



Science For A Better Life

# Sustainable production of delightful berries



food chain partnership



## How it all started

Production of berries in Portugal has been increasing and becoming more representative due to the excellent and unique growing conditions for high-quality, high-flavor berries. The main berry crops grown in Portugal are raspberries, strawberries, blueberries, and blackberries. Given the high quality of its berry production, Portugal has a competitive advantage as an exporter, and the value of berry exports has increased over the past few years. This is particularly true for raspberries, which have become one of the top fresh-fruit exports.

Besides the fact that Driscoll's wants to be respectful to its communities and environment where it operates, there are increasingly high demands on food safety and sustainability. Consumers' awareness of sustainable production is also increasing, as well as the demand along the entire value chain for certification, sustainability, and the sustainable use of plant protection products. Bringing together their efforts to tackle the increasing challenge of sustainable berry production, Driscoll's and Bayer CropScience developed a Food Chain Partnership project in Portugal.

## What we aimed to achieve

The aim of this Food Chain Partnership project is to contribute to a performance improvement in sustainability topics, such as water, biodiversity, the safe use of plant protection products, best practices, and waste reduction.





## Who is involved

**Driscoll's** is a fifth-generation, family-owned business that has grown to global proportions and is completely dedicated to the production of fresh berries. Its mission is to delight berry consumers across the globe by aligning strongly with its customers and berry growers. Driscoll's was established in Portugal in 2004, and since then it has developed a network of grower partnerships based upon an independent yet very collaborative business model, providing a full set of services to support the production of its proprietary varieties.

**Bayer CropScience Portugal** is one of the leading innovative crop science companies in the areas of seeds, crop protection, and non-agricultural pest control. It offers innovative crop protection solutions based on chemical and biological modes of action, as well as high value services for modern, sustainable agriculture, e.g., Academia Bayer, Phytobac®, BayDiversity, BayClubes, Bayer Agro.TV, BayProtege, BayMonitoring, etc.



## The integrated crop solution

At the beginning of this Food Chain Partnership project all the parties involved came together to discuss their aspirations and responsibilities. An integrated crop solution was developed in accordance with the needs outlined, and an action plan was set up and agreed on for the main intervention areas identified by the Bayer Sustainability Radar. This project management tool captures and measures economic, environmental, and social sustainability indicators. In this collaboration the focus areas have been:

- **Optimization of plant protection strategy:** Excellent conditions for the crop also mean the same for pests and diseases. High pressure throughout the season, and emerging new pests such as *Drosophila suzukii* sp., are an increasing challenge. A plant protection strategy was discussed and developed, following Integrated Pest Management (IPM) principles, using alternative methods and biological solutions, enlarging the number of solutions available for efficient anti-resistance management, yet maintaining the high-quality, safe, and sustainable production of berries.
- **Biodiversity:** Located in a natural park in Zambujeira do mar, Driscoll's Samoqueiro farm already complies with strict biodiversity requirements. Yet there was still room for improvement with respect to an

integrated farming approach and a strategic plan for the future. A biodiversity plan for Driscoll's farm was drawn up by a specialized independent biodiversity company within the framework of the BayDiversity Program. An action plan for biodiversity conservation was set up as part of the integrated solution, identifying strategic areas, measures for implementation, and landscape conservation management recommendations.

- **Water protection:** The reduction of point source risk pollution and water volumes for application equipment cleaning are essential to protect and preserve water in and around farm operations. All phases (storage, preparation, filling, cleaning equipment, managing effluents) needed to be assessed with regard to facilities and procedures. The annual volume of effluent resulting from equipment-washing practices was measured and good agricultural washing practices evaluated in order to enable the identification of areas of potential improvement.
- **Safe use:** The use of the correct individual protection equipment in all activities relating to plant protection products increased through knowledge transfer and the availability of tools and information to allow the correct decisions to be taken on which personal protective equipment (PPE) should be used for each phase and product.





## What we achieved

The farmland (arable/non-arable areas) and surrounding landscape were assessed within the BayDiversity project. Over 150 species were classified according to taxonomic groups and five distinct habitats identified. A strategic plan (including measures and milestones) was drawn up for each habitat depending on the interest and potential contribution for biodiversity conservation, e.g. the replacement of invasive species with native ones. The farm also improved the efficiency of water usage by reducing the annual amount of effluent by 20 %, through changes in farm practices and new facilities to be built such as the construction of new washing and preparation areas, future effluent management systems, improving efficiency of water usage and point source pollution risk reduction.

With regard to the safe use of plant protection products, certified operators were trained on how to choose and use individual protective equipment before, during, and after application of plant protection products. Several tools were also made available, e.g., the BayProtege online tool to select individual protective equipment, printed pictograms for each product, visual recommendations on how to use each type of individual protective equipment, as well as additional gloves and suits. Thanks to excellent communication between all project partners and the flexibility shown, excellent levels of teamwork have been established that have significantly contributed to the successful start of this Food Chain Partnership project.

## Next steps

This is an ongoing project with plans to consolidate results at Zambujeira as well as to extend the acreage to other Driscoll's growers in Portugal. The continuous review of the sustainability indicators, and improvement of the current ones, will remain the focus of this berry project.



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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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