Increasing in-field productivity and reducing post-harvest losses

Food Safety
Compliance with EU MRLs

Marketability
Fresher, higher-quality produce

Sustainability
Biologics included in crop management plan

food chain partnership

The Dominican Republic Mango Initiative
What was the market situation?

The market for mangoes is dynamically growing and consumer trends are expected to boost the demand for fresh, high-quality mangoes even more in years to come. Dominican Tropical Fruits, Bayer’s partner in this Food Chain Partnership, is one of the country’s leading producers and exporters of mangoes to the EU and the USA. A Food Chain Partnership between Dominican Tropical Fruits and Bayer was signed at Fruit Logistica in Berlin in February 2017.
Challenges:
• Improve post-harvest loss situation
• Reduce number of crop protection product applications in crop cycle
• Introduce biological alternatives for pest and disease control

Solutions:
• Improve management plans through ongoing visits by crop experts in the post-harvest period
• Establish demonstration plots to optimize crop management plans and thus reduce the number of applications
• Reduce the chemical load through demonstration plots featuring biological alternatives and other products with low environmental impact

Benefits:
• Higher productivity through reduced post-harvest losses leading to greater customer confidence in improved product quality
• Economic gains and enhanced peace of mind about compliance with European MRLs through fewer crop protection product applications
• Improved crop and businesses sustainability through inclusion of biologicals in crop management plan

“Cooperation with our customers is both a great challenge and responsibility for us. As part of this collaboration we can offer the Bayer biological product portfolio as well as our overall expertise, thereby promoting sustainable agriculture. As a result, we achieved improved fruit quality and reduced post-harvest losses.”

Manuel Suazo, Bayer
What were the challenges?

The main challenges Dominican Tropical Fruits faced in exporting mangoes to Europe were improving in-field productivity levels and reducing post-harvest losses, meeting certification requirements, achieving consistent production schedules to meet export commitments despite sudden changes in the Caribbean climate, and reducing the chemical load.

What was the solution?

Bayer presented its high-quality, low-environmental-impact portfolio to Dominican Tropical Fruits and supplemented this with the offer of training and demonstration plots. Bayer also provided ongoing G.A.P. and GMP support to maintain existing certifications and improve the post-harvest loss situation. Originally, the fruit Dominican Tropical Fruits exported was purchased from independent growers. Now, 85% of the exports are from the company’s own production. This change and the support Bayer has provided have enabled decisive improvements to be made in a broad range of agronomic aspects, such as irrigation systems, application programs, fertilization by irrigation, more plants per hectare, and improved post-harvest processes through automation in the packing plants. What’s more, certification was achieved for all the farms and plants, which also contributed to improving all the processes.

“Visits by external consultants and technical advice from Bayer allowed us to improve fruit quality, reduce post-harvest losses (-5%) and decrease the chemical load, thus contributing to our objectives of continuous improvement. We are working to develop a new portfolio of products, including biologicals, for our program.”

Guillermo Contreras, Dot Fruits
What did we achieve?

The improvements in post-harvest and packaging processes were made possible through visits to the farms by external consultants. The outcome was a reduction in post-harvest losses by approx. 10 percentage points. Prior to this project, losses were as high as 15%; now they are down to around 5%.

In addition, integrated pest and disease management plans were successfully introduced, resulting in a reduction in the number of crop protection product applications from 12–15 per year to less than 10. Moreover, the inclusion of 2–3 applications of biologicals in the crop management program reduced the chemical load.
About 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. The Crop Science Division of Bayer has the global experience and cutting-edge expertise to create a successful partnership at every level.

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