



STATUS OF THE NATIONAL ALLIUM COLLECTION

CZECH REPUBLIC

Helena Stavělíková

Crop Research Institute,
workplace Olomouc

*Eighth Meeting of the Allium Working
Group, 11-12 October 2022, Skierniewice,
Poland*

Number of accessions in the Czech collections



Species/Crop	Ex situ	Field	Cryo	Vitro	Total
Garlic (<i>Allium sativum</i> L.)	605	605	177		605
Shallot (<i>Allium ascalonicum</i> L.)	132	132			132
Common onion (<i>Allium cepa</i> L.)	28				28
Chive (<i>Allium schoneoprasum</i> L.)	4				4
Leek (<i>Allium porrum</i> L.)	10				10
Spring onion (<i>Allium fistulosum</i> L.)	12				12
Wild Alliums from NL	72	72			72
Wild Alliums	40	40			40
TOTAL	903	777	177		903

Safety duplication percentage



Species/Crop	%	Number acc.in collection /number of SD
Garlic (<i>Allium sativum</i> L.)	50	605/304
Shallot (<i>Allium ascalonicum</i> L.)	16	132/21
Common onion (<i>Allium cepa</i> L.)	14	28/4
Chive (<i>Allium schoneoprasum</i> L.)	25	4/1
Leek (<i>Allium porrum</i> L.)	40	10/4
Spring onion (<i>Allium fistulosum</i> L.)	16	12/2
TOTAL	42	791/336

Comments:

Vegetatively propagated-garlic

IPK, Germany (DEU146) – 74
RIPP, Slovakia (SVK001)– 53
CRI, cryo, CR (CZE151) – 177

Shallot

IPK, Germany (DEU146) – 21

Generatively propagated

Svalbard Global Seed Vault (NOR051) –

2 acc. onion

1 acc. Chive

RIPP, Slovakia - (SVK001) –

2 acc. onion

4 acc leek

Portugal - 20 acc.
Poland - 30 acc.
Bulgaria - 56 acc.



Structure of garlic collection by country of origin

Country of origin	Number of accessions	Country of origin	Number of accessions
Soviet Union	126	Poland	39
Czechoslovakia	96	Slovakia	35
Bulgaria	56	Spain	28
Czech Republic	55	Hungary	28

Comments:



Biology status of the most important collection(s) [i.e. garlic, etc.] and ability to flower (garlic)

Biological status	Number of accessions
Traditional cultivar/landrace	406
Advanced or improved cultivar	109
Wild	13
Breeding/research material	8

Ability to flower	Number of accessions
Bolting garlic	320
Non bolting	192
Semibolting	93

Comments:

- current varieties
- restricted Czech andCzechoslovakian varieties
- landrase fromSouth Moravia and theWhite Carpathians
- wild species and primitive forms from Central Asia and Western Siberia



Status of documentation



- Descriptors used:

IPGRI, ECPGR a AVRDC, 2001: *Descriptors for Allium (Allium spp.)*.

STAVĚLÍKOVÁ, H., a FABEROVÁ, I., 2005: *Klasifikátor / Descriptor List Genus Allium L.*

Garlic -22 char., shallot – 17 char., onion – 12, spring onion – 8 char.

- Documentation system (software): GRIN Czech

- % characterized: garlic – 99%, shallot – 100%, onion – 100%, spring onion - 80%, leek and chive – 0%

- C&E data to EURISCO: yes/no/% - yes

- Pictures available: yes/no - yes





Acquisitions

- Any plans to fill gaps: cooperation with others GB (repatriation) and seeds company
- Acquisition strategy: direct collecting/ from companies / genebanks, etc.: mainly breeding companies, local growers





Use of the collection

- Availability of material (% available and under what terms – SMTA, MTA): 90 %
- Cooperation with users (breeders, NGOs, farmers): university, breeder companies, exhibition center Flora Olomouc
- **Ongoing projects:** Garlic yield and quality increasing by selection drought and cold resistant clones based on molecular genetic analysis

(Zvýšení výnosů a kvality produkce česneku výběrem suchovzdorných a chladuvzdorných klonů na základě molekulárně genetické analýzy)



Main problems

- Climate change



Proposals for collaborative activities within the Working Group

Safe duplication

Preparing of project

Cooperation with other WG

Communication with members of AWG

