



BUYERS' GUIDE

EFFECTIVE AUGUST 2016

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CROPLANDS



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CROPLANDS ACCREDITED SERVICE TECHNICIAN

In the ever changing landscape of agricultural machinery business we often find ourselves competing with mining and the attraction of big cities when it comes to retaining service technicians.

Croplands will be offering a comprehensive range of technical training to support our dealer network to ensure our customers receive the best technical service at a local level.

Croplands also have factory trained technicians to assist in the delivery of new WEEDit sprayers to ensure the owner and operator are equipped with the knowledge to get the best performance from their sprayer.



PRE DELIVERY

The CAS-TECHNICIAN will achieve the most accurate technical setup with a focus on precision agriculture.

Including in field service:

- » Installation of precision ag components
- » Calibration of speeds and pressure sensors
- » Filling flow meter calibration
- » Configuration of optical spot spraying sensors and timing sensor accuracy

Including in-office support:

- » Online introduction to Croplands Service Support, including demonstrations of parts search and technical information
- » Introduction to relevant contacts for parts, tech support and service



GENERAL MANAGER'S WELCOME

Dear Customer

In the space of 12 months Croplands' WEEDit has seen many new and exciting enhancements from the original 4000L/6000L model. The demand and return on investment for this brilliant technology has been overwhelming.

The Croplands R&D team have subsequently designed a brand new 7000L WEEDit with 800L flushing tank and 1500L hot tank, encompassing many added features with operator safety and ease of use in mind. This project has required a substantial financial and resources investment, that we are excited to be releasing around the field day circuit over the coming months.

Smaller broadacre and irrigation properties have also been catered for with the release of the WEEDit Toolbar.

Many farmers, particularly in the Darling Downs region of Queensland, have already seen exceptional cost benefits associated with chemical savings and the ability to use more strategic chemical mixes. WEEDit can also be purchased in a kit form, for those who wish to adapt it to their own platform.

The WEEDit Spot Spray Technology continues to light up paddocks across Australia and we are continuously looking at ways this technology can be applied to different applications. If you are interested in witnessing WEEDit in action and learning about how an investment in WEEDit can advantage your operation, contact your local Area Sales Manager to find out when we are holding demonstrations near you.



A white cursive signature of Sean Mulvaney on a black background.

Sean Mulvaney
General Manager
Croplands

THE STORY OF WEEDit

In 2011 Croplands partnered with Hawkeye Precision to develop a machine for WEEDit's near infrared sensors. The technology was developed by a Dutch university and at the time was used on a much smaller scale to spray weeds in urban areas, such as footpaths and railway tracks.

The challenge for Croplands was to increase the scale of the system to suit the tough conditions of Australian Broadacre farming. The first two years saw major developments in the suspension system to minimise fatigue and more importantly, allow the sensors to float both during compression and rebound over a harsh Australian summer fallow paddock. WEEDit Series 2 featured a contour following boom, dual line and twin tank. Upon this, Croplands invested in further research and development to improve the chassis and suspension in the Series 3 model we have today. As

part of the Croplands service philosophy, they offered all Series 2 owners the opportunity to have their machines retrofitted to the new suspension package.

In 2016 Croplands launch a brand new 7000 litre WEEDit. The WEEDit Toolbar is another recent adaptation of the technology, suitable for smaller broadacre and irrigation properties.

WEEDit technology has proven to assist Australian broadacre farmers achieve substantial chemical savings, improve water retention, delay the onset of herbicide resistance and lower their weed seed bank. Croplands and Nufarm are committed to the long term development of this product through working with growers, understanding the problems they face and creating sustainable solutions for their future.

"With WEEDit, there's no procrastination because of the cost of spraying. You spray when you need to rather than worrying about the cost and weighing it up."

Jock McNeil
WEEDit owner and cereal grower,
Paruna, Murray Mallee S.A.





Take control with up to 80% chemical savings for farmers using WEEDit technology in fallow paddocks.

- » Operates using near infrared sensors to detect chlorophyll in the leaves of weeds in fallow paddocks
- » These sensors activate solenoids, controlling the release of chemical from the nozzles to the target
- » Sensor units are spaced 1 metre apart, reducing weight on the boom and improving effective operation driving speeds
- » WEEDit will become an increasingly important application solution for the management of resistant weeds requiring specialised chemistry

SUPERIOR MODE OF DETECTION

WEEDit's near infrared technology only detects the chlorophyll present in living plants sending a quick response to the nozzles which release the spray onto the weed. This superior mode of detection allows for faster travel speeds and the ability to target even smaller weeds. WEEDit improves at night because there is no interference from sunlight and weeds are often less stressed meaning the reaction to active chlorophyll is greater. The WEEDit system utilises two speed sensors to increase or decrease the reaction time of the nozzles during cornering, resulting in a more accurate and efficient job across the paddock.

