# providing advanced technology for progressive farming



#### **Garford Products**

- Robocrop Precision Guided Hoes
- Hooded Sprayers
- Robocrop Inrow Weeder
- Weedfoil Wiper
- Robocrop Spot Sprayer



What is ..

## COCCOP

Vision enabled, computer controlled, field scale implements delivering a fast and effective means of mechanical weed control or targeted chemical application.



The computer continually adjusts the position of the hoe via a hydraulic sideshift or disc steer system.



robocrop4 QUICK TOUCH



Robocrop uses video cameras to view the crop just ahead of the row crop equipment.

The computer analyses the images searching for higher densities of crop colour pixels which it then matches to the pre determined grid to locate the exact plant row position.



#### Robocrop Precision Guided High Speed Hoes

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As long as the crop row is a clear dominant feature and weeds are reasonably evenly distributed crop row following is generally better than 10mm and accuracy can be

maintained at up to 12kph or beyond.





#### Robocrop Precision Guided Hoe

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A triple section x 4mtr cereal Hoe



#### Robocrop Precision Guided Baby Leaf Hoe



If we have well defined crop lines then accuracy of 5mm is achievable.





#### **Custom Colour**





The latest software features the custom colour setting which enables us to pick the exact shade of preferred colour and any colour of the rainbow.





Hooded Sprayers offer an alternative to hoeing which may be advantageous as soil disturbance is minimal. Garford use a combination of spray hoods and crop protection shields for maximum crop safety. Glyphosate is authorised (EAMU) for use inter row in carrots, onions, parsnips and other veg crops. Inter-row non selective herbicide application can be combined with on the row selective herbicide and row fertiliser application.







The Robocrop InRow Weeder extends the Robocrop imageing system into 2 dimensions, firstly locating the crop row and then the individual plants along the row.







The information is then used to synchronise an inter-plant weeding rotor to cut between the individual plants and, in combination with inter-row shares, provide a total weeding solution.

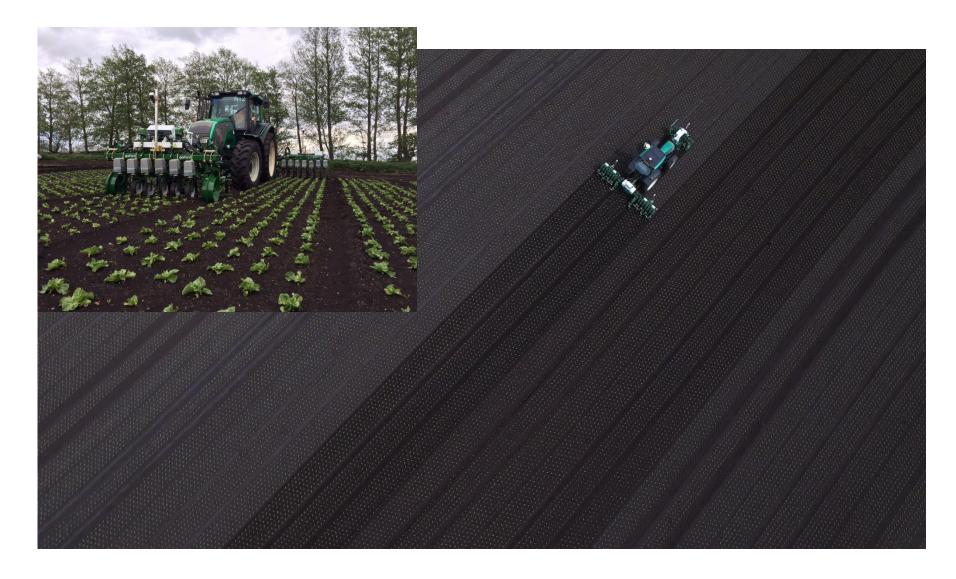






The latest Robocrop Inrow eRotor model can work with high accuracy at up to 6 plants per second per row resulting in spot workrates of more than 3 hectares per hour for this split 6mtr model.









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#### Weedfoil Wiper height dependant weed control

Unique large area felt pad Individual electronic saturation control & liquid feed per pad Robust construction



#### Garford Precision Weedfoil Wiper

The Garford Precision Weedfoil Wiper pads are mounted on a contour following wheel unit which accurately follows the contours of the soil to keep the pad at a constant height.

The operator can adjust the height remotely and if required monitor the ground clearance closely via a CCTV system.

The inter-bed area is sprayed via a number of hooded spray units if required.





#### Garford Weedfoil Wiper



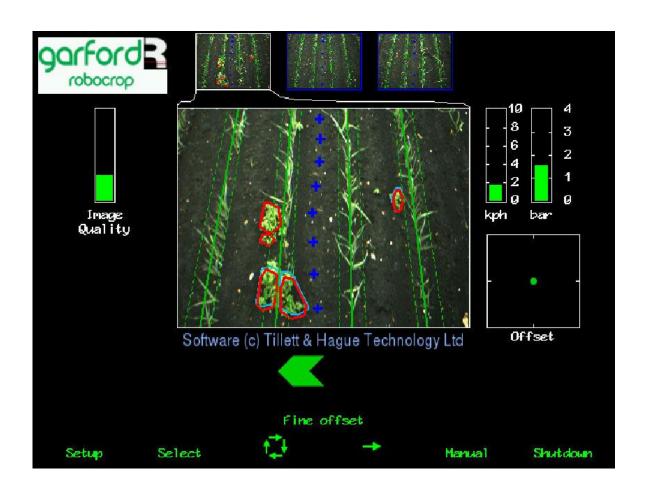


#### Robocrop Spot Sprayer.





The Robocrop Spot Sprayer Imaging system takes a slightly different approach. Robocrop searches for clumps of vegetation which do not conform to the crop row characteristic. These objects are then tracked as they pass down through the camera field of view.





As the clumps of weeds pass below the specially developed nozzles, Robocrop fires the required nozzle at precisely the right moment to hit the weed with a measured quantity of herbicide in order to hit the weed clumps but minimise crop damage.

The user interface allows for selection of the minimum weed clump size threshold.

The percentage of the plant area to be targeted can also be selected.

The minimum nozzle on/off period of 30ms results in a minimum target area of 40mm at 5kph.







The Robocrop Spot Sprayer targets the weeds and avoids the plants therefore keeping the possibility of crop contamination to a minimum.

The actual quantity of herbicide usage is commonly less than 2% of the overall rate depending weed density.



Images courtesy of Tillett Hague Technology





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