



ECPGR *Lens* Database

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ELDB history



- 1995- Turkey received responsibility for the European *Lens* Database at the first meeting ECPGR Working Group on Grain Legumes.
- 1998- Database was established and the *Lens* database contains about 1516 accession data, received from 6 countries.
- 2001- The *Lens* database contains about 1675 accession data, received from 7 countries.
- 2002- Database was made available online on the Bioversity server.
(<http://www.ecpgr.cgiar.org/databases/Crops/lens.htm>)
- 2007- The *Lens* database contains about 4681 accession data, received from 8 countries.
- 2010- The *Lens* database contains about 8069 accession data, received from 6 countries.

Passport: Overview 2013

	Countries	Institute	PASSPORT (no. Of accessions)	Last Update	Remarks
1	Russian Federation	RUS001	2375		from EURISCO 2013
2	Turkey	TUR001	1118	2013	
3	Hungary	HUN003	1074	2010	
4	Ukraine	UKR001	872		from EURISCO 2013
5	Spain	ESP004, ESP027, ESP109, ESP124, ESP198	642		from EURISCO 2013
6	Bulgaria	BGR001	497		from EURISCO 2013
7	Germany	DEU146	463		from EURISCO 2013
8	Slovakia	SVK001	285		from EURISCO 2013
9	Azerbaijan	AZE003, AZE015	218		from EURISCO 2013
10	Poland	POL003	108		from EURISCO 2013
11	Israel	ISR002	99		from EURISCO 2013
12	Greece	GRC002, GRC005, GRC006	97		from EURISCO 2013
13	Czech Republic	CZE090	92		from EURISCO 2013
14	Armenia	ARM005	61		from EURISCO 2013
15	Romania	ROM007, ROM020, ROM023	27		from EURISCO 2013
16	Portugal	PRT004, PRT005, PRT102	21		from EURISCO 2013
17	Cyprus	CYP001	20		from EURISCO 2013
18	Albania	ALB017	10	2010	
19	United Kingdom	GBR004, GBR006	6		from EURISCO 2013
20	Lithuania	LTU001	4		from EURISCO 2013
21	Austria	AUT001, AUT046	3		from EURISCO 2013
22	Sweden	SWE054	2	2010	
23	Georgia	GEO013	1		from EURISCO 2013
	Total		8095		



ELDB taxon composition



Species	No. of accessions	%
<i>Lens culinaris</i> Medik.	7552	93,29
<i>Lens</i> Mill. sp.*	124	1,53
<i>Lens culinaris</i> Medik. subsp. <i>culinaris</i> .	304	3,76
<i>Lens nigricans</i> (M.Bieb.) Godr.	47	0,58
<i>Lens orientalis</i> (Boiss.) Hand.-Mazz.	44	0,54
<i>Lens ervoides</i> (Brign.) Grande	12	0,15
<i>Lens montbretii</i> (Fisch.&C.A.Mey.)P.H.Davis&Plitmann	5	0,06
<i>Lens lamottei</i> Czefr.	4	0,05
<i>Lens odemensis</i> Ladiz.	3	0,04
Total	8095	100

* Need taxonomical identification



Passport: Data quality



Collection material : 5520 recs.

Collection numbers: 2855 recs. (51%)

Geo-referenced records:

1695 recs. (latitude+longitude) (20%)

1475 recs. Elevation (26%)

older records don't have coordinates;

Note: Geo-reference related only to collecting missions, not to the institute providing data.



Passport: Data quality

Country of origin: 6573 recs. (81%)

Donor code: 1781

Donor number: 903 (878 records don't have donor number)

Pedigree information: 9 %

152 records from 1774 (known advanced cvs., **breeding material**, Breeder's line, hybrid or mutant)



