



# STATUS OF THE NATIONAL ALLIUM COLLECTION SPAIN

**Marcelino de los Mozos Pascual**

IRIAF-CIAF Albaladejito, Cuenca, Spain

(FAO code ESP124)

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

# STATUS OF THE NATIONAL ALLIUM COLLECTION – SPAIN

## SPANISH INSTITUTIONS PRESERVING ALLIUM MATERIALS

- ESP003** – ETSIA, Madrid (Curator: Santiago Moreno Vázquez - [bgv.etsiaab@upm.es](mailto:bgv.etsiaab@upm.es) ) – Wild species.
- ESP004** – CRF-INIA, Madrid (Curator: Isaura Martín Martínez - [martin@inia.es](mailto:martin@inia.es) ) – Safety duplicates for seed collections.
- ESP026** – COMAV, Valencia (Curator: María José Díez Niclós - [mdiezni@btc.upv.es](mailto:mdiezni@btc.upv.es) ) – Onion, Leek.
- ESP027** – CITA, Zaragoza (Curator: Cristina Mallor Giménez - [cmallor@aragon.es](mailto:cmallor@aragon.es) ) – Onion, Leek, Elephant garlic, Wild species.
- ESP032** – SERIDA, Asturias (Curator: Juan José Ferreira Fernández - [jjferreira@serida.org](mailto:jjferreira@serida.org) ) – Onion.
- ESP124** – IRIAF-CIAF Albaladejito, Cuenca (Curator: Marcelino de los Mozos Pascual – [mde@jccm.es](mailto:mde@jccm.es) ) – Garlic, Elephant garlic, Shallot, Wild species.
- ESP172** – CCBAT, Tenerife (Curator: José Domingo Ríos Mesa - [domingor@tenerife.es](mailto:domingor@tenerife.es) ) – Garlic, Elephant garlic.
- ESP198** – IMIDRA, Madrid (Curator: María Victoria Colombo Rodríguez - [mariavictoria.colombo@madrid.org](mailto:mariavictoria.colombo@madrid.org) ) - Garlic, Onion.
- ESP200** – IRFAP, Mallorca (Curator: Carme Garau Taberner - [mccgarau@irfap.es](mailto:mccgarau@irfap.es) ) – Onion.



## Number of accessions in the COUNTRY collections

Species/Crop	Ex situ	Field	Cryo	Vitro	Total
Common onion ( <i>Allium cepa</i> L.)	1022	0	0	0	1022
Garlic ( <i>Allium sativum</i> L.)	0	471	0	(10) + 4	475
Leek ( <i>Allium porrum</i> L.)	202	0	0	0	202
Elephant garlic ( <i>Allium ampeloprasum</i> L.)	17	52	0	0	69
Shallot ( <i>Allium ascalonicum</i> L.)	0	6	0	0	6
Spring onion ( <i>Allium fistulosum</i> L.)	5	0	0	0	5
Chive ( <i>Allium schoenoprasum</i> L.)	4	0	0	0	4
Other species	38	10	0	1	49
<b>TOTAL</b>	<b>1288</b>	<b>539</b>	<b>0</b>	<b>5</b>	<b>1832</b>

## Safety duplication percentage

Species/Crop	%
Common onion ( <i>Allium cepa</i> L.)	55
Garlic ( <i>Allium sativum</i> L.)	0
Leek ( <i>Allium porrum</i> L.)	62
Elephant garlic ( <i>Allium ampeloprasum</i> L.)	18
Shallot ( <i>Allium ascalonicum</i> L.)	0
Chive ( <i>Allium schoenoprasum</i> L.)	0
Spring onion ( <i>Allium fistulosum</i> L.)	0
Other species	7
<b>TOTAL</b>	<b>39</b>

Comments:



## Structure of the most important collections by country of origin

### ONION

Country of origin	Number of accessions	Country of origin	Number of accessions
Spain	961	Cuba	3
Australia	7	Argentina	2
Portugal	3	Others (8)	13
Germany	3	Unknown	19

Comments:



