

# WORLD SAFFRON AND CROCUS COLLECTION (CROCUSBANK)

## *Material's acquisition and collection Protocol<sup>1</sup>*

### Banco de Germoplasma Vegetal de Cuenca

#### INTRODUCTION

The main objective of the project CROCUSBANK, founded by Directorate General for Agriculture and Rural Development of the European Commission (contract number AGRI-2006-0265), is the creation, characterisation and utilization of a world collection of *Crocus* spp., including saffron (*C. sativus* L.). The tasks of the Bank of Plant Germplasm of Cuenca (BGV-CU) in this project are the conservation, multiplication, characterisation and documentation of the materials collected all around the World. In order to improve the processes of collecting and sending materials, and the subsequent management, BGV-CU has developed this protocol, which is accessible via Internet through the [CrocusBank website](#).

#### GENERAL

##### I) The plant material for conservation and/or supply in the BGV-CU, will be corms and / or seeds of:

- a) Wild species and regressive forms.
- b) Species or varieties from traditional agriculture (primitive cultivars).
- c) Species or varieties from conventional agriculture and/or gardening that are not protected by the effective legal registers.
- d) Materials from genetic improvement, biotechnological or genetic engineering programs, previous authorization by the responsible researchers of the programs.

##### II) Procedures for the incorporation of materials to the BGV-CU

- a) The materials incorporated into BGV-CU may come: from collecting expeditions carry out by the different partners of CrocusBank Project and/or personal collaborator, or from donation, exchange or purchase to institutions, companies or other entities.
- b) The materials must be correctly labelling and documented (passport, agronomic and conservation data, records of entry and/or exit, etc.). We recommend to complete, as much as possible, the information required in the [Collecting Form](#).
- c) In the donation and/or exchange of materials, donor and recipient will have to sign the Standard Material Transfer Agreement (MTA).
- d) The donation and/or exchange of materials will have agree with the international regulations established on the matter, specially with the [International Treaty on Plant Genetic Resources](#), [International Code of Conduct for Plant Germplasm Collecting and Transfer](#), [Convention on Biological Diversity](#) and the [International Plant Protection Convention](#).

### CROCUS COLLECTION PROTOCOL <sup>(1)</sup>

#### 2.1 SAMPLING STRATEGY

- a) Localization of the collecting areas for the target species:
  - Make a complete bibliographic search on the different *Crocus* species in order to determine their chorology, dates and locations where the material could be found (ecogeographic and floristic studies, Geographic Information Systems, Cartography, etc.)
  - Contact plant nurseries, botanic gardens and private cultivators. If possible, also consult specialists on the genus, botanist, farmers, forest agents, inhabitants of the collecting place, etc.
- b) If the collection is made in protected areas or on endangered species, the authorisation of national, regional and local authorities must be previously obtained.
- c) All the information about target species and collecting place must be compiled (see [Collecting Form](#))

<sup>1</sup>Adapted from: Jaramillo, S. y Baena, M. *Conservación ex situ de recursos fitogenéticos*. IPGRI. Instituto Internacional de Recursos Fitogenéticos. Grupo América. Cali, Colombia, 2000.

d) Split sampling place according to their ecogeographic, edaphoclimatic and floristic characteristics in order to obtain the maximum variability of the sampled population.

## 2.2 TYPE AND SIZE OF THE SAMPLE

- We recommend to collect samples of the maximum size, in order to include the maximum variability and, at the same time, without endanger the populations, and always attending to the indications of the permissions obtained in each case.
- The total amount of material sampled must be in consideration the risk of material losses (natural death, low viability, sterility, transport damages, etc.) and the needs of safety duplicates.

According to the strategy of conservation and multiplication established in the BGV-CU the recommendations about the type and optimal size of the materials to be incorporated into BGV-CU are:

### a) *Vegetative forms (bulbs or corms):*

- During the transport we recommends to wrap the samples in an absorbent material (newspaper, etc.) and use a string bag that allow transpiration in order to avoid the development of fungi on the plant material.
- Optimal quantity of saffron (*C. sativus* L.) for supplying: 50 bulbs (10 for reserve collection and 40 for exchange collection and multiplication)
- Optimal quantity of wild crocus (*Crocus* spp.) for supplying: 50 bulbs (10 for reserve collection and 40 for exchange collection and multiplication)

### b) *Vegetative forms (complete plant):*

- Complete plants will be collected when reproductive organs are in immature stages of development and/or when be necessary to made additional measurements in laboratory.
- The use of suitable size containers is recommended in order to facilitate further transport (small flowerpots).
- The maximum quantity of root ball must be included, to allow the optimal plant development up to the extraction of bulbs and/or seeds.
- For conservation and/or sending purposes, the extraction of corms and/or seeds is recommended.

### c) *Seeds:*

- When seeds are collected it is advisable to harvest all mature fruits (capsules) because the seeds kept it viability for more time.
- The seeds must be mature in order to tolerate the further desiccation process.
- The seeds must be hand-dressed from the capsules.
- Minimum quantity of seeds for accession: 1000 seeds (for conservation, regeneration and viability test).

## 2.3 ADDITIONAL INFORMATION ABOUT COLLECTING AREA AND PLANT MATERIAL

The additional information about collecting area and plant material (required in the [Collecting Form](#)) will allow to establish some conditions of *ex situ* conservation (in BGV-CU) similar to those found in the original collecting area of the materials.

## 2.4 GENERAL RECOMMENDATIONS FOR THE SENDING OF THE MATERIAL TO BGV-CU

- After the collection, the sample must be sent as rapidly as possible to BGV-CU to prevent the loss of viability.
- The material must be sent perfectly labelled and in the containers adapted according to the type of sample (corms and /or seeds).
- The packaging must be sufficiently solid, to avoid damages or any other contingency during the transport.
- Recommended sending method: Certified parcel service.

Send with the plant material and the additional information to:

**CENTRO DE INVESTIGACIÓN AGRARIA DE ALBALADEJITO**  
**(BANCO DE GERMOPLASMA VEGETAL DE CUENCA)**  
**Ctra. Toledo-Cuenca, km 174, 16194 Cuenca (Spain)**

For further information: e-mail: [mde@jccm.es](mailto:mde@jccm.es) / Telephone number: +34 969-213763