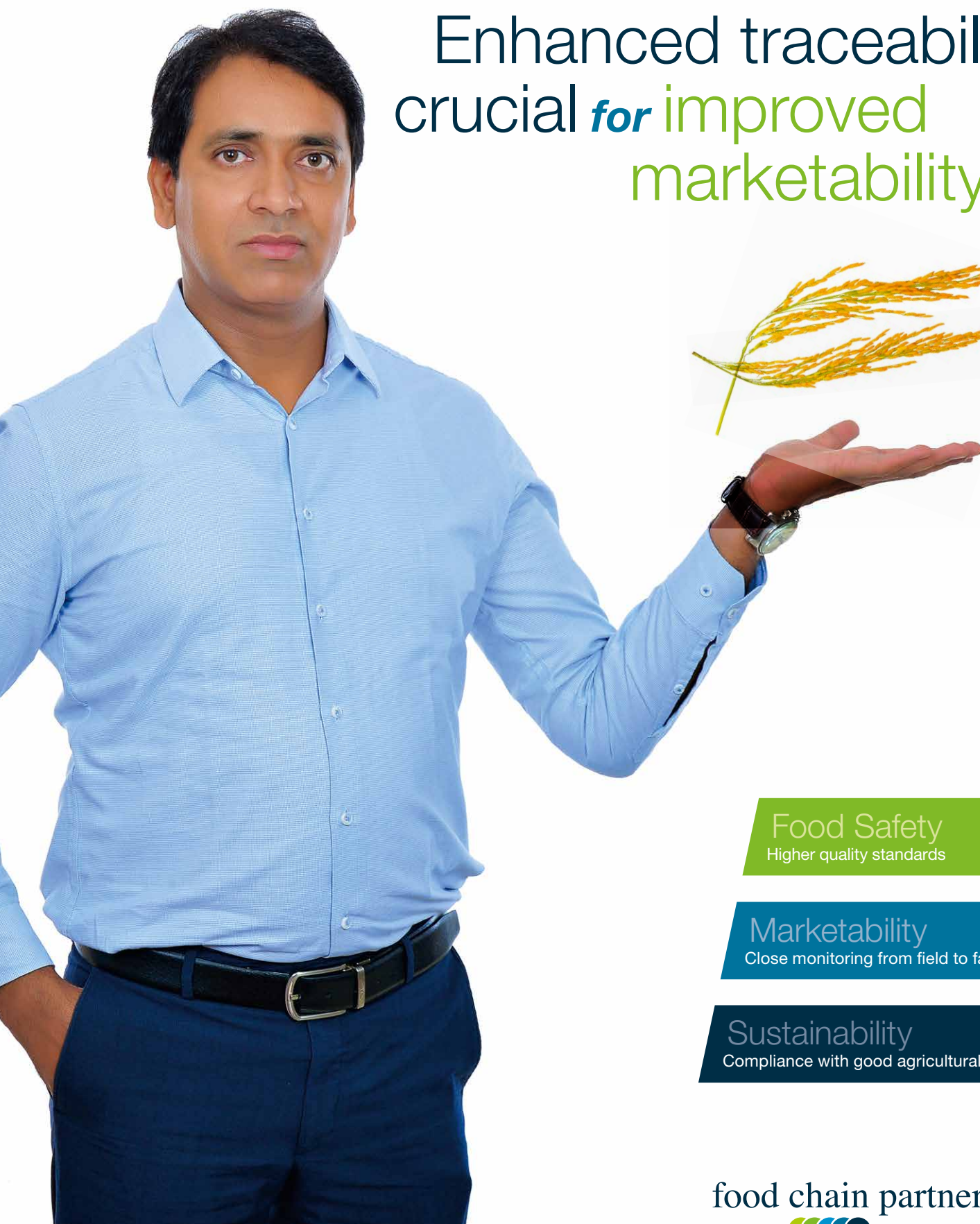




Enhanced traceability, crucial *for* improved marketability



Food Safety

Higher quality standards

Marketability

Close monitoring from field to factory

Sustainability

Compliance with good agricultural practices

food chain partnership



What was *the market situation?*

Rice, one of India's main grains and staple crops, flourishes in the hot, humid climate of Indian states where there is heavy annual rainfall of over 1,000mm and temperatures of 25°C. and above. Through the development of a wide range of enhanced rice products, such as processed and canned rice or ready-to-eat meals, the importance of the rice crop to India's economy cannot be overestimated.

