

Selecting the Most Appropriate Accessions for AEGIS – a pilot study

Report for the Brassica Working Group

Noor Bas
Charlotte Allender
Helmut Reiner

Meeting of the AEGIS model crops curators and database managers

1-3 July 2008, Radzików, Poland

European *Brassica* Collection

- Total of 24,336 accessions in BrasEDB
- Need to test MAA selection criteria on a subset
- *B. rapa* chosen

Species	Accessions held
<i>B. carinata</i>	279
<i>B. juncea</i>	2441
<i>B. napus</i>	5710
<i>B. nigra</i>	382
<i>B. oleracea</i>	10905
<i>B. rapa</i>	3618

General Methods

- Most up-to-date version of BrasEDB used
- F1 hybrids disregarded
- Genetic uniqueness determined by accession name or other data
- Other primary criteria assumed to apply
- Geographic origin was priority for the secondary criteria

Application of Selection Criteria

- Data split in two:
 - Accessions with names
 - Accessions without names
- Potential MAAs identified in each group
- Data recompiled and analysed

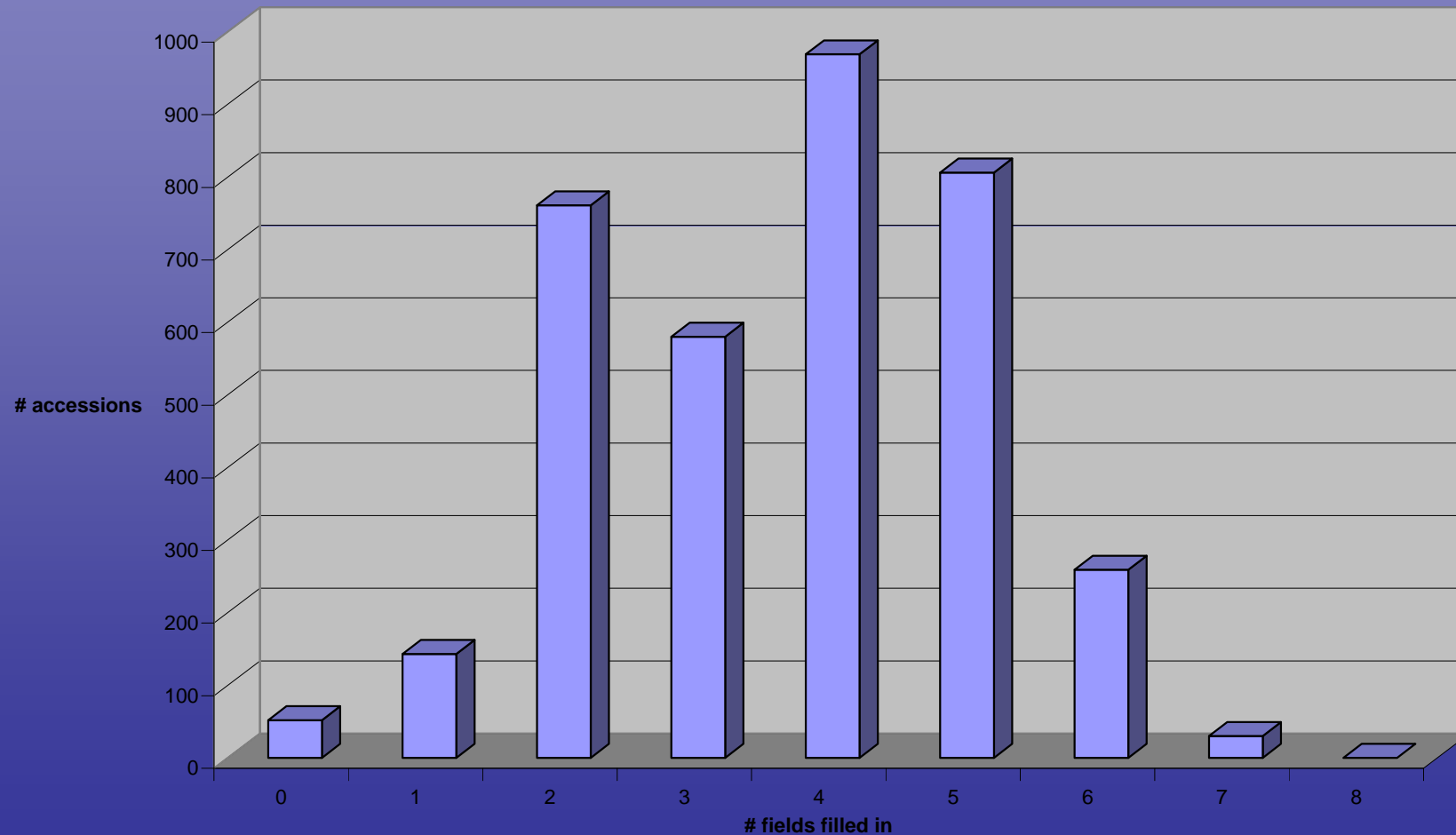
Results

% selected as MAA	Noor	Charlotte
