

Title of case study	Developing stress-tolerant plants
Name of organization(s)	Bayer
Business sector	Chemicals
Region(s) relevant to case study	<input type="checkbox"/> All regions <input type="checkbox"/> Africa and the Arab States <input type="checkbox"/> Asia and the Pacific <input type="checkbox"/> Caribbean and Central America <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Least Developed Countries <input type="checkbox"/> North America <input type="checkbox"/> Polar regions <input type="checkbox"/> Small Island Developing States <input type="checkbox"/> South America
Country(s) relevant to case study	Germany (Bayer headquarters), All
Adaptation sector(s) relevant to case study	<input type="checkbox"/> Business <input type="checkbox"/> Education and training <input checked="" type="checkbox"/> Food security, agriculture, forestry and fisheries <input type="checkbox"/> Human health <input type="checkbox"/> Oceans and coastal areas <input type="checkbox"/> Science, assessment, monitoring and early warning <input type="checkbox"/> Terrestrial ecosystems <input type="checkbox"/> Tourism <input type="checkbox"/> Transport, infrastructure and human settlements <input type="checkbox"/> Water resources <input type="checkbox"/> Other (please specify):
Adaptation activity	<p>Climate change represents a particular challenge for agriculture. The world's population is continuing to grow and, with it, the demand for food, feed and renewable raw materials, which all have to be produced on a limited amount of agricultural land. At the same time, heat, drought and salinity can dramatically reduce the optimal crop yields that can be achieved. Given this situation, it is essential to make agricultural production more efficient and sustainable. In order to achieve this, an integrated approach is required that covers new crop protection solutions, seeds with higher potential yields, and optimized crop rotation, irrigation technology and fertilization. In addition, much greater use needs to be</p>

	<p>made of modern plant cultivation methods and the options offered by plant biotechnology.</p> <p>Bayer CropScience is carrying out intensive research into solutions to meet the growing demand for agricultural products and find ways to make plants more resistant to climatic conditions and improve their stress tolerance. Bayer CropScience is also already supplying crop protection agents that help to safeguard or even increase crop yields, including under stressful conditions. Two research approaches are being pursued in its efforts to reduce the impact of climate change on crops.</p> <p>The biotechnology approach is designed to equip plants with a special ability to tolerate stressful situations. Reducing a naturally occurring protein created in response to stress minimizes a plant's energy loss. Current research efforts are focused on canola, cotton, corn and rice.</p> <p>The second research approach is focusing on the stress-reducing effect of special formulations of established active ingredients used in crop protection. Even conventional insecticides can have a positive effect on plant growth under unfavorable environmental conditions, irrespective of whether the plant has been attacked by insects. The Bayer product Confidor® Stress Shield, for example, significantly increases the salt tolerance of rice.</p>
<p>Cost-benefit</p>	<p>The central statement of Bayer's Policy on Climate Change is "We help with solutions". The policy focuses on the development and market launch of innovative and future-focused products. The company's Stress Shield products, for example, have already successfully established themselves on the market.</p>
<p>Case study source(s)</p>	<p>Climate Change: We Help with Solutions (Bayer)</p>
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