

Increasing the efficiency of conservation of wild grapevine genetic resources in Europe (InWiGrape project)

Current status of *Vitis sylvestris* genetic resources in Portugal

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Summary

- 1) Map of distribution of wild grape
- 2) Propagation methods for inclusion of *V. sylvestris* into *ex situ*
- 3) *in situ* and *ex situ* protection (vulnerability indicators for *V. sylvestris* populations)
- 4) Characterization and evaluation data on wild grape

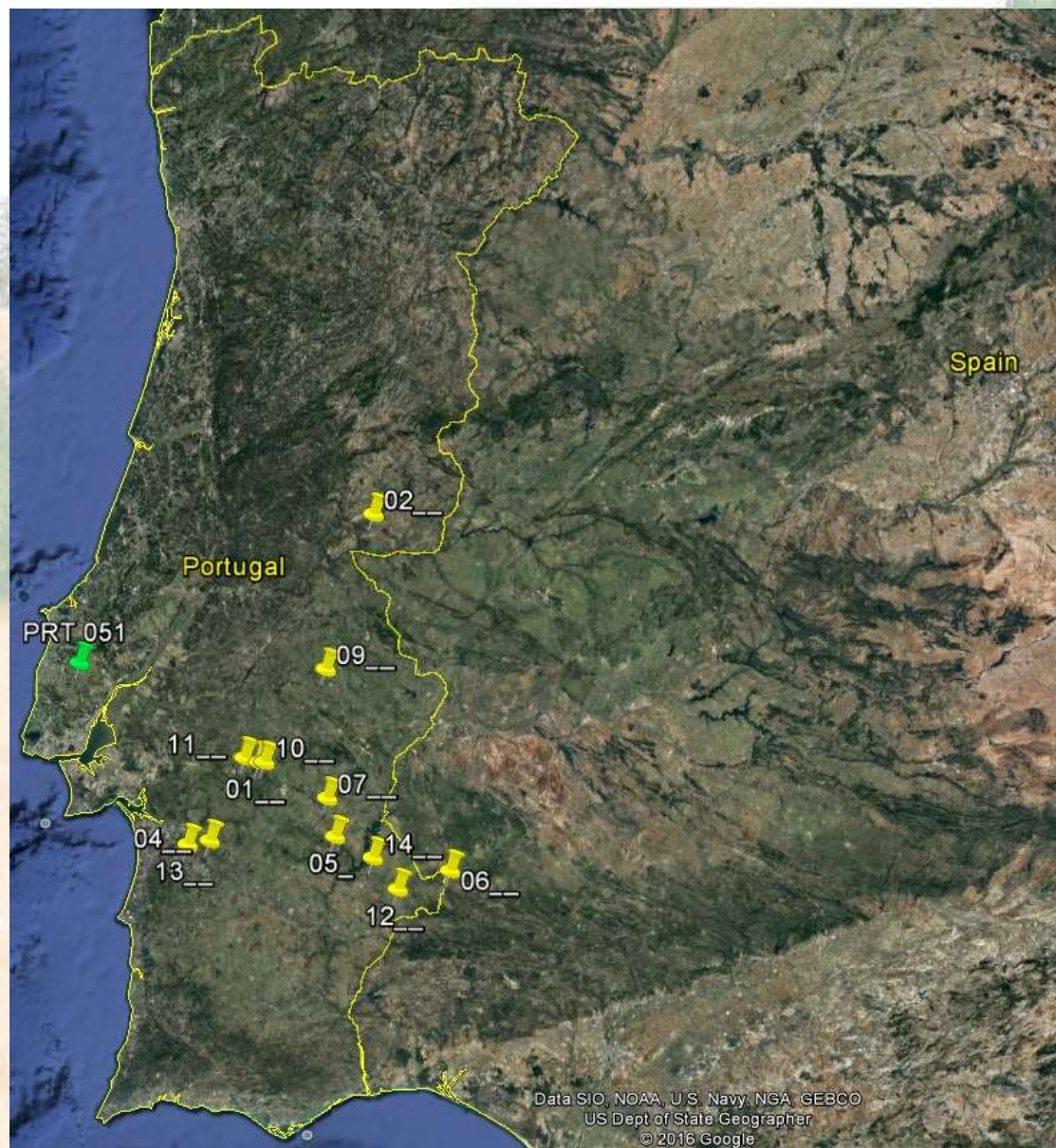


Map of distribution of wild grape

POPNUMB = 15
characters

11-ACCENAME = 50 characters

EVN 01	Stª Sofia - Montemor-o-Novo
EVN 02	Castelo Branco
EVN 04	Vale do Guiso - Alcácer do Sal
EVN 05	Portel - Évora
EVN 06	Barrancos
EVN 07	Vendinha
EVN 08	Pintada - Montemor-o-Novo
EVN 09	Fronteira
EVN 10	Anta do Silval - (Évora)
EVN 11	Quinta do Pinheiro (Montemor)
EVN 12	Toutalga
EVN 13	Grândola
EVN 14	Moura



