



VÉGÉTRUIES

EXPLORATORY
PROJECT
2022-2024

Coordination

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Plants as alternatives to synthetic hormones for cycle synchronization in pig farming

The transition to more numerous and more efficient organic pig farms requires the development of alternatives that do not use synthetic hormones for the synchronization of estrus to facilitate gilt batch management. The objective is to test two natural substitutes for synthetic progestagens used for cycle synchronization: the fruit of the chaste tree and walnut leaves. The hypothesis is that the incorporation of phytoprogestagens in the feed ration would extend the luteal phase of gilts and that its cessation would induce a resumption of follicular growth and a synchronization of estrus.

In order to choose the most interesting varieties of chaste and walnut trees, the following will be carried out:

- a steroid profile of the chaste berry (analyses have already been made for walnut leaves)
- an assessment of flavonoids and phytosterols in chaste tree fruits and walnut leaves
- a study of the intraspecific variability and the area of presence of wild and cultivated chaste trees.



INRAE units

GenESI, Rouillé
UEVT, Villa Thuret
UEA, Toulence

Partners

Phytosynthesis
INSERM – Université
Paris Saclay



Chaste berries and walnut leaves will be incorporated into the gilts' feed in the form of pellets, and the effects on estrus cycles and on the plasma and salivary concentrations of steroids will be measured, notably progesterone and its metabolites.

These experiments will take place at the Porganic experimental farm of the GenESI unit.

These results will make it possible to confirm the relevance of using these plants for the synchronization of gilt cycles.

The interdisciplinarity of this project is an asset for its success, allowing it to draw upon knowledge from the disciplines of botany and reproductive physiology, as well as advanced physico-chemical analysis techniques.

METABIO

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