PRESS RELEASE

I-SPRAY: artificial intelligence applied to spraying to reduce consumption of plant protection products

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In today's farming context, it is a growing economic, environmental and societal challenge to reduce the consumption of plant protection products. Artificial intelligence is a breakthrough solution to drastically reduce chemical consumption. In partnership with CARBON BEE, KUHN is currently developing a sprayer that can locate and treat weeds, and only weeds.

The I-SPRAY concept

Fitted with hyperspectral sensors on the boom, the sprayer constantly monitors the vegetation being treated. Artificial intelligence is used to analyse the images and recognise adventive species that need treating. The purpose is to open the required nozzle to spray only the targeted plant. For the user, the main advantage is applying plant protection products only where they are needed.

A New Era in Spraying

This is a revolution in spraying logic. As the technology is able to distinguish between different weed families, it is possible for example to select targeted spectrum plant products to gain higher efficiency of chemical application. Furthermore, the treatment goal is no longer preventive but to target one or more localised operations on weeds and only spray where necessary with the most suitable product.

Initial Promising Figures

Initial figures show considerable savings in plant protection products, that can reach up to 80% just by reducing the treatment on the target plant. This technology opens the possibility of managing herbicide resistance, by using more targeted active substances. Finally, maps of weed flowering will provide better agronomic knowledge of field conditions enabling new crop cultures to be measured, tested and developed on farms. These are just some of the issues KUHN and CARBON BEE will be researching over the coming months.

The i-SPRAY concept will be previewed at SIMA 2019, awaiting the continuation of tests and farm trials prior to commercialisation.

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