

# ENRD Thematic Group on Sustainability Agreements CASE STUDY

# DCOOP: Collective initiatives and sustainability agreements in a non-recognised Producer Organisation

### Introduction

This case study emphasises how sustainability agreements can be applied in the agri-food supply value chain in a non-recognised producer organisation (a single cooperatives made up of cooperatives covering olive oil, livestock, cereals and almonds). In this specific case, different operators in the supply value chain have entered into horizontal agreements, between actual or potential competitors, and vertical agreements, between different actors operating within the food supply chain, to enhance environmental, economic and social sustainability.



# DCOOP - A farmer-owned cooperative with family farming and the environment at its heart

DCOOP is one of the largest cooperative groups worldwide, with different productions including: olive oil, olives, wine, goat milk, nuts and cereals. It is a cooperative of 130 cooperatives formed by partners, aggregating around 75 000 small and medium size producers across Spain and Portugal.

The main objective of DCOOP is to generate prosperity and employment in the countryside, supporting the commercial exchange of sustainable, innovative, profitable and high-quality production.

Improving the sustainability of the agri-food supply value chain is one of the key priorities of DCOOP. To this end, sustainability practices have been implemented through the value chain supported by investments in Research & Development, alongside the implementation of sustainability agreements.







# Collective initiatives and sustainability agreements

TDCOOP is currently working on the development of a new **sustainable production model**, strategically conceived to provide added value to the surrounding rural environment whilst responding to new global demands and challenges. All DCOOP's activities are based on a recognition of the need to mitigate climate change and enhance the natural environment in a sustainable way.

One way of pursuing this is through a collective agreement for the **centralised purchase of inputs**, which reduces production costs for small farmers as well as for the processing and manufacturing activities of the cooperatives. This activity is focused on the 'collective' buying of inputs such as fertilisers and pesticides for agriculture, fuels, and animal feeds.

The reduction of the cost of inputs for small farmers may be seen as a sustainability action as it improves profit margins and thus economic sustainability.

Other key objectives of this cooperation initiative include guaranteeing a high quality of products; providing services to all the members of the cooperatives; covering a wide-range of farmers' needs; and increasing the level of loyalty, reliability, and trust within the agri-food supply value chain.

# Circular economy and sustainability agreements in DCOOP: working for the integral recovery of by-products from the olive production

In 2021, DCOOP started work on the recovery of olive production, including the waste utilisation. The aim is to improve the management of byproducts of olive production in the group's ten oil production facilities by recuperating the by-product ('alperujo') for different uses. The 'alperujo' is obtained from the centrifugation of the olive while the oil is being extracted. It is composed of parts of the olive and traces of its oil. Two new processing facilities in Andalucía are being built. This initiative has been made possible through a horizontal agreement between ten olive oil cooperatives.

The main goal of this sustainability agreement is to increase the industrial capacity for the transformation of a byproduct (alperujo), benefiting the circular bio-economy.



DCOOP takes the lead in obtaining relevant authorisations and introducing the appropriate environmental management systems, including under the ISO 14001 series. Examples include GHG emissions certification









reporting against the ISO 14001 standard in two of the olive oil factories and the renewal of traditional olive cultivars in new plantations, which entails an increase in the number of olive trees per hectare achieving higher productivity and increased CO<sub>2</sub> fixation. This is a complex set of actions, including efficient fertilisation through integrated production, integrated pest control to reduce the use of pesticides and the minimise applications, reducing CO<sub>2</sub> emissions. and contributing to the aim of a neutral 'carbon footprint' in the olive sector (Eco-Score).

It is expected that the revalorisation of by-products will provide opportunities for increased returns to olive oil producers whilst enabling a more sustainable management of waste derived from the extraction of olive oil, mainly the pomace ('orujo') but also the stones.



### Added value for goat farmers, forests and consumers

Spanish goat milk cooperatives, in alliance with the French cooperative Agrial, entered into an agreement that aims to improve the value chain through the start-up of two dairy units for processing milk and cheese using around 43.8 million litres of goat milk per annum.

The Sustainability agreement offers the potential to stabilise market prices and reduce production costs through shared ownership of the transformation of the product, aggregating farmers, adding value, and boosting business profitability. Co-operation through the value chain has reversed the decline of traditional goat farming and avoided the abandonment of extensive goat farms, in a rural environment at risk of depopulation. Continued grazing by goats also plays a key role in forest fire prevention and control.





