UK farm scale evaluations of GM crops 2000 - 2005

Following concern about the possible environmental impacts of GM crops, in 2000 the UK Government carried out a series of farm-scale evaluations to examine the effects of herbicide tolerant (GMHT) varieties of sugar beet, fodder beet, maize and spring and winter oilseed rape on biodiversity and the wider environment.

The trials finished in 2002, cost £3.3m and reported results in 2003 and 2005. Only herbicide tolerant crops were studied at the time because these GM crops were furthest ahead in terms of development. The RSPB was a member of the Scientific Steering Committee because of our concerns about GM crops and our expertise in farmland bird ecology.

The evaluations examined whether the planting and management of the GM crops is more damaging to wildlife than conventional crops and their management. The research mostly looked at effects on wild plants and invertebrates in the fields, both before and after the crops were grown in the rotation.

The results found that growing GMHT beet and spring rape was worse for many groups of wildlife than conventional beet and spring rape. There were fewer weeds, seeds, bees and butterflies – all food items for birds and other wildlife. GMHT winter rape cultivation was similarly poor for insects. There were more weeds and weed seeds than conventional winter rape but less of the broad leaved weeds which are important for birds.

Growing GMHT maize was better than non-GM maize with more weeds, seeds and insects, however, since the trials, the herbicide used has been banned and therefore the trials are no longer representative of current impacts.

The trials showed that GM crops could have implications for wider farmland biodiversity and as a result, the UK Government decided to oppose the growing of GM beet and rape in the EU. GMHT maize was withdrawn by the company who had developed it.