

The Integrated Horticultural Production pole

With a crisis in the fruit and vegetable industry and stagnation of their consumption, the centre has chosen as its objective the development of a scientific multidisciplinary approach at the service of the industry and of society in a sustainable agriculture framework. The work devolves around three research questions:

- characterisation, elaboration and maintenance of quality,
- this research aims to characterise the quality (organoleptic, health) of pulpy fruits, to elucidate its genetic determination and to provide knowledge and tools to control it by means of cultural practices and to maintain it after harvest during storage,
- integrated production.

The objectives are to understand the chain of causality which links the cultural practices and the characteristics of the farming landscape with the operation of horticultural systems, to devise on this basis cropping systems and landscapes suited to integrated production, to develop knowledge of tools for non-chemical control and to analyse the conditions for and ways whereby these integrated production methods can be adopted by farmers.

- health and safety value.

The objective is to understand the mechanisms whereby some micronutrients, such as polyphenols and carotenoids, in fruit and vegetables are active and biologically available in the food and in the bolus. Research is also being done for a better evaluation of the microbiological risk from fresh and processed fruit and vegetables.

The centre covers research in the fields of systemic agronomy, ecophysiology, post-harvest physiology, food chemistry, microbiology, epidemiology, entomology, plant pathology, genetics, genomics, statistics and spatial mathematics. It houses 300 permanent Inra staff and 30 staff members of the University of Avignon and the Pays de Vaucluse. They are divided into 7 research units (UR/UMR), 1 service unit (US), 2 experimental units (UE, and 1 associated facility (Geves).

Technical capacities: analysis of fruit quality, molecular biology, microbiological safety of foods, microscopy.
Experimental facilities: glasshouses, polytunnels, fields.