Propagation methods for inclusion into *ex situ* of *V. sylvestris*

- 1) We collect plants molecularly and morphologically characterized;
- 2) These plants are grafted;
- 3) Planted in the Portuguese Ampelographic Collection;
- 4) Currently we have 107 accessions representative of 8 populations;
- 5) Each accession has five plants;

Vulnerability indicators for *V. sylvestris* populations

- **Definition of population:**

- 1) **Site with, at least, one *sylvestris* plant;**

- 2) **In an isolated watercourse:**

- 1 km among watercourses;**

- 10 km along the same watercourse.**



Evaluation of Danger

◆ PopStatus

- A site with 7 *sylvestris* plants;
- A ratio of 3 / 4 (male/female or vice versa)
it is 5 (medium).

◆ PopRisk

- A site with a risk of extinction during the next 10 years it is 7 (high).



Phytosanitary state

Phylloxera vastatrix (absent)

Colomerus vitis (variable)

Jascobiasca lybica (low)

Uncinula necator (low)

Plasmopara viticola (low)

Virus Group	Virus	N° samples	Positive samples	% positive samples
NEPOVIRUS	GFLV	36	0	0
CLOSTEROVIRUS	GLRAV 1,2,7	36	1	2,8
	GLRV 3	36	1	2,8
	GLRaV 4,5	36	0	0
VITIVIRUS	GVA	36	0	0
FOVEAVIRUS	RSPAV(1UID)	36	5	13,8
	RSPAV(RSP149)	36	4	11,1
	RSPAV (RSP52/RSP53)	36	2	5,6

Characterization and evaluation data on wild grape

1. **Young Shoot;**
2. **Flower;**
3. **Mature leaf;**
4. **Bunch;**
5. **Berry;**
6. **Seeds.**



Young Shoot: aperture of tip



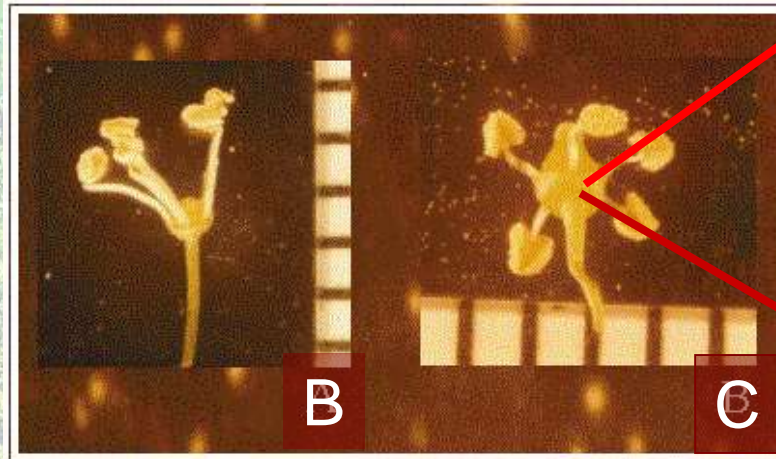
OIV
001

Pop.	Notes (No Plantes)		
01	1(0)	3(0)	5(13)
02	1(0)	3(0)	5(12)
04	1(0)	3(0)	5(12)



Flower: sexual organs

OIV	Pop.	Notes (No Plantes)			
151	01	1(1)	2(0)	3(0)	4(12)
	02	1(3)	2(0)	3(0)	4(9)
	04	1(6)	2(0)	3(0)	4(6)





Mature leaf

Characters :

1. **Size of blade [OIV 065];**
2. **Shape of blade [OIV 067];**
3. **Number of lobes [OIV 068];**
4. **Length of teeth compared with their width [OIV 078];**
5. **Density of prostrate hairs between the main veins on lower side of blade [OIV 084];**

With the aim to improve the objectivity of the description, the use of some measurements (transformed) of adult leaf it will be very useful.



Bunch

Characters:

1. Length (peduncle excluded) [OIV 202];
2. Density [OIV 204];
3. Length of peduncle of primary bunch [OIV 206];
4. Must yield [OIV 233];
5. Weight of a single bunch [OIV 502];
6. Number of bunches per shoot [OIV 153] .





