

## Appendix II. Decision factors for field cultures and cryopreservation of vegetative *Allium* accessions

The main decision factors listed below should be used to determine the optimum methods for field cultures and cryopreservation of vegetative *Allium* accessions under the given conditions of the respective collection holder.

### Field culture

- Plot design (e.g. year 2010 at IPK: 397 garlic plots amongst altogether 800 *Allium* plots arranged in 4 blocks at 10 x 20 plots; size per plot 1.5 x 1.5 m; 6 planting sites of 3 cloves each; 54 core collection plots containing 3 rows of 15 cloves each)
- Number of cloves/bulbs per accession (e.g. at IPK: core collection 45 cloves, other material 18 cloves)
- Turnover (annual, bi-annual or longer) (e.g. at IPK: core collection annual, other material quadrennial)
- Distinction between autumn- and spring-planted types (winter or summer garlic) or not (e.g. at IPK: no distinction, all planting in autumn; reserve stored over winter on shelves in case of winter loss)
- Planting period(s) – harvest period(s)
- Additional seeds stored if any (shallot) (e.g. at IPK: yes for shallots)
- Reasons for vegetative maintenance
  - No seeds
  - Reproduction too complicated
- Field work – soil management (which and when)
- Phytosanitary treatments (which, where and when)
- Proportion of virus-free material (which material, measures for elimination, free-keeping, detection)
- Characterization measures (which and when)
- Bulb/bulbil storage (where, how long, conditions?)
- Yearly average of field loss rate

### Cryopreservation

- Presence of bulbils
- Size of bulbils (large bulbils easier than small ones)
- Presence of inflorescences
- Need of phytosanitary treatment
- Number of cloves per bulb
- Vigour of the plant
- Tendency to fall into dormancy
- Availability of donor material
- Capacity of pre-multiplication in the field