Passport: Data quality



Countries of origin of collected *Lens* genetic resources

Region	No. of accessions	Origin of accessions
Europe	4012	Turkey (1391), Russia (728) , Spain (440), Greece (327), Bulgaria (257), Ukraine (138), Italy (119), Czechoslovakia (96), France (88), Hungary (84), Germany (64), Union of Soviet Socialist Republics (61), Poland (53), Czech Republic (32) Cyprus (30), Romania (28), Portugal (20), Albania (13), Slovakia (12), Yugoslavia (10), Austria (5), Serbia (5), Lithuania (4), Sweden (4), Belgium (1), Netherlands (1), Norway (1)
Asia	823	India (184), Azerbaijan (165), Tajikistan (134), Afghanistan (108), Armenia (106), Uzbekistan (44), Georgia (39), Pakistan (14), China (12), Kazakhstan (5), Turkmenistan (5), Bangladesh (3), Nepal (3), Myanmar (1)
Middle east	1245	Syrian (810) , Israel (172), Iran (140), Jordan (47), Yemen (36), Lebanon (19) Iraq (12), Palestinian (9)
Eastern Africa	118	Ethiopia (118)
Northern Africa	117	Morocco (38), Tunisia (27), Algeria (22), Egypt (19), Libyan Arab Jamahiriya (9), Sudan (2)
Northern America	107	Canada (71), United States (36)
Central America	72	Mexico (63), Guatemala (6), Panama (2), Costa Rica (1)
South America	65	Chile (21), Ecuador (15), Colombia (13), Argentina (7), Peru (4), Bolivia (2), Brazil (2), Uruguay (1)
Oceania		Australia (6), New Zealand (1), South Africa (2)
South Africa	2	South Africa (2)
The Caribbean	2	Cuba (2)



Passport: Data quality-status

Code	Status	No. of accessions	%
0	unknown	1861	22,99
100	Wild	74	0,91
300	Traditional cultivar/landrace	4381	54,12
400	Breeding/research material	780	9,64
410	Breeder's line	436	5,39
412	Hybrid	2	0,02
420	Mutant/Genetic Stock	3	0,04
500	Advanced/improved cultivar	553	6,83
999	Other (elaborate in REMARKS field)	5	0,06
	Total	8095	100,00



Passport: Data quality



codes	collecting/acquisition source	No. of accessions	Total	%
10	Wild habitat	53	63	0,7
11	Forest/woodland	5		
12	Shrubland	4		
13	Grassland	1		
20	Farm or cultivated habitat	395	1336	16,5
21	Field	74		
22	Orchard	1		
23	Backyard, kitchen or home garden	24		
26	Farm store	736		
27	Threshing floor	106		
30	Market or shop	46	46	0,5
40	Institute, Experimental station, Research, Genebank	2791	2791	34,4
60	Weedy, disturbed or ruderal habitat	12	42	0,5
61	Roadside	26		
62	Field margin	4		
99	Other (Elaborate in REMARKS field)	463	463	5,7
	Unknow	3354	3354	41,4
	Total		8095	100



Passport: Data quality

Type of germplasm storage	No. of accessions
Short term, Medium term	1
Field collection	2
Short term	133
Seed collection ?	704
Long term	716
Medium term, Long term	1624
Medium term	2059
Unknown	2856
Total	8095



Identification of possible duplicates

Same :

taxons (genus and species), collector's name, collecting date, collecting number,, accession name, origin country, donor name, donor institute, donor number etc.

How to indicate duplicate accessions ?

- common taxonomy
- better fill of descriptors
- characterization & evaluation data
- molecular fingerprinting data



Identification of possible duplicates

Same taxons (genus and species) and accession name:

-without national characters

Botanical name	Accession name	Origin country	Donor country
<i>Lens culinaris</i> subsp. <i>culinaris</i>	74 TA 577	Mexico	Syrian Arab Republic
<i>Lens culinaris</i> subsp. <i>culinaris</i>	74 TA 577	Mexico	Syrian Arab Republic

-without species and punctuation (only a-z, 0-9)

NICODE	Botanical name	Accession name	Origin country	Donor country
DEU	<i>Lens culinaris</i>	grossamige linse nr. 2	DDR	East Germany
RUS	<i>Lens culinaris</i>	grossamige linse n2	DDR	East Germany
BGR	<i>Lens culinaris</i>	grossamige linse no2	DEU	Germany
HUN	<i>Lens culinaris</i>	Grossamige Linse Nr.2	DEU	Germany



Identification of possible duplicates

Country of origin should not be included

-Misunderstanding connected with country of origin/donor country

NICODE	Botanical name	Accession name	Origin country	Donor country
CZE	<i>Lens culinaris</i> subsp. <i>culinaris</i>	tr-k-32	CZE	Czechoslovakia
SVK	<i>Lens culinaris</i> subsp. <i>culinaris</i>	tr-k-32	CZE	Turkey

