

**International conference:
SUSTAINABLE WORLD**

London 13-14 July 2005

Gene Bank of Bari Italy at Risk

by

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**SHORT PRESENTATION
OF THE GENE BANK
OF BARI, ITALY**

Italy and City of Bari



Germplasm Institute of CNR

City of Bari



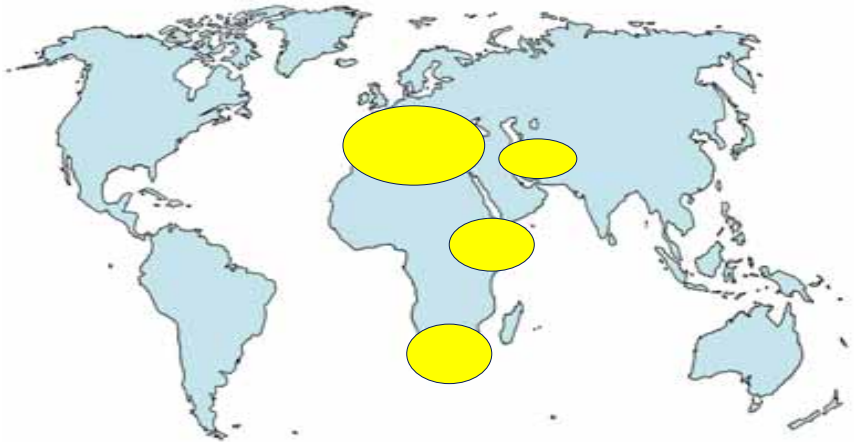
FOUNDED IN 1970

Aims

- to collect**
- to conserve**
- to multiply**
- to characterize**
- to use**
- to distribute**

