

Context

Potato is a major food and trade crop on both sides of the Mediterranean Sea. Its vegetative mode of propagation and high economic value foster continuous exchange of living material, long production cycles, and severe losses to microbial diseases during vegetation and storage. This vulnerability is enhanced by the diversity of the production systems in which the crop is grown, and by changes in the geographical distribution of emerging or re-emerging parasites resulting from climate change and the seed trade. Developing sustainable potato protection strategies, with low or no pesticide applications, is therefore a major challenge to improve the economic, environmental and human performance of potato production worldwide.

Objectives

The PoH-MED project aims at enhancing the sustainability of potato protection in the Mediterranean area, through three complementary working directions: 1) to infer local adaptations and/or population movements of major potato fungal and bacterial pathogens by unravelling their distribution, polymorphisms and population structures, 2) to develop, and assess non-pesticide control methods (resistant cultivars, plant defence stimulators, agronomic strategies) identified during the project or in earlier collaborative work, and to combine them through a systemic analysis into innovative crop protection strategies, and 3) to disseminate key findings through participatory actions.

Workplan

To reach these goals, PoH-MED brings together a multi-faceted consortium involving public research institutions, universities and agricultural high schools, official extension services and growers' organisations. It will fill major knowledge gaps by providing multidisciplinary data much needed for an adequate understanding of the changes occurring on both sides of the Mediterranean in

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- Molecular Biology Unit, Institut National de la Protection des Végétaux, Algeria
- Fédération Nationale des Producteurs de Plants de Pomme de terre, France
- Centre National de Contrôle et de Certification, Algeria
- Université Paris VI- Jussieu, Laboratoire Electrophysiologie des Membranes, France
- Central Administration for Seed Certification, Egypt
- Groupement National Interprofessionnel des Semences, France
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populations of severe potato pathogens, and will disseminate innovative plant protection technologies towards extension services and advanced growers through collaborative demonstration platforms designed and run by end users themselves, as well as through academic and practical training of undergraduate students by participating institutions.

