

Portugal-Espanha Cooperação Transfronteiriça INTERREG III A Santa - Portugal





Prospecting almond germplasm in Arribes del Duero

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INTRODUCTION

Arribes del Duero is a relative small area situated among North-west of Salamanca and South-west of Zamora, where the Duero River serves as natural border between Spain and Portugal. Due to proximity of the river, temperatures are warmer in winter than typical continental climate of Castilla y León, and high in summer, allowing the presence of typical Mediterranean crops such as citrus and almonds.

Almond is a marginal crop, which takes place in terraces mixed with vineyards and olives. Varieties are mainly landraces and Spanish and Portuguese traditional varieties. The crop is decreasing due to depopulation and ageing that is suffering the county. Castilla y León still retains the genetic potential of some clones although the trend will be the loss if we do not take measures to prevent it. It is necessary to undertake prospecting, characterization and conservation of this germplasm.

MATERIAL AND METHODS

This survey has been carried out during 2006 and 2007. During this time more than one hundred trees have been geolocalized and characterized morphologically by IBPGR (1985) and UPOV (1978) descriptors.



Longth (mm)



Descriptor list

Lear traits	Length (mm)	0F0V-10
	Breadth (mm)	UPOV-11
	Length/Breath	UPOV-12
	Color	UPOV-13
	Incisions of margin	UPOV-14
	Length of Petiole	UPOV-15
	Tamaño del limbo (LxA)	
Nut traits	Length (mm)	
	Breadth (mm)	
	Thickness (mm)	
	Shape	UPOV-34
	Shell color intensity	IBPGR-6.2.14
	Marking of outer shell	IBPGR-6.2.15
	Suture opening of the shell	IBPGR-6.2.16
	Shape of apex	UPOV-35
	Resistance to cracking	UPOV-37
	Keel development	UPOV-38
	Percentage of double kernels	UPOV-39
Kernel Traits	Length (mm)	
	Breadth (mm)	
	Thickness (mm)	UPOV-42
	Color	UPOV-43
	Intensity of color	UPOV-44
	Rugosity	UPOV-45

RESULTS

Traditional varieties from Spain (Marcona, Desmayo Rojo, Largueta, Esperanza) and from the region of Tras-os-Montes in Portugal like Pestañeta, Verdeal or Verdinal were found. Also, French varieties (Ferragnes, Ferraduel), and lots of native varieties belong to the area were found too. Seventy seven trees were analyzed. On the basis of leaf, fruit and kernel traits data it has been possible to describe a wide variability between landraces. Furthermore, the results have led to detect the presence of homonyms and synonyms in local varieties and a large confusion between them about the names used, showing disregard and neglect of the crop in this area, and the necessity and urgency for preservation of this genetic material which could become useful for solving future problems, like a reserve of genes, in plant breeding.

CONCLUSION

The results have led to detect the presence of homonyms and synonyms in local varieties and a large confusion between them about the names used, showing disregard and neglect of the crop in this area, and the necessity and urgency for preservation of this genetic material which could become useful for solving future problems, like a reserve of genes, in plant breeding.



REFERENCES

IBPGR. 1985. Descriptors list for Almond (*Prunus amygdalus*). Editor: R. Gülcan. UPOV. 1978. Guidelines for the conduct of test for distinctness, homogeneity and stability. Almond (*Prunus amygdalus* Batsch) TG/56/3.

ACKNOWLEDGEMENTS

Financial support for this work was provided by Interreg III-A: PIREFI Project.

