Garford Farm Machinery

Robocrop AI

22 October 2025

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Garford Farm Machinery Limited

Business Overview

- GFM - Started 1986
- Owned by Zurn Harvesting GmbH - 2019
- Sugar Beet Harvesters
- Robocrop Inter Row – 2001
- Robocrop InRow – 2012
- Robocrop AI – 2025
- Garford Electric Weeders - 2026
- Export sales >90% of revenue
- Sales in 25 countries

- Main markets
  - Germany
  - France
  - Netherlands
  - Denmark
  - Norway
  - Sweden
  - Hungary
  - Romania
  - Poland
  - Italy
  - Israel
  - USA
  - Canada
  - China
  - Chile

Frognall Site

- Sales
- Order fulfilment
- Marketing
- Customer Support
- Supply Management
- R&D
- Engineering
- Logistics
- HR
- Finance

- Fabrication
- Assembly
- Mechatronics
- Parts
- Paint

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Market Drivers

- Organic
- Cost of labour for hand weeding
- Loss of Actives
- Selective Herbicide Resistance
- Sustainability
  - Multi vector - integrated weed management

Robocrop AI – Customer Value

- Green on Green
  - Wider operating window
- Precise Stem location
  - Increased efficacy
- Resilience
  - Varying light conditions

- **Performance / Availability / Cost of operation**

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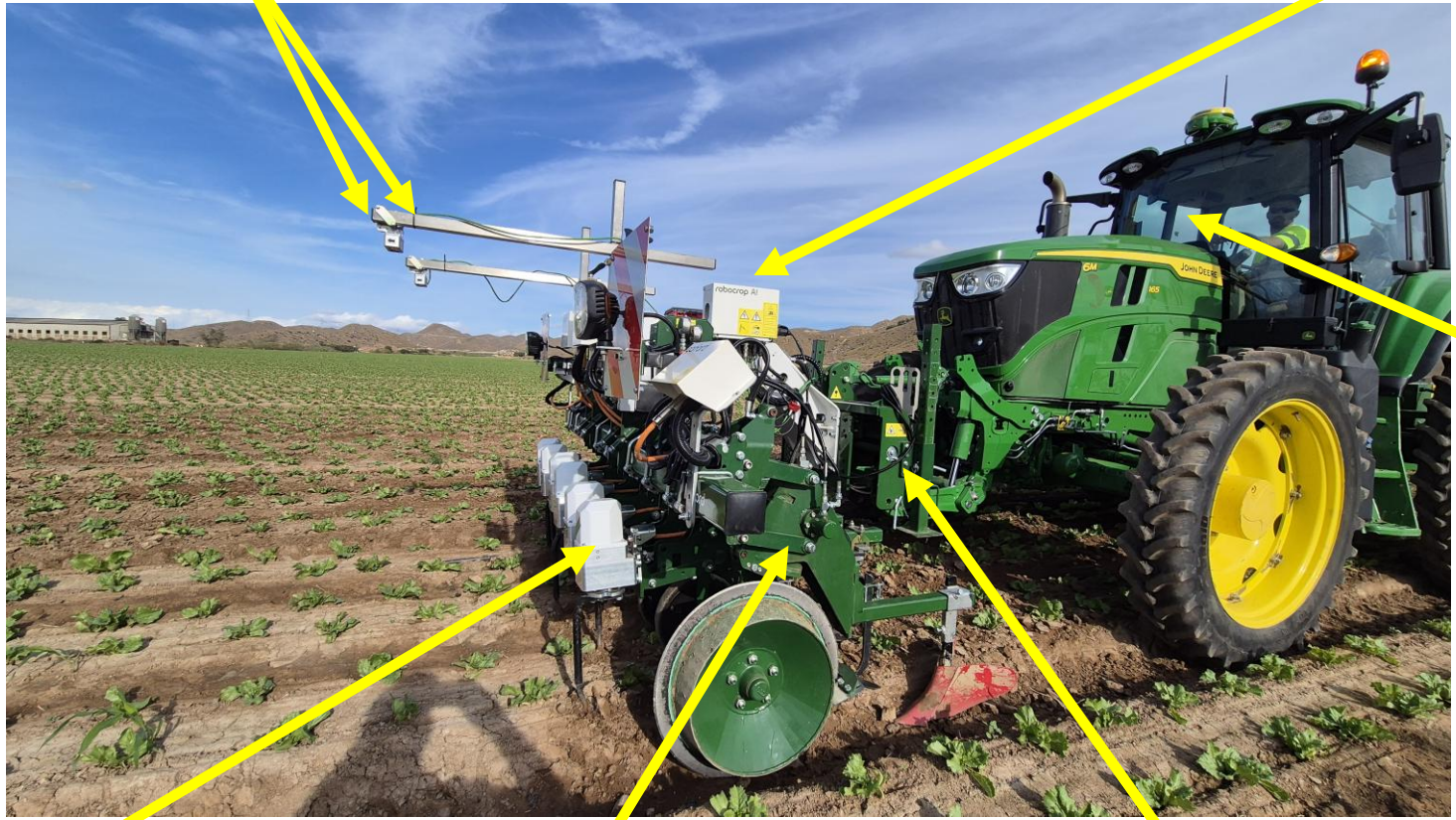
Robocrop AI
System Overview

