



Banco Português de Germoplasma Vegetal

# Portuguese *Daucus* Collection

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European  
Cooperative  
Programme  
for Plant  
Genetic  
Resources

ECP/GR

**CarrotDiverse**



National Institute for  
Agrarian and Veterinary  
Research



# Portuguese *Daucus* collection structure



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SPECIES	N.º Acc.	Status	Conservation
<b><i>D. carota</i></b>	<b>112</b>		11 Acc. Base :101 Acc. Active
<i>D. carota carota</i>	32	Wild	
<i>D. carota hispidus</i>	8		
<i>D. carota maritimus</i>	40		
<i>D. carota maximus</i>	15		
<i>D. carota</i>	1		
<i>D. carota sativus</i>	16		8 wild:8 landraces
<b><i>D. muricatus</i></b>	8	Wild	Active
<b><i>D. crinitus</i></b>	18	Wild	Active
<b><i>Daucus</i> spp.</b>	7	Wild	Active



**CarrotDiverse**

BPGV collection in



<http://bpgv.inia.v.pt/gringlobal/search.aspx>

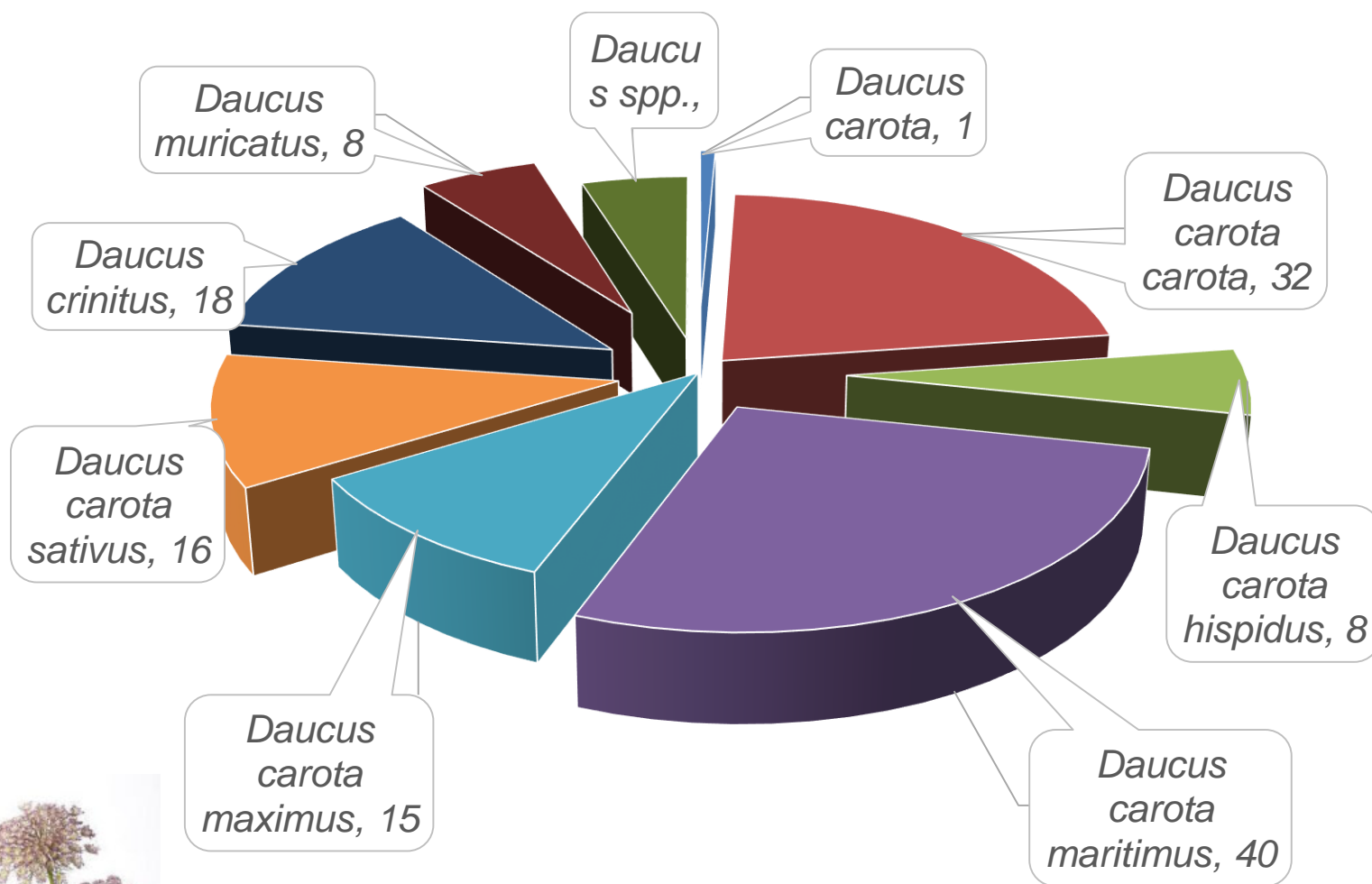




# *Daucus* spp. *ex situ* collection structure



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# Number of accessions collected



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Years	Nº Accession
1990-2000	15
2001	55
2002	57
2003-2012	9
2014	9
<b>Total</b>	<b>145</b>



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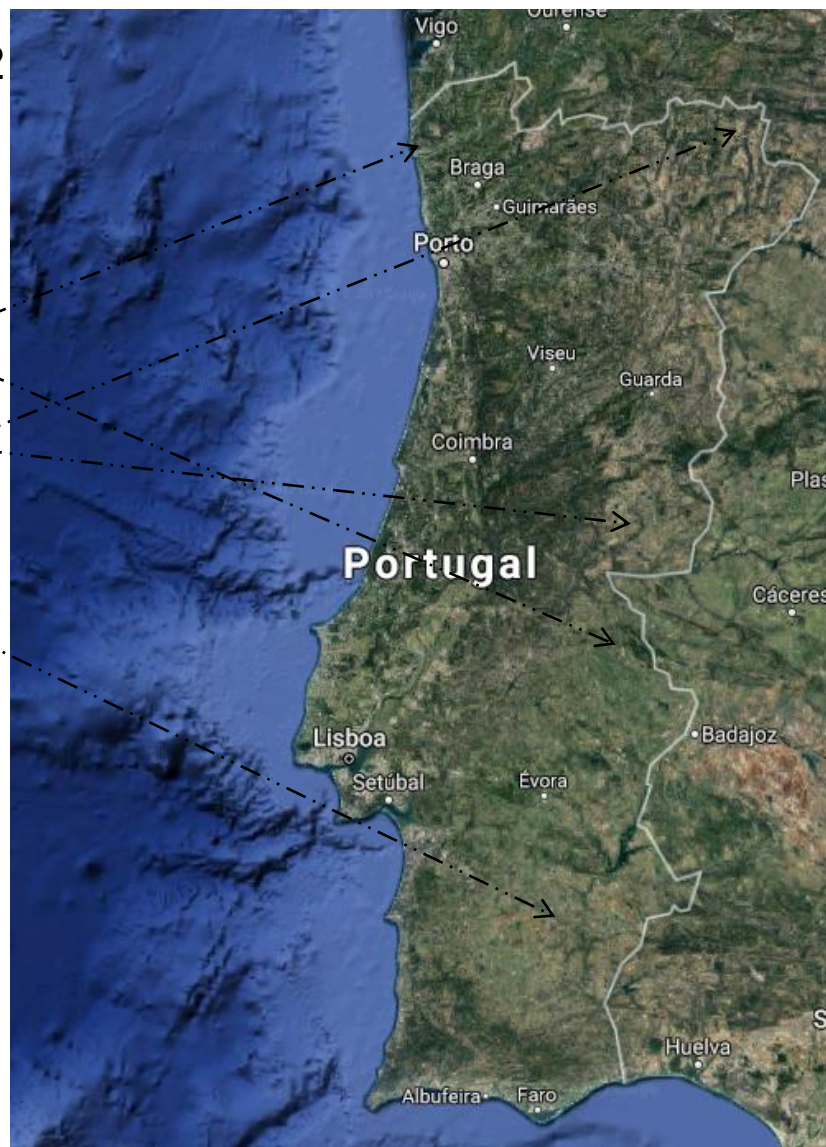




# Collection origin

80% of acc. collected in 2001-2002  
9 acc. collected in 2014

Districts	N.º of Acc.
Faro	54
Portalegre	13
Viana Castelo	12
Castelo Branco	9
Bragança	9
Beja	7
Coimbra	6
Vila Real	6
Porto	5
Évora	4
Guarda	2
Viseu	2



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### Accession for *Daucus muricatus* (L.) L.