BACKGROUND CALIBRATION

Changes in background conditions such as soil type and stubble are not a problem for WEEDit's auto-calibration system. The WEEDit is not affected by changes in background conditions because it is only measuring active chlorophyll. For the operator this means even better targeting of small grasses.



SENSOR AND NOZZLE PLACEMENT

WEEDit sensors are placed every 1 metre across the boom and control 5 nozzles (individually) on 20 cm spacings. Benefits from this design are less weight due to less sensors being required, and a smaller spray footprint when a weed is sprayed. This set-up provides great savings on chemical. The nozzle spacing of 20 cm also allows for better penetration in stubble with less shading of small grasses.

ENHANCED ELECTRICAL SYSTEM

Weed detection systems place large demands on electrical supplies. The WEEDit overcomes this issue by running at 48 volts. This not only gives superior solenoid operation but current draw is 4 times less than other weed detection equipment using 12 volt systems. Faster solenoid operation also means quicker spraying speeds in the paddock.

SUPERIOR PRODUCTIVITY

The WEEDit system provides high speed operation and up to 25 km/h while cornering. High speed operation gives you greater productivity and better utilisation of your investment.

Standard 60°/80° spot spray line

110° blanket line



CONTROLLER

WEEDit System – easy to use intelligent display provides constant monitoring of solenoid and sensor operation, with malfunctions or errors reported on screen. This display allows for setup and sensitivity adjustments from the easy to use menu. The controller also monitors increased boom speeds on corners and automatically adjusts response time to ensure the nozzle hits the target.

IN CAB MONITOR

The easy to use display has simple warnings for low pressure, sensor faults and voltage. The intelligent design allows for easy fault identifications and greatly increases productivity as the requirement to visually check and monitor the machine is dramatically reduced. This monitor also keeps a record of nozzle activation, chemical use and sensor history.



CROPLANDS ACCUMULATOR

The Croplands Accumulator controls the flow from the pump to the nozzles. It utilises a 200mm diaphragm, supported by a regulated air supply. Through combining the high flow centrifugal pump, the fast acting diaphragm controls the nozzle fluid pressure and volume rapidly from single nozzle activation to full boom.

This system maintains a boom line pressure of 3 bar for fast response at all times.

When the sensor detects a weed, within milliseconds the solenoid is firing at full pressure. Nozzle speed is essential for efficient weed coverage.



CENTRAL CONTROL PANEL

From a central point, the operator can take charge of all the filling, mixing and flushing.

When the operator camlocks a 2" filling hose to the non-return valve on the sprayer, they can select to fill the spot spray tank, flush tank or main tank.

The electronic flow metre measures part tank filling.

The secondary rotary valve allows selection of the chemical suction probe, 60 litre Chem-e-flush hopper or return to spray position.

The control panel also allows selection of spot spray tank rinse, main tank rinse, agitator and chemical suction probe rinse through a series of valves.



NEW

WEEDit 7000

ACCESS PLATFORM

The up and over platform allows safe and easy access from both sides of the sprayer to the large toolbox and tank lids. Fold down steps provide greater crop clearance.

BIG PUMP CAPACITY

The large capacity AR185 (180L/min open-flow) diaphragm pump gives reliable, positive displacement, liquid delivery with minimal service or downtime. Maximum operational system pressure is 10 bar – perfect for low to high pressure air-induction nozzles. An optional 250 L/min pump is available. Hydraulic drive is standard.

OPTIONAL AIR RIDE DRAWBAR SYSTEM

The heavy drawbar features an integrated Hendrickson airbag which is an integral part of the suspension package and improves the ride. Also features a heavy duty adjustable hitch and swivelling eye drawbar.

