



## PHE-B

# A high-throughput phenotyping bar for high-growing crops

New high-throughput phenotyping technology out in the field paves the way for characterising large volumes of crops. These techniques help to improve the ability of cash crops – particularly high-growing crops – to withstand stress.

Carnot Plant2Pro Institute

### Scientific / technological breakthrough

Climate change and the associated production environments have major impacts on the development of field crops. For example, cold temperatures, water shortages or pests can impact high-growing crops such as maize or sorghum. Assessing the capacity of these plants to withstand such stress is of particular interest to the agri-food industry, however businesses lack the technology needed to gather these indicators out in the field. The PHE-B demonstrator developed by Carnot Plant2Pro® lab Arvalis is a phenotyping bar for high-growing crops adapted to fit onto a high-clearance device. Monitoring variables (plant surface, architecture or biochemical composition) will improve assistance with varietal selection and density optimisation and the competitiveness of partner businesses.



### Competitive advantage for the economic stakeholders

High-throughput phenotyping tools first appeared a few years ago on straw cereals. A lot of work was done on choosing and adapting equipment and the first benefits are beginning to appear on the crops themselves. It has proven essential to adapt this type of equipment to maize or sorghum to enable the players in these sectors to maintain high levels of competitiveness.

The PHE - B demonstrator is a light and easily accessible system for the seed and plant protection industries.

The new measurements made possible by this innovative system will provide farmers with better advice and more effective characterisation of the effects of plant protection or biostimulation products through «high-throughput» crop cover measurement.

