

ECPGR
MAPEUROCOLLECTION MEETING
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**Update of the national MAPs inventories:
a short report from Italy**

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Status of MAPs collection at CREA-MPF of Trento

Subject	N°	%	Taxon	N° of accessions
Accessions	125			
Taxa	58		<i>Armoracia rusticana</i>	28
			<i>Arnica montana</i>	12
			<i>Rhodiola rosea</i>	12
N° of accessions:			<i>Achillea erba-rotta</i> subsp. <i>moschata</i>	8
from own country	107	85,6	<i>Gentiana lutea</i> subsp. <i>vardjanii</i>	8
conserved <i>in vivo</i>	125	100,0	<i>Monarda didyma</i>	3
conserved by seed (short term)	83	66,4	<i>Thymus vulgaris</i>	3
with Passport data	125	100,0		
in Eurisco	68	54,4		
N° of taxa:				
with 30 or more individuals per accession	10	17,2		
20 - 29 individuals	17	29,3		
10 - 19 individuals	10	17,2		
<10 individuals	21	36,2		

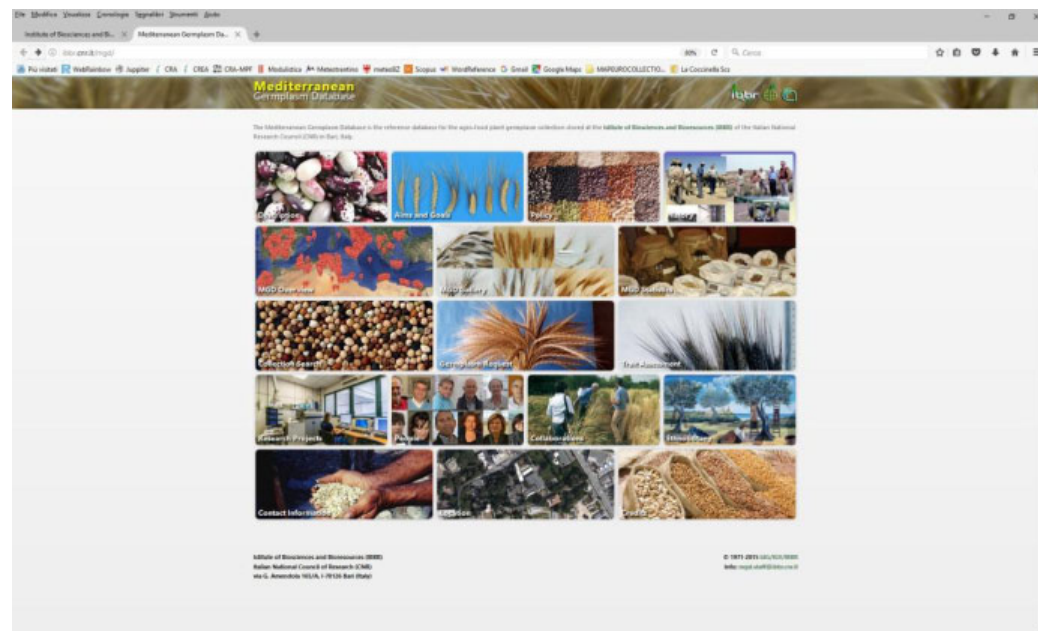
Other collections hold by institutes of Council for Agricultural Research and Economics (CREA) including MAP species:

- CREA-FSO, Sanremo (Research center for ornamentals)
 - ✓ *Rosmarinus sp.*: 3 species; 490 accessions from 18 natural populations of Italy
 - ✓ *Salvia sp.* : 122 accessions
 - ✓ *Helichrysum sp.*: 488 accessions
 - ✓ all accessions classified as ornamentals (not all are MAPs), conserved *in vivo* in pots (4 individuals per accession)
- CREA-FLC, Lodi (Research center for forages)
 - ✓ *Achillea millefolium*: 16 wild accessions conserved by seed, long term
- PlantaRes - National Network for Plant Genetic Resources for Agriculture
 - ✓ includes PGR of CREA Research Centers, Universities, Regional Public bodies etc. involved in the RGV/FAO National Project (total 54000 accessions)
 - ✓ data reported in EURISCO
 - ✓ consultable web database: <http://planta-res.politicheagricole.it/>

Italian National Research Council (CNR)

- Institute of Biosciences and Bioresources, Bari (CNR/IBBR)
- Mediterranean Germplasm Database: reference database for the agro-food germplasm collection at the CNR/IBBR
- consultable web database: [http:// ibbr.cnr.it/mgd](http://ibbr.cnr.it/mgd)
- among priority species of MAP WG:

Species	N° accessions
<i>Achillea millefolium</i>	0
<i>Artemisia absinthium</i>	0
<i>Carum carvi</i>	6
<i>Gentiana lutea</i>	0
<i>Hypericum perforatum</i>	0
<i>Melissa officinalis</i>	1
<i>Mentha piperita</i>	0
<i>Mentha spicata</i>	1
<i>Origanum sp.</i>	1
<i>Origanum majorana</i>	1
<i>Origanum vulgare</i>	10
<i>Salvia officinalis</i>	0
<i>Thymus serpyllum</i>	0
<i>Thymus vulgaris</i>	0



Universities

- 8 Agronomy departments with known experience in MAPs contacted: 4 answered

University Taxon		Accessions	Conserved <i>ex situ</i>		Conservation status		Evaluation & characterisation		
			seed bank	field	long-term	short-term	Morphological	Molecular	Chemical
Bari	<i>Origanum vulgare</i>	3	no	yes	-	yes	yes	no	yes
Bari	<i>Rosmarinus officinalis</i>	6	no	yes	-	-	yes	no	yes
Bari	<i>Thymus vulgaris</i>	3	no	yes	-	-	yes	no	yes
Padova	-	0	-	-	-	-	-	-	-
Palermo	<i>Origanum vulgare</i>	50	no	yes	-	-	yes	no	yes
Palermo	<i>Rosmarinus officinalis</i>	50	no	yes	-	-	yes	yes	yes
Palermo	<i>Thymus vulgaris</i>	50	no	yes	-	-	yes	no	yes
Perugia	<i>Chamomilla recutita</i>	10	yes	no	yes	-	-	-	-
Perugia	<i>Foeniculum vulgare</i>	4	yes	no	yes	-	-	-	-
Perugia	<i>Galega officinalis</i>	3	yes	no	yes	-	-	-	-
Perugia	<i>Gentiana lutea</i>	10	yes	no	yes	-	-	-	-
Total	7	189	4	6	4	3	6	1	6

Botanic Gardens

- 6 University B.G. with known experience in MAPs contacted: 1 answered
- Padua Botanic Garden, Padova
 - ✓ 500 taxa of MAPs
 - ✓ 1 accession per taxon, 1 or 2 individuals per accession
 - ✓ origin of accessions: from natural populations, exchanges with other B.G.
 - ✓ conservation: *in vivo*, by seed short term
 - ✓ no characterization of accessions
- “E. Ghirardi”, Toscolano Maderno (BS): dedicated to MAPs, ca 160 taxa (in 2002)

Presence of the MAP WG priority species in the *Index seminum* of some B.G.:

Species	Padova	Camerino	Pisa	Palermo
<i>Achillea millefolium</i>	x			x
<i>Artemisia absinthium</i>	x	x		
<i>Carum carvi</i>	x			x
<i>Gentiana lutea</i>		x		
<i>Hypericum perforatum</i>	x	x	x	x
<i>Melissa officinalis</i>	x	x		
<i>Mentha piperita</i>	x			
<i>Mentha spicata</i>	x	x		
<i>Origanum majorana</i>	x			
<i>Origanum vulgare</i>	x	x		

Rete Italiana Banche del Germoplasma (RIBES)

- National network for *ex situ* conservation of wild plants
- 15 seed banks linked with Universities, Botanic gardens, National Parks etc.
- MAP WG priority species present in RIBES database (<http://reteribes.it>)

Species	N° seed banks	Species	N° seed banks	Species	N° seed banks
<i>Achillea millefolium</i>	3	<i>Melissa officinalis</i>	3	<i>Origanum vulgare</i>	3
<i>Artemisia absinthium</i>	1	<i>Mentha piperita</i>	1	<i>Salvia officinalis</i>	2
<i>Carum carvi</i>	0	<i>Mentha spicata</i>	1	<i>Thymus serpyllum</i>	1
<i>Gentiana lutea</i>	9	<i>Origanum heracleoticum</i>	1	<i>Thymus vulgaris</i>	1
<i>Hypericum perforatum</i>	3	<i>Origanum majorana</i>	1		

3 seed banks contacted, 1 answered:

Centro Flora Autoctona Regione Lombardia/ Lombardy seed bank

- accessions collected in the wild and conserved by seed (long term)
- aims: conservation and re-introduction of endangered species (restoring of natural habitats etc.)
- among conserved species, 5 included in the list of MAP WG priority species: *Achillea millefolium*, *Gentiana lutea*, *Hypericum perforatum*, *Mentha spicata*, *Origanum vulgare*

Private companies

“Il Giardino delle erbe” Casola Valsenio, Ravenna, Italy -

<http://www.ilgiardinodelleerbe.it/>

- private cooperative specialized in conservation, cultivation and processing of MAPs
- 442 species conserved *in vivo*, mainly one accession per species
- various origin of accession: wild populations, selections, cultivars
- seeds conserved short term
- from 10 (conservation) to thousands individuals per accession (cultivation and processing)
- among conserved species, 14 are included in the list of MAP WG priority species: *Achillea millefolium*, *Artemisia absinthium*, *Carum carvi*, *Hypericum perforatum*, *Melissa officinalis*, *Mentha piperita*, *Origanum vulgare*, *Origanum heracleoticum*, *Origanum majorana*, *Salvia officinalis*

Conclusions

- even if a specific national program for MAPs conservation does not exist in Italy, MAP species are included in various programs of Plant Genetic Resources conservation
- many programs of PGR conservation are present in Italy, although poorly connected among them
- main active subjects in PGR conservation in Italy are: CREA, CNR, Universities, Botanic gardens, Public Seed Banks, Private companies
- different subjects have different aims and so different strategies and modalities of conservation
- individuation of MAPs species in the existing collections is difficult because they can be classified for different purposes (ornamentals, forages, industrial crops etc.): it's necessary first to define a list of species to be considered as MAPs
- some databases of conserved accessions are consultable in the web, but quantity and quality of available information is not satisfactory: direct surveys (interviews, questionnaires, formal requests) are needed



CREA-MPF of Trento, Italy

thank you for your attention