



WIWAM

Automated systems for plant phenotyping



WIWAM

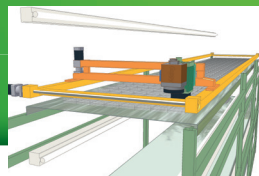
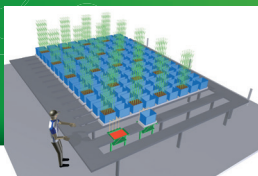
Weighing, Imaging & Watering Machines for Scientific research

WIWAM is the collective name for a series of **plant phenotyping robots**, which are designed and developed by SMO and VIB. The systems allow for the **automated imaging** and the **precise irrigation** of plants, according to a preset scheme, specific for each plant or group of plants. The combination of automated plant handling with non-invasive imaging methods yields a variety of plant growth parameters at regular time intervals during development and ensures the high-throughput and reproducible phenotyping of plants.



TAILOR-MADE SYSTEMS

Each of the WIWAM plant phenotyping platforms can be extended and adapted to meet your specific research question or to optimally fit your available space. Several image acquisition systems can be implemented and specific pot sizes can be accommodated. Also entirely custom made systems can be designed.

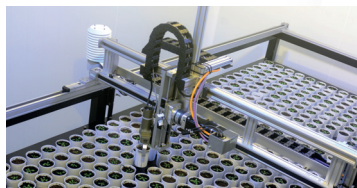


You can visit the WIWAM types @ VIB, Ghent, Belgium.
contact: info@wiwam.com



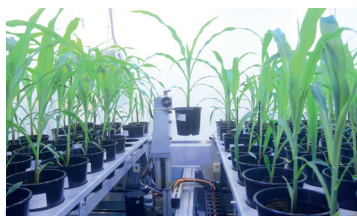


Currently, there are three standard types of WIWAM plant phenotyping systems: WIWAM xy, WIWAM line, and WIWAM conveyor.



WIWAM xy

WIWAM xy is an overlying portal robot, positioned in a growth room, for the high-throughput and reproducible phenotyping of seedlings and small plants, like Arabidopsis. A robotic arm picks individual pots from the top. Images are typically acquired by a top view camera.



WIWAM line

WIWAM line is an underlying portal robot, positioned in a growth room, for the high-throughput and reproducible phenotyping of small caulescent plants, such as small maize plants. A robotic arm picks individual pots from the side. Images are typically acquired from different angles by a side view camera.



WIWAM conveyor

WIWAM conveyor is an integrated greenhouse solution for the high-throughput and reproducible phenotyping of larger plants, like maize. A conveyor network brings the plants to weighing & watering stations and to imaging cabins, harboring a range of non-invasive camera systems.

The WIWAM plant phenotyping robots allow for the automated irrigation and measurement of a variety of morphological and physiological growth parameters at regular time intervals. WIWAM replaces a lot of manual handling, saving time and costs, and does this with high precision.



Check out the WIWAM movies!



SMO & VIB: A successful collaboration

The WIWAM machines are the result of an intensive collaboration between machine builder SMO and the VIB (Flemish Institute for Biotechnology)



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