



**LAPOESIE**

EXPLORATORY  
PROJECT  
2020-2022

**Interspecific ecosystem benefits  
between rabbits and apple trees**

**Coordination**

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This transdisciplinary project analyzes the feasibility and added-value of associating rabbits with an organic apple orchard. The main hypothesis is that the association between apple trees and rabbits induces reciprocal benefits for both species (food, animal health and well-being, weed control, soil fertility, etc.), as well as constraints: damage to apple trees caused by rabbits, exposure of rabbits to predators and diseases (coccidiosis, RHD, etc.).

From a sociological point of view, this project presents challenges in terms of getting arboriculture and livestock specialists to work together.

The first part of the project involved setting up an original system for animal experimentation in an orchard (regulations, prototypes) and co-designing an original housing and management system for rabbit farming with a wide range of stakeholders from both the tree and rabbit farming sectors.



## **INRAE units**

**AGIR**, Toulouse

**Ecodevelopment**,  
Avignon

**IHAP**, Toulouse

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**LISIS**, Marne-la-Vallée

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## **Partners**

Independent socio-  
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In terms of ecosystem services, the rabbits thoroughly cleaned up the area around the tree trunks, consuming the grass, fallen apples and leaves, and offering a potential prophylactic and soil fertilization service. The orchard also provided a number of services for the rabbits: protection from aerial predators, a source of food that reduced the consumption of pellets, and an environment allowing the expression of rabbits' natural behaviour.

On the down side, despite the installation of tree guards, the bark of some trees was eaten away, although this did not affect tree survival. Another point of vigilance concerns work ergonomics. In addition, among the project's many prospects, agronomic elements and the technical management of both orchard and animals are priorities for continuing the design of an orchard dedicated to raising rabbits (and other livestock).

This work will be pursued on animal welfare issues, in particular, via strengthened cooperation with the French organic rabbit breeders' association and foreign researchers.

**METABIO**



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