

Conserving and managing local seed crop biodiversity
in Sicily: towards functional community seed banks

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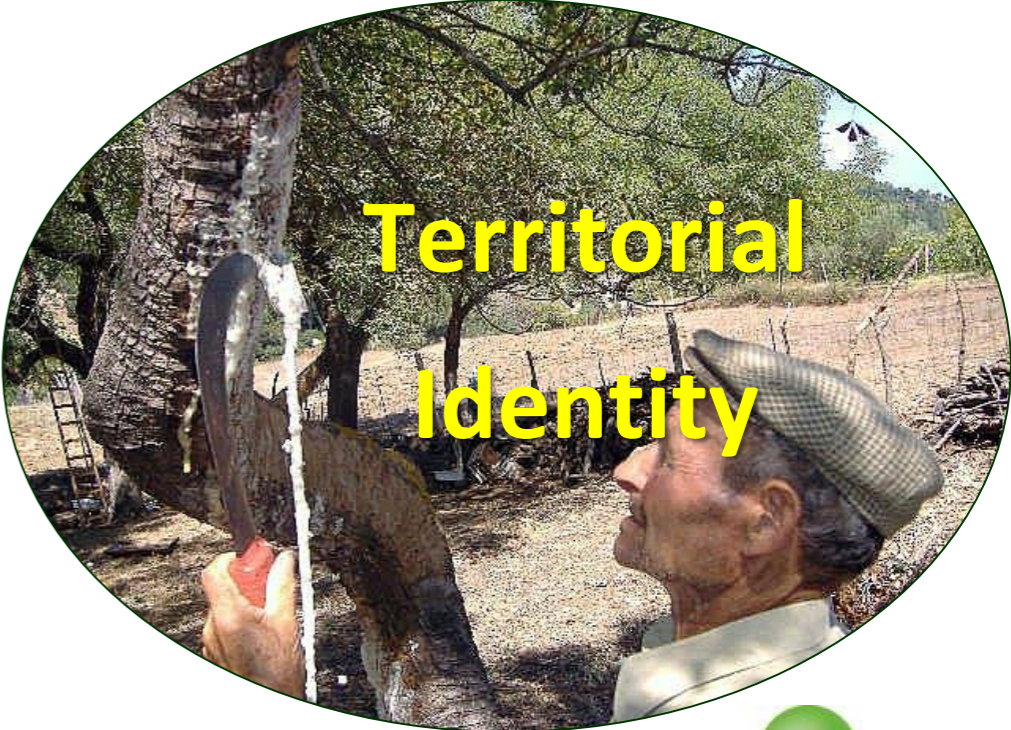
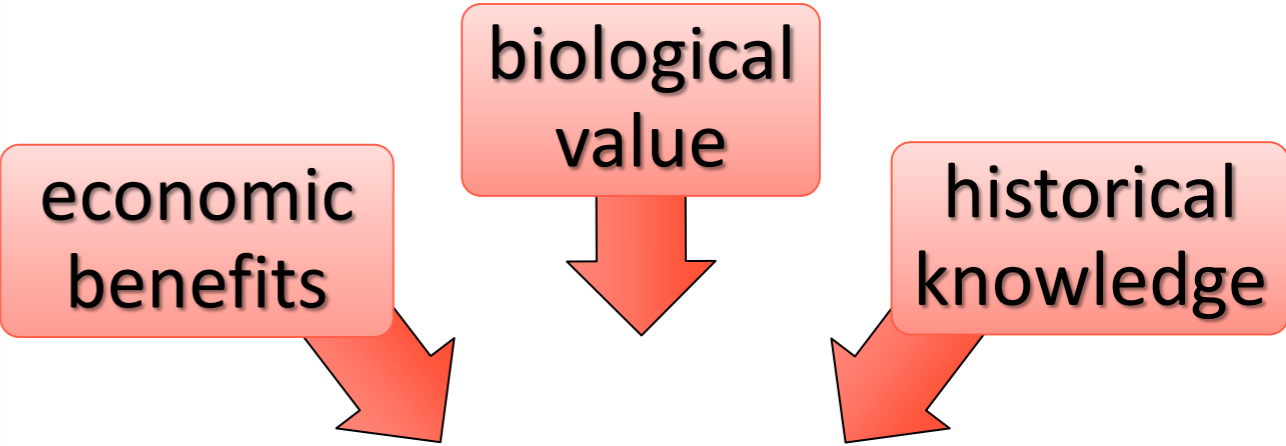
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**Local crop varieties:
integral part of plant genetic diversity**



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Local Ecotypes

- microclimatic conditions
- soil types
- agrotechniques
- geographic isolation
- qualitative / aesthetical preferences
- traditions and culture

**Sicily rich in exclusive
old local landraces & cultivars**

Hyblaeian olive trees

Apple trees in Etna Mt.

Manna from Ash tree in Madonie Mts.