# Sustainability agreement to manage waste of almond production obtaining animal and green energy: DEALMALTEA Research & Development

The main objective of the DEALMALTEA R&D sustainability agreement is the valorisation of the nuts' shells through their inclusion in the feeding of small ruminants (goats and sheep), and the manufacturing of biomass (green energy resource)

Nuts production cooperatives within DCOOP have signed an agreement to revalorise almond waste to produce animal feed and green energy.

The farmers produce around 8 300 tons of shelled almonds (2 600 tons of grain almond), aggregating the production of 12 cooperatives.

In 2020, the 30-month Research & Development project DEALMALTEA (funded through ERDF) enabled DCOOP to enter a sustainability agreement with DE PRADO and the Spanish Centre for Industrial Technological Development (CDTI) to recover almond shell from the waste stream. To date, some 2 225 tons of biomass has been converted into animal feed and it is also used as green energy.

### Benefits resulting from these sustainability agreements:

- The nutritional properties of the almond shells of different almond varieties make it a useful natural crushed, flour and pelletised food for animals.
- These natural feed products result in nutritious and tasty goat milk and lamb meat, benefits which are directly appreciated by consumers.
- The revalorisation of a by-product contributes to the increased profitability for small farms.
- The reuse of almond waste contributes to the improvement of the environment and landscapes, avoiding the abandonment of almond waste in fields.
- The reuse of almond shells for biomass provides a green energy resource.
- Almond shells also provide a domestic alternative to traditional cereals for animal feed, contributing to reduced production costs, especially important given the current global situation with reduced supply and rising prices of cereals.



This initiative represents a clear innovation in the use of almond shells, which will have a positive economic and environmental impact for the production of this dried fruit in the scope of the circular economy. The incorporation of this new raw material in the FEDNA tables<sup>1</sup> is proposed for inclusion in feeding dairy goats and fattening lambs.



<sup>&</sup>lt;sup>1</sup> Spanish Foundation for the Development of the Animal Feeding (*Fundación Española para el Desarrollo de la Nutrición Animal*). http://www.fundacionfedna.org/tablas-fedna-composicion-alimentos-valor-nutritivo



# **EU-funded Research & Development sustainability agreements in DCOOP**

DCOOP members benefit from participation in various Research & Development projects supported by EU funds, which are related to climate change and the defence of the environment. In addition, several other R&D projects are being carried out in collaboration with universities, aiming at making livestock farming sustainable and using less chemicals, and improving animal health and meat quality using waste and effluents from the table olive industry. The following are two relevant examples of R&D initiatives carried out by DCOOP.

# PhytoDron: Validation and safety of aerial applications with drones in the agroforestry environment<sup>2</sup>

During 2021, the Supra-autonomous PhytoDron Operational Group began promoting the use of drones as a safe tool to carry out applications of phytosanitary products. The project aims to advance the regulatory framework of drones as tools for the application of phytosanitary products and establishing scenarios of use with which to promote their comparison with conventional land applications.

This initiative provides an opportunity for more efficient use of pesticide and fertilisers, applying only the minimum quantity and number of doses.

# European project "MED-GOLD - Turning climate-related information into added value for traditional Mediterranean Grape, Olive and Durum wheat food systems"3

This project, financed by the European Union's Horizon 2020 Research and Innovation programme, started in December 2017 with a duration of four years and focuses on the adaptation and mitigation of the consequences and effects of climate change. The specific goal was to design and develop climate services applied to three sectors (wine, olive, and cereal agriculture) in three Mediterranean countries.

The project was developed through three pilots: in Portugal for the wine, in Italy for the wheat and in Spain for olive trees. DCOOP is co-leader and is contributing with its knowledge to the design and development of IT tools (information and communication technologies) that are being designed within the framework of the project.

This sustainability initiative uses IT tools to improve the adaptation and mitigation of climate change for small farms.

# Disclaimer

This paper has been developed with the involvement of Thematic Group members from several EU Member States as part of the work carried out by the ENRD Contact Point to support the activities of the Thematic Group on Sustainability Agreements. The information and views set out in this document do not necessarily reflect the opinion of the European Commission.

<sup>3</sup> https://www.med-gold.eu/es/proyecto/



<sup>&</sup>lt;sup>2</sup> https://gophytodron.es/