Research for the second green revolution

Safeguarding the supply of food for a growing world population is one of the most important issues of our time. However, enlarging the area of arable land is next to impossible. A new green revolution is needed. Scientists from Bayer CropScience are therefore working on increasing agricultural yields. They are using molecular biology to prevent herbicide resistances from developing, searching for new active ingredient formulations that provide even more effective protection against pests and fungi, and conducting research into the genes that are responsible for storage life and disease resistance in fruit and vegetables such as tomatoes and cucumbers. They are also using special fungicides to protect crops against extreme heat, drought and cold.

The world population is forecast to reach the seven billion mark by 2012. At the same time, the areas of land available for agriculture are dwindling: the United Nations estimates that only 30 percent of the

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arable land that was used to safeguard the supply of food in 1950 will be available per person in 2050. Furthermore, growing prosperity in developing countries and threshold markets has led to changed eating habits such as greater consumption of meat. In addition to the growing demand for food and animal feed, there is also an increasing need for energy-producing plants. The consequence is spiralling prices for agricultural raw materials.

Climate change is also intensifying the strain on crops such as rice, corn and wheat. Poor long-term growing conditions such as drought, saline soils and heat, cold or extreme weather phenomena cause billions of euros of damage to agriculture every year.

Safeguarding the future supply of food requires substantial investment in research. "We need intensive research in agriculture to counter the challenges to food production and to ensure that our agricultural resources are employed optimally. We therefore need a second green revolution," said Professor Dr. Dr. h.c. Friedrich Berschauer, Chairman of the Board of Management of Bayer CropScience AG. In the first green revolution in the 1960s, international development policies produced enormous increases in yields by promoting modern agricultural techniques in Asia, India and Africa.

Today, scientists at Bayer CropScience are facing the challenges of modern agriculture: using state-of-the-art crop protection methods and new solutions from the field of plant biotechnology and breeding, they are making a contribution to safeguarding harvests around the world and increasing agricultural yields.

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