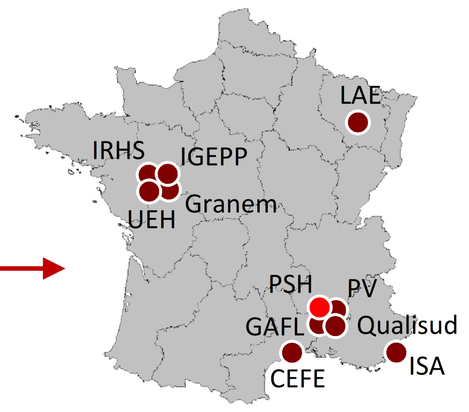
GROWING
PROTECTING
differently

CAP ZERO PHYTO

Developing the concept of agroecological immunity

A multi-disciplinary consortium: **11 partners** from **10 scientific disciplines**



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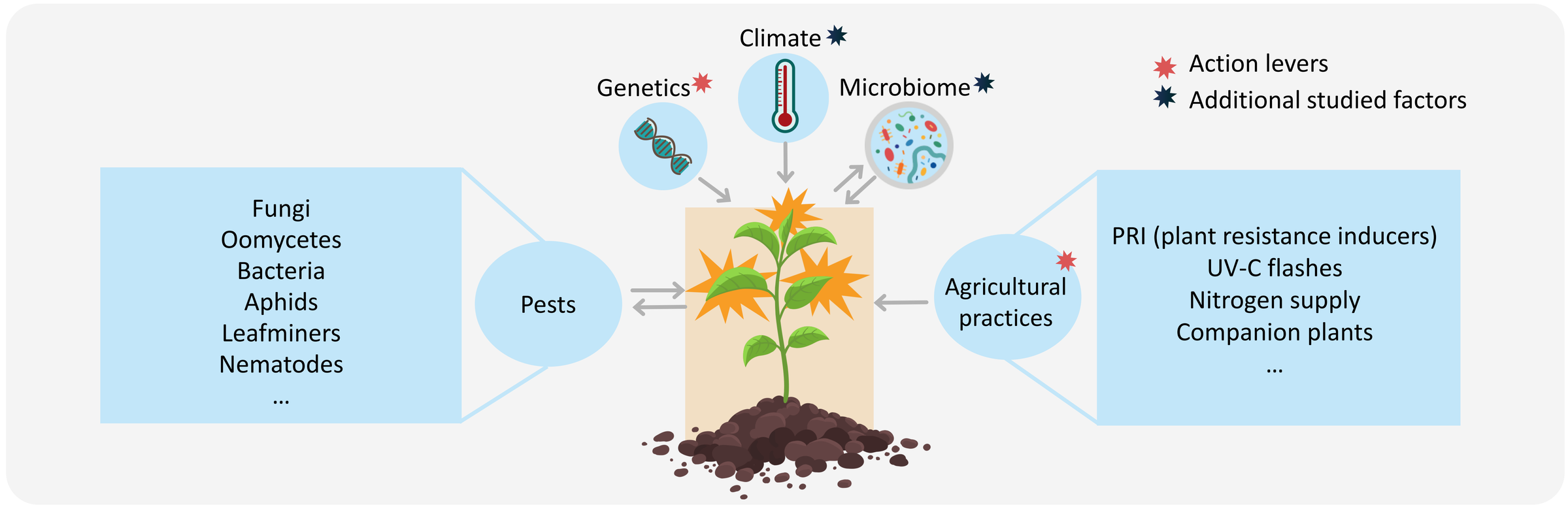
CONTEXT & OBJECTIVES