**plant genetic resources threatened
by genetic erosion and/or extinction**

EXPLORED AREAS



TRADITIONAL PLOWING SYSTEMS





MARGINAL AGRICULTURAL LAND

SMALL WHEAT FIELD

TRADITIONAL HARVESTING SYSTEMS





TRADITIONAL THRESHING SYSTEMS

TRADIOTIONAL THRESHING SYSTEMS



DIVERSITY IN A WHEAT FIELD



TRITICUM SPECIES

Africa 1973



SPAIN



Winston

DIVERSITY OF MAIZE IN THE SAME FIELD

**OTHER GERMPLASM WAS
ACQUIRED THROUGH
EXCHANGE ACTIVITIES WITH
OTHER GENE BANKS
AND INSTITUTIONS**

CONSERVATION ROOM

CNR
Genetic
Bank

Collections of:
Cereals
Leguminosae
vegetables
cultivated
and wild



**> 84.000
accessions**

Condition
of conservation

Short and
medium term:
T: 0°C; RH=35%

Long term:
T: -20°C



WHEAT WORLD COLLECTION

POPULATIONS

MULTIPLICATION

DNA



**Seed
physiology**

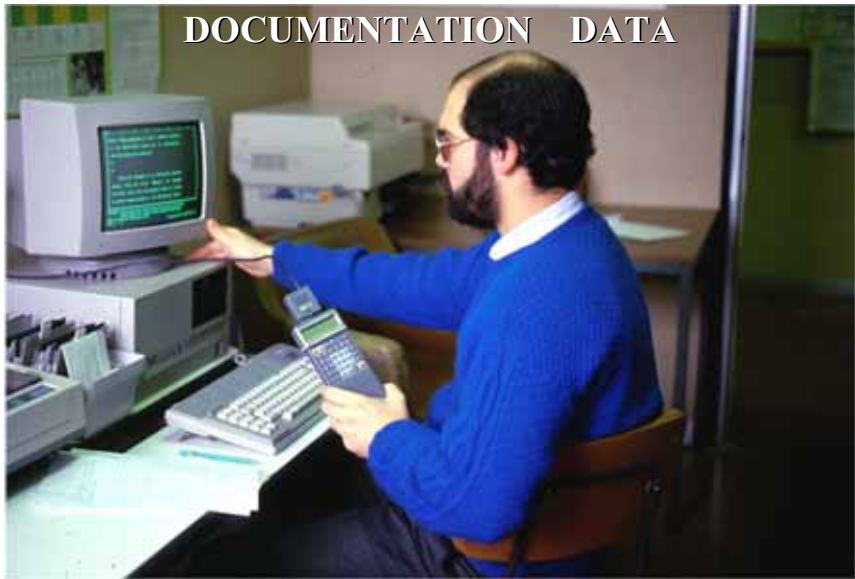


CHARACTERIZATION

Proteins



DOCUMENTATION DATA



**GENE BANKS
IN THE
WORLD**

A light blue world map with black outlines of continents and countries, serving as a background for the text.

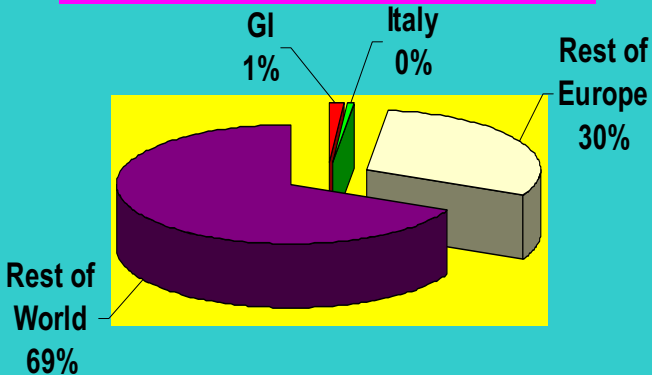
1400

**GENE BANKS
PRESERVING *EX SITU***

6.000.000

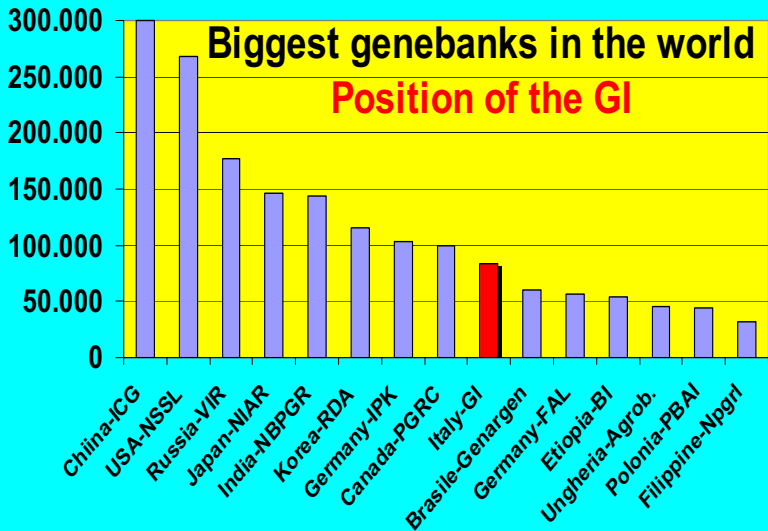
ACCESSIONS

Plant germplasm collections in the world



Biggest genebanks in the world

Position of the GI



32 YEARS
1970-2002

COSTS

• Research:	€ 16.000.000
• Personnel:	€ 32.000.000
• Scholarship:	€ 1.000.000
• Others:	€ 2.500.000
TOTALE	€ 51.500.000

BENEFITS/RESULTS

Genetic patrimony:

