

# INNOVATION

**Innovation is key within our cooperative, to anticipate trade transformations and support societal changes. Innovation is a collective approach applied throughout the entire group. Each branch has its own innovation strategy, which is then developed by individual trades. In the same way, innovation is shared on an international level thanks to cross-cutting projects with long-term strategic visions.**

## **OVALIE INNOVATION, A CROSS-CUTTING VISION OF INNOVATION**

Jointly launched in 2012 by Maïsadour and Vivadour, Ovalie Innovation is one of the ways in which our innovation approach is applied. Boasting 14 recognised trades, these two cooperatives joined forces to meet both societal and regulatory expectations, and strengthen their resources with a goal to meeting identical objectives:

- Innovating to maintain and develop member farmer income, as well as competitiveness in both Cooperatives' industrial activities
- Helping give members advice and methodology tips
- Obtaining public and private financing by combining our requests
- Implementing a common strategy in terms of research and development.

Maïsadour and Vivadour teams, as part of Ovalie Innovation, actively collaborate to create programmes deeply connected to the relevant trades. Employees in branches in charge of R&D work coincidentally with Ovalie Innovation teams. Ovalie Innovation programmes are connected with relevant trades, and these trades give us the key points in which our innovations need to be rooted.

### **Priority topics:**

- **AGRO-ECOLOGY:** productivity with low input impact, resource savings (phyto, water, fertilisers) and animal welfare
- **ENERGY:** creating energy production activities within operating farms (methanisation, solar power)
- **BIO-ECONOMY:** recovering and using biomass sources for new activities (chemistry, cosmetics/ nutraceuticals, bioplastics, bio-construction, circular economy)

## KEY EVENTS:

- High-precision irrigation: the Maiséo tool is being finalised
- Eco-construction: pursuit of the DIVA project
- Micro-methanisation: MCUBE project is being finalised
- Force-feeding of the future: pursuit of the PRECIPALM project
- Bio-economy: first contract for Coriander oil
- Drones: several services in the pipelines

## Number of OVALIE INNOVATION employees:



## Number of projects:



## A project to serve irrigation

Maiseo®: in 2017, the MAISEO mobile application, developed by OVALIE INNOVATION, underwent a successful large-scale trial with 30 farmers.

This tool helps monitor any changes in the soil's water reserves, and thus any water needs for the various corn varieties planted - whilst taking soil type and weather conditions into account for each plot.

A second trial was launched during the 2018 harvest, with a view to making any last-minute adjustments and widen the panel of testers. Objectives: being ready to launch the service among farmers from 2019!

## Combining livestock farming & energy:

The MCUBE project, concerning individual micro-methanisation within farms, is a real feat as for now there is no technically and financially viable technology at this scale. After 4 years of laboratory-based R&D in collaboration with teams at the INRA, INSA-Toulouse and industrial partners, pilots were implemented jointly with Animal Production teams to assess all potential outcomes.

The prototype unit set up at a feeder's in Barcelonne du Gers is currently finishing off its trial programme. Based on the results obtained for this unit, initial "series" should see the day in 2018-2019, before wider-scale roll-out is considered for 2020.

# INNOVATION

## Eco-construction thanks to the DIVA project

Launched in September 2016, this programme aims to market insulating mortar made using plant matter by creating an end-to-end industry that ranges from the production of this matter (harvest, transformation, packaging, etc.) to its use in an energy renovation project. The challenge of course is to reach economic balance, making it possible to remunerate all the stakeholders involved, and more specifically improve profitability in local farms.

## Cosmetics/nutraceuticals thanks to the CORIANDRE project

In 2016, Ovalie Innovation announced the development of a coriander oil formulated in partnership with the LCA (Industrial ChemistryLab at Toulouse Chemistry School) and its AGROMAT platform in Tarbes, using grains produced locally.

Since then, an alliance was formed with SEPPIC - a subsidiary of Air-Liquide and a major international distributor of ingredients used in the cosmetic and nutraceutical industries (food supplements). SEPPIC launched the Coriander oil product at the Vitafood Show in Geneva in May 2018. Drawing on these many advances, Ovalie Innovation launched a sales activity in 2018, expected to boom from 2019.



## Increased productivity, lower environmental impact and improved animal welfare thanks to PRECIPALM

Ovalie Innovation built up an R&D project in collaboration with Animal Production teams, which won the government-organised “investing in the future” programme, under section 2I2A which focuses on agriculture and the food industry, coordinated by France-AgriMer. Thanks to this seal of approval a project known as Precipalm®, funded by the Investment for the Future Programme, was launched in June 2017 and scheduled to run for 48 months.

The project relies on measurements taken in actual breeding conditions (sensors linked to expert digital systems), which will then help regulate food intake - to ultimately boost productivity, liver quality and enhance animal welfare.



## DRONES

In collaboration with the Agronomic Division, Ovalie Innovation's expertise is evolving, and research into drone technology is picking up pace every year, around 3 main themes: Drones & Biological Safety (fight against pyralids), Drones & Seeds (in partnership with Maisadour Semences) and Drones & Coverage. On the last point, Ovalie Innovation has entered a partnership with Reflet du Monde in Bordeaux to develop a drone able to carry and sow seeds over a cornfield. The goal is - from 2019 - to grow a type of "winter plant cover" crop before the harvest of the main crop.





**A YIELD SENSOR FOR VINES:** how ambitious of us to try and measure the volume of grapes hidden by vines leaves! Economic stakes are also high, as the vineyard's entire production and harvest organisation could in fact be optimised... Yet the challenge was met by Ovalie Innovation in collaboration with the CNRS. During the pilot study and in real conditions, they managed using radar waves to estimate plot yield with impressive precision. Making this technology available to wine-makers will be the next step, which has in fact already been initiated by a company specialised in farming equipment.

**SEXING DUCK EGGS:** Ovalie Innovation and Nutricia, with support from incubation establishments, met the challenge of fighting an (international!) battle aiming to provide a solution that could sort male and female eggs within less than 10 of incubation. The stakes are high regarding animal welfare and productivity within the palmiped sector - which only keeps male ducks for breeding. Two solutions are currently being trialled: on the one hand we have teams at the CNRS and on the other we have two companies specialised in sensors and robotics. Hopes are that the equipment will be fitted in a hatchery in 2019.