost effective & environmentally sustainable



Agricultural producers and contractors are reaping the benefits from sensors that can be used to selectively apply herbicides, insecticides, fungicides and fungicides to plants in an agricultural, horticultural, viticultural and industrial situation.

WeedSeeker® users are achieving up to 90% savings in fallow herbicide; substantially reducing costs and significantly delivering environmental benefits.

The WeedSeeker® system is designed for use on any crop free surface, such as under vines or trees, between row crops, industrial situations or, most commonly, on broadacre fallow paddocks.

Research

DPI research in Northern NSW has shown that the average weed cover in fallow paddocks is as low as 20% of the paddock area. This means that often 80% of the herbicide is applied to bare soil and is wasted. This is inefficient, expensive and environmentally unsustainable.

History

Crop and weed sensing technology has existed as a research tool in Australia since 1984. The concept was originally developed by researcher Warwick Felton at the DPI Tamworth, NSW. The reliable application of the concept in agriculture has only recently been possible with the commercial release of WeedSeeker® and GreenSeeker® selective application equipment.

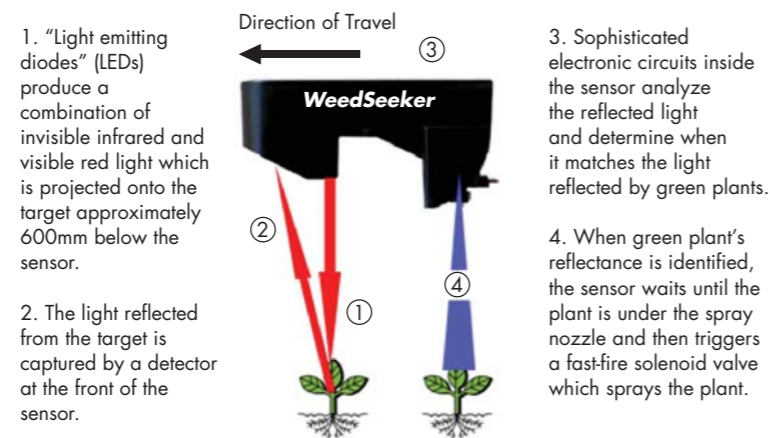
Selective spot spraying technology was commercialised in the USA in the mid nineties and has found wide commercial application around the globe in all types of environments.

How WeedSeeker® Works

The WeedSeeker® technology uses sensors and nozzles spaced at 380mm apart. This spacing is due to a narrower field of view of the sensors compared to a 500mm spacing on a standard boom. **The WeedSeeker® will spray only weeds, not bare ground.** WeedSeeker® technology is effective wherever weeds occur intermittently, and can be fitted to most boom sprays.

WeedSeeker® is being used in agriculture, irrigation districts, along roadsides, railway corridors, airport runways, golf courses, parking lots, median strips, parks and hiking trails, etc. The possibilities are limitless.

How a WeedSeeker® sensor works



Applications

- Broadacre fallow spraying
- Shielded spraying in row crops
- Tree crops
- Fungicide, insecticide and fertiliser applications in vegetables
- Channel spraying
- Industrial (councils, railways, airports and schools)
- Vineyards

Features

- Weatherproof
- Operational both day and night
- Modular system that can be added to
- Capable of speeds up to 25km/hr
- Sensor: weight 1.2kg; length 27.5cm; width 8cm; height 13cm
- 12 volt power
- Goyen 12 volt fast fire solenoids
- Optional radar speed control

Products

WeedSeeker® Model 650

The WeedSeeker® Model 650 sensors operate on 12 volt, and are typically configured for a 300mm spray pattern matching its 300mm field of view. The 650 model is ideally used in vineyards where the sensors are mounted 455-760mm from the ground. Systems may have a single sensor or as many as 120 sensors on a boom spray.

WeedSeeker® Model 655

Sensors operate on 12 volt for the WeedSeeker® Model 655 and are typically spaced 380mm apart, matching its 380mm field of view. The sensors are mounted 610-760mm from the ground and typically have 60-90 sensors or more on a boom spray. The 655 model is primarily used for broadacre spraying due to the sensors being spaced further apart.

Benefits of WeedSeeker®

Reduce herbicide costs - Australian research has shown savings in herbicide use on cotton, soybeans and fallows commonly in the range of 50-80%. Commercial use of the WeedSeeker® systems in the northern cropping area over the last four years has resulted in a reduction in fallow herbicide use of up to 90%.

Herbicide resistance - The emergence of hard to kill fallow weeds such as fleabane, peachvine, milkthistle, roundup ready cotton and marshmallow has become an increasing issue in the northern cropping region. Australia was one of the first countries in the world to discover resistance in annual rye grass (*Lolium sp*) to the common fallow herbicide Glyphosate. The WeedSeeker® allows you to use mixtures of different herbicide groups, which may be currently too expensive to apply in a blanket application. This will prolong the life of existing herbicides and reduce resistance in weed populations greatly improving sustainability of cropping systems.

Reduction in herbicide drift - The total chemical released by the boom is substantially lower due to only spraying the weeds and not bare soil. The risk of herbicide drifting onto non-target areas and the surrounding environment is reduced.

Increased adoption of no-till - Reduced tillage cropping systems can provide environmental benefits in terms of reducing soil erosion by wind and water. Reducing herbicide use improves returns further and allows more farmers to adopt the system to the benefit of the whole agricultural landscape.

Environment - Reducing chemical load in the environment benefits the whole community.

Water Saving - Reduce the amount of water used by covering more hectares per tank load. Save time not having to fill tanks as often.

Testimonials

"The WeedSeeker® is excellent technology for problem weeds or scattered weeds on clean broadacre fallows. Our best results are achieved at a speed of 12-16km per hour at night when lighting conditions are consistent, using a rate of 80-120 litres of water. It is a machine that will come into its own as weed resistance issues arise and hard to kill weeds become more evident."

"We purchased the WeedSeeker® in 2004 and haven't looked back. The 18,000ha (combination of owned and contracted) that we spray is actually only 2-20% weed coverage, saving on average 50-80% of chemical costs. We are now building a 36 metre stand alone trail behind WeedSeeker®."

Hugh Ball, Moree NSW

"We purchased the WeedSeeker® in early 2007 and have been using it in many situations. It has been particularly successful in controlling hard to kill weeds such as ryegrass, fleabane and milkthistle. Depending on the situation and weed population (i.e. spot spraying in fallow) we generally make chemical savings between 75%-90%."

"When dual-lining, that is putting on an overall light background spray and spot spraying only the larger weeds in the one pass, we also make significant chemical savings."

Don Hubbard, Spring Ridge NSW