total	60	78
with ACCNAME	57	72
without ACCNAME	66	90

Incomplete passport data

INSTCODE	ACCENUMB	SUB TAXA	CROP NAME	ACC NAME	ORIG CTY	SAMP STAT	DONOR NUMB	OTHER NUMB
ITA004	200430				ETH			
ITA004	201165				ITA			
ITA004	201166				ITA			
BGR001	84403045							
BGR001	84403046							

Number of accessions with number of following 8 descriptors filled in:
ACCENAME, ORIGCTY, SAMPSTAT, COLLSITE, COLLNUMB,
OTHERNUMB, DONORNUMB, DONORCODE (Noor's analysis)



Accession names can differ – all available data must be used to detect duplicates

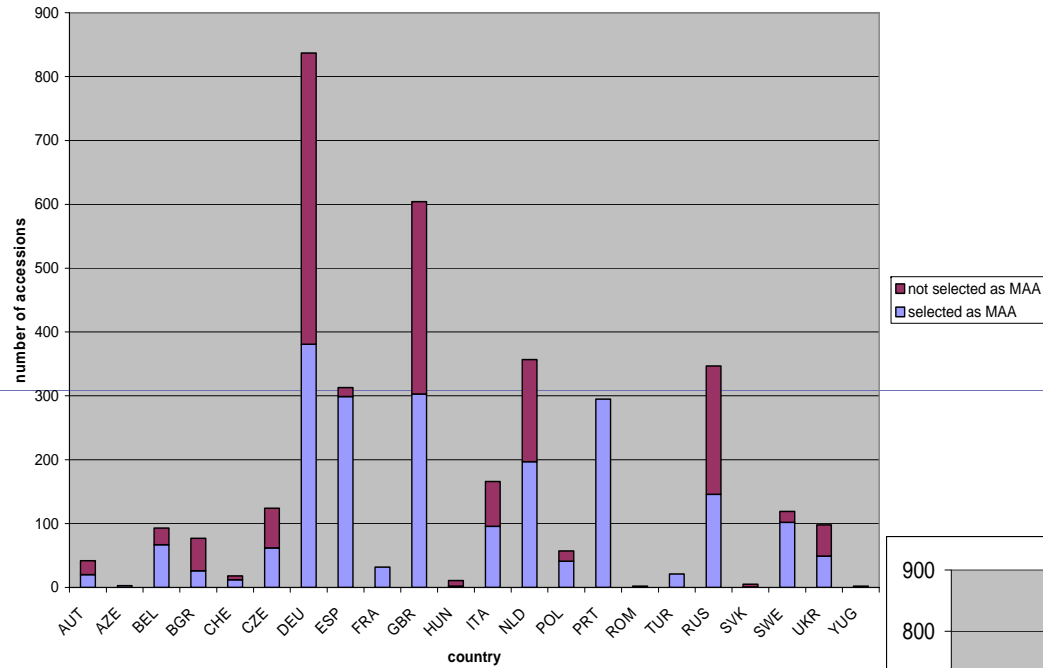
INSTCODE	ACCENUMB	ACCENAME	ORIGCTY	SAMPSTAT	DONOR CODE	DONOR NUMB	OTHERNUMB
DEU146	BRA 337	Bortfelder		500			DEU146:K 684
GBR006	HRIGRU 7743	BORTFELDER		500		57 74 038	38/74 McNAIR
SWE002	NGB13823	BORTFELDER	NLD	999	NLD037	6671	
SWE002	NGB13821	BORTFELDER	DNK	999	NLD037	6678	
RUS001	505700980	Bortfelder					
NLD037	CGN06671	Lange Gele Bortfelder	NLD	500	NLD078	BC 10.05	NLD083:62.26. 704
NLD037	CGN06678	Lange Gele Bortfelder	DNK	500	NLD078	BC 10.17	NLD083:64.26. 702