MANUAL JACK STAND

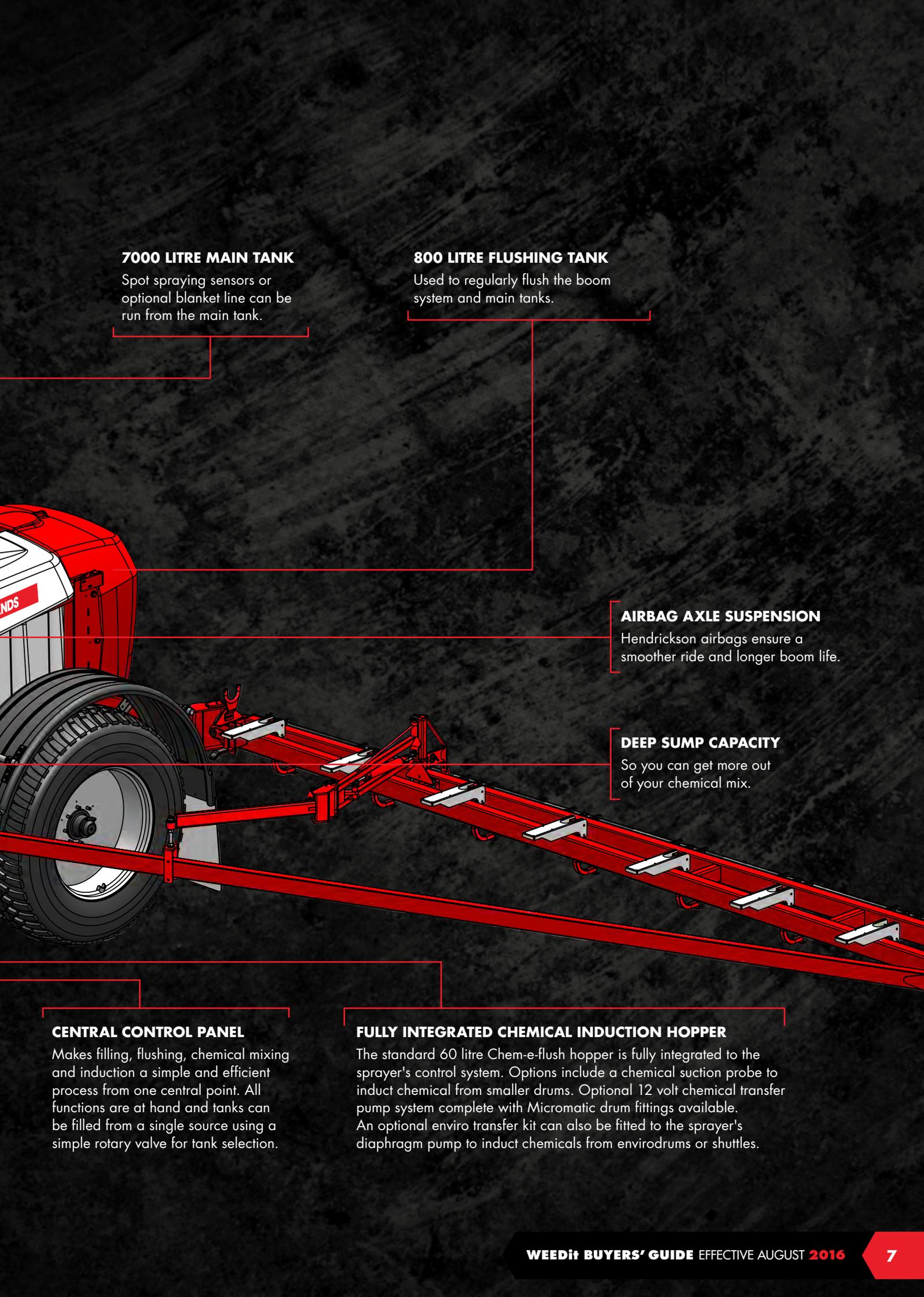
Optional hydraulic jack.

SECOND CHEMICAL INDUCTION HOPPER

Smaller hopper transfers chemicals directly to the 1500 Litre Hot Tank.

1500 LITRE HOT TANK

Used to hold high concentration chemicals used for spot spraying.



7000 LITRE MAIN TANK

Spot spraying sensors or optional blanket line can be run from the main tank.

800 LITRE FLUSHING TANK

Used to regularly flush the boom system and main tanks.

AIRBAG AXLE SUSPENSION

Hendrickson airbags ensure a smoother ride and longer boom life.

DEEP SUMP CAPACITY

So you can get more out of your chemical mix.

CENTRAL CONTROL PANEL

Makes filling, flushing, chemical mixing and induction a simple and efficient process from one central point. All functions are at hand and tanks can be filled from a single source using a simple rotary valve for tank selection.

