



European project funded within the "Horizon 2020" program with the involvement of different institutions and organizations from Germany, Denmark, Spain, France, Poland, Belgium, Italy and the Netherlands

WeLASER; the technological solution that aims to end chemical treatments in the weed management

- *WeLASER project is based on the application of lethal doses of energy on the weed meristems using a high-power laser source.*
- *During the execution period (2020-2023) the effectiveness of the system will be tested in wheat, corn and potato crops.*
- *The prototype will be available in 2023 and will require specific implementation to be commercialized.*

Madrid, 30 of November 2020. WeLASER project starts working with the aim of avoiding the use of chemical products in the removal of weed. In the next 36 months (2020-2023) a prototype of the technological solution will be produced and will require further development to be commercialized broadly.

In a context of a world growing population and higher needs of reducing the uses of pesticides and fertilizers, WeLASER seeks for a more sustainable management. Mechanical solutions contribute to deteriorate the soil properties, harm beneficial soil organisms and provide poor results for in-row weeding. However, the WeLASER solution focuses on non-chemical weed management based on applying lethal doses of energy on the weed meristems using a high-power laser source. An AI-vision system discriminates crops from weeds and detects the position of the weed meristems to point the laser on them using a laser scanner. An autonomous vehicle carries these systems all over the field. A smart controller coordinates these systems and uses IoT and cloud computing techniques to manage agricultural knowledge. This technology will provide a clean solution to the weeding problem and will help to decrease significantly the chemicals on the environment.

WeLASER is a European innovation project funded within its "Horizon 2020" program. It is coordinated by the Spanish Council for Scientific Research (CSIC) and has the participation of Futonics LASER (Germany), Laser Centrum Hannover (Germany), Department of Plants and Environmental Sciences of the University of Copenhagen (Denmark), AGREENCULTURE SaS (AGC) (France), the Coordinator of Farmers and Livestock Organizations (COAG) (Spain), the Department of Agricultural Sciences of the University of Bologna (Italy), the Institute for the

Ecology of Industrial Areas (Poland), the Department of Agricultural Economics of the University of Ghent (Belgium) and Van den Borne Projecten BV (VDBP) (The Netherlands).

With the help of the European funding, WeLASER will put to work a large group of actors and stakeholders to advance in increasing agricultural productivity while making the environment more sustainable and enhancing health to animals and humans.

WeLASERinfographic solution of the technical process