Synonyms should also be accounted for

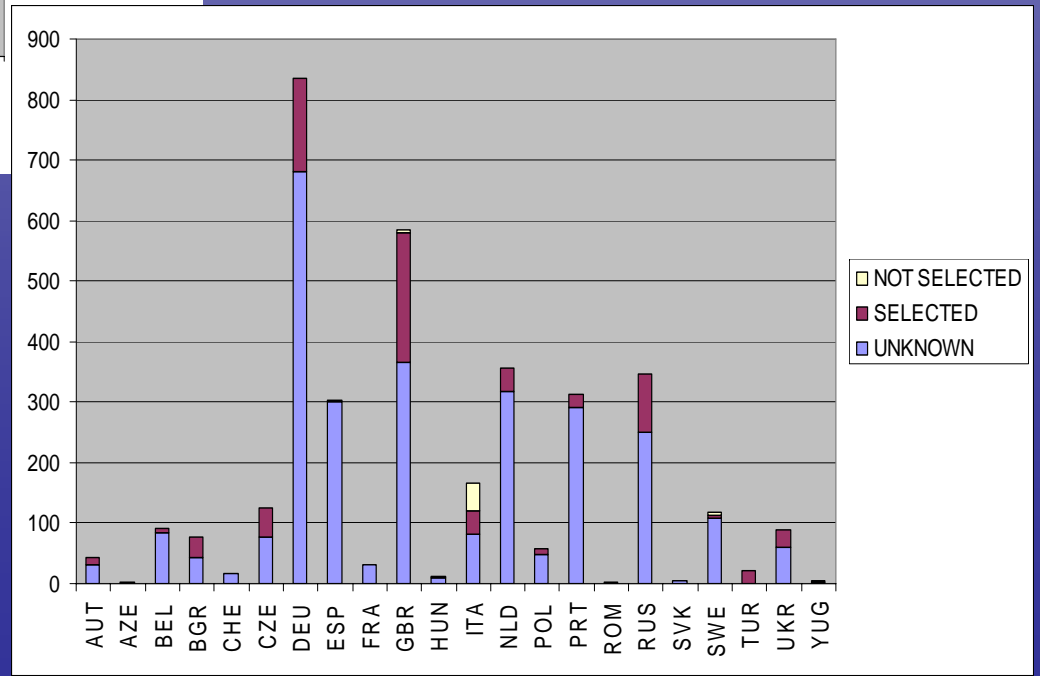
- Accession names marked with * are synonymous with:
**Norfolk a collet Rouge,
 Norfolk a colletto violetto,
 Lincolnshire Red Globe**

INSTCODE	ACCENUMB	ACCENAME	synonym?	ORIGCTY
ESP009	BRS-0098	Nabo Norfolk Cuello Rosa	*	
NLD037	CGN06673	Grote Ronde Witte Roodkop-Norfolk; De Norfolk a Collet Rouge	*	GBR
RUS001	505701044	NORFOLK A COLLET ROUGE	*	
RUS001	505700998	NORFOLK ROODKOP	*	
RUS001	505700948	ROND DE NORFOLK A'COLLET ROUGE	*	
ESP009	BRS-0013	Nabo Forrajero Norfolk Violeta		
RUS001	505700861	NORFOLK WHITE PURPLE TOP		
DEU271	CR 1541	Lincolnshire Red Globe	*	GBR
GBR006	HRIGRU 3263	LINCOLNSHIRE RED GLOBE	*	GBR

Total number of accessions selected and not selected as MAA per country



Noor's analysis



Charlotte's analysis

Further Investigations

- Selection of MAAs could be refined even further based on other data
 - Linguistic
 - Geographic
 - Historical
- Requires high levels of effort by a crop specialist – may not always be possible

Questions on MAA criteria

- Minimum amount of passport data for inclusion in AEGIS?
- Inclusion of material where country/region of origin is unknown?
- How to determine the correct country of origin for commercial varieties?