## Structure of the most important collections by country of origin GARLIC

Country of origin	Number of accessions	Country of origin	Number of accessions
Spain	272	Egypt	5
Argentina	26	USA	5
France	9	Others (17)	36
Chile	6	Unknown	116

Comments:



## Structure of the most important collections by country of origin LEEK

Country of origin	Number of accessions	Country of origin	Number of accessions
Spain	187	Italia	1
G. Britain	4	-	-
Albania	2	-	-
Cuba	1	Unknown	7

Comments:

## Structure of the most important collections by country of origin

### ELEPHANT GARLIC

Country of origin	Number of accessions	Country of origin	Number of accessions
Spain	60	-	-
Tunisia	1	-	-
-	-	-	-
-	-	Unknown	8

Comments:





## Biology status of the most important collections

### ONION

Biological status	Number of accessions
Wild	0
Advanced or improved cultivar	7
Breeding/research material	1
Traditional cultivar/landrace	848

**Comments:**



## Biology status of the most important collections

### GARLIC

Biological status	Number of accessions
Wild	-
Advanced or improved cultivar	25
Breeding/research material	-
Traditional cultivar/landrace	232

#### Comments:

\* Information about ability to flower in this collection is not currently available.

## Biology status of the most important collections LEEK

Biological status	Number of accessions
Wild	-
Advanced or improved cultivar	1
Breeding/research material	-
Traditional cultivar/landrace	122

**Comments:**



## Biology status of the most important collections

### ELEPHANT GARLIC

**Comments:** Wild specimen of *Allium ampeloprasum* L. near Cuenca city, Spain (Author: M. de\_los\_Mozos).

Biological status	Number of accessions
Wild	19
Advanced or improved cultivar	-
Breeding/research material	-
Traditional cultivar/landrace	40



# Status of documentation

- Descriptors used: *Multi-crop Passport Descriptors*
- Documentation system (software): *MS Access, MS Excel*
- % characterized: 30%
- C&E data to EURISCO: 61%
- Pictures available: 25%



# Acquisitions

- **Any plans to fill gaps**

*No specific plan at national level. The coordination among the different Spanish genebanks involved with Allium is a priority.*

- **Acquisition strategy**

*Currently, the interchange with other genebanks when possible, would be an appropriate option for increasing and safeguarding garlic collection.*



# Use of the collection

- Availability of material (% available and under what terms – SMTA, MTA): Aprox. 70%. SMTA, MTA (simplified for direct use by farmers and minor users).
- Cooperation with users (breeders, NGOs, farmers):
  - Advice on the interest and utilization possibilities of *Allium* genetic resources to different users (researchers, farmers, agricultural associations, schools, urban gardeners, etc.).
  - Collaboration on specific research initiatives on *Allium* collections.
  - Participation in the recovery and enhancement of traditional crops in different Spanish regions.
  - Occasional collaboration with farmers for the regeneration of *Allium* collections.

# Use of the collection

- Main current actions:
  - Enhancement of onion landraces in the Balearic Islands.  
( <https://varietatslocalsib.com/ca/webcataleg/pagina/31> )
  - Comprehensive project for the conservation of wild relatives of crops in the Sierra del Rincón (Madrid), including some *Allium* wild species.  
( <https://www.sierradelrincon.org/parientes-silvestres-cultivos/> )
  - "Siembra Teruel" project for the recovery of the cultivation of horticultural varieties in the province of Teruel (Aragón, Spain), including those of the genus *Allium*, specifically onion.





# Main problems

- *Institutional changes.*
- *Lack of funding.*
- *Dispersion of materials in different Spanish genebanks (coordination activities and National strategy is needed – On going).*
- *Lost of materials due to sanitary problems (mainly in garlic).*



# Proposals for collaborative activities within the Working Group

- *Interchange material with different European genebanks to retrieve lost accessions in the Spanish garlic collection and to create safety duplicates for the most representative materials.*
- *Possibilities of new initiatives in the frame of ECPGR Allium WG after defining the national priorities with curators of Allium collections in the Spanish network and with the competent authorities.*