FULLY INTEGRATED CHEMICAL INDUCTION HOPPER

The standard 60 litre Chem-e-flush hopper is fully integrated to the sprayer's control system. Options include a chemical suction probe to induct chemical from smaller drums. Optional 12 volt chemical transfer pump system complete with Micromatic drum fittings available. An optional enviro transfer kit can also be fitted to the sprayer's diaphragm pump to induct chemicals from envirodrums or shuttles.



IN-CAB HYDRAULIC FOLDING BOOM

Unlike other wheeled booms it is hydraulically controlled from the cab, to allow for quick and effortless folding and unfolding of the boom, from transport position to field operation.

CROPLANDS CONTOUR FOLLOWING BOOM

Heavy duty hydraulic fold 18 metre, 24 metre, 30 metre, 32 metre and 36 metre trailing contour-following booms, designed to handle Australia's challenging broadacre farming conditions. Some models may have road transport speed limitations.

The hydraulically steered inner boom wheels control the folding and unfolding of the boom, this is also a pivot point for the boom to contour follow. In total there are five different plains that the boom and sensors can operate at to mirror the contours as accurately as possible. The sensors will achieve the lowest possible spray rate per hectare and effectively target small grasses when the boom height is maintained, with only small variations in height.

New responsive gas air ride suspension on all boom wheels is custom engineered for Croplands WEEDit. This helps to maximise sensor effectiveness by controlling compression and rebound to allow the sensor a smooth ride for superior detection. The responsive gas air ride suspension also absorbs vibration to reduce metal fatigue and improve longevity.

SENSOR SPACING AND ROW CROP SPRAYING

Traditionally WEEDit sensors are positioned at 1 metre spacings along the length of the boom. This spacing can be adapted to 40" to meet the needs of row cropping or matching tillage equipment based on imperial measurements. Regardless of sensor spacing, there are five nozzles per sensor positioned at 20cm spacings. Close nozzle spacings are a major advantage in penetrating stubbles such as sorghum and also minimising shading.

NOZZLE SELECTION

The standard 40 degree flat even fan nozzle provides a coarse droplet spectrum and provides great coverage for broad leaf weeds in a warm summer weed spraying environment.

Cone nozzles can be used for larger targets where non systemic chemicals are used in a strategy to avoid the over use of glyphosate. The cone nozzle provides the advantage of spraying forwards and rearwards at an angle enhancing penetration. Full cone spray patterns aim for complete plant coverage. Coverage is king with contact chemicals.

Contour following boom



FEATURES



6000 OR 4000 LITRE MAIN TANK

Spot spraying sensors or optional blanket line can be run from the main tank, utilising the dual pumps simultaneously. As an example, a pre-emergent herbicide could be applied through the blanket line, while the spot spray sensors may be applying a knockdown herbicide to existing weeds.



1100 LITRE HOT TANK

Spot spraying sensors are run from the Hot Tank. A common strategy used to delay the onset of herbicide resistance is to use a more concentrated combination of chemicals for spot spraying. This is often referred to as the "hot mix" that becomes affordable when only spraying 10% of the paddock with the WEEDit system.



GAS AIR RIDE SUSPENSION

Featuring air-bags to control ride-height. The system utilises coil springs to provide fast and responsive ride for the sensors. The enhanced ride assists with detection of weeds on both compression and rebound, minimising metal fatigue across the machine.



CHASSIS AND AXLE

The chassis encompasses a simple robust design with safe platforms and handrails for ease of operation. It features a 2.2 metre axle track, optional 3 metre solid axle or 3 metre adjustable axle.

TURN COMPENSATION

The WEEDit operating system utilises two speed sensors to automatically calculate and adjust the nozzle timing to ensure the chemical hits the target accurately every time regardless of boom tip speed.



HYDRAULIC DRIVE CENTRIFUGAL PUMP

The advantages of the 500 L/min centrifugal pump for spot spraying applications is that it can respond and deliver from zero to very high volumes almost instantly as required.



