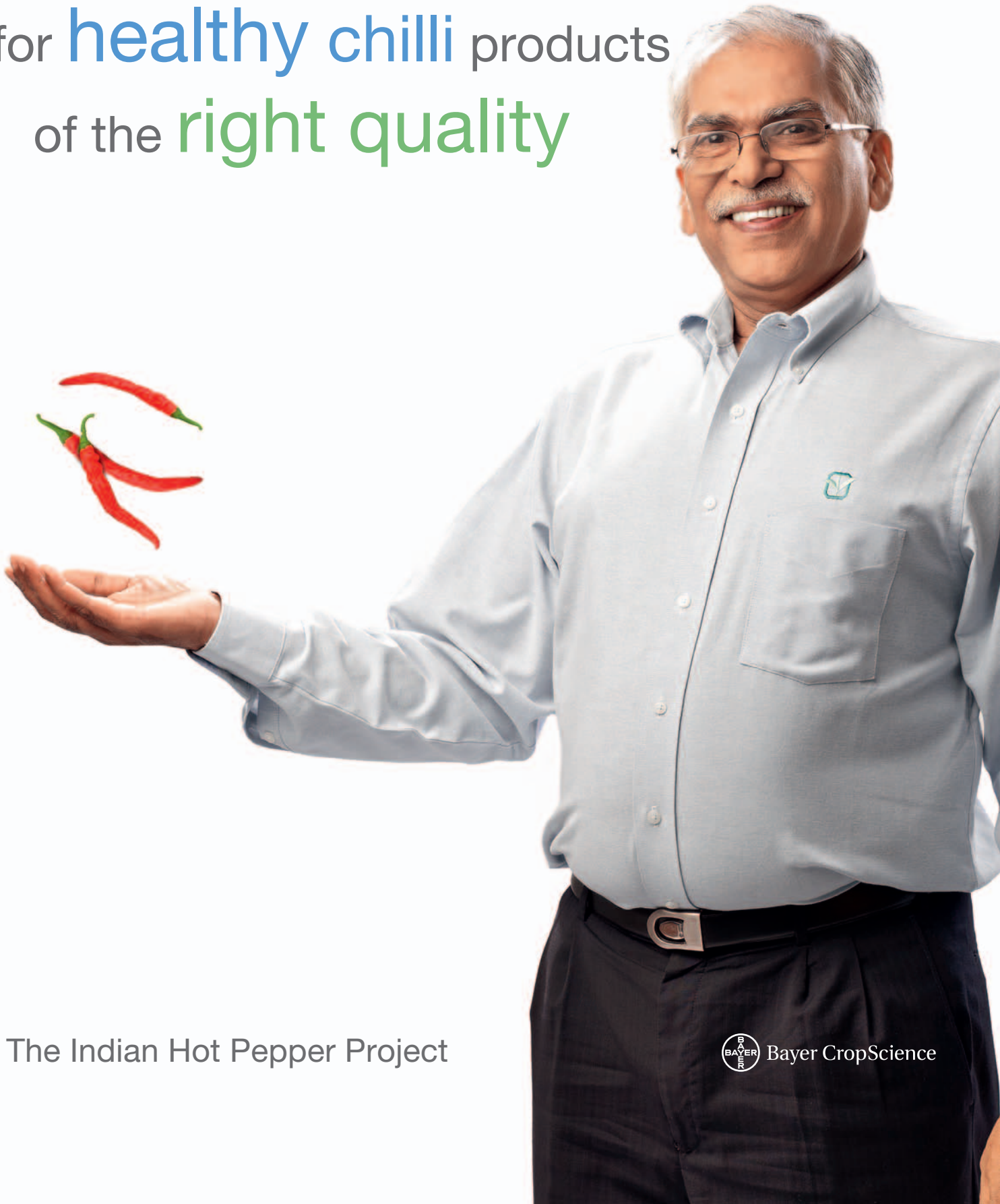




Win-win solution
for **healthy chilli** products
of the **right quality**



The Indian Hot Pepper Project

Current scenario

Hot peppers (chillies) are known to have been consumed in America since 7,500 BC. Later, they were exported to many other countries, including India in the 15th century for their medicinal value.

Today, India is the largest producer, consumer and exporter of red chillies. Chillies account for 20–30% of India's total spice exports and are worth about €60–75 million. They are produced in almost all regions across India but most are commercially grown in Andhra Pradesh.