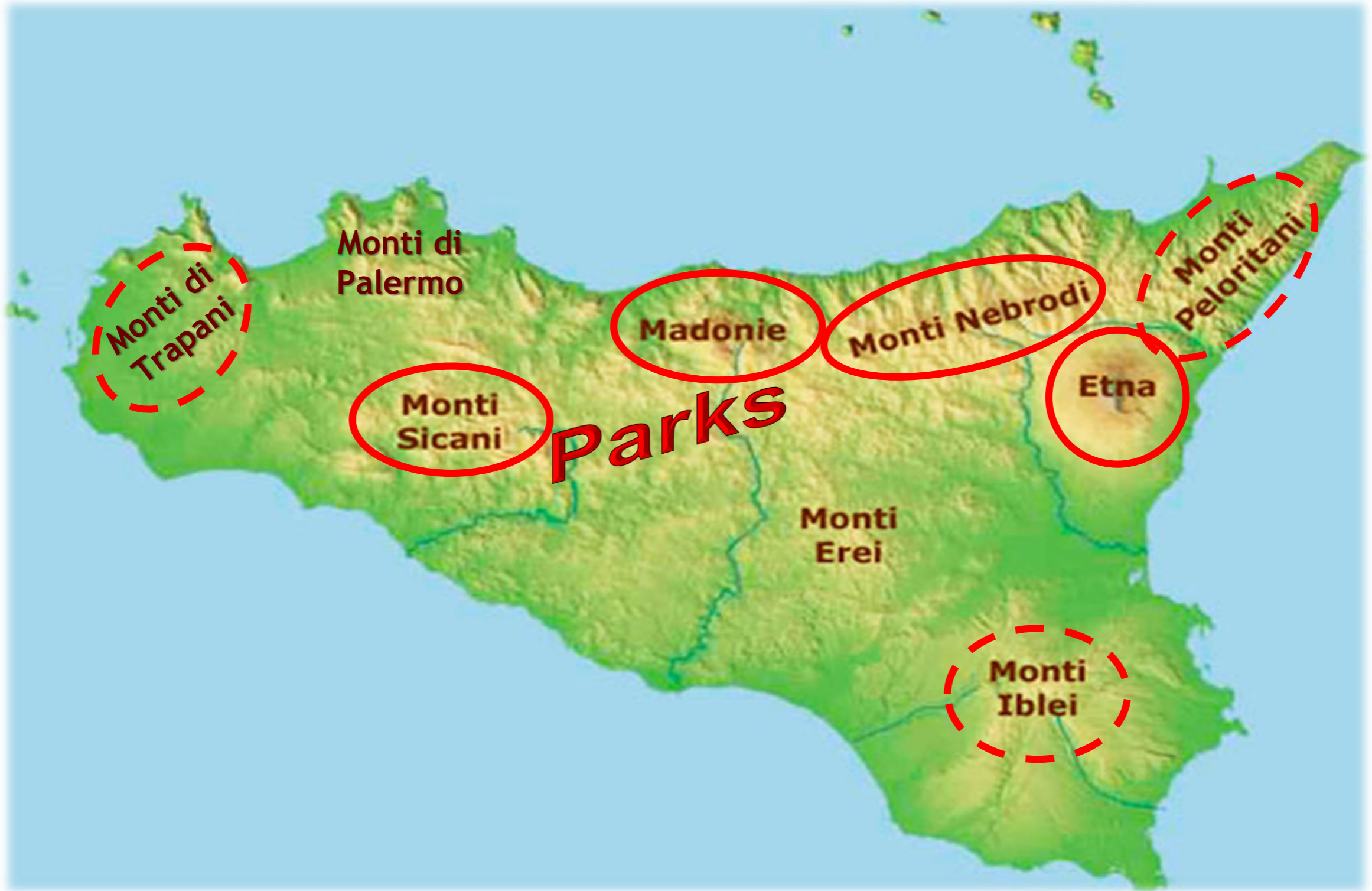
Hazels in Nebrodi Mts.

paleogeography
3000 years human history



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risk to be lost



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CONSERVATION OF LOCAL CROPS AND CWRs BY THE SEED BANK OF PALERMO UNIVERSITY



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Relationships with territorial Administrations

Agreements with Regional Parks' Authorities

Research projects

Conservation and valorization



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**Old fruit trees heritage:
Madonie Mts.**

- Inventory
- Assessment
- Characterization
- Promotion



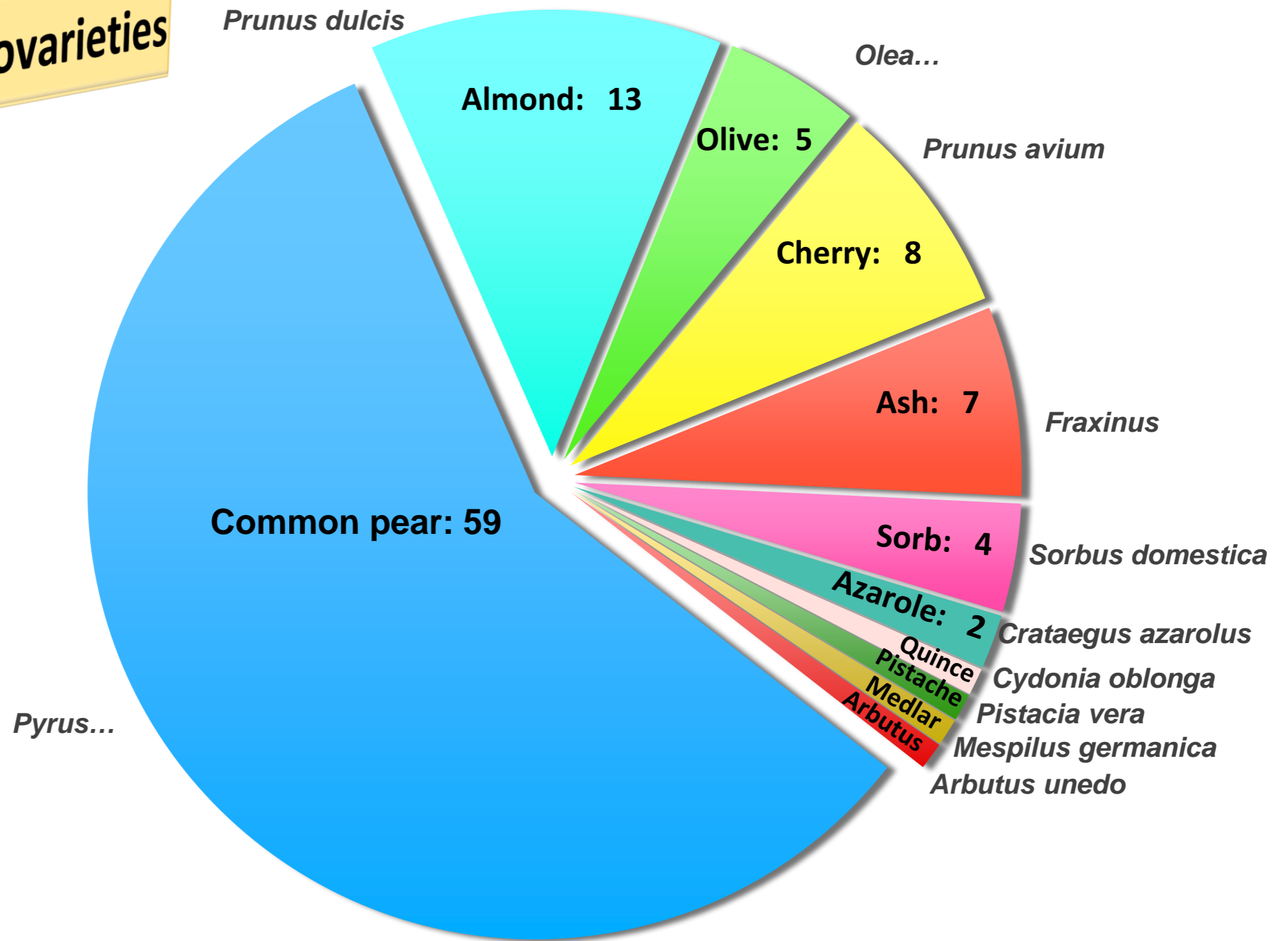
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Detected ethnovarieties

