Research and Development continued

Delivering integrated solutions

In addition to quality seeds and chemicals, we have enabled the development of solutions that integrate our technologies. PLENE® has the potential to revolutionize the way sugar cane is grown (see page 26). TEGRA™ will deliver a step change in rice productivity through a unique combination of seeds, seed care, agronomy and mechanization (see page 25).

In Europe, Syngenta is demonstrating its deep understanding of wheat and barley through unique integrated growing systems: a combination of seeds and variety-specific crop protection products specially combined for optimum plant establishment, pest control and yield. We have recently introduced the only commercially available barley hybrid and will be further developing our hybrid solutions in barley and also in wheat.

Our global capabilities

In 2011, we established new global platforms, underpinning all our R&D activities, which will allow us to share our expertise across crops and regions. For example, by uniting our crop protection and seeds field trialing capabilities we can apply our skill-sets more broadly and leverage our technologies across the globe to improve our offer.

We continue to invest in our biotechnology capability worldwide. In 2011, we opened an award-winning new facility in Beijing for Syngenta Biotech China and began building a US\$71 million extension at our US biotechnology campus in North Carolina.

Product safety and environmental considerations are integral to our work. To make earlier and better-informed decisions on which active ingredients to progress, we begin safety trials at an early stage in the development process. This facilitates early decision making and timely engagement with regulators, enabling us to bring new products and solutions to market fast and efficiently.

Collaborating for innovation

To help address the challenge of feeding 9 billion people by 2050, and in addition to employing over 5,000 highly qualified scientists, we work with partners to complement our in-house expertise.

We currently have over 400 collaborations around the world with universities, research institutes and commercial organizations, including with peers where there are clear opportunities for synergy.

Syngenta THOUGHTSEEDERS™ is our new online portal for helping to identify new opportunities and gives potential partners a forum to share new technologies or ideas with us. This opens the business to completely new initiatives. We also use this platform to pose specific challenges to a broad audience using an external open innovation network. We are broadening our culture of collaboration to work across boundaries inside Syngenta. New tools and networks are helping us to engage all the expertise within Syngenta, particularly the grower insights of our commercial teams.

The quality of our in-house science and expertise continues to be recognized. In 2011, two people closely involved with the invention of our two best selling products received external recognition. Syngenta Fellow John Clough won the 2011 Creativity in Industry Prize from the UK's Royal Society of Chemistry, notably for his work on the fungicide azoxystrobin. Peter Maienfisch received the Medal of the Slovak Chemical Society in recognition for his engagement in collaborations with local companies and academia over more than 20 years, and his work on thiamethoxam, which became the world's top-selling insecticide in 2011.