A big challenge to Indian chilli production comes from the pattern of land holding. The Land Ceiling Act has resulted in high fragmentation and the majority of farmers have small-holdings. The right pungency, yield and colour value as well as pesticide residues and aflatoxins are some of the other issues challenging the profitable growth of chilli exports from India.

The increasing demand for processed chillies creates opportunities and challenges alike. It is not only necessary to come up with answers to these challenges but also to implement them among a large number of fragmented and small-scale growers while keeping the business profitable.

The mission

A pressing need to achieve the common mission of improving quality in order to safeguard Indian chilli export opportunities urged experts within the community to collaborate for the mutual benefit of all stakeholders.

The targets

- **Farmers:** Implement practical solutions to improve yield and profitability per hectare.
- **Jayanti Group:** Ensure a continuous supply of chilli products of the right quality to consumers in various countries.
- **Bayer CropScience:** Receive and analyse the relevant specifications, design and support implementation of a scientific crop management programme to ensure a best-quality chilli product by the tried-and-trusted 5P process.



Who got involved

Project farmers: 600 selected innovative farmers in the project areas.

Indian Products Ltd: This division of the Jayanti Group is a leading manufacturer-exporter of value-added spices from India and is making inroads in the domestic retail segment. Established in the 1940s, the Jayanti Group is an Indian multinational, exporting coffee, decaffeinated tea and spices with annual sales of \$88 million. This progressively minded Group has successfully implemented many innovative ideas, which differentiate it from the rest in the industry, and has seen extraordinary growth during the past three decades.

Nunhems: A vegetable hybrid seed company belonging to Bayer CropScience, Nunhems is one of the world's leading suppliers of vegetable seeds, offering 2,500 seed varieties for 28 crops. Dedicated to producing market-oriented varieties and seed products, the company is people-oriented and focused towards sharing value-added genetics, services and expertise with customers to help them succeed in their ventures.

Bayer CropScience: One of the world's leading innovative crop science companies in the crop protection field (Crop Protection), non-agricultural pest-control (Environmental Science), seeds and plant biotechnology (Bioscience) with annual sales of about €6.5 billion.



The solution

Understanding the need to design a specific solution to meet the growing challenges affecting the global trade in chilli-based products, Bayer CropScience and Jayanti agreed to work together to implement the innovative Food Chain Partnership model developed by Bayer with a clear focus on delivering economic, ecological and social benefits to all stakeholders by developing a sustainable crop solution. The tried-and-trusted 5P process was implemented as follows:

Production: As per the specific requirements of the consumers and with significant information from Jayanti, Bayer CropScience and Nunhems specialists identified the most suitable chilli variety: Devanur Delux.

Protection: Based on their international expertise in MRLs and import tolerance, Bayer CropScience developed a specific and scientific plant protection schedule incorporating the principles of Integrated Pest Management (IPM).

Programme monitoring: The farmers were coached and guided from seed to harvest by dedicated project officers and food chain managers working in coordination with experts and agronomists from Jayanti.

Passport: Since traceability is one of the most important identified requirements, Bayer CropScience designed this passport to bring complete transparency in all applications. Developed in the local language, this passport not only provided traceability to the stakeholders but also served as a great tool for the growers in record management and cost-benefit analysis.

Post-harvest: Jayanti led the way in guiding growers on the best practices of managing risks and post-harvest losses.

The process was professionally designed and implemented and thus created win-win solutions for all stakeholders.

All stakeholders enjoyed economic, social and ecological benefits and thus the programme put sustainable agriculture into practice.





The result

In the end, collaboration proved to be good for everybody's business. The aim of the project was to ensure production and supply of best-quality chillies from farm to fork and met all sides' expectations. Thanks to this unique backward integration programme for sustainable agriculture, Jayanti and Bayer can now offer end-to-end solutions for chilli exports.

While Bayer specialises in monitoring and controlling quality at farm level, Jayanti ensures worldwide supplies of safe and palatable ready-to-use chillies. The overall outcome was contented stakeholders as each partner along the value chain benefited immensely from the programme.

- **Farmers:** 14 % increase in net income per hectare
- **Jayanti:** Quality supplies of raw chillies
- **Consumers:** Safe chilli products of the right quality
- **Bayer CropScience:** Modern solutions providing the basis for healthy nutrition



left:
Amit Sharma
Senior Manager - Food Chain Alliances
of Bayer CropScience India

right:
Philip Kuruvilla
Vice Chairman and Head –
Backward Integration of Jayanti



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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