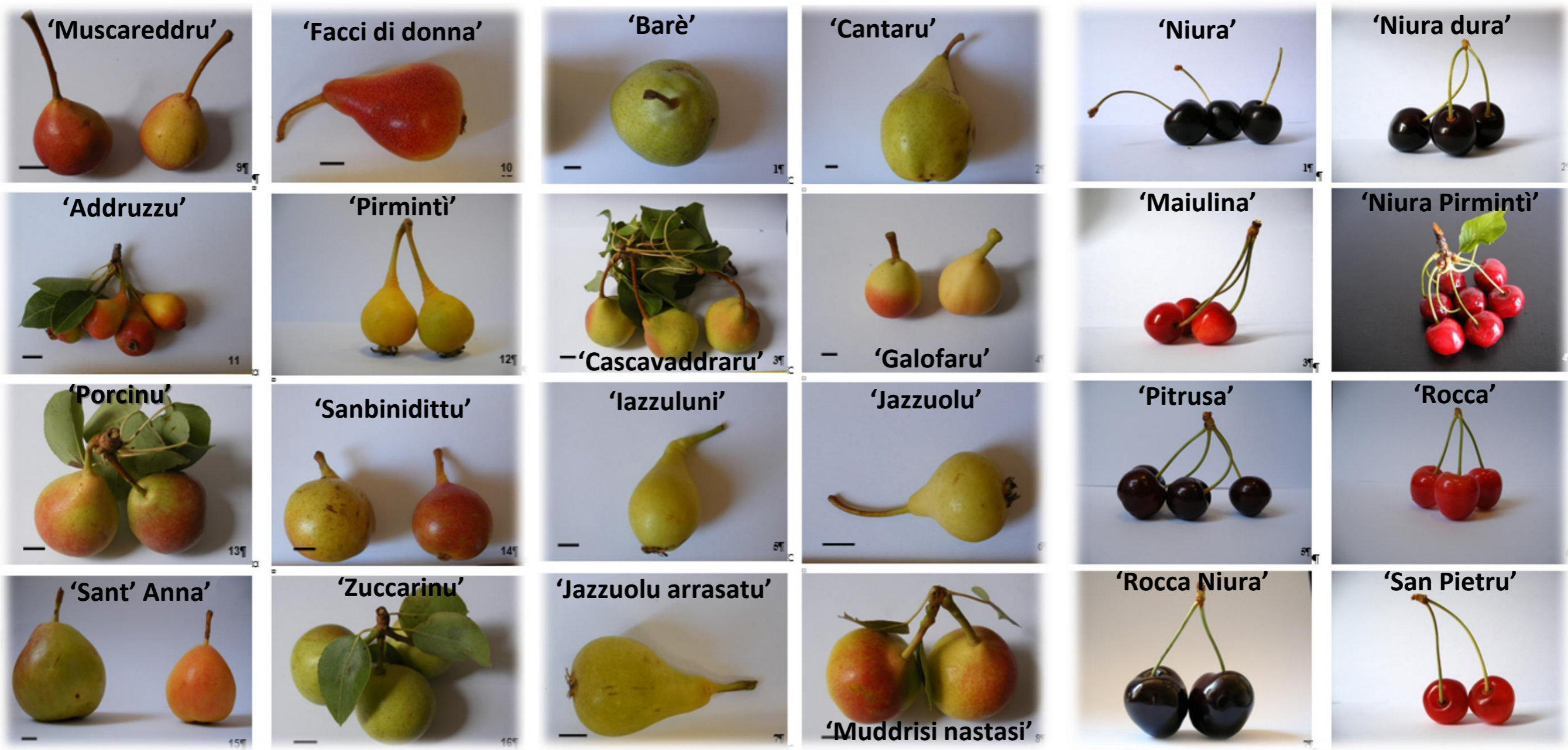
102 types



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MOPHOLOGICAL CHARACTERIZATION



Fruits of *Pyrus communis* cvs. Bar 1 cm

Fruits of *Prunus avium* cvs.