4 POINT FILTRATION

- » Lid strainer 18 mesh
- » Filling filter 32 mesh
- » Pressure filter 80 mesh
- » Nozzle or section filter 50/100 mesh

CHEMICAL HANDLING

- » Integrated suction probe transports chemical directly into the tank without putting neat chemical through the pump
- » Optional: 12 Volt chemical transfer pump system

FLUSHING AND SAFETY

- » 470 litre flush tank
- » 30 litre fresh water tank fitted for operator safety

**THE TOOLBAR KIT
IS DESIGNED FOR
FARMERS TO FIT TO
EXISTING TOOLBARS
FOR OPTICAL
SPOT SPRAYING**

12 METRE | 18 METRE | 24 METRE

BASE KIT



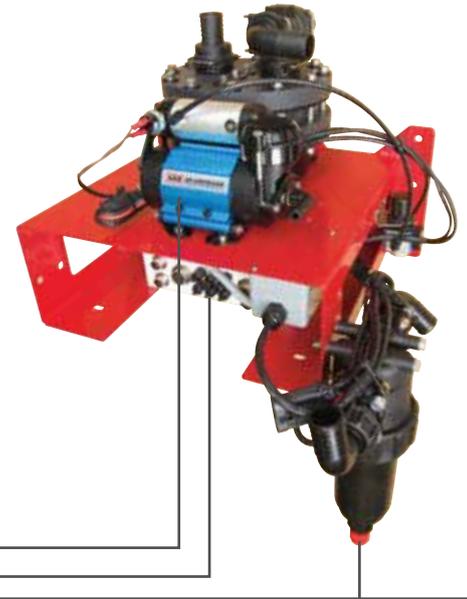
WEEDIT CONTROLLER AND MOUNT BRACKET

For easy installation in the tractor cab.



GPS SPEED SENSOR

The Astro 5 GPS Speed Sensor continues to provide speed input when turning on headlands, for consistent application and accurate speed readings.



ELECTRIC COMPRESSOR

Provides air to the accumulator pressure regulating valve, ensuring the system is primed to 3 bar operating pressure and ready to turn on all nozzles within mille-seconds with consistent pressure.

POWER BOX

Mounted to the toolbar with either a 4 inch or 7 inch U-bolt provides power to all sensors and solenoids.

