Using research and development to improve agricultural productivity

R&D and environmental sustainability

Much of Syngenta's R&D focuses on the development of new products for farmers and growers, but the company also invests in environmental projects. These demonstrate how highly productive, profitable agriculture can go hand-in-hand with biodiversity and environmental sustainability. Two examples are:

SOWAP (Soil and Water Protection) Project

Soil erosion is a huge problem in arable farming, particularly when ploughed fields are subject to heavy rainfall. In Europe, around 200 million tonnes of soil per year is washed into lakes, rivers and roads, causing pollution and reducing agricultural productivity.

Working with around 25 project partners across Europe, Syngenta led a 4-year project demonstrating how the practice of Conservation Agriculture'- reduced soil disturbance, permanent soil cover, and diverse crop rotations â€“ can reduce erosion by 60% or more. When applied correctly, Conservation Agriculture reduces water pollution and improves farmland biodiversity, whilst maintaining crop yields.

Operation Bumblebee

Bumblebee populations on UK arable farms have declined by more than 70% over the last 30 years. This is because of changing ways in which crops were grown, which led to the loss of vital nectar food resources and nesting sites for bees.

One of the 20 native species of bumblebee has disappeared altogether. Three others are on the verge of extinction. Operation Bumblebee involved more than 5 years of research by Syngenta into the habitats for bumblebees, butterflies, spiders and other insects on farms.

The research involved a number of test sites within the UK. The edges of fields (field margins) were cultivated to create biodiversity sites. Scientists at Syngenta designed a special pollen and nectar seed mixture that included wild flowers and clovers. Farmers are trained to establish and manage these mixtures along the field edges. The impact upon the bee population was clearly beneficial.

Managing field edges in this way also produces major environmental benefits on farms whilst maintaining high food production. If farmers manage their farms this way they qualify for payments from the Department for Environment, Food and Rural Affairs (Defra). In this way among others Syngenta has helped farmers to improve the environment.

Supporting farmers

Farmers get full product support. For example, Syngenta trains over one million farmers each year worldwide in the safe use of its products. Syngenta's representatives in the field use relationship marketing skills with farmers for repeat business. It also provides farmers with the confidence to try new products and innovations as and when they are launched.