

Science For A Better Life

Collaborating to meet high quality and ecological requirements



food chain partnership

BAYER E R

The French Apple Project

How it all started

Apples are mainly grown in the southern, southwestern, central, and western regions of France. They are the country's most popular fruit, with the average French household consuming 18 kg of apples a year. Around 1.5 million metric tons of apples were grown in France in 2014, and some 38 % of the crop is exported. France is one of the top-three apple producers in the European Union (EU), where a total of 11.9 million metric tons of apples were grown in 2014. Retailers place very high demands on the visual appearance and quality of apples.

In this Food Chain Partnership project Bayer is partnering with Cofruid'Oc Méditerranée, a cooperative in southeastern France. The project got off the ground when representatives of the cooperative expressed their interest in a partnership to tackle the residue issues at a meeting with Bayer CropScience staff.

What we aimed to achieve

This Food Chain Partnership project aimed to achieve the following goals:

- Collect data on sustainable spraying programs, including residue monitoring, to ensure compliance with specific customers' crop health requirements
- Demonstrate the importance of technical adjustments to spraying equipment in order to safeguard the health of farmers, protect the environment against drifts and improve the efficiency of crop protection solutions
- Promote biodiversity
- Stimulate the exchange of know-how with the world of beekeeping



Who is involved

Cofruid'Oc, a cooperative of 50 farmers that has existed for half a century, produces around 25,000 metric tons of apples on almost 500 ha of land. Some 60% of the cooperative's apple harvest is exported to EU countries, the Middle East, and Eastern Europe. The cooperative's trade customers have particularly high requirements in two areas: the health of the apples, and the need to combine commercial success with environmental and social responsibility. As a result, the cooperative is strongly committed to quality at every stage of the production process: in the orchard, at the packing station, and in the business as a whole. The cooperative's main aim is to improve the yield of first-choice apples. Moreover, its apple growers implement good agricultural practices in a scheme known as Vergers Ecoresponsables (Ecologically Responsible Orchards). **Bayer CropScience France** supported the cooperative by setting up an experiment to ensure compliance with strict crop health requirements. This involved carrying out tests on a new crop protection product and a biological solution. A second element of the partnership saw Bayer bringing its state-of-the-art expertise on the sustainable agriculture issues of farmers' safety, environmental preservation, bee health, and the conservation of pollinators in general.



The integrated solution

Bayer CropScience specialists carried out demonstration trials to compare fruit quality and residue levels in two spraying programs – one with the Bayer CropScience fungicide Luna[®] and one without. The comparisons were undertaken at harvest time and after a 4-month storage period.

The trials involved an innovative comparison of four different kinds of spraying equipment and different methods of application (anti-drift nozzles and low flow rates). Fluorescent products were employed to compare the quality of spraying under a UV lamp (a so-called Pulve-Fluo demonstration). Efficient spraying results in tiny droplets of the crop protection product being evenly distributed on the leaves and fruit of the apple trees. Four technical advisers from an independent specialist were involved in this Pulve-Fluo demonstration, which was undertaken with seven of the farmers participating in the project. Bayer CropScience specialists also carried out a bee health monitoring program involving bee pathology, pollen determination, and pollen residue analyses by independent laboratories. This was undertaken in cooperation with a farmer who is also a beekeeper. Furthermore, Bayer CropScience provided the project's farmers with shelters for wood insects in consideration of their important role as wild pollinators. The farmers were also supplied with documentation that explained to the general public the usefulness of wild pollinators for farming in general.

From left to right:

Amandine Berthoud, Food Chain Manager France, Bayer CropScience France; Catherine Delobel, Assistant Technician, Cofruid'Oc; Jean Nougaillac, President, Cofruid'Oc; Sandrine Bonnand, Sustainable Agriculture Manager, Bayer CropScience France; Luc Boulet, Vice-President, Cofruid'Oc;

Georges Fandos, Technical Advisor, Cofruid'Oc

What we achieved

The Pulve-Fluo demonstration proved that very good spraying results could be obtained using anti-drift nozzles. As a result, the farmers involved realized how important high-quality and correctly adjusted spraying equipment is. The bee-monitoring program revealed healthy apiaries near the orchards.

The key factor in the success of this project has been the commitment of the field teams from the cooperative and Bayer CropScience. As a result, the numerous different challenges that cropped up – on-field spraying tests, residue monitoring, Pulve-Fluo demonstration, bee health monitoring, and the distribution of insect shelters – were successfully mastered.

The residue monitoring results revealed the benefits of a Luna[®]-based spraying program: optimized protection for a better conservation of fruits during the storage, and good residue results according to customers' demands.

The most important outcome of the partnership so far has been that these French apple growers have been provided with the human, material, and know-how resources to defend their products and business in a highly demanding and competitive environment.

Next steps

The low-residue spraying program trials and the bee-monitoring program will continue in 2015. This Food Chain Partnership project is helping to pave the way for the launch in France in 2015 of the Bayer CropScience fungicide Luna[®] for use on apples.

left: Sandrine Bonnand Sustainable Agriculture Manager, Bayer CropScience France

right: Georges Fandos Technical Advisor, Cofruid'Oc



food chain partnership

Consumers are becoming increasingly conscious of the need for healthy nutrition. Food Chain Partnerships help to supply consumers with high-quality fresh produce, which forms the basis of a healthy diet. But such partnerships can only succeed if they involve every player in the food chain – from the farmer and processor to the exporter or importer and retailer. Bayer CropScience has the global experience and cutting-edge expertise to create a successful partnership at every level.





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