Innovations to enhance the sustainable competitiveness of crop production

The Plant2Pro Carnot Institute is dedicated to integrated R & D “from laboratory to field” in the area of agricultural crop production. Plant2Pro is a network of academic research units and agricultural technical institutes which aims to help companies and foster innovation, technology transfer and public-private partnership in the fields of varietal innovation, crop protection and biological control, agronomy, crop designs and precision farming, including digital applications.

Producing more and better to contribute to the economic and environmental performance of agriculture

Promising range of application for public-private partnership to:

- Speed varietal innovation process and maximize the use of genetic diversity by using green biotechnologies.
- Improve plant varieties for new characters (productivity, seed and products quality, disease resistance, reduced need for agri-chemicals, climate change adaptation...).
- Innovate in the field of crop health by developing biocontrol and exploiting natural regulations.
- Adapt crop designs to economic and environmental challenges by mobilizing precision farming.

Target markets

- Seeds and plant propagating material
- Green biotechnology
- Biocontrol and crop protection
- Biostimulants
- Water and mineral nutrition
- Digital and precision farming
- Agricultural advice
- Public authorities
A trans-disciplinary and integrated R&D offer “from lab to field” to promote innovative partner-oriented research

Plant2Pro brings together 14 research laboratories from French academic institutions (INRA, AgroCampus Ouest, AgroParisTech, AgroSup Dijon, Montpellier SupAgro and CNRS) and 3 agricultural technical institutes (Arvalis, French Institute of Vine and Wine, Terres Inovia) to support companies in their projects and for a wide range of technological maturity level (from TRL 1 to 9).

A unique range of skills and resources

- Research skills: plant biotechnology, genetics and plant breeding, crop protection and biological control, management of natural resources, agronomy, crop designs and decision support tools.
- Crop sector skills: grapevine and field crops (e.g., grain cereals, oilseeds, protein crops, maize and sorghum, fodder, potatoes, flax, tobacco).
- Technological platforms for: soil biodiversity, high-throughput phenotyping, genomic resources (production, preservation, DNA banks characterization), high-throughput genotyping, proteomics, microscopy, biochemical, chemical and metabolic phenotyping, translational research, plant pathology, food storage.

Research staff (full-time equivalent): 1 264 including PhD students: 209
Partnership incomes with industry: 33,1 M€
Global budget: 169,7 M€

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