Marine biological resources

HELIOS

MARINE-SOURCED BIOACTIVE COMPOUNDS TO PREVENT GROWTH OF OROBANCHE AMONG CROPS

The HELIOS project aimed to develop an effective solution to eradicating Orobanche (Broomrape), a genus of parasitic plants which attack numerous cultivated crops.

The R&D carried out during the project has led to the discovery of extracts from marine algae and halophytes which impact on how the parasite and host interact. Research has mainly focused on treatments prior to colonisation of the host and thus to the emergence of the parasite. The aim of this innovative approach was to divert the attention of the parasite away from the host plant and even to repel it. Controlled field trials evaluated how effective these new marine-sourced bioactive compounds actually were to determine the most efficient application methods and to guarantee optimum yields for the target crops.

The HELIOS project results are promising and will lead to development of a new, marine-sourced environmentally friendly solution as an alternative to genetic selection and herbicide-tolerant varieties of crops.

SPIN-OFFS AND FUTURE DEVELOPMENTS

Results

- A new biocontrol product for use against Orobanche

Partners

Companies

Centre Mondial d'Innovation (CMI) du Groupe Roullier, Saint-Malo [Project Developer]
Maisadour Semences, Mont-de-Marsan

Research centers

CETIOM, Paris
Université de Nantes, Nantes

Funders

Bpifrance
Région Bretagne
Saint-Malo Agglomération

Labelisation

01/12/2011

Overall budget

2 750 K€

- Project paper given at International Conference (Spain, June 2014)

- Presentation at the World Congress on Parasitic Plants (China, June 2015)

- Permanent contracts for one technician and one engineer and temporary contracts for an operator (2 months), an assistant engineer (24 months), a technician (6 months) and 2 (University of Nantes) postdoctoral researchers (24 months