Cameras



ECU
- CNN Processor
- Machine Control
- CAN Interface

Display

eRotor

Disc Steering & Leveling

Free-Shift

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Multi modal camera

- Stereo NIR
- RGB – Colour
- Laser

NVIDIA – Jetson Platform

- Convolutional Neural Network (CNN)

Machine Control

- Steering
- Leveling
- eRotor comms

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Screen Shot of Main Run Page

Green on Green

Artificial Intelligence

Multi – Modal system

Precise Stem location

Resilience to varying light

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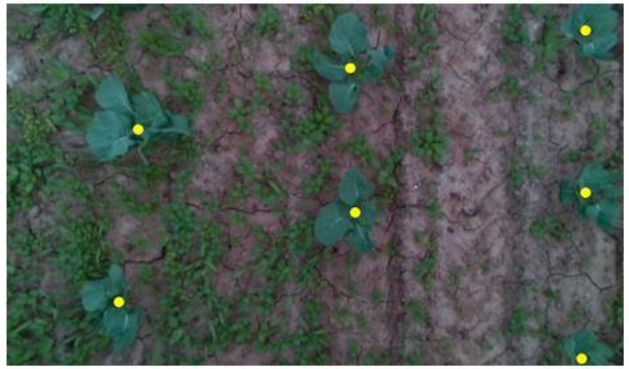
Broad Leaf Weeds

Crop Plant Overlap

Green Background



In all these image samples the Robocrop AI system successfully identifies the crop and identifies the exact stem location of the individual crop plant

Not recommended practice –

Before

After

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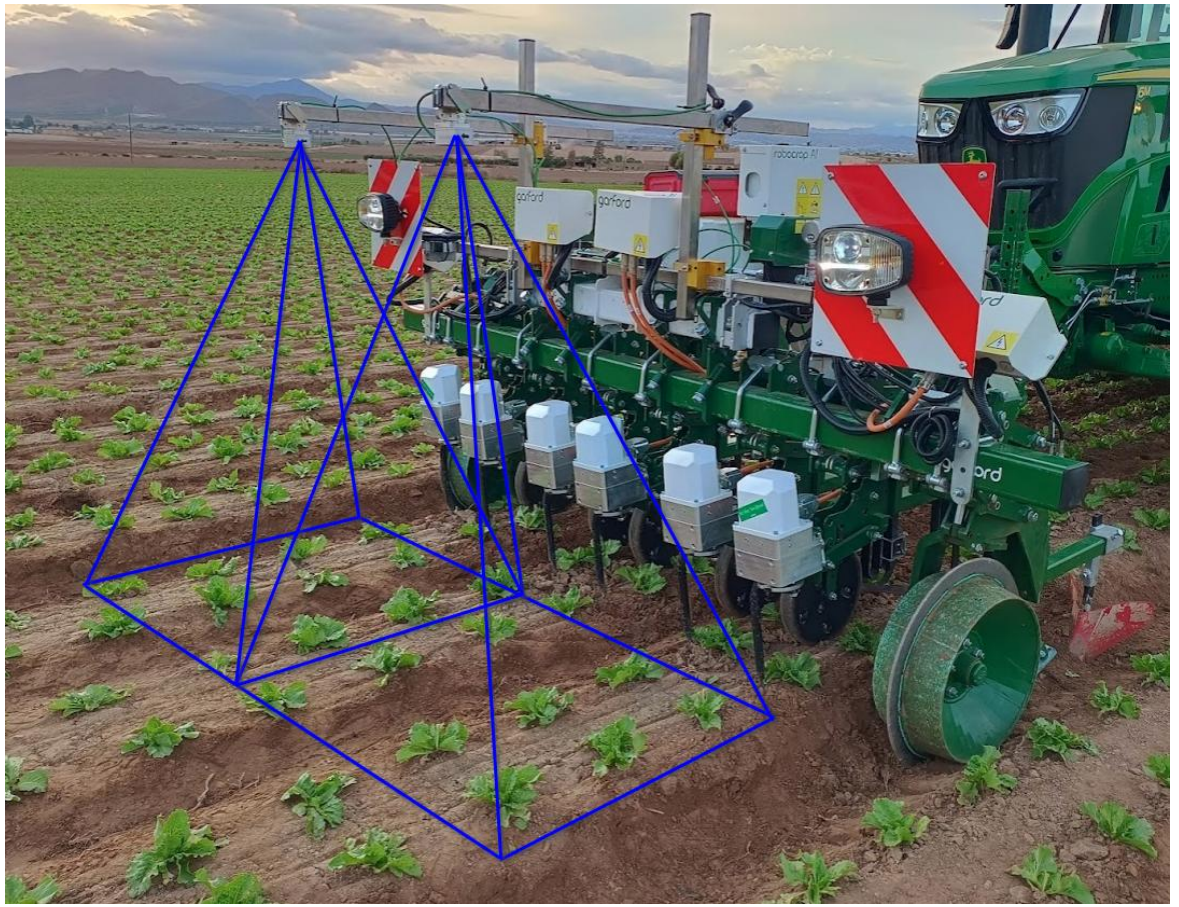
Business and Engineering challenges

- New Specialist skills
- Scope management
- CNN - Training



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Will Artificial Intelligence revolutionise Agriculture?

AI – Transformational?

- Machine control
- Job Optimization
- Agronomic Optimization

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	Technology	AI - Tools	Economic Headroom
Machine Control	Yes	Yes	$
Job Optimization	Yes	Yes	$
Agronomic Optimization	Yes	Yes	$$$$

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Questions

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