

Selecting target crops for laser weeding testing

Selecting target crops

Potato, wheat and maize were the initial target crops in WeLASER. However, during the First Stakeholder Event, the stakeholders suggested also to focus final system on sugar beets to make the weeding system more competitive. Hence, the WeLASER General Assembly decided to focus on sugar beet and to keep wheat and maize as target crops because they are dominating crops in the EU.

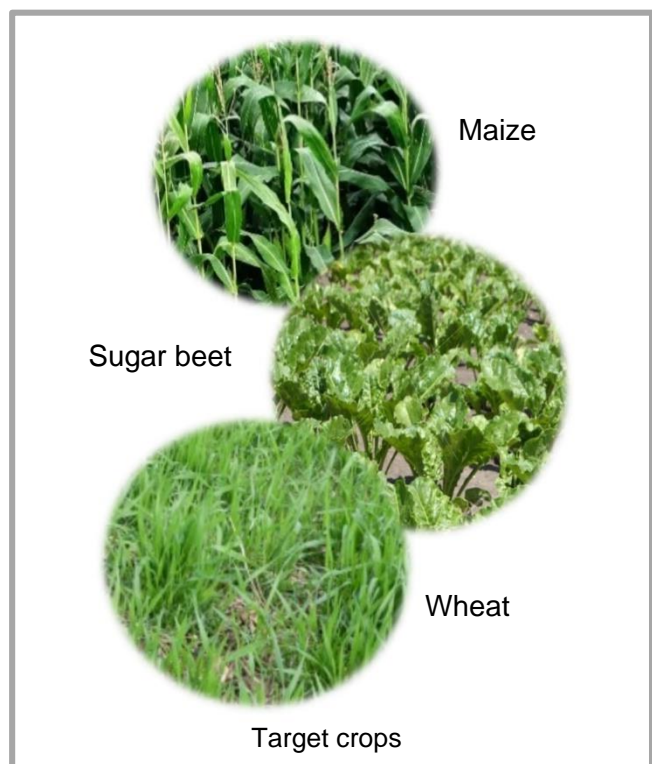
Sugar beets (*Beta vulgaris*)

The EU is the 3rd sugar producer in the world (18 M tons of sugar using 1.6 M ha). Sugar beet was also selected as a target crop due to its high herbicide consumption. Beet plants are small during the part of the growing season where weeds need to be controlled efficiently. The small plants make it easy for a robot to drive over the rows to carry out the treatment.

Maize (*Zea mays*)

Maize was grown on 6.26 M ha in the EU in 2020. Maize is a row crop that covers the ground late in the growing season and weeds are often controlled with herbicides 3 times in the growing season.

Controlling weeds with laser in a small area around the crop plants early in the season with a laser is a good solution as it is not possible to control these weed plants with mechanical tools.



Autumn-sown cereals

Autumn-sown cereals are the dominating crops in the EU. The plants cover the ground relatively fast and compete well with many weed species. However, grass weeds emerging in the autumn constitute serious and increasing problems and they need to be controlled early in the season.

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