The rice supply chain in India is extremely complex, since numerous stakeholders and middlemen are involved. This means there has traditionally been little to no traceability from farm to factory gate. Moreover, as the entire grain market is driven by price rather than quality parameters such as protein and fiber content, contaminants such as heavy metals or mycotoxins have also been an issue.

However, the market situation is changing as consumers and local regulators become more aware of such issues and increasingly demand local, safe, and sustainable foodstuffs. Knowledge about good agricultural practices and the quality standards demanded by companies such as Nestlé are becoming more important criteria in sourcing rice or rice-based products. Thus, traceability is now one of the key tools in ensuring that safe products enter the marketplace and boost consumer confidence.

As a subsidiary of the world's largest food and beverage company, Nestlé India is committed to long-term sustainable growth and shareholder satisfaction. As such, it has earned the trust and respect of every stratum of Indian society and is acknowledged to be one of India's "Most Respected Companies" and "Top Wealth Creators." Accordingly, Nestlé India demands the highest standards when procuring rice from domestic sources.





Challenges:

- Mapping of possible risks across entire value chain
- Farmer awareness and adoption of good agricultural practices
- Ensuring traceability of target crops through proper documentation



Solutions:

- Mapping of target geographies and documentation of overall production process from seed to post-harvest management
- Documentation of data on input availability and recommendations for managing pest complexes
- Training courses for farmers: diagnostics, personal safety, food safety, and other good agricultural practices
- Implementation of Bayer Passport for documenting overall production process



Benefits:

- Shellers and millers linked to Nestlé enjoy sustainable sourcing of traceable and compliant raw materials
- Consistent market sourcing from defined regions with better-quality produce and improved visibility across the value chain
- Greater security for farmers through guaranteed purchase of their produce

“Thanks to joint efforts by all the supply chain partners we were able to map farm practices and achieve regional level traceability.”

Vinay Kumar, Nestlé India



What were *the challenges?*

The main aim of this Food Chain Partnership project was to create a transparent database of information about all rice production activities. Overall project monitoring had to start with the selection of growing areas and farmers and continue through crop cultivation. Guidance had to be given to farmers on timely sowing, appropriate irrigation practices, the responsible use of plant protection products, the importance of personal safety, and environmental protection.

Traceability involved several steps and challenges, including selection of farmers, locations, training of staff and farmers, regular field visits, and ensuring the implementation of good agricultural practices on the farms.

Moreover, even when food has been traced from source, it still has to contend with the challenges of tracking during transportation, warehousing, and delivery.

What was *the solution?*

This Food Chain Partnership project implemented the Bayer Passport, a tool developed for record management and documentation at farm level to solve the traceability challenge. Passport copies were supplied to all growers involved in the project and they also received strong support from Bayer's technical team. Regular field visits were a key factor in the process of verifying traceability while

the crop was still standing in the field, where it is subject to the vagaries of weather and exposed to other known or unknown factors affecting its quality. Bayer staff provided growers with regular assistance, from sowing to harvest, on the agreed inputs and other aspects of the production process.



“Mapping the current practices and guiding the farmers on documentation is pivotal for the future prospects of this initiative.”

Pankaj Sharma, Bayer India





What did *we achieve?*

The main achievement was to establish regional traceability. Thanks to implementation of good agricultural practices at different stages of crop cultivation, the project ensured consistent and sustainable marketability for the rice farmers as well as for the shellers and millers.

Bayer's technical team helped all the stakeholders to build strong relationships as the basis for successful future endeavors. There is a clear commitment to deliver on all three facets of sustainability, i.e. social, economic, and environmental factors, by 2020.

- Approx. 7–8% increase in rice output using existing resources through technical advice to the rice farmers
- 1,208 rice farmers now growing cereals across three locations in the states of Punjab, Rajasthan, and Telangana

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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