-Misunderstanding connected with accession name/donor number

NICODE	Botanical name	Accession name	Accession number	Origin country	Donor country
TUR	<i>Lens culinaris</i> subsp. <i>culinaris</i>	Lentil	TUR51401	TUR	
SVK	<i>Lens culinaris</i> subsp. <i>culinaris</i>	tr 51 401	18246	TUR	Turkey
CZE	<i>Lens culinaris</i> subsp. <i>culinaris</i>	tr 51 401	05L0800160	TUR	Turkey



Identification of possible duplicates



-duplication within the institute

INSTCODE	ACCENUMB	Botanical name	Accession name	Origin country	Donor country	ACQDATE
HUN003	RCAT023728	Lens culinaris.	78 S 26002	Jordan		1983
HUN003	RCAT023758	Lens culinaris.	78 S 26002	Jordan		1983
HUN003	RCAT053900	Lens culinaris.	78 S 26002	Syrian Arab Republic		1999
HUN003	RCAT064053	Lens culinaris.	78 S 26002			1993

INSTCODE	ACCENUMB	Botanical name	Accession name	ACQDATE
HUN003	RCAT023334	Lens culinaris	Anatóliai	1957
HUN003	RCAT023715	Lens culinaris	Anatóliai	1977

-duplication between countries

INSTCODE	ACCENUMB	Botanical name	Accession name	ACQDATE	Origin country	Donor country
DEU146	LENS 201	Lens culinaris	belocerkovskaja 24	1975	Ukraine	-
BGR001	1963-LEN-CU-15	Lens culinaris	belocerkovskaya 24	1963	RUS	-
HUN003	RCAT023936	Lens culinaris	Belocerkovszkaja 24	1987	SUN	-
RUS001	VIR401201973	Lens culinaris	belotcerkovskaya 24		Ukraine	-



ELDB Descriptors



Adopted list 33 descriptors (the FAO/IPGRI Multi-Crop Passport Descriptors, the EURISCO descriptors)

1. Institute code	INSTCODE	18. Collecting date of sample	COLLDATE
2. Accession number	ACCENUMB	19. Breeding institute code	BREDCODE
3. Collecting number	COLLNUMB	20. Biological status of accession	SAMPSTAT
4. Collecting institute code	COLLCODE	21. Ancestral data	ANCEST
5. Genus	GENUS	22. Collecting/acquisition source	COLLSRC
6. Species	SPECIES	23. Donor institute code	DONORCODE
7. Species authority	SPAUTHOR	24. Donor accession number	DONORNUMB
8. Subtaxa	SUBTAXA	25. Other identification (numbers) associated with the accession	OTHERNUMB
9. Subtaxa authority	SUBTAUTHOR	26. Location of safety duplicates	DUPLSITE
10. Common crop name	CROPNAME	27. Type of germplasm storage	STORAGE
11. Accession name	ACCENAME	28. Remarks	REMARKS
12. Acquisition date	ACQDATE	29. Decoded collecting institute	COLLDESCR
13. Country of origin	ORIGCTY	30. Decoded breeding institute	BREDESCR
14. Location of collecting site	COLLSITE	31. Decoded donor institute	DONORDESCR
15. Latitude of collecting site	LATITUDE	32. Decoded safety duplication location	DUPLDESCR
16. Longitude of collecting site	LONGITUDE	33. Accession URL	ACCEURL
17. Elevation of collecting site	ELEVATION		



Priorities



- Data quantity and quality improvement
- Web page development
- Characterization and evaluation data delivery (within Grain Legumes WG members)
- Identification of possible duplicates
- Safety duplication: ELDB contains information on 1046 accessions
- Regeneration/multiplication of accessions – no information



Assessment of ELDB activities

- All updates dependent on Grain Legumes WG members activity and information sharing
- Low data quality and absence of C&E data = low reliability
- Should contribute to exchange of information between two database (ECCDBs and EURISCO). Because crop specific data analysis is easier ECCDBs than EURISCO.



ELDB

Thank you for your attention!