Berry

Characters :

1. Length [OIV 220] ;
2. Width [OIV 221];
3. Color of skin [OIV 225];
4. Bloom [OIV 227];
5. Thickness of skin [OIV 228];
6. Hilum [OIV 229];
7. Intensity of the anthocyanin coloration of flesh [OIV 231] ;
8. Firmness of flesh [OIV 235];
9. Particularity of flavor [OIV 236];
10. Length of pedicel [OIV 238];
11. Ease of detachment from pedicel [OIV 240];
12. Single berry weight [OIV 503].





Seeds

Character :

1. Weight [OIV 243]

Stummer Index

Width / Length
≤65mm 65-75mm ≥75mm

1	0	2	2
2	0	1	1
4	0	0	0



SSR: Fragments Analysis (cpDNA)

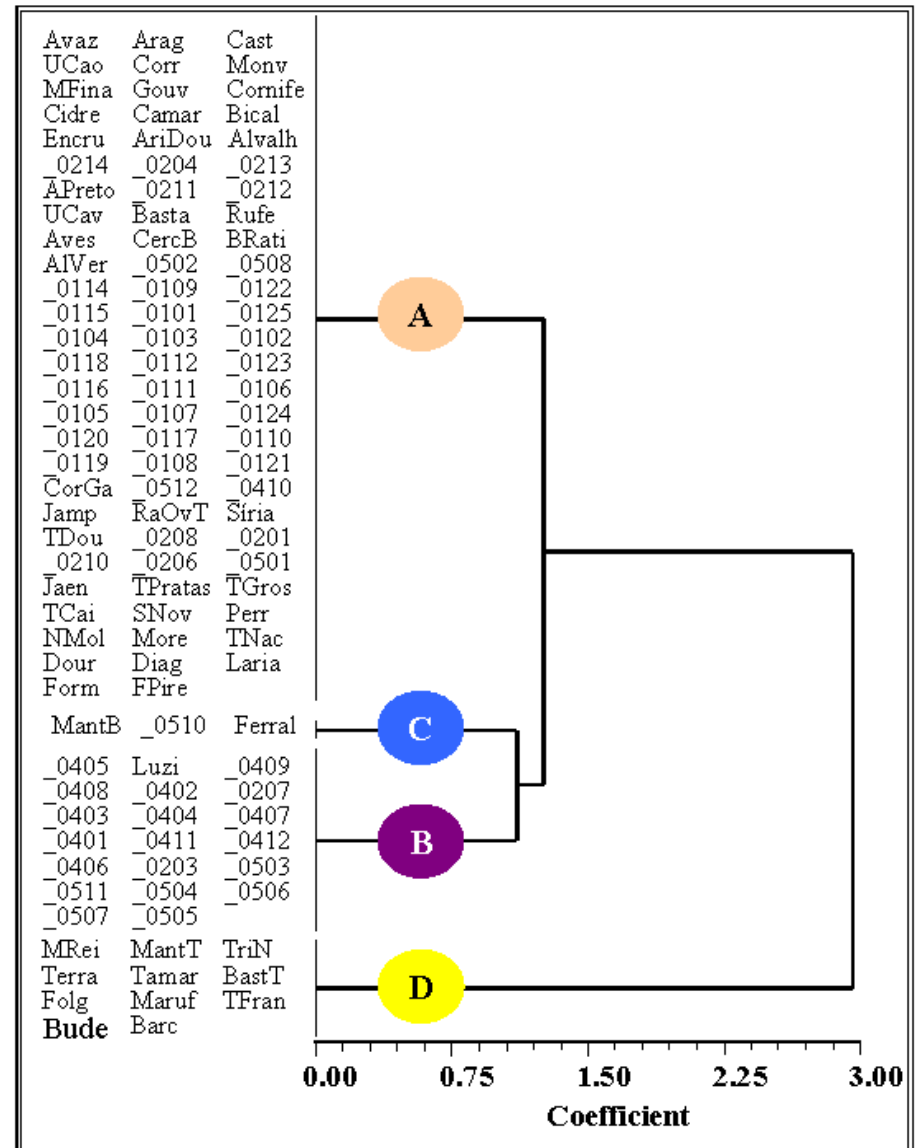
Chlorotype				<i>sativa</i>	<i>sylvestris</i>	Total
				(n = 58)	(n = 60)	(n = 118)
A	106	105	114	0,77	0,67	0,72
B	106	105	115	0,02	0,32	0,17
C	106	105	116	0,04	0,02	0,03
D	107	104	115	0,19	0,00	0,09

A – Haplotype Iberico

B – *V. vinifera* Ancestral Haplotype

C – H. Middle East.

D – H. Middle East



Acknowledgements



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