



## **NEWS RELEASE**

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### **Plant breeders highlight key role of biodiversity**

Contrary to environmentalists' frequent claims that modern agriculture is eroding our plant diversity and crop genetic heritage, the British Society of Plant Breeders (BSPB) says conserving plant genetic resources is more important today than ever before.

The UK is host to a number of internationally significant seed bank collections, whose combined resources include many thousands of wild species, landraces and obsolete cultivars dating back many decades, as well as more recent 'conservation' types and modern elite varieties.

Britain's leading seed bank collections include the Commonwealth Potato Collection at the James Hutton Institute in Dundee; more than 20,000 accessions of wheat, barley, oats and peas at the John Innes Centre; The National Fruit Collection at Brogdale – the world's largest collection of fruit trees and plants; the Genetic Resources Unit at IBERS, housing over 2,000 grass and clover populations; and Warwick Crop Centre which maintains an important collection of key vegetable crops such as leek, celery, broccoli, cabbage, carrot, lettuce, cauliflower and Brussels sprout.

In addition, Kew Gardens' Millennium Seed Bank at Wakehurst Place in West Sussex is the world's largest *ex situ* plant conservation project, with more than 30,000 wild plant species representing around 10% of the planet's plant biodiversity.

Alongside the work of conserving and renewing germplasm in these collections is the vital task of identifying and classifying the genetic diversity within the material as a resource for future crop improvement.

Through active collaboration with plant scientists and breeders, the race is on to identify valuable sources of genetic variation which will help to sustain and increase yields at a time of rapid environmental change of growing food demand.

New technology is helping. The development of powerful genomics tools, high-throughput sequencing equipment and advanced molecular markers is opening up radical new opportunities to understand, unlock and exploit the genetic diversity within these collections.

“Improving the yield and quality of our major food crops in the face of climate change, declining natural resources and new pest and disease threats depends critically on safeguarding access to novel sources of genetic variation and introducing them into commercial breeding programmes,” explains BSPB chairman Dr Richard Summers.

“That’s why plant breeders are keen to ensure that the gene pool from which desirable traits can be selected remains as extensive as possible. Modern breeding and crop production is often linked with a decline in genetic diversity, when the reality is that more effort, resource and technology is now going in than ever before to safeguard our genetic heritage, and to maintain access to the wild and cultivated diversity which supports the work of plant breeders in improving the crops of tomorrow.”

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