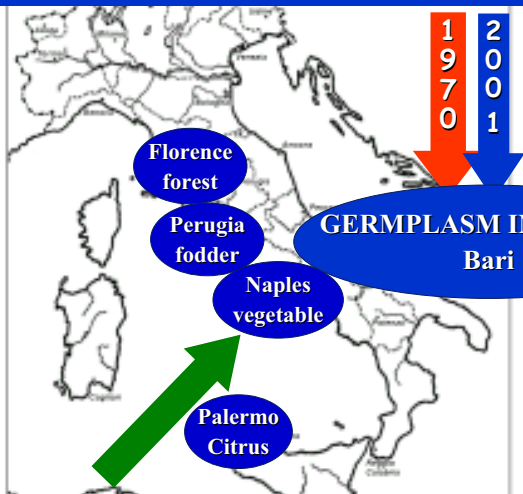
- **84.000 accessions**
- **ancient varieties**
- **popoulations**
- **new varieties**
- **new combination of genes**

Know how

Training

**MERGING OF THE
GENE BANK OF BARI
WITH OTHER
SMALL
ITALIAN CENTRES**

MERGING

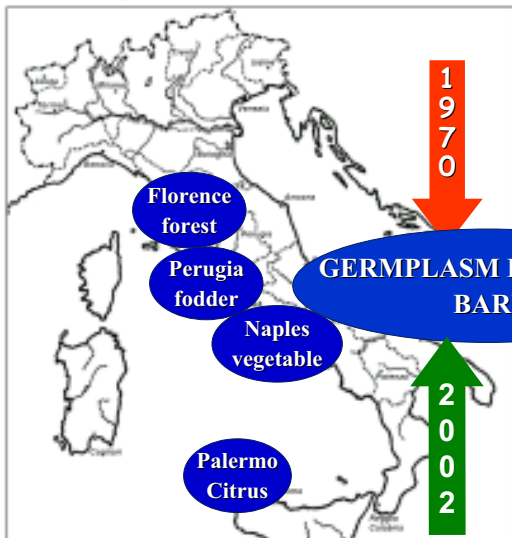


Seat of Plant Genetic Institute

FIRST NEGATIVE CONSEQUENCES OF MERGING

- seat of the PGI in **Naples** and not in **Bari**
- the **thematics of research** of GI were neglected

TWO POSITIVE REACTIONS



1970

Florence
forest

Perugia
fodder

Naples
vegetable

Palermo
Citrus

GERMLASM INSTITUTE
BARI

2002

Seat of Plant Genetic Institute

**THEMATICS WERE INTEGRATED WITH
SOME OF THE GI RESEARCH ACTIVITIES**

SECOND NEGATIVE CONSEQUENCES OF MERGING ARISED IN 2003 AND 2004

- **bad management of the genebank**
- **malfunction of the cool system of room storage**
- **breaking of the cool system**
- **possiblible damage of seed samples**

A blue industrial cooling system unit is installed in a narrow utility space. The unit features two large, circular fans on top and a blue cylindrical tank on the left side. The unit is mounted on a blue metal base. The surrounding area includes a concrete wall on the left and a metal structure on the right.

COOL SYSTEM BROKEN
2nd engine malfunctioning

A photograph of a mechanical cooling system unit, possibly a water-cooled engine or generator, located in a narrow, enclosed space. The unit features four large, circular fans arranged in a 2x2 grid. A blue cylindrical tank is positioned in the lower-left corner of the unit's base. The entire assembly is surrounded by various pipes, hoses, and electrical conduits. The unit appears to be in a state of disrepair or is non-functional. The background shows a window with a view of the outdoors. The text "COOL SYSTEM BROKEN without engine" is overlaid in white, bold, serif font across the center of the image.

COOL SYSTEM BROKEN
without engine

FUTURE OF THE GENE BANK

SOME QUESTIONS:

- **When the evaluation of damage will start?**
- **When the germplasm will be regenerated?**
- **Who will have the control of germplasm?**
- **When the CNR will react to this problems?**
- **When the Government will take an action?**

FINAL QUESTIONS:

- > Can this sustainable world conference make any action?**
- > Is this the right forum to start actions to know more about the situation of genebanks, their costs and benefits for a sustainable world?**

