

# Portuguese *Cucurbita* spp. and *Citrullus lanatus*: Conservation, Evaluation and Breeding

**Por:**[Rocha, FA](#) (Rocha, F. A.)<sup>[1]</sup>; [Barata, AM](#) (Barata, A. M.)<sup>[1]</sup>; [Quedas, F](#) (Quedas, F.); [Lopes, F](#)(Lopes, F.); [Marreiros, A](#) (Marreiros, A.); [Leitao, J](#) (Leitao, J.)

**Editado por:**[Hummer, KE](#)

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## Resumo

Cucurbitaceae is one of the most important families of vascular plants. This family includes 118 genera and 825 species. The five major cucurbit crops are *Citrullus lanatus* Thunb Mansf. (watermelon), *Cucurbita maxima* Duchesne (pumpkin), *Cucurbita pepo* L. (squash), *Cucumis sativus* L. (cucumber) and *Cucumis melo* L. (melon). *Citrullus lanatus* and *Cucurbita* spp. are very important in the Portuguese agro-ecosystems, associated with maize, beans and cabbage. Due to the importance of *Citrullus* and *Cucurbita* spp., the Portuguese National Genebank (BPGV) has done systematic collecting missions in Portugal (Mainland and Madeira Island). Since 2001, BPGV in partnership with other National Institutions, Escola Superior Agraria de Santarem, Direccao Regional de Agricultura e Pescas do Algarve and Universidade do Algarve, has been carrying out activities related to preservation, characterization, evaluation and pre-breeding. In Portugal, in BPGV, the Curcubitaceae collection preserved in ex situ conditions (medium and long term) totals 573 accessions. The collection of *Citrullus lanatus* and *Cucurbita* spp. has a total of 355 accessions, representing 62% of the whole collection: (37 of *Citrullus lanatus*, 19 of *Cucurbita ficifolia*, 74 of *Cucurbita maxima* and 224 of *Cucurbita pepo*). Based upon the diagnosis of the preserved collection, further germplasm collecting missions were recommended in Algarve Region.

AFLP and RAPDs markers were used to check the assignment of accessions to *Cucurbita* species: *C. pepo*, *C. maxima* and *C. moschata*. The morphological characterization followed the Curcubitaceae spp. and *Citrullus* descriptors, elaborated by Bioversity International, integrated in the European Cooperative Program for Genetic Resources, Cucurbits Working Group. Characterization data are reported herein. Departing from the most homogeneous accessions of *Citrullus lanatus*, *Cucurbita maxima* and *C. moschata*, three cultivars, one of each species, have already been selected and registered in the National Catalogue of Varieties.

## **Palavras-chave**

**Palavras-chave de autor:** [Cucurbita](#); [Citrullus lanatus](#); [landraces](#); [conservation](#); [evaluation](#); [breeding](#)

## **Informações sobre autores**

**Endereço de reprint:** Rocha, FA (autor de reprint)

IP Banco Portugues Germoplasma, Inst Naci Recursos Biol, Braga, Portugal.

## **Endereços:**

[ 1 ] IP Banco Portugues Germoplasma, Inst Naci Recursos Biol, Braga, Portugal

## **Editor**

INT SOC HORTICULTURAL SCIENCE, PO BOX 500, 3001 LEUVEN 1, BELGIUM

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