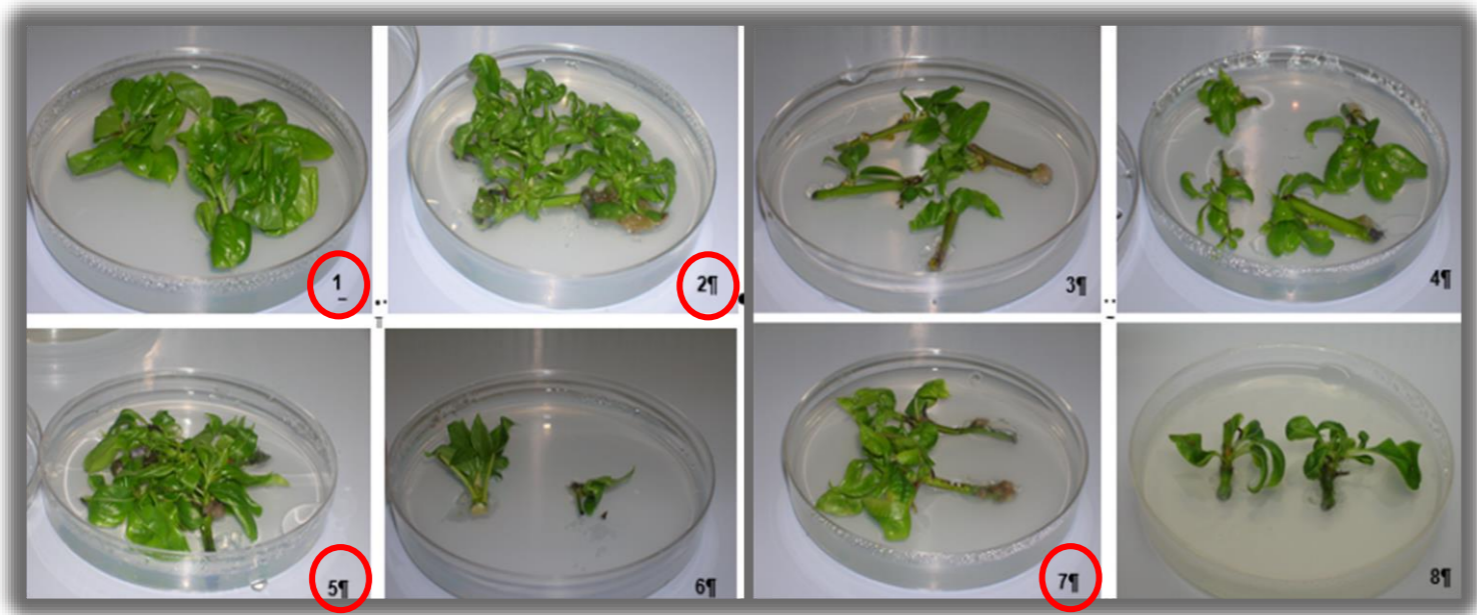
Schicchi R., Marino P., Saporito L., Di Noto G. & Raimondo F.M. 2008.

