

AEGIS *Allium* Group – Identification of MAAs

- Over 25+ years European institutes had organized “unofficial” safety duplication for garlic clones & this was encouraged during the GENRES *Allium* project (1996-2000)
- The European *Allium* Database was rebuilt in 2007 to support the objectives of the EURALLIVEG project. EADB2007 contained 3251 accessions of garlic in 18 countries including Israel & Russia.
- EURALLIVEG partner collections (Czech Republic, France, Germany, Italy, NGB & Poland) contained 1549 garlic accessions.
- First step to identify historic safety duplicates in EADB2007 collections. Total safety duplicates 358 mainly in Czech Republic, Germany & Spain.
- Sufficient funds in EURALLIVEG to molecular fingerprint (Array-On) all EURALLIVEG partner accessions to identify duplicates & MAAs.
- Project proposal for ECPGR Phase VIII to fingerprint selected material from Portugal & Spain.

Country / Genebank	No. accessions	Official duplicates	Duplicates from country
Czech Republic	624	117	Bulgaria 67, Poland 30, Portugal 20
Germany	502	122	Czech Republic 76, Poland 20, Spain 26
France	61	0	
Italy	71	2	Italy 2
Nordic Genebank	10		
Poland	281	9	Slovakia 9
EURALLIVEG	1549		
Azerbaijan	2		
Bulgaria	26		
Switzerland	5		
Spain	634	108	<i>Germany 52, USA 17, Egypt 12, Japan 27</i>
Georgia	1		
Israel	245		
Lithuania	51		
Portugal	292		
Romania	40		
Russia	298		
Slovakia	62		
Ukraine	46		
Total	3251	358	

Conclusions

- i. Molecular fingerprinting is the main criterion to be used in the selection of garlic MAAs.
- ii. EURALLIVEG project (2007-2011) will provide significant information & technical expertise in the development of MAAs for a European collection of garlic based on the results of the molecular analysis.
- iii. A significant limitation is that EURALLIVEG represents only a proportion of European garlic material.
- iv. Molecular method & analysis provide the tools for screening other garlic collections for unique MAAs. Plans to extend screening of garlic collections in ECPGR Phase VIII.
- v. Additional funds will be required in the future to extend screening of other ECPGR/European collections (Israel, Lithuania, Romania, Russia, Slovakia & Ukraine).
- vi. Material exists in some European collections where the status has not been formalised, so need for clarification with holding institution & the country of origin.