



IRFAP GERMPLASM BANK

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“Institut de recerca i formació agroalimentària i pesquera de les Illes Balears (IRFAP)”

The public entity belongs to the Ministry of Agriculture, Fisheries, and Food of the Balearic Government.

- Initially, it was established as a test center.
- In recent years, it has functioned as a public service company.
- Last year, it merged with the former Research and Training Institute.
- Although it currently maintains both services.



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Animal germplasm bank of the IRFAP Mallorca / Menorca.

- Among the activities carried out by the IRFAP is supporting the development of the agri-food and small-scale sector.
- One of the activities carried out is supporting breeder associations to promote and conserve genetic resources, which are part of the Balearic heritage, and to help develop official breeding programs.
- One of the strategies of the Conservation and/or Improvement Program is to create Germplasm Banks and duplicates.
- The IRFAP has proposed to achieve the objective of having a complete semen collection and its duplicate for each officially recognized breed.
- One of the collections will be stored in the IRFAP Bank, and its duplicate will be stored in the BNGA.

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Entities involved in the creation of the Balearic Islands germplasm bank

Breeders and Associations managers
BREEDER ASSOCIATIONS

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Technical equipment and official laboratories
IRFAP – OFFICIAL LABORATORIES IB- BGA of BALEARES

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Breed Inspector
AUTONOMOUS LIVESTOCK SERVICE

Technical team and reference laboratory
MAPA –OFFICIAL LABORATORIES–BGA NATIONAL

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COMPLETE TEAM



Donor management
Breeders



Training and extraction
Managers



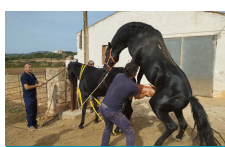
Organization
Breeders Association- IRFAP



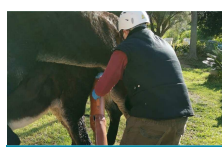
Semen extraction
Livestock



Laboratories
Technicians



Extraction EME
Technicians



Balearic donkey Extraction
Technical



Management
Breeders Associatio
IRFAP and Administration

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GEOGRAPHIC SITUATION



BALEARIC ARCHIPELAGO

- 4 islands with permanent population.
- Islands with differences: orographic, historical, cultural and commercial.
- Great genetic diversity. Example 4 sheep breeds.

ANIMAL GENETIC RESOURCES

- 15 Cataloged Native Livestock Breeds.
- 5 Canine Breeds.
- 13 Racial groups.

ALL CATALOGED IN A STATE OF THREAT

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BREEDS WITH WHICH WE WORK

OFFICIAL CATALOG (20)

Livestock breeds (15):
 Equids: Ase Balear, Caballo Mallorquí and Caballo Menorquí.
 Cattle: Vaca Mallorquina and Vaca Menorquina
 Porcine: Porc Negro Mallorquí.
 Sheep: Ovella Eivissenca, Ovella Mallorquina, Ovella Menorquina and Ovella Roja Mallorquina
 Goats: Cabra Eivissenca and Cabra Mallorquina.
 Birds: Gallina Eivissenca, Gallina Mallorquina and Gallina Menorquina.

Dog breeds (5): Ca de Bestiar (Pastor Mallorquí), Ca de Bou (perro de presa Mallorquí), Podenco Ibicenco, Ca de Mè, Ca Rater

RACIAL GROUPS (13)

Duck: Annera Mallorquina
 Turkey: Indiot Mallorquí y Gall d'Indi Menorquí.
 Pigeons: Borino, Casta Grossa, d'Escampadissa, Gavatxut, Nas de xot y Pinta.
 Dog: Ca de Conills de Menorca
 Rabbits: Conill pagès d'Eivissa
 Cattle: Vaca de la Reina
 Pigs: Porc Negre d'Eivissa i Formentera

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GERMOPLASM BANK

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EVOLUTION

START OPERATION

- 2004 UAB: Asno Balear
- 2008 to 2010 UCO: Ovella Eivissenca, Ovella Menorquina, Cabra Eivissenca, Cabra Mallorca, Ovella Mallorca and Roja Mallorca – unsuccessfully

WORK CIRCUMSTANCES

- Collection in farm
- Universities Service.
- 2015 it is decided to bet on developing the banks with IRFAP personnel

DEVELOPMENT

- Since 2016 provision of infrastructure and personnel to IRFAP (Mallorca and Menorca)
- Adaptation of the protocols to each breed.
- A continuous work schedule is established .

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ISSUES

TEAM FORMATION

- **There was no specialized technical staff.**
- **There is no prior training.**

EXTERNAL DEPENDENCE

- **External technical teams - universities.**
- **An annual visit** makes implementation very difficult and slows the growth of collections.

POOR INFRASTRUCTURE

- **Ignorance of the needs.**
- **All manual processing.**

COSTS

- **High cost of reproductive techniques.**
- **Few financing channels.**
- **Insularity (double and triple cost)**

PARTICIPATION COMMITMENT

Lack of continuity meant **lack of commitment and little progress .**

The different implication of the associations.

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SOLUTIONS

- **Training of own staff:**
Assumes some external independence.
- **Infrastructure creation.**
Save time and give security .
- **Establish protocols and calendars:**
Forecast of time and dates, it is very useful for the farmer, the associations and IRFAP

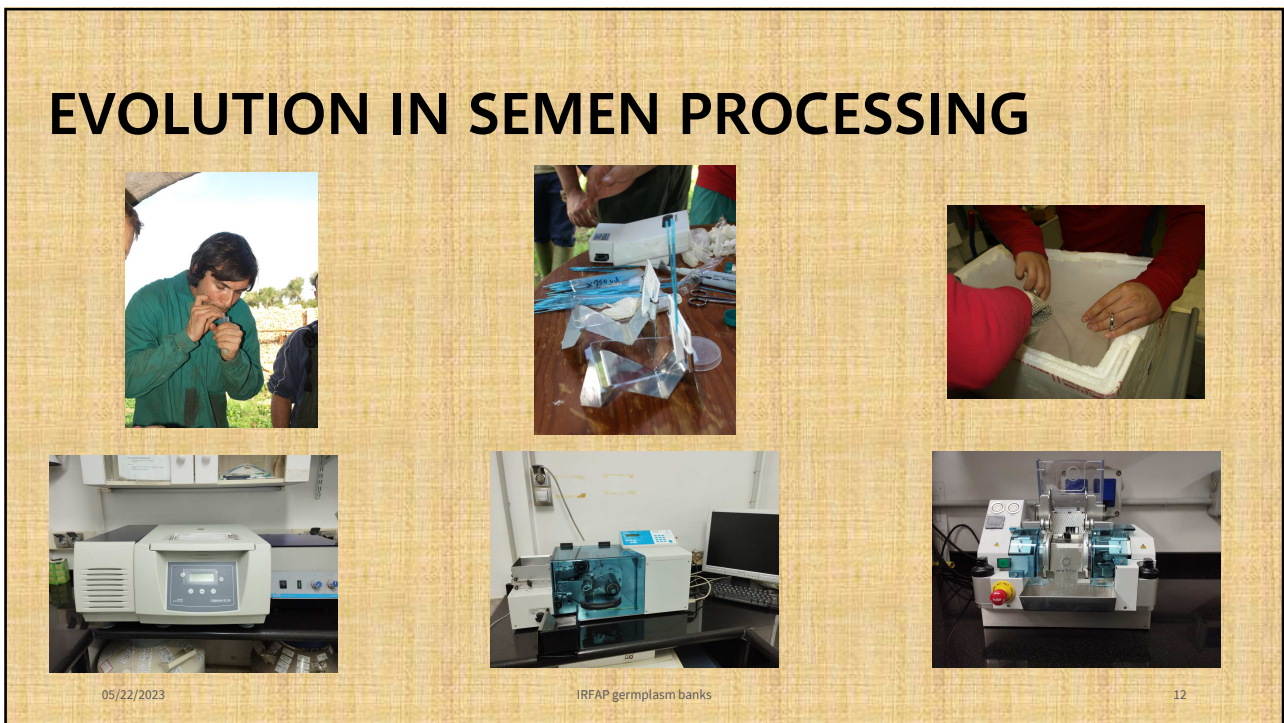
ADVANTAGES



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EVOLUTION IN SEMEN PROCESSING



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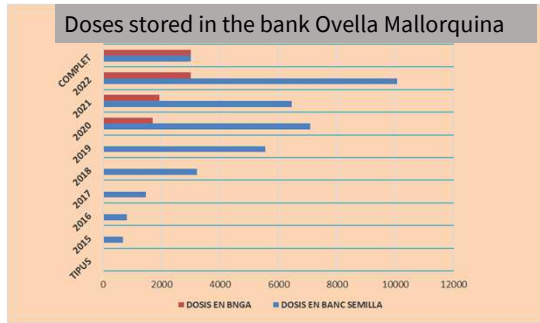
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EXAMPLE OF EVOLUTION IN TWO RACES

Visibility of change from establishing the strategies appropriate to the Balearic reality

