

Broschewitz, Lea / Bannier, Hans-Joachim / Reim, Stefanie / et al:

Microsatellite/SSR dataset: pomological and molecular characterization of apple cultivars (*Malus ×domestica* Borkh.) of the German Fruit Genebank. 2023.

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Title: Microsatellite/SSR dataset: pomological and molecular characterization of apple cultivars (*Malus ×domestica* Borkh.) of the German Fruit Genebank

Resource Type: Dataset

License: CC0

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Subject: German Fruit genebank; genetic resources; pomological characterization, *Malus ×domestica*; microsatellite marker

Description:

The German Fruit Genebank (<https://www.deutsche-genbank-obst.de/>) is a decentralized network with focus on the coordination of the different germplasm collections in Germany to conserve and utilize genetic resources of native fruit species. Here, emphasis is put on the trueness-to-type of the genetic resources based on pomological and molecular characteristics. Over the years from 2009 to 2021, several projects were carried out to take an inventory of the germplasm collections in the apple (*Malus ×domestica*) network of the German Fruit Genebank. In a first step, at least two knowledgeable experts of the German Pomological Association characterized accessions pomologically. In a second step, a DNA fingerprint analysis was used for the molecular characterization. The DNA fingerprint analysis utilized a set of 17 simple sequence repeat (SSR) markers and 8 reference genotypes recommended by the European Cooperative Programme for Plant Genetic Resources (ECPGR; <http://www.ecpgr.cgiar.org/>) *Malus/Pyrus* working group and was performed by Microsynth ecogenics GmbH (Balgach, Switzerland). 8,184 samples (fruits/ leaves) of apple trees belonging to the German Fruit Genebank from eight network collections were investigated. 1,404 different fingerprints in correspondence to cultivars could be estimated for apple.

Contributor:

Microsynth ecogenics GmbH, Switzerland; Hermann Cordes nursery KG; Nonprofit Association: Teaching and Research Institution for Horti- and Arboriculture; State Institute for Agriculture and Horticulture Saxony-Anhalt; Federal Plant Variety Office, Testing station Wurzen; Julius Kühn-Institute, Institute for Breeding Research on Fruit Crops; Administrative Office of the Kyffhaeuser district; Triesdorf Agricultural Education Centre; Competence Centre of Fruit Production - Lake Constance

GeoLocation: Samples were collected in Germany (<https://www.deutsche-genbank-obst.de/>)