BPGV16250 ( Mapped accessions = 8)



### Accession for *Daucus crinitus* Desf.

BPGV16249 ( Mapped accessions = 18)



### Accession for *Daucus* spp.

BPGV08389 ( Mapped accessions = 7)



### Accession for *Daucus carota* L. subsp. *sativus* (Hoffm.) Schubl. & G. Martens

BPGV11248 ( Mapped accessions = 15)



#### Key to symbols <sup>1</sup>

-  1 accession
-  2-5 accessions
-  6-10 accessions
-  11-100 accessions
-  > 100 accessions

<sup>1</sup> For small species each accession is mapped and can be clicked to show the total number of accessions collected from that location.

Search Accessions | Descriptors | Search Taxonomy | View Cart | Reports | My Account | Help | Choose language English

**Accession for *Daucus carota* L. subsp. *maritimus* (Lam.) Batt.**  
 BPGV16295 ( Mapped accessions = 39)

Mapa | Satélite

Google

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**Accession for *Daucus carota* L. subsp. *carota* L.**  
 BPGV01634 ( Mapped accessions = 28)

Mapa | Satélite

Google

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**Banco Português de Germoplasma Vegetal**

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**Accession for *Daucus carota* L. subsp. *hispidus* (Desf. ex Arcang.) Heywood**  
 BPGV08432 ( Mapped accessions = 8)

Mapa | Satélite

Google

**Accession for *Daucus carota* L. subsp. *maximus* (Desf.) Ball**  
 BPGV08417 ( Mapped accessions = 15)

Mapa | Satélite

Google

**Accession for *Daucus carota* L.**  
 BPGV12178 ( Mapped accessions = 1)

Mapa | Satélite

Google

Key to symbols<sup>1</sup>

- 1 accession
- 2-5 accessions
- 6-10 accessions
- 11-100 accessions
- > 100 accessions

<sup>1</sup> For small species each accession is mapped and can be clicked to show the collection site. For mid- or large-sized species, the points are aggregated and clicked to show the total number of accessions collected from the site.



# BPGV collection in EURISCO



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Search   Advanced search   Export data by species   **Export data by National Inventory**

Home > Search > Download by species > Download by National Inventory

Export EURISCO data by National Inventory

*Hint: For performance reasons, the accessions from the Nottingham Arabidopsis Stock Centre (GBR140) are excluded from the dynamic export. However, these accessions are of course included in the full EURISCO dump.*