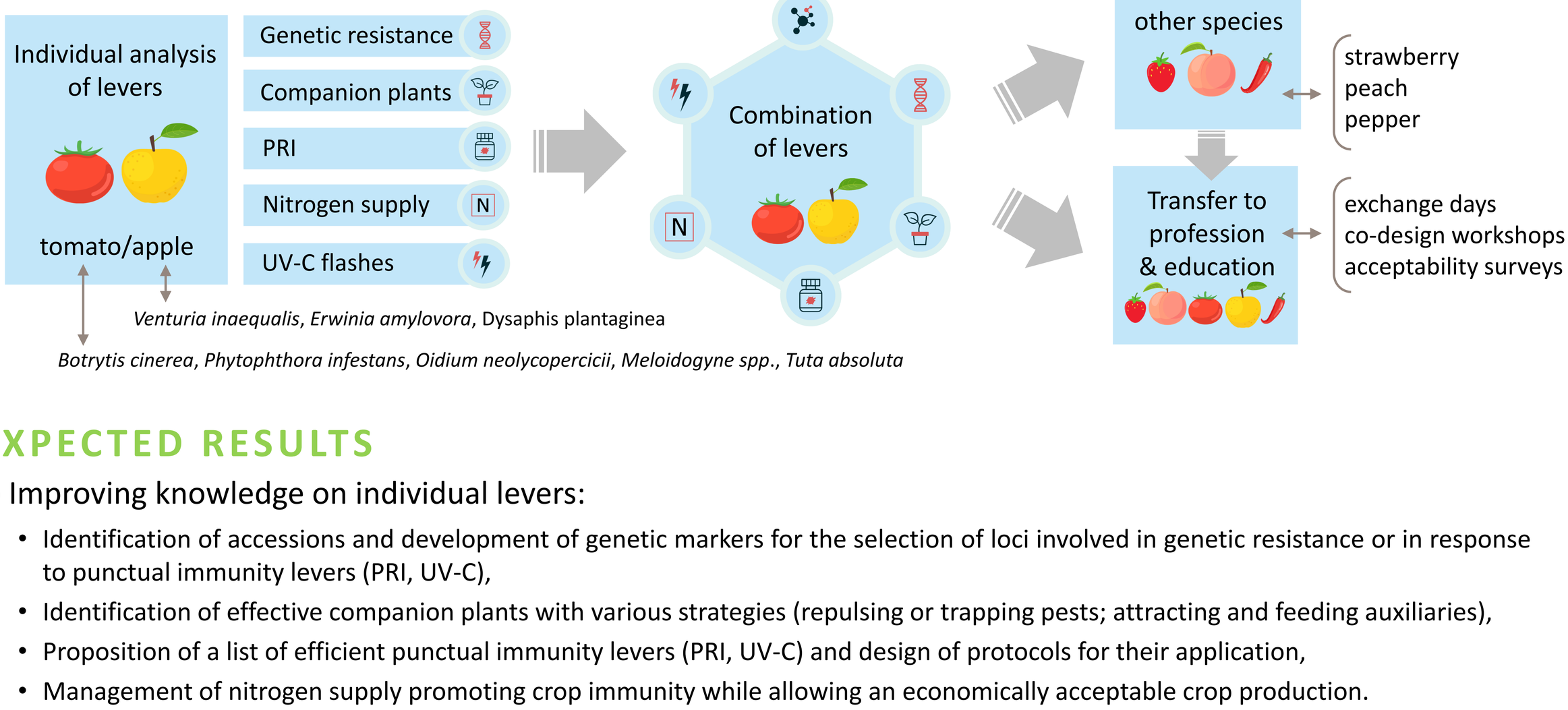
The project aims to propose new crop protection strategies based on a **combined use of agro-ecological levers to strengthen crop immunity (✸).**



Scientific issue		*Socio-economic issue*
Understanding interactions	Integrating knowledge for an optimal **immunity** of the cropping system	Adopting new practices

METHODOLOGY & ORGANISATION

Studies under controlled conditions and system experimentations



EXPECTED RESULTS

1) Improving knowledge on individual levers:

- Identification of accessions and development of genetic markers for the selection of loci involved in genetic resistance or in response to punctual immunity levers (PRI, UV-C),
- Identification of effective companion plants with various strategies (repulsing or trapping pests; attracting and feeding auxiliaries),
- Proposition of a list of efficient punctual immunity levers (PRI, UV-C) and design of protocols for their application,
- Management of nitrogen supply promoting crop immunity while allowing an economically acceptable crop production.

2) Understanding i) the multiple interactions between levers and between levers and environmental factors,
ii) how to rationally combine levers to control the various pests of each crop.

PERSPECTIVES

The goal of the project is to develop integrated crop protection strategies based on plant immunity with the most efficient combinations of levers on fruit and vegetable production. This could lead to the complete re-design of cropping systems, i.e. new cultivars and a novel spatialization of the crop mixed with companion plants, involving innovative management practices, and taking into account technical and economical feasibility.

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