Catalogo pomologico degli Antichi fruttiferi di Sicilia. Università di Palermo

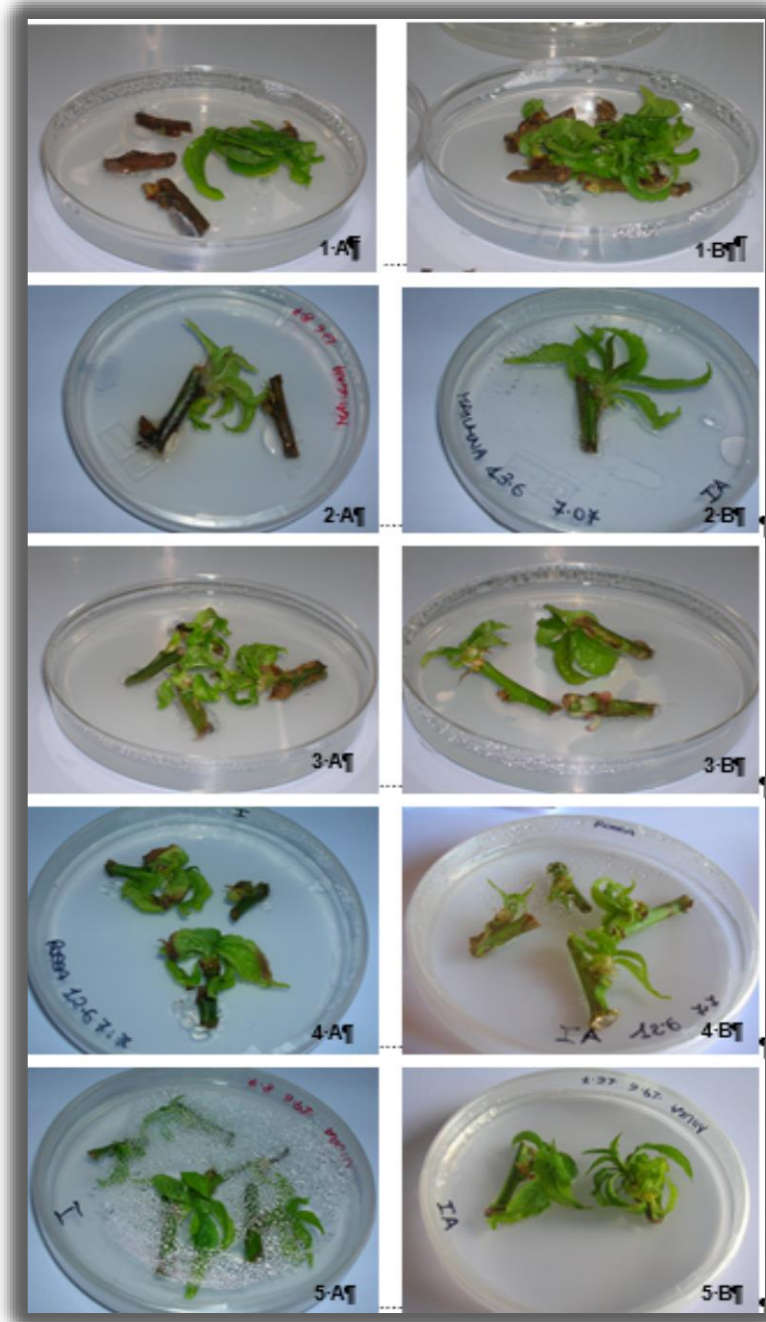


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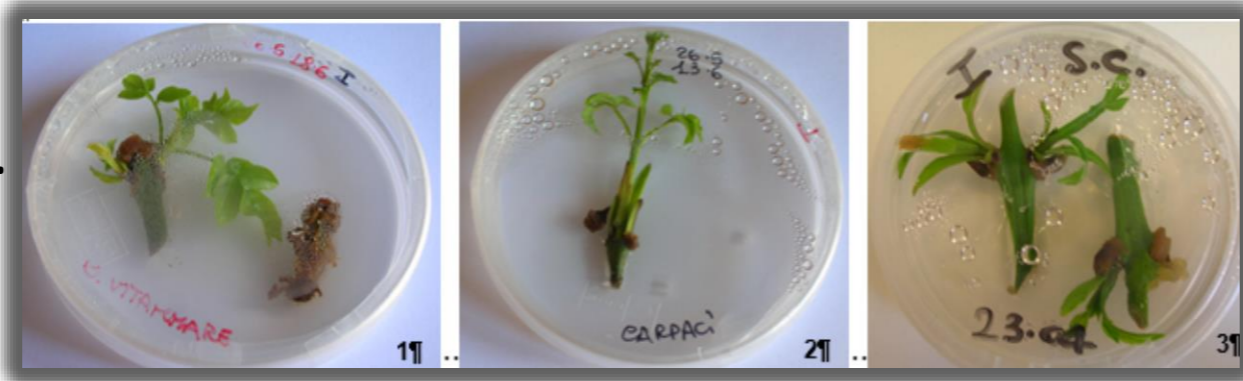
IN VITRO MICROPROPAGATION



Explants of *Pyrus communis* cvs.
 30 days and 60 days (circle)



Explants of *Prunus avium* cvs.
 on MP (sx) and WBM (dx)



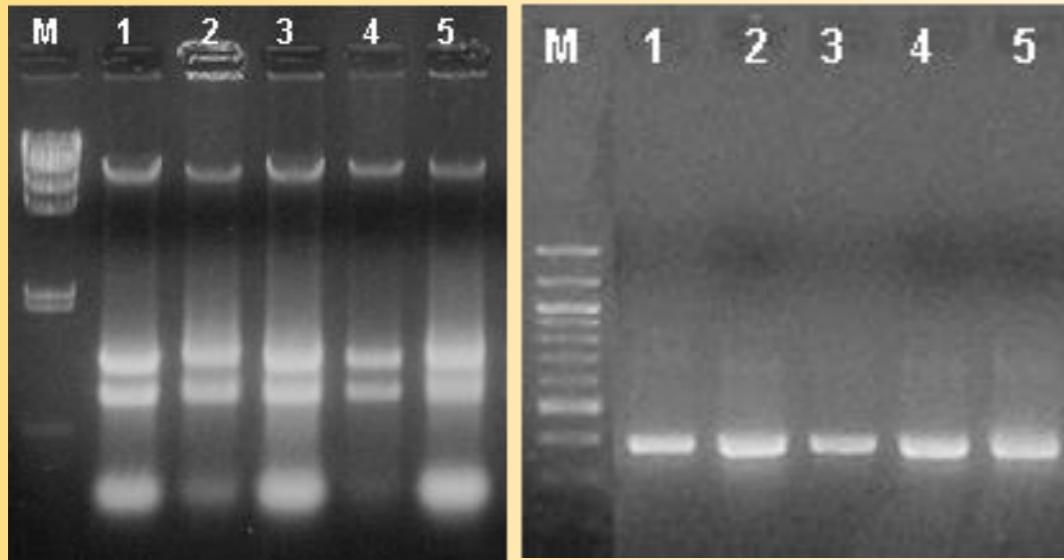
Explants of *Fraxinus ornus* cvs.
 from apical and axillary buds