National Inventory \*

Genus

## National inventory data of Portugal updated 03.05.2017

Filtered values

Rows  Actions

1 - 145

NICODE	INSTCODE	ACCENUMB	GENUS	SPECIES	SPAUTHOR	SUBTAXA	SUBTAUTHOR	CROPNAME	ACCENAME	ACQDATE	ORIGCTY	SAMPSTAT	MLSSTAT	AEGISSTAT
PRT	PRT001	BPGV08432	Daucus	carota	L.	subsp. hispidus	(Desf. ex Arcang.) Heywood	wild carrot	-	20020802	PRT	100	-	-
PRT	PRT001	BPGV08434	Daucus	carota	L.	subsp. hispidus	(Desf. ex Arcang.) Heywood	wild carrot	-	20020803	PRT	100	-	-
PRT	PRT001	BPGV08207	Daucus	carota	L.	subsp. hispidus	(Desf. ex Arcang.) Heywood	wild carrot	-	20010728	PRT	100	-	-
PRT	PRT001	BPGV08208	Daucus	carota	L.	subsp. hispidus	(Desf. ex Arcang.) Heywood	wild carrot	-	20010728	PRT	100	-	-
PRT	PRT001	BPGV08211	Daucus	carota	L.	subsp. hispidus	(Desf. ex Arcang.) Heywood	wild carrot	-	20010729	PRT	100	-	-
PRT	PRT001	BPGV08212	Daucus	carota	L.	subsp. hispidus	(Desf. ex Arcang.) Heywood	wild carrot	-	20010729	PRT	100	-	-
PRT	PRT001	BPGV08427	Daucus	carota	L.	subsp. hispidus	(Desf. ex Arcang.) Heywood	wild carrot	-	20020802	PRT	100	-	-
PRT	PRT001	BPGV08430	Daucus	carota	L.	subsp. hispidus	(Desf. ex Arcang.) Heywood	wild carrot	-	20020802	PRT	100	-	-
PRT	PRT001	BPGV08169	Daucus	carota	L.	subsp. maritimus	(Lam.) Batt.	wild carrot	Cenoura brava marítima	20010724	PRT	100	-	-
PRT	PRT001	BPGV08171	Daucus	carota	L.	subsp. maritimus	(Lam.) Batt.	wild carrot	Cenoura brava marítima	20010724	PRT	100	-	-
PRT	PRT001	BPGV08205	Daucus	carota	L.	subsp. maritimus	(Lam.) Batt.	wild carrot	Cenoura brava marítima	20010728	PRT	100	-	-
PRT	PRT001	BPGV08213	Daucus	carota	L.	subsp. maritimus	(Lam.) Batt.	wild carrot	Cenoura brava marítima	20010729	PRT	100	-	-
PRT	PRT001	BPGV08175	Daucus	carota	L.	subsp. maritimus	(Lam.) Batt.	wild carrot	Cenoura brava marítima	20010724	PRT	100	-	-
PRT	PRT001	BPGV08176	Daucus	carota	L.	subsp. maritimus	(Lam.) Batt.	wild carrot	Cenoura brava marítima	20010725	PRT	100	-	-
PRT	PRT001	BPGV08178	Daucus	carota	L.	subsp. maritimus	(Lam.) Batt.	wild carrot	Cenoura brava marítima	20010725	PRT	100	-	-
PRT	PRT001	BPGV08179	Daucus	carota	L.	subsp. maritimus	(Lam.) Batt.	wild carrot	Cenoura brava marítima	20010725	PRT	100	-	-
PRT	PRT001	BPGV08180	Daucus	carota	L.	subsp. maritimus	(Lam.) Batt.	wild carrot	Cenoura brava marítima	20010725	PRT	100	-	-
PRT	PRT001	BPGV08185	Daucus	carota	L.	subsp. maritimus	(Lam.) Batt.	wild carrot	Cenoura brava marítima	20010726	PRT	100	-	-
PRT	PRT001	BPGV08198	Daucus	carota	L.	subsp. maritimus	(Lam.) Batt.	wild carrot	Cenoura brava marítima	20010728	PRT	100	-	-
PRT	PRT001	BPGV08201	Daucus	carota	L.	subsp. maritimus	(Lam.) Batt.	wild carrot	Cenoura brava marítima	20010728	PRT	100	-	-
PRT	PRT001	BPGV08202	Daucus	carota	L.	subsp. maritimus	(Lam.) Batt.	wild carrot	Cenoura brava marítima	20010728	PRT	100	-	-



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# *Daucus* spp. *ex situ* collection characterized



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SPECIES	N.º Acc.	n.º Acc. characterized	n.º Acc. Regenerated
<b><i>D. carota</i></b>	<b>112</b>		<b>3</b>
<i>D. carota carota</i>	32	8	
<i>D. carota hispidus</i>	8	3	
<i>D. carota maritimus</i>	40	14	
<i>D. carota maximus</i>	15	11	
<i>D. carota carota</i> (?)	1	1	
<i>D. carota maritimus</i> (?)	16	1	
<b><i>D. muricatus</i></b>	8	1	
<b><i>D. crinitus</i></b>	18	7	
total	145	46	



