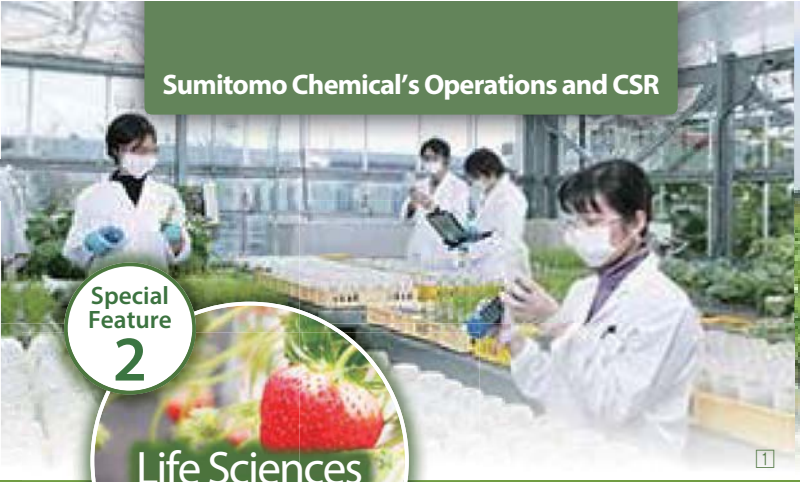


Special Feature 2

Life Sciences

Responding to Global Food

Contributing to the Stable Production of Food and Invigoration of Agriculture

Issues pertaining to food production have become more serious around the world against a backdrop of climate change, population growth and insufficient agricultural productivity. Sumitomo Chemical is leveraging its accumulated experience in the field of agricultural chemicals to tackle these challenges from various angles.

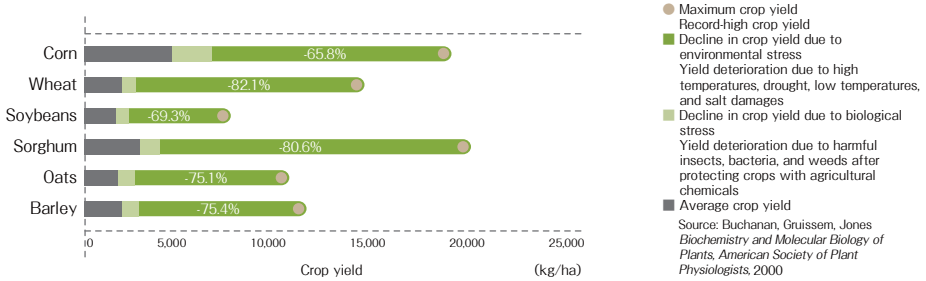
Aiming for dramatic improvements in productivity by lessening environmental stress on crops

For many years, Sumitomo Chemical has worked on the development of pesticides, fungicides, and herbicides to protect crop growth and promote better harvests. Crops are affected by biological stress, such as harmful insects, bacteria, and weeds, as well as environmental stress, which has gained more attention lately, such as extreme temperatures, drought and salt damages. Recently, environmental stress has been a larger factor in lowering harvests than biological stress. Climate change has been a cause of abnormal weather, making environmental stress an issue of increasing concern.

To mitigate environmental stress on crops, Sumitomo Chemical has been developing a new chemical field called **crop stress management**. Using the power of chemicals to enhance tolerance to environmental stress, we aim to increase harvests as per-area productivity improves considerably. Partnering with universities and companies inside and outside Japan, Sumitomo Chemical has been working to identify effective compounds through research at the laboratory level and successfully confirmed the effectiveness of these compounds in field studies during fiscal 2012 and fiscal 2013. Sumitomo Chemical is stepping up its efforts toward commercialization by advancing further analysis in fiscal 2014.

Testing of agricultural chemicals in a greenhouse

Crop loss due to environmental stress



Source: Buchanan, Gruissem, Jones *Biochemistry and Molecular Biology of Plants, American Society of Plant Physiologists*, 2000

Taking on world problems as a worthwhile cause

We believe taking on world problems such as food shortages through research into possible solutions is a worthwhile cause. There is the difficulty of setting specific targets without anything to compare against because these chemicals are completely new and have not been commercialized yet, even by other companies. The development of agricultural chemicals requires years of research and time in addition to the arduous process of trial and error, but we are driven forward by the promise that this technology may someday benefit agriculture around the world. Our first and foremost goal is to deliver a product to the world as quickly as possible.

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Discovery Biology Group,
Health & Crop Sciences
Research Laboratory