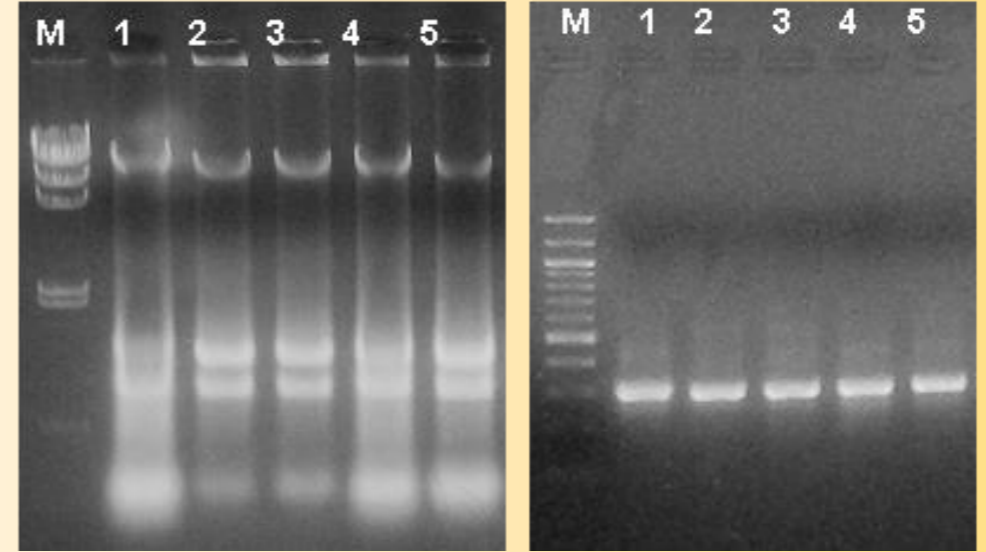
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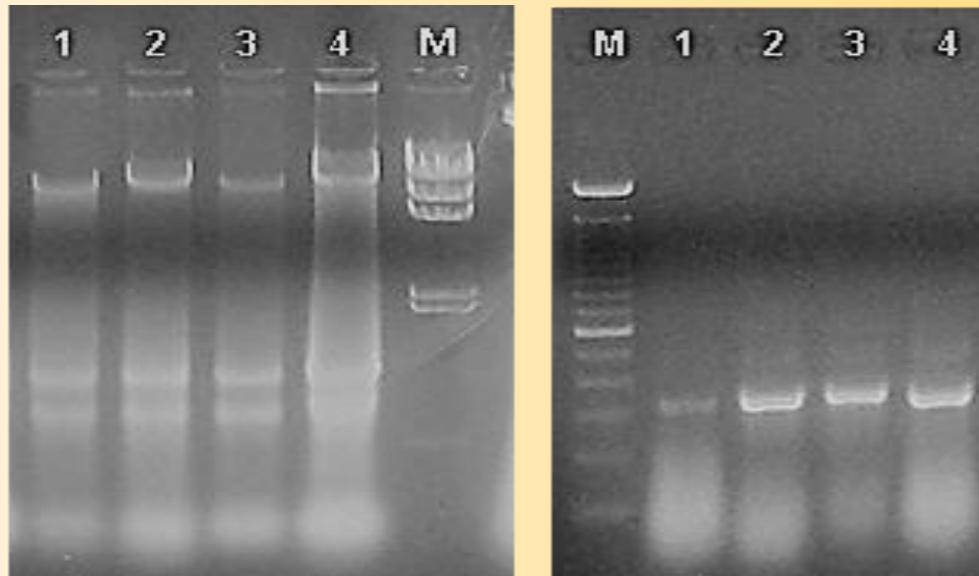
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DNA extractions and PCRs from *Pyrus communis* cvs.



DNA extractions and PCRs from *Prunus avium* cvs.



DNA extractions and PCRs from *Fraxinus ornus* cvs.

GENETIC CHARACTERIZATION

ITS - ISSR



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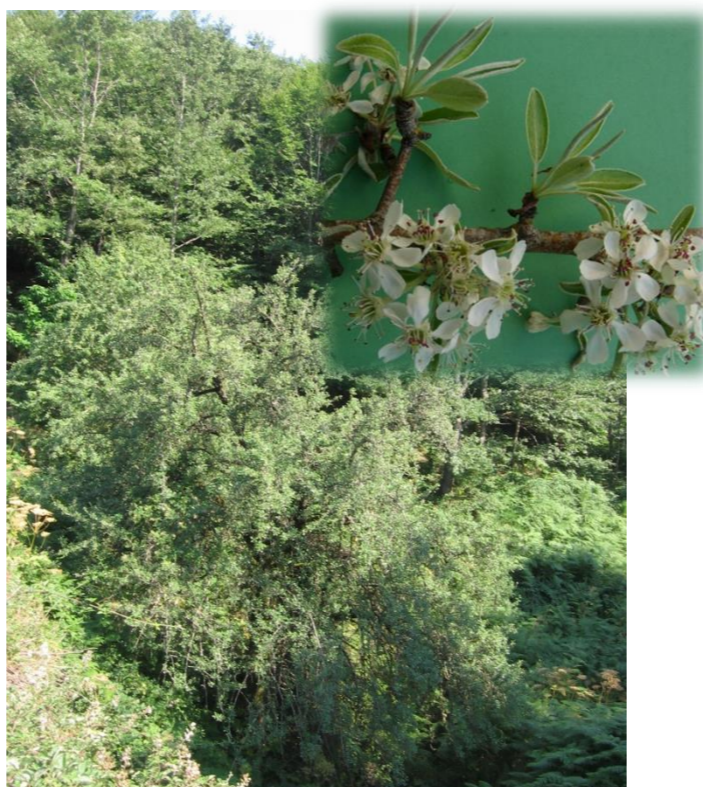
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Sorbus madoniensis Raimondo et. al.



Pyrus ciancioi P. Marino et al.
 rootstock for *Pyrus communis* cvs.



Malus crescimannoi Raimondo
 probable CWR of *Malus domestica*



Sorbus busambarensis Castellano et al.



