

# German Fruit & Grapevine Genebanks



## Genebanks at a Glance

<b>Acronym</b>	DGO (Deutsche Genbank Obst) DGR (Deutsche Genbank Reben)
<b>Country</b>	Germany
<b>Year established</b>	DGO: 2007 DGR: 2010
<b>Conservation methods and facilities</b>	<i>Ex situ</i>
<b>Number of staff</b>	DGO: 4 DGR: 5
<b>Total number of accessions</b>	DGO: 7,939 DGR: 4,854
<b>Number of accessions distributed annually</b>	DGO: 500 DGR: 87



## Recent Highlights

- Both genebanks act as decentralized networks in which partner institutions cooperate with the aim of effective long-term conservation of genetic resources. The conservation of fruit and grapevine genetic resources usually takes place in field collections. However, in some cases (e.g. strawberries), cryopreservation protocols have also been established and virus-free variety collections have been set up in insect protection tents.
- In addition to the conservation and provision of genetic resources for various purposes (e.g. hobby cultivation, urban greening), the focus of both genebanks is on breeding research and cultivar development.
- Breeding research focuses on documenting the genetic and phenotypic diversity within the respective species, researching the genetic basis of important traits (e. g. disease resistance, stress tolerance, cluster architecture), identifying donors for pre-breeding and cultivar development and developing molecular markers to increase breeding efficiency.
- The continuous and systematic evaluation of the genebank collections is carried out using state-of-the-art methods. The provision of genome-wide marker data has already been completed for most of the species. Today, the focus is on digital phenotyping.
- The focus of pre-breeding and cultivar development in fruit and grapevines is improving resistance to various fungal and bacterial diseases, improving product quality, and adapting new varieties to the changing climate. The genetic resources preserved in the JKI genebank collections provide a good basis for this.

