

STATUS OF THE NATIONAL ALLIUM COLLECTION - ITALY

Alessandro Natalini

Council for Agricultural Research and Economics (CREA)

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

Number of accessions in the COUNTRY Italy collection(s)

Species/Crop	Ex situ	Field	Cryo	Vitro	Total
Garlic (Allium sativum L.)		65			73
Elephant garlic (<i>A. ampeloprasum</i> L. var. <i>halmense</i>)		8			
Shallot (Allium ascalonicum L.)	2				2
Common onion (<i>Allium cepa</i> L.)	61				61
Chive (Allium schoneoprasum L.)	1				1
Wild leek (Allium ampeloprasum)	2				2
Spring onion (Allium fistulosum L.)	1				1
Wild Alliums					
TOTAL					140



Safety duplication percentage

Species/Crop	%
Garlic (Allium sativum L.)	0 (ITA 365) 10 (ITA 368)
Elephant garlic (A. ampeloprasum L. var. holmense)	0 (ITA 365) 0 (ITA 368)
Shallot (<i>Allium ascalonicum</i> L.)	
Common onion (<i>Allium cepa</i> L.)	0 (ITA 363) 100 (ITA 368) 100 (ITA 389) 0 (ITA 393) 0 (ITA 436)
Chive (Allium schoneoprasum L.)	0 (ITA 393)
Wild Leek (Allium ampeloprasum)	0 (ITA 436)
Spring onion (Allium fistulosum L.)	0 (ITA 393)
TOTAL	

Comments:

One accession of common onion and a few of Garlic were recently donated to the Institute of Agriculture and Tourism, Poreč (CRO) (ITA 368)



Structure of the most important collection (onion) by country of origin

Country of origin	Number of accessions	Country of origin	Number of accessions
A (Italy)	53	E	
B (Libya)	4	F	
C (Egypt)	3	G	
D (Algeria)	1	Н	



Structure of the most important collection (shallot) by country of origin

Country of origin	Number of accessions		Number of accessions
A (Italy)	2	E	
В		F	
С		G	
D		Н	



Structure of the most important collection (garlic + elephant garlic) by country of origin

Country of origin	Number of accessions	Country of origin	Number of accessions
A (Italy)	61	E (Chile)	1
B (France)	5	F (Greece)	1
C (Albany)	1	G (Hungary)	1
D (Turkey)	1	H (Croatia)	2



Structure of the most important collection (chive) by country of origin

Country of origin	Number of accessions		Number of accessions
A (Italy)	1	Е	
В		F	
С		G	
D		Н	



Structure of the most important collection (spring onion) by country of origin

Country of origin	Number of accessions		Number of accessions
A (Italy)	1	Е	
В		F	
С		G	
D		Н	



Structure of the most important collection (wild leek) by country of origin

Country of origin	Number of accessions		Number of accessions
A (Italy)	2	Е	
В		F	
С		G	
D		Н	



Biology status of the most important collection(s) [onion]

Biological status	Number of accessions
Wild	
Advanced or improved cultivar	12
Breeding/research material	
Traditional cultivar/landrace	49



Biology status of the most important collection(s) [shallot]

Biological status	Number of accessions
Wild	
Advanced or improved	
cultivar	
Breeding/research	
material	
Traditional	2
cultivar/landrace	



Biology status of the most important collection(s) [garlic and elephant garlic] and ability to flower [garlic and elephant garlic]

Biological status	Number of accessions	Ability to flower	Number of accessions
Wild		Bolting garlic	7
Advanced or improved	1	Bolding game	/
cultivar	1		8 (A. ampeloprasum)
Breeding/research		Non bolting	
material			39
Traditional	72	Semibolting	
cultivar/landrace	. –		19

Comments: during COVID-19 pandemic, ITA 365 lost 48 accessions



Biology status of the most important collection(s) [chive]

Biological status	Number of accessions
Wild	
Advanced or improved	
cultivar	
Breeding/research	
material	
Traditional	1
cultivar/landrace	



Biology status of the most important collection(s) [spring onion]

Biological status	Number of accessions
Wild	
Advanced or improved	
cultivar	
Breeding/research	
material	
Traditional	1
cultivar/landrace	



Biology status of the most important collection(s) [wild leek]

Biological status	Number of accessions
Wild	2
Advanced or improved	
cultivar	
Breeding/research	
material	
Traditional	
cultivar/landrace	



Status of documentation

- Descriptors used: EURISCO Descriptors (MCPD multicrop passport descriptors)
- Documentation system (software): Excel
- % characterized: on going (partly)
- C&E data to EURISCO: yes/no/% (partly)
- Pictures available: yes/no (partly)



Acquisitions

- Any plans to fill gaps: not yet defined
- increase the interaction with Croatian and Slovene genebanks (ITA 368)
- Acquisition strategy: direct collecting/ from companies / genebanks, etc.:
- direct collecting (ITA 365, ITA 436);
- other institutions: not yet defined



Use of the collection

- Availability of material (% available and under what terms SMTA, MTA): mainly not available (available under SMTA for ITA 368)
- Cooperation with users (breeders, NGOs, farmers): not defined
- interactions with farmers for the Resia garlic, a SlowFood Praesidium of Friuli Venezia Giulia (ITA 368)
- Ongoing projects:

- 'AGLIOG' project - Campania PSR 2014/2020. Measure 19 - Participatory local development - LEADER. Sub-measure 19.2. Type of intervention 19.2.1 "Local Development Strategies" Measure 16 "Cooperation". Type of Intervention 16.1.1 "Garlic of Tanagro area for gourmet foods: recovery and characterization of local ecotypes of the "Buon Vivere" territory" (ITA 365).



Main problems

- Lack of funds and lack of technical personnel
- Need funding for field operation and maintenance also for safety duplication. Very high risk to lost germoplasm (for example, ITA 365 lost 48 unique garlic accessions during COVID).
- Germoplasm fragmentation
- New members in ITA 393



Proposals for collaborative activities within the Working Group

- Full availability to cooperate in germoplasm collection, characterization for ITA 365, ITA 368, ITA 391, ITA 393
- direct contacts with the National Focal Point for Alliums PGR at the Institute of Agriculture and Tourism, Poreč (CRO) (ITA 368)
- Availability to cooperate also in breeding for ITA 393