Pyrus vallis-demonis Raimondo & Schicchi



Pyrus castribonenis
 Raimondo, Schicchi & Mazzola



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Brassica oleracea group

12 endemic taxa

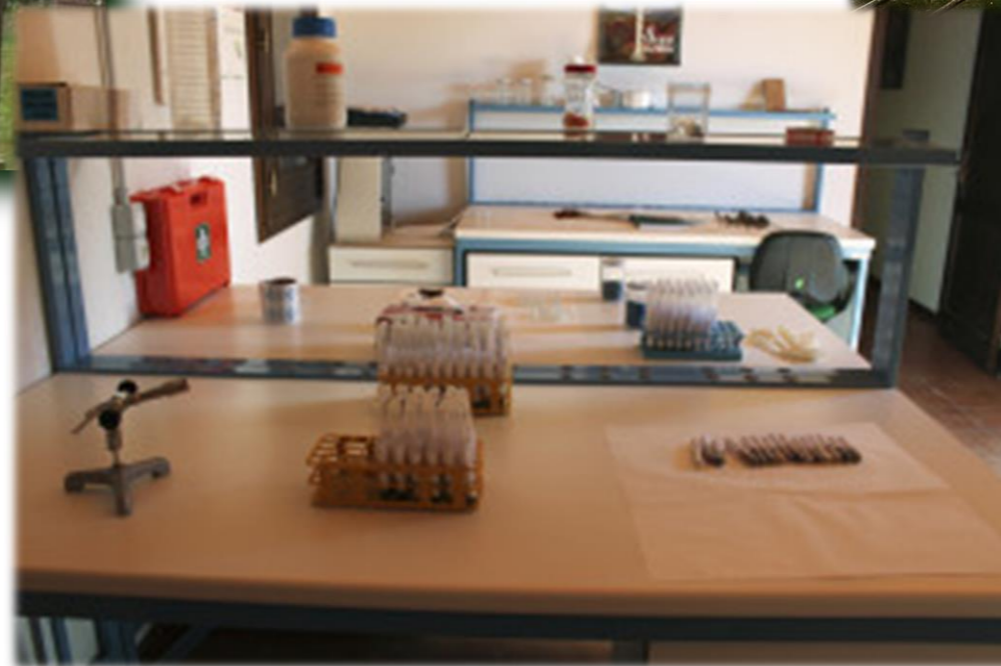
- B. incana* Ten.
- B. insularis* Moris
- B. macrocarpa* Guss.
- B. raimondoi* Sciandr., C. Brullo, Brullo, Giusso, Miniss., Salmeri
- B. rupestris* Raf.
 - ssp. rupestris*
 - ssp. hispida* Raimondo & Mazzola
- B. trichocarpa* C. Brullo, Brullo, Giusso & Ilardi
- B. villosa* Biv.
 - ssp. villosa*
 - ssp. bivoniana* Raimondo & Mazzola
 - ssp. brevisiliqua* Raimondo & Mazzola
 - ssp. drepanensis* Raimondo & Mazzola
 - ssp. tinei* (Lojac.) Raimondo & Mazzola

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CONSERVATION AND VALORIZATION OF NEBRODI MTS. BIODIVERSITY



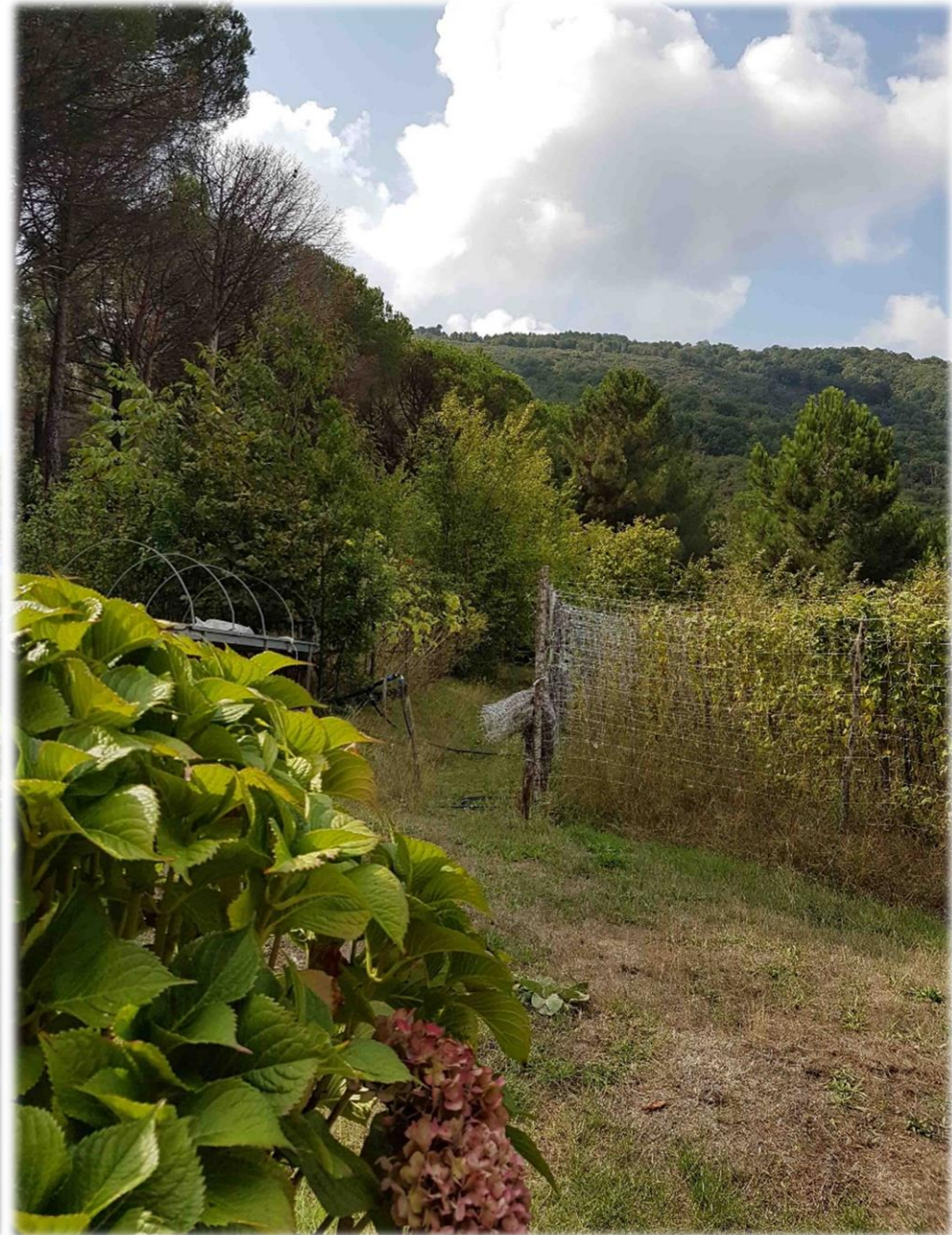
SEED BANK



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Germplasm collection fields



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Local Beans' Collection

65 varieties:

