



Onion Algorithm

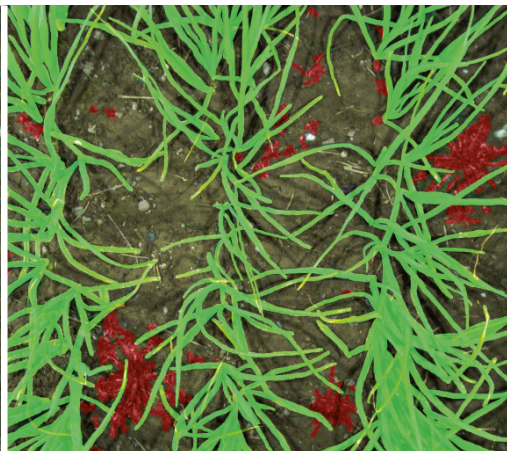


The Onion Algorithm used by the ARA™ UHP Sprayer is setting a new standard in sustainable agriculture. For onion growers, the benefits are considerable, particularly in terms of reducing phytotoxicity and promoting healthier onion growth.

Real-time capture with ARA™



Sub-centimeter plant detection



Red: targeted weeds. Green: crop



We have treated more than 1,750 hectares of onions with ARA™, which has allowed us to achieve savings of up to 96% on raw chemical inputs. Of course, this depends on weed pressure and crop growth stage, but we are very satisfied with the results.

— **Angus Hill**, Agronomist & Farm Support Consultant, United Kingdom

Detect & Treat Weeds with Artificial Intelligence (AI)

Our advanced Plant-by-Plant AI™ technology detects weeds of sub-centimeter size in your onion crop, even in the onion rows. It targets them in less than 1/4 of a second on a footprint as small as 6 by 6 cm.



The clearly visible spray footprints on the ground here demonstrate the drastic reduction in product use compared to a broadcast treatment.



This precision allows to come **closer to the crop**, hitting more weeds, even in the onion rows, without harming them.

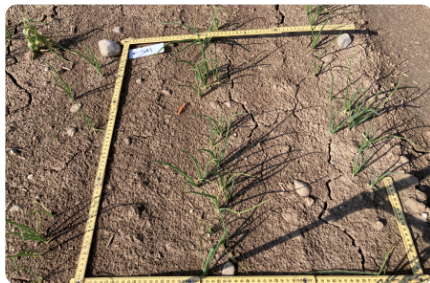
Visible Results

Phytotoxicity, caused by excessive or imprecise plant protection product application, can have a severe impact on the onion's development:

Untreated Control



Conventional Broadcast



ARA™ Spot Spray Treatment



Treatment with ARA™ is as effective as the conventional method, without its phytotoxic downsides. Pictures show representative plots 7 days after treatment.

It is estimated that weeds are responsible for 34% of crop losses. ARA™ enables growers to **stay on top of the most problematic weeds** such as volunteer potato, thistle, nutsedge, field bindweed.

The ARA™ precision field sprayer from Ecorobotix is an efficient solution for chemical weed control.

ARA™ uses **artificial intelligence** and **highly precise, localized spraying technology** to effectively combat weeds while achieving higher yields. The study compares different weed control methods: an untreated control, broadcast spraying and ARA™ spot spraying with selective products.

The link to the study is on: ecorobotix.com/crop-care/crop-algorithms/onion/

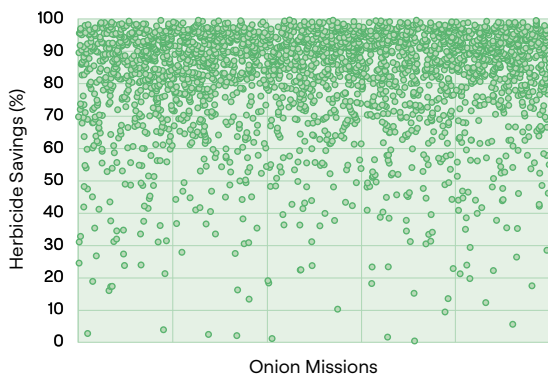
Proven Benefits:

Data from **3,000** Onion Missions

Analyzing nearly 3,000 ARA™ sprayer missions, **herbicide savings reached up to 95%**. In most cases, plant protection product use was reduced by at least **80%**, proving that **ARA™ not only cuts costs but also protects onions from chemical stress**.

- **Higher Yield Potential** – By avoiding phytotoxicity, onions grow stronger and bigger.
- **Cut costs of manual labor** – Improve overall farm profitability by reducing the need for manual labor.
- **Environmentally Sustainable** – Reduce chemical runoff, improve soil health and air pollution.

Graphic representation of herbicides saving in 2023



Each dot shows the herbicide saving for each single mission ARA™ led in onions in 2023.

Note: Any use of plant protection products must comply with the official authorisations, authorised conditions of use, and applicable regulations in the country of use.

A local distributor is likely closer than you think.

Get in touch to learn more!

ecorobotix.com