PRESSURE FILTER

Traps particles before reaching the solenoid valves and nozzles

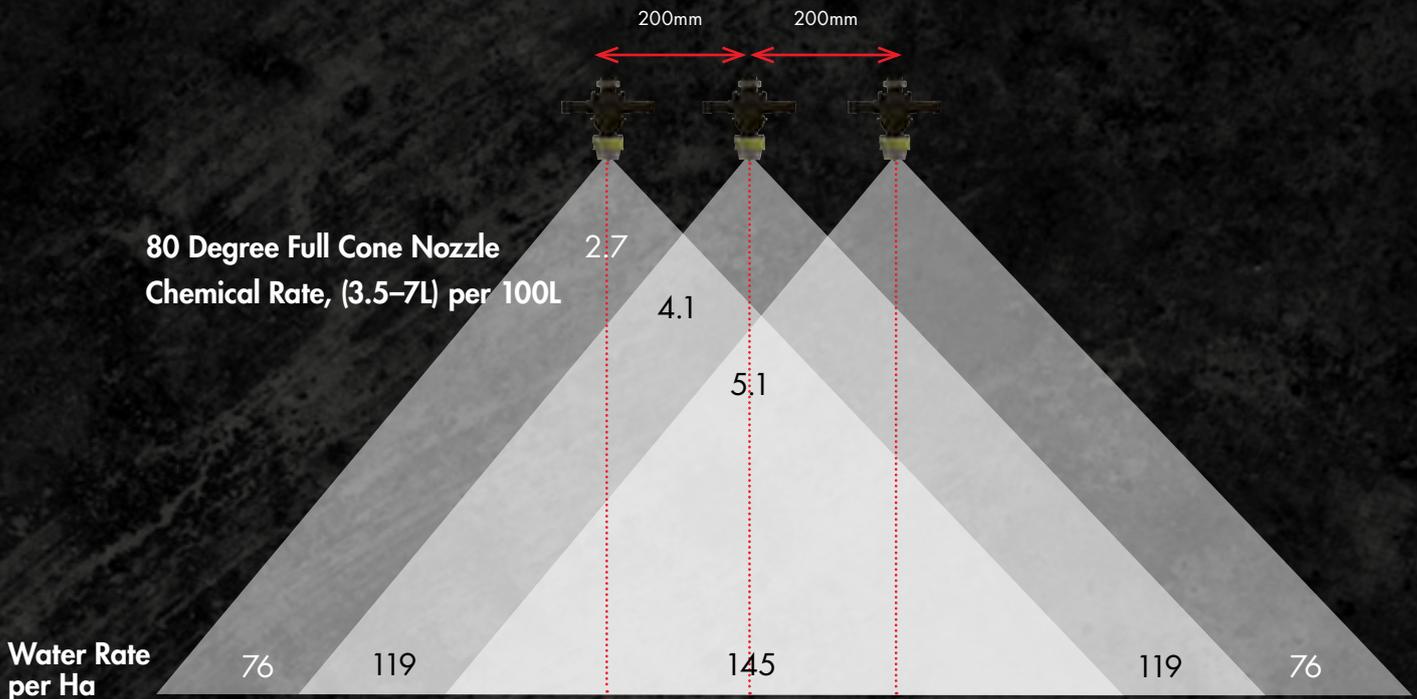
CAMERA NOZZLE KIT

- » 1 inch stainless steel tubes to deliver the chemical across the toolbar connecting with Quick Connectors
- » Camera Brackets secured to the toolbar with either 4 inch or 7 inch U-bolts
- » Nozzles mounted on the same bracket for ease of fitting
- » Male and Female 1 inch Camlock provided on the mounting plate along with the compressor air filter, used to couple quickly to a front mounted tank when fitted

WEEDit Toolbar Kit



NOZZLES



ONE NUFARM WORKING TOGETHER TOWARDS APPLICATION EFFICIENCY

CROPLANDS HAS BEEN WORKING WITH NUFARM TO IMPROVE THE EFFICIENCY OF WEEDIT USING TANK MIXES AND CONTACT CHEMICALS.

With WEEDit, many farmers are not only seeing it as a spot spraying tool, but a tool to delay on the onset of herbicide resistance. The two main contributing factors of herbicide resistance are the repetitive use of glyphosate and poor application of chemicals.

Conventional sprayers using flat fan nozzles, apply chemical well to one side of the plant in the direction of travel.

To use contact herbicides in a herbicide resistance strategy, coverage is imperative for weed control.

Albus have developed a full ceramic cone nozzle which penetrates both forwards and backwards creating good coverage to the backside of the plant. These wide angled 80 degree full cone nozzles are very effective on elongated plants, such as fleabane and skeleton weed.

These nozzles maintain their pattern and are very effective under 18km/hour, which is ideal for WEEDit and best practice application.

Albus ATF full cone nozzles are now available as an option for new and existing machines – cone nozzle caps are required.



NATIONWIDE DEALER LISTING



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NSW

Corowa	O'Connors	02 60331 666
Dubbo	Geronimo Farm Machinery	02 6826 8600
Griffith	Guidolin Agrimac Australia Pty Ltd	02 6964 3400
Gunnedah	NFS-Ag	02 6742 7771
Moree	Black Truck & Ag	02 6752 2277
Parkes	McPherson's Parts & Service	02 6862 3888
Temora	Temora Truck & Tractor Service	02 6977 1098
Tottenham	Western Farm Machinery	02 6892 4078
Walgett	Walgett Tyre & Machinery Service	02 6828 1500
Warren	Western Farm Machinery	02 6847 3422

QUEENSLAND

Dalby	Black Truck & Ag	07 4669 8988
Dalby	Dalby Rural Supplies	07 4662 6122
Emerald	Ready to Run Machinery Maintenance	07 4982 2021
Goondiwindi	Black Truck & Ag	07 4677 8113
Goondiwindi	Agtronics	07 4671 4715
St George	St George Machinery Centre	07 4625 3633
Roma	Black Truck & Ag	07 4624 4800
Toowoomba	Black Truck Sales	07 4631 4200

SOUTH AUSTRALIA

Bordertown	O'Connors	08 8752 1311
Cleve	Pringles Crouch	08 8628 2150
Crystal Brook	Pringles Crouch	08 8636 2257
Cummins	Pringles Crouch	08 8676 2105
Kimba	Pringles Crouch	08 8627 2071
Loxton	Ronco Motors	08 8584 5575
Pinnaroo	Ronco Motors	08 8577 8129
Wudinna	Pringles Crouch	08 8680 2236

TASMANIA

Statewide	Spray Shop Tasmania	03 6343 1666
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VICTORIA

Bendigo	Precision Control Australia	03 5448 8484
Birchip	O'Connors	03 5492 2311
Horsham	O'Connors	03 5382 1727
Mildura	Sunrise Ag	03 5023 0284
Ouyen	Sunrise Ag	03 5092 1031
Shepparton	O'Connors	03 5821 4555
Swan Hill	Sunrise Ag	03 5032 0099
Warracknabeal	O'Connors	03 5398 1877

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YOUR CROPLANDS DEALER

OUR RANGE OF BUYERS' GUIDES



OPTIMA



Horticultural



Self Propelled



WEEDit Optical Spot Spraying



Broadacre Trailed