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# Descriptors for wild and cultivated carrots (*Daucus carota* L.) IPGRI 1998



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**Plant diameter** [cm] - Measure extremity of plant. Record at flowering (first umbel opened)

**Length of basal primary leaflet** [cm]

**Petiole thickness** [mm] - Record at the thickest point, at the time of full development of the foliage

**Petiole shape in transverse section**

1. Round
2. Semi round
3. Flat
99. Other

**Petiole hairiness**

3. Sparse
5. Intermediate
7. Dense

**Number of mature leaves per plant**

**Mature leaf length** [cm]

**Mature leaf width** [cm]

**Leaf growth habit** (attitude)

3. Prostate
5. Semi-erect
7. Erect

**Leaf hairiness**

3. Sparse
5. Intermediate
7. Dense

**Leaf colour**

1. Yellow green
2. Green
3. Grey-green

4. Purple-green

99. Other

**Stem colour**

1. Yellow green
2. Green
3. Grey-green
4. Purple-green
5. Red
99. Other

**Stem hairiness**

3. Sparse
5. Intermediate
7. Dense

**Stem growth habit**

3. Prostate
5. Semi-erect
7. Erect

**Number of branches per plant**

**Umbel type**

1. Simple
2. Compound
3. Both

**Total number of umbels per plant**

**Width of primary umbel open** [cm]

**Umbel shape** – Observed at full development.

1. Convex, nest-like umbel with curved rays
2. Flat-topped umbel with straight rays
3. Concave

**Flower colour**

1. White
2. Whitish

3. Yellow

4. Green

5. Rosy/red

6. Pink

7. Purplish

99. Other

**Colour of the central flower of the umbellet**

1. White

2. Red

3. Green

4. Pink

5. Purple

99. Other



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# Main achievements from characterization



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Descriptors	Average	Variance	SD	Max.	Mín.	C.V. (%)
PlaDia	0,74	0,0566	0,238	1,64	0,5	<b>32,16</b>
LenBasP	3,41	0,1042	0,3228	4,2	2,8	9,47
PetThi	0,24	0,0252	0,1588	0,85	0,12	<b>66,17</b>
PetShaT	2,39	0,3768	0,6138	3	1	25,68
PetHai	3,78	1,5072	1,2277	7	3	<b>32,48</b>
NumMatL	9,98	11,3106	3,3631	17	3	<b>33,7</b>
MatLeaL	12,49	2,6016	1,6129	14	8,2	12,91
MatLeaW	6,31	0,5997	0,7744	7,4	4,2	12,27
LeaGroH	5,22	0,9295	0,9641	7	3	18,47
LeaHai	3,78	1,5072	1,2277	7	3	<b>32,48</b>
LeaCol	2,30	0,3498	0,5914	4	2	25,71
SteCol	2,39	0,4657	0,6824	4	2	28,55
SteHai	3,78	1,5072	1,2277	7	3	<b>32,48</b>
SteGroH	7,00	0	0	7	7	0
NumBraP	14,80	21,7609	4,6649	23	5	<b>31,52</b>
UmbTyp	1,83	0,1469	0,3832	2	1	20,94
TotNumU	32,00	180,1778	13,423	46	3	<b>41,95</b>
WidPriO	8,04	0,9104	0,9541	10,8	7	11,87
UmbSha	1,35	0,4541	0,6739	3	1	<b>49,92</b>
FloCol	1,00	0	0	1	1	0
ColCenF	1,70	2,3498	1,5329	5	1	<b>90,17</b>



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Marisa Mota et al., 2005. *In V Congresso Ibérico de Ciências Hortícolas* vol. 4, 141:146





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# Main achievements from characterization

...”The morphological characterisation showed the distinction of species *D. crinitus* and *D. muricatus* and also of the subspecies *D. carota hispidus*. Concerning subspecies *D. carota carota*, *D. carota maritimus*, *D. carota maximus* the separation is not so clear.”

Marisa Mota et al., 2005. *In V Congresso Ibérico de Ciências Hortícolas* vol. 4, 141:146



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Thank you very much



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