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## SOP.13. FIELD CONSERVATION OF PLANT GENETIC RESOURCES

### 1. Purpose

The preservation of vegetatively propagated species through the cultivation of live plants, grown annually in the Bank's field.

### 2. Field of Application

The Plant Genetic Resources Bank of Suceava (BRGV) – Field conservation of genotypes: potato (*Solanum tuberosum* L.), garlic (*Allium sativum* L.), and onion (*Allium cepa*, var. *aggregatum* G. Don and *Allium cepa Proliferum* Group).

### 3. Definitions, Abbreviations, and Terms Used

- BRGV: Plant Genetic Resources Bank
- PGR: Plant Genetic Resources
- GeneDataBank: Database
- Field Conservation of PGR: A method of preserving the integrity and vitality of biological material maintained and propagated vegetatively, by adhering to specific conditions for annual regeneration, depending on the crop, and storage during autumn and winter.

### 4. Procedure Description

#### a. Coding and Registering Samples in the GeneDataBank Database

Each sample received is assigned a registration number and labelled during the vegetation period if the sample meets all selection criteria for this type of conservation. Both the registration number and label are included in the annual list of varieties maintained in the Bank's field.

#### b. Selecting the Location for Cultivating the Collection

The area chosen annually for regenerating the samples must be suitable for the number of genotypes and must also comply with crop rotation practices to prevent or reduce the occurrence of diseases and pest attacks specific to the crop.

#### c. Writing Field Labels


Each sample to be planted is provided with an identification label, in accordance with the corresponding records.

#### d. Inspecting Material Before Planting

Samples are individually inspected (potato genotypes in spring, garlic and onion genotypes in autumn) to remove biological material showing signs of deterioration caused by diseases or pests.

#### e. Planting Samples in the Field

The collection is planted in the field (potatoes in spring; garlic and onions in autumn) within a short timeframe (1–2 days), adhering to all technical and technological norms of cultivation, including soil preparation, spacing between rows and plants, and

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optimal planting periods. A sample consists of 10–15 potato plants and 20 garlic or onion plants.

**f. Monitoring Genotypes During the Vegetation Period**

Throughout the vegetation period, starting from the emergence phase, observations are made regarding morpho-physiological aspects related to crop-specific descriptors, as well as resistance to foliar diseases and pest attacks. Data is recorded in the field notebook and subsequently entered into the database.

**g. Crop Maintenance**

All maintenance activities, such as weed removal, soil loosening, hilling for potatoes, and treatments against diseases and pests, are carried out at optimal times to ensure the development of vigorous and healthy plants, as well as high-quality planting material for the perpetuation of the collection and to prevent the degradation of biological material.

**h. Preparing Packaging**

Samples are packed in high-quality paper bags that allow biological material to breathe while also being resistant to transport and handling during the storage period.

**i. Harvesting and Storage**

Samples are harvested when the material reaches physiological maturity and when weather conditions allow for the collection of representative samples without soil on the storage organs. Samples are stored in the vegetative material conservation chamber under controlled temperature and humidity conditions (5–7°C and 85–90% relative humidity).

**j. Monitoring Material During Storage**

The parameters in the storage chamber are checked daily, and any deviations are corrected as quickly as possible.