



Science For A Better Life

Collaboration from **farm** to
supermarket – for sustainable
agriculture



food chain partnership



How it all started

Grapes (*Vitis vinifera*) are normally a subtropical crop. However, grapes are also grown in India under tropical conditions – with excellent results. Grapes are cultivated in India on 111,000 ha in all, with an overall production 1,234,000 metric tons (mt) and a productivity of 11 mt/ha. Thanks to a special grape cultivation system in India, productivity is relatively high. Maharashtra is India's leading state in the production of grapes, and the Nasik and Sangli districts of this state lead in grape cultivation and production. In 2011–12, India exported a total of 108,000 mt of grapes with a total value of 6,028 million Indian rupees. Of this total, nearly 80% was exported from Maharashtra.

Table grape exports to Europe have always been challenging, not only for growers but also for the Indian exporters involved, because of the increasingly strict requirements laid down by European supermarkets. In 2010, the identification of chloromequat chloride residues in Indian table grapes further diminished their export potential and led to a significant reduction in the volume of table grapes exported to Europe. The UNIVEG Group, a worldwide supplier of fresh produce, also procures table grapes from India through their Indian associate exporters, Shree Consultants and Indyglobal Ventures. Bayer CropScience and UNIVEG decided to work together in India to promote the sustainable production of high-quality grapes.



Who is involved

The UNIVEG Group, a worldwide leader in the sourcing and distribution of fresh fruits and vegetables, flowers, and plants, as well as convenience products, has operations across four continents and serves a global customer base in 25 countries.

Shree Consultants, a company set up in 1989, initiated the Grape business in 1993. The company is involved in monitoring and improving the quality of table grapes and supporting the group of farmers to supply to major retail chains in UK, Germany, and Scandinavian countries. Shree Consultants over the years has been recognized as a leading grape exporter from India and growing significantly in the global market.

Indyglobal Ventures is one of the major exporters of fresh grapes and pomegranates to supermarkets in the UK and continental Europe. With its state-of-the-art facilities for sourcing, processing, and packing export-quality produce, IndyGlobal Ventures is rapidly expanding in the global market.

About **109 progressive farmers** with a total cultivation area of 110 ha joined this program in the Nasik district of Maharashtra.

Bayer CropScience is India's leading crop protection company with more than 100 years of experience in the Indian market. Through its innovative Food Chain Partnership model Bayer CropScience provides not only innovative products but also comprehensive crop solutions to grape growers, helping them in the production of quality grapes. The company focus is on training the farmers in disease and pest management and the safe use of crop protection products.



What we aimed to achieve

The aim was to develop and implement an effective production solution to improve the yield and quality of the table grapes by managing residue levels to comply with the specifications of various European supermarkets without compromising on the crop quality, and by implementing good agricultural practices and adhering to the principles of sustainable agriculture.

The confidence-building solution

The first step was to build up confidence among all the stakeholders. It was very important to convince the growers about the whole approach and the project itself. Shree Consultants and Indyglobal Ventures played a key role by identifying the growers for the project. The discussions happened in groups to make all the growers aware of the objective of the project and of the clear expectations and support required from them. In consultation with the exporters, Bayer CropScience developed the crop protection schedule for table grapes. Due importance was given to critical success factors such as MRLs in the EU, approved usage of products, recommendations by India's National Research Centre for Grapes (NRCG), Post Harvest Intervals (PHI), as well as the past experience of the growers and historical data from the residue testing laboratories. The plant protection schedule was approved by UNIVEG to be followed by the growers involved in this project. Bayer CropScience shared their experience of weather-based disease and pest management in grapes in a joint project with the NRCG.

The project was initiated in Nasik, a table grape production hub in Maharashtra. In line with the Food Chain Partnership principles it was agreed to support farmers by offering sustainable solutions and guiding them through. Bayer CropScience supported the growers in good agricultural practices and disease and pest management by sharing weather data with the table grape growers. Downy mildew, jassids, and thrips were the major issues, and they were managed using innovative Bayer products such as Antracol®, Alliette®, Admire®, Bayleton®, Confidor®, Melody Duo®, and Sectin®. The best-possible solutions were always offered to the growers, also including non-Bayer products.

Thus, program monitoring was an integral part of the Food Chain Partnership project. The overall field activities were monitored by the Bayer CropScience and exporter's field teams. Training courses were given to the farmers on agronomic practices, nutrient management, GLOBALG.A.P. principles, and quality improvement through disease and pest management as well as the safe use and handling of crop protection products.

The overall program took into account GLOBALG.A.P. principles and good agricultural practices with a focus on integrated disease and pest management and worker safety. All records were maintained to ensure traceability of the produce from the farm onwards. In this way, all the farmers' spraying practices were duly recorded. A pilot run by Bayer CropScience used an electronic platform for traceability purposes. Visits by a UNIVEG management team during the crop cycle built up the confidence of the growers in the project and helped to achieve the objectives. Finally, at harvesting, UNIVEG experts advised and trained the farmers and exporters in harvesting, grading, and packing the grapes to comply with the requirements of the various supermarkets.



What we achieved

A true spirit of partnership was exhibited by all the key stakeholders. Bayer CropScience delivered added value to each stakeholder through its innovative product portfolio, sustainable agricultural expertise, and global Food Chain Partnership concept. The integrated approach made improvements in the quality of the table grapes possible.

Farmers were able to increase their average exportable yields by 15–20%. Overall plant protection costs were reduced by 10–15% through optimizing the number of spray applications. This resulted in the production of better-quality table grapes and UNIVEG was able to procure these high-quality grapes in line with supermarkets' requirements. In all, 51 specification compliant containers were procured and supplied to the supermarkets targeted.

Next steps

In view of the benefits received by each stakeholder, Bayer CropScience and UNIVEG have decided to intensify their collaboration in the future. The project that started in 2011–12 on more than 100 hectares will be extended to 200 hectares in 2012–13, and there are plans to export 100 containers and cultivate grapes on 400 hectares in 2013–14.



From left to right:
Dinesh Bhoir, Manager – Food Chain
of Bayer CropScience Ltd. India
Paresh Bhayani, Director of Indyglobal Ventures
Shirish Kothare, Proprietor of Shree Consultants
Sachin Kotwal, Manager – Food Chain
of Bayer CropScience Ltd. India

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.



Bayer CropScience

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