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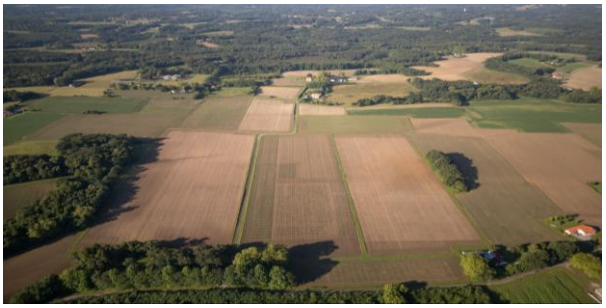

UE0394

Maize Experimental Unit

Manager
Carine Palaffre
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Research Themes

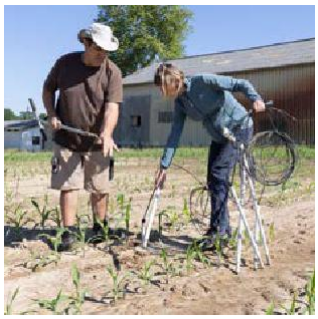
- Preservation of Genetic Heritage
- Research Support
- Enhancement of Genetic Material

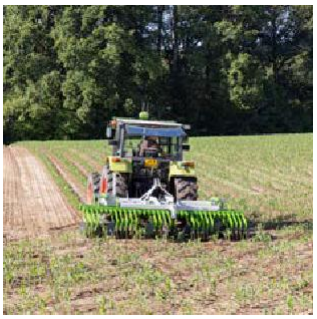
Some figures

- 6 staff INRAE
- 1 staff GEVES
- 45 hectares of cultivated area
- 15 seasonal workers in summer
- 15 seasonal workers in autumn
- 6810 preserved varieties

Mission and objectives

The Maize Experimental Unit is a station dedicated to maize genetics. It is primarily concerned with the evaluation of plant material in the field, from sowing to harvest, and its interaction with the environment. Bringing together expertise in phenology, genetics, plant material description, phenotyping, maize cultivation and seed production, the unit's team has the opportunity to work on the entire range of diversity of maize grown in Europe as well as tropical crops thanks to its geographical and climatic location.





In order to illustrate the relevance of certain methodologies and tools of the institute's research teams, the unit's team is required to create original genetic material, whether classic or for diversified use, and to experiment with it on site.

Actions

• Preserving the Maize Genetic Heritage :

First and foremost, the unit's mission is to preserve the maize genetic heritage. Labeled a Biological Resource Center for maize lines, the unit propagates, preserves, and distributes INRAE collections, as well as others from European public partners unable to fulfill this mission for their own national heritage. By 2025, we will conserve 6,810 maize lines, including 2,015 tropical lines.

• Research Support :

Also, and in the context of climate change, the unit provides research support through scientific experiments: advancing flowering dates, integrating drought-tolerant exotic material, and improving the nutritional value of corn grain. The experiments conducted can also be oriented towards new agroecological practices: promoting soil biodiversity, reducing nitrogen fertilizers, rational irrigation, and strategies for resistance to borer insects.

Center
Bordeaux - Nouvelle-Aquitaine

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Thanks to its geographical location and its skills, the Maize Experimental Unit is the only site in France responsible for expertise in the varietal control of maize parents for the seed sector, whether it be late material for studies by the Variety and Seed Study and Control Group, or for all parents used in France by the interprofessional organization for seeds and plants.

• Popularization of science :

Finally, the unit participates in the teaching and popularization of science through numerous visits to the site by high school students from agricultural vocational establishments.

Collaborations and partnerships

The Maize Experimental Unit has developed partnerships within the framework of research programs with the following laboratories:

- Joint Research Unit for Quantitative Genetics and Evolution (UMR GQE le Moulon)
- Laboratory of Ecophysiology of Plants under Environmental Stress (UMR LEPSE)
- Joint Research Unit for Genetic Improvement and Adaptation of Mediterranean Plants (UMR AGAP)
- The Jean-Pierre Bourgin Institute (UMR IJPB)
- Multidisciplinary Research Unit for Grasslands and Forage Plants (UR P3F)
- Laboratory for Plant Reproduction and Development (UMR RDP)
- DiaScope Experimental Unit
- Galicia Biological Mission (CISC Pontevedra, Spain)

It also acts as a service provider to the Group for the Study and Control of Varieties and Seeds (GEVES), the National Interprofessional Group for Seeds and Plants (SEMAE), and Agri Obtainments, commercial subsidiary of INRAE.

Education

In addition to popular science activities, the unit team welcomes BTS level interns and doctoral students for their field experimentation needs.



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