



Science For A Better Life

Good quality yields,  
low residue levels,  
excellent  
storability



food chain partnership



The Dutch Redcurrant Project

## How it all started

Growers in the Netherlands were confronted by retailer requirements regarding the level and number of residues. Redcurrants are in fact a very challenging crop in terms of residue. Virtually every chemical applied from blossoming in April until harvest in July or August is found on the fruits at harvest time. On the other hand, the grower has to protect his crop against pests and diseases, must seriously consider resistance management issues, and cannot take any risks on fruit rot during the long months of storage. So the massive challenge is to develop a crop protection schedule that fulfills retailers' requirements. For this reason, the Central Advisory Service for Fruit Crops (CAF), The Greenery and Bayer CropScience started a project to look at spray schedules, residue levels and the consequences for quality and production (also during storage). This was in order to be able to guide redcurrant growers in their spray schedules so as to achieve a reduction in residue levels and the number of residues while maintaining the required quality. Since it is not possible to draw conclusions from a single year reason, the project commenced back in 2010 and five years of valuable results were collected. At the start of the project, not much was known about the residue behavior of existing crop protection products in redcurrants. But during the project much was learned about the possibilities available and challenges to be overcome.

## What we aimed to achieve

The most important goal of this project was to maximize the sales potential for Dutch redcurrants across Europe. At the same time, the challenge was to reduce the number of active ingredients at harvest to five, and the residue level to a maximum of one third of the MRL. If this goal was achieved, almost every retailer in Europe would want to have these redcurrants in their supermarkets. However, the reduction in residue levels is only acceptable if the quality of the fruit does not deteriorate and there is no increase in fruit rot at harvest and during storage.



## Who is involved

**Central Advisory Service for Fruit Crops (CAF)** is one of the most important advisory services for top and small fruit growers in the Netherlands.

**The Greenery** is one of the Netherlands' most important suppliers of a complete range of fresh fruit and vegetables for retailers and the trade market. The company markets the crops of its cooperation members as well as importing produce from all over the world.

**Anton van Garderen** is a small fruit grower and manager of a service station that sorts fruit for The Greenery.

**Bayer CropScience** has not only an interesting portfolio for controlling mildew and fruit rot in redcurrants, but also a great deal of know-how in positioning crop protection products to maximize the results of a fungicide spray schedule in redcurrants. As a result of some interesting new developments in the portfolio since 2010, e.g. Luna<sup>®</sup> Sensation and the biological fungicide Serenade<sup>®</sup>, all four parties to the project were interested in working together to see whether it was possible to develop a crop protection schedule that fulfills the food chain's demands.



## The integrated crop solution

The main diseases affecting redcurrants grown in the Netherlands are fruit rot (mainly *Botrytis cinerea*) and mildew (*Sphaerotheca morsuuae*). The demonstration trials conducted with Luna Sensation in alternation with Switch and Serenade applications during the summer resulted in high-quality redcurrants, good storage in the chain to the customer, and lower residue levels than before the project began. The challenge of completely fulfilling all retailer requirements depends on disease and pest pressure, which varies from

plantation to plantation. But though the challenge has not been fully mastered, good progress has been made. The use of a biological fungicide in the spraying schedule reduced the need for applications of chemical crop protection products and thus diminished the environmental impact of the spray schedule in general. Residue analyses and fruit rot assessments were carried out at harvest and after storage the following spring.



## What we achieved

CAF described the project as “very educational” and Anton van Garderen was pleased with the “very fruitful cooperation”. As a result, CAF is now in a position to provide growers with spraying schedule advice relating to pest and disease pressures in their plantations. Another outcome of the project was the information that it is very difficult to reduce the number of active ingredients in redcurrants and is not always possible to achieve the maximum of five demanded by some retailers. From the trials conducted, all the participants learned more about the residue behavior of fungicides in redcurrants, how to optimize spray schedules for the best fruit rot and storage results, and where best to position Serenade® in the spray schedule.

What was learnt above all is that producing good quality redcurrants with low residue levels and good storage results until the spring is indeed possible through intelligent positioning of highly effective products such as Luna® Sensation, and the integration of a biological such as Serenade® into the spraying schedule.

## Next steps

The project has now been completed and the results gained have been passed on to the CAF, the growers and The Greenery.

“By doing this kind of work on our farm, we learn about the efficacy and residue behavior of biological and chemical crop protection products.”

Anton van Garderen, Redcurrant grower and fruit sorter



**From Left to Right:**  
**Rien Simonse**  
**Quality Manager**  
**The Greenery**

**Geert van Gessel**  
**Specialist Stonefruit and small fruit**  
**Central Advisory Service for Fruit Crops**

**Anton van Garderen**  
**Grower of small fruit and**  
**Manager Servicestation Zachtfruit**  
**Zachtfruitbedrijf Anton van Garderen**



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.



## Science For A Better Life

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