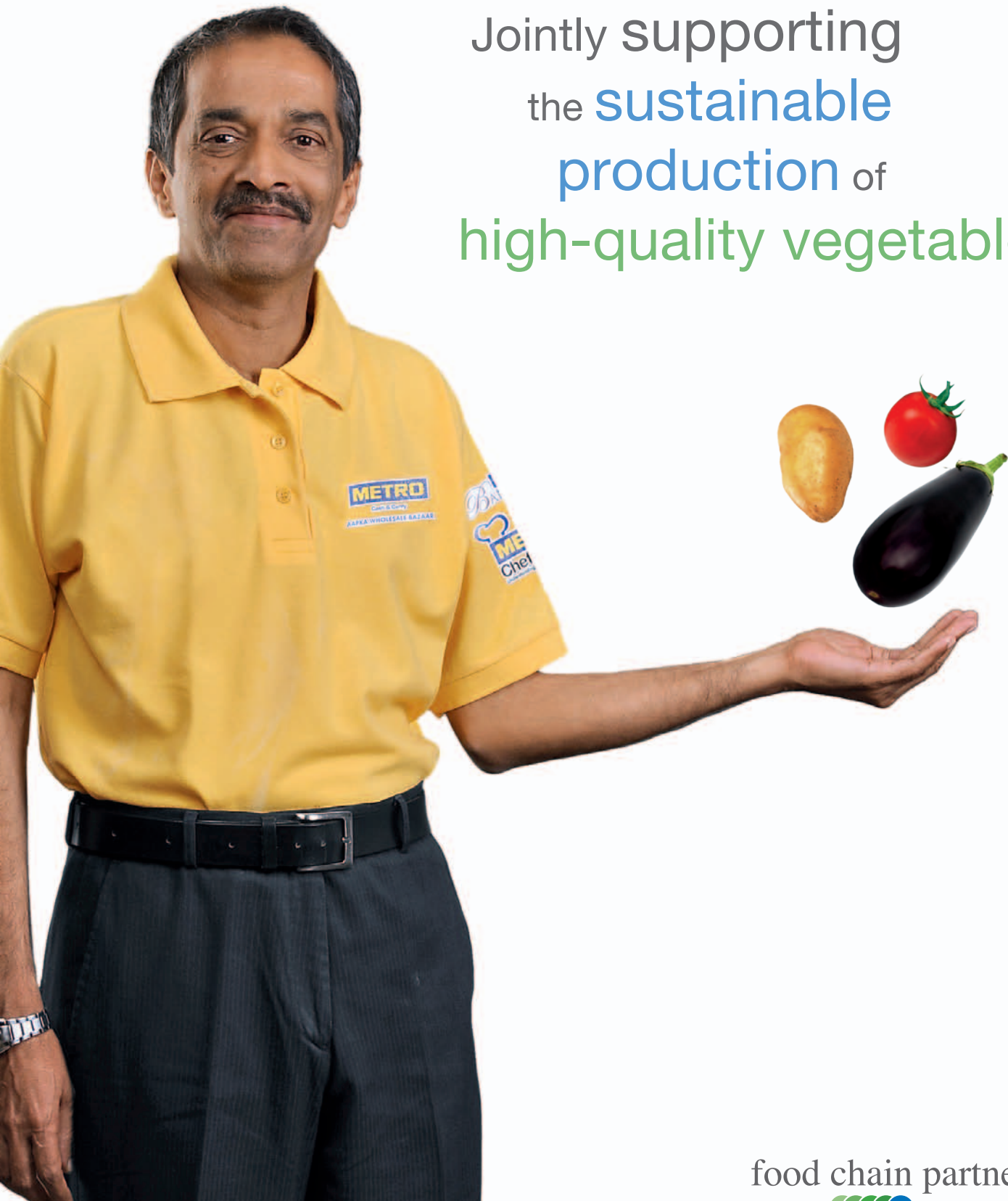




Science For A Better Life

Jointly supporting
the **sustainable**
production of
high-quality vegetables



food chain partnership



The Indian Vegetable Project



Growing vegetables in India

India is the world's second-largest producer of vegetables and fruits with an annual production of 134 and 71 million metric tons respectively*. Geographical and climatic diversity provides a unique opportunity for the production of fruits and vegetables from temperate to tropical crops all year round. While production is high, there is ample scope to improve the productivity per unit area to bring it into line with global standards. The production of vegetables is always a challenging task given the characteristics of Indian farming, such as fragmented land holdings, low levels of mechanization, lack of support for technical know-how and multiple crops. When it comes to marketing the produce, multilayered supply chains, the absence of alternative options and a lack of infrastructure make it even more challenging. It is an established fact that farmers get only 30–40% of the price consumers pay for the produce.

*Source: National Horticultural Board, 2009–10

What we aim to achieve

The aim of this Food Chain Partnership is to implement best agricultural practices according to international standards and certification systems in order to meet customer requirements in terms of food quality, safety and traceability. An additional aim is to develop and implement effective solutions to improve the yield and quality of vegetables, creating a win-win situation for all partners involved by implementing good agricultural practices and respecting the principles of sustainable agriculture.



Who is involved

About 122 **growers** registered by Metro Cash & Carry benefit from the cooperation with Bayer CropScience through improved farm incomes and good agricultural practices.

METRO Cash & Carry is the leading international player in the self-service wholesale business: customer-focused, international and innovative. METRO is oriented towards helping customers successfully run their own businesses – commercial customers, such as hotels, restaurants, caterers, small retailers and offices. Founded in 1964 in Germany, METRO quickly spread to many countries of Europe, Asia and Northern Africa. METRO started its Indian operations in 2003 and since then has spread across the country with, at present, nine cash & carry stores. METRO was the first multinational company to run cash & carry operations in India.

With more than 100 years of experience in the Indian market **Bayer CropScience** provides integrated and sustainable crop solutions that deliver added value to all the partners involved in this project. Bayer meets customers' needs not only through an innovative and well-balanced portfolio of crop protection products but also through comprehensive services such as training courses for farmers in the safe use of crop protection products as well as in application and spraying techniques.



The sustainable solution

Bayer CropScience and METRO were focusing on supporting farmers in achieving higher yields and quality; the former through the Food Chain Partnership project and the latter through their direct farm procurement program. Discussions between Bayer and METRO led both parties to realize that working together would not only bring added value to all the stakeholders but also help both organizations to carry on the sustainability initiative. A Food Chain Partnership agreement between Bayer CropScience India and METRO was signed in February 2011.

The project was initiated in Vantimamidi, a vegetable production hot spot near Hyderabad in Andhra Pradesh, where METRO has established a collection center to procure vegetables from farmers. METRO buys the vegetables from over 122 project farmers in the surrounding villages. With its innovative product portfolio and global expertise Bayer CropScience supported METRO in developing and implementing the innovative “5 P” program* for different vegetables. The focus crops were tomatoes, cabbages, cauliflowers and cucumbers.

Training courses for farmers were an integral part of the whole program, aiming at creating awareness of quality improvement, disease and pest management, as well as the safe use and handling of crop protection products. Bayer's Food Chain Team provided technical support to METRO's farmers. Besides this training, the Bayer Food Chain Project Officer regularly visited the farmers to monitor and guide them through the pest and disease management and spraying operations. In order to create a high level of awareness about the safe use of the crop protection products, the inputs were made available at the collection center.

The good agricultural practices were followed, giving due importance to Integrated Pest Management, worker protection, environment care and related aspects to strengthen the sustainability aspect in this project. In order to maintain the traceability of the produce up to the farm level, the Bayer Passport was implemented. This tool was developed by Bayer CropScience for record management, documentation and traceability at a farmer level. Finally, the farmers were advised and trained by METRO to harvest, grade and pack the vegetables in line with the customers' requirements.



“5 P” program:

Production: Crop production training and advice

Protection: Development and implementation of scientific plant protection program

Program monitoring: Professional production process monitoring

Passport: Tool for documentation and traceability

Post-harvest: Grading, sorting, packing and transportation

What we achieved

Thanks to METRO's commitment to the whole project and the very close relationships they have with their project growers, the innovative crop protection portfolio, the global expertise and Bayer's Food Chain Partnership approach that brought added value for each stakeholder, an overall improvement in the quality and productivity of the vegetable production was achieved.

Farmers were able to increase the yield by average 7 %. Guidance throughout the crop cycle resulted in the higher yield, better quality and a higher net income of 35 % for the farmers. On average, farmers realized 4 % to 5 % higher prices by marketing through METRO. The farmers appreciated the expert guidance from Bayer CropScience and the marketing of their produce by METRO.

METRO was able to buy good-quality vegetables and strengthen their relationships with the growers on the basis of the greater benefits the farmers received through being part of the production program managed by METRO. Bayer's products and services helped the farmers to protect their crops and produce vegetables of higher quality and in greater quantities.

Next steps

The project started with one location in Hyderabad and will now be expanded to four other locations in Punjab, West Bengal, Maharashtra and Karnataka. More than 1,000 farmers will be included, growing crops like tomatoes, cole crops, cucurbits and others. Besides the increase in the number of crops and geographical regions, efforts will be undertaken to measure the progress in sustainability through a new tool, the "Bayer Sustainability Radar".



left:
Amit Sharma
Associate General Manager –
Food Chain Alliances
of Bayer CropScience India

right:
Narasimha Nakshathri K
Head: Central Buying Office
of Offer Management Department

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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FCP-12-1544



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