58 climbing – 7 dwarf



FASOLA DEL PRETE
PRIEST'S BEAN



CARRAZZU CRIOTO
BEANPOLE OF UCRIA



OCCHIO DI PERNICE
EYE OF PARTRIDGE



VASOLU NIVURU NANU
DWARF BLACK BEAN



VASOLU NANU DELL'OCCHIO
DWARF BEAN WITH EYE



CRUCCHITTU SETTEMBRINU



FASOLU BAVALUCI DI TRIVOTI



VASOLU DI PASTA BIANCU



CARRAZZU VIOLA



VASOLU NANU DI CASTANIA



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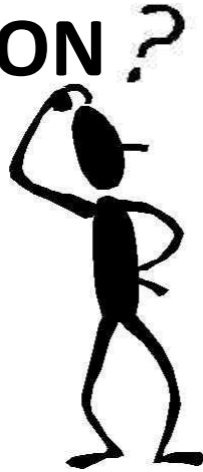


DISSEMINATION

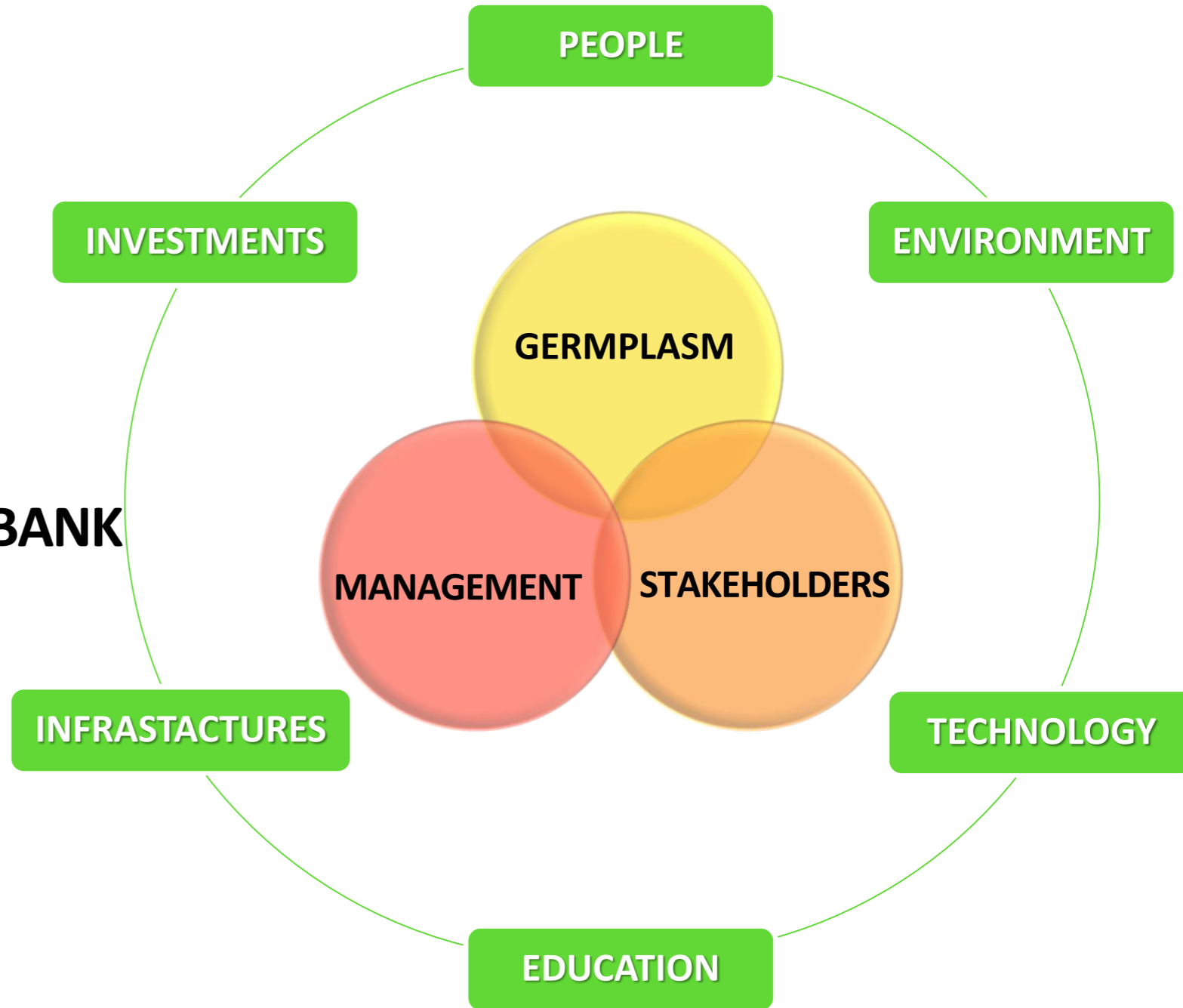


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WHAT'S THE AMBITION?



A FUNCTIONAL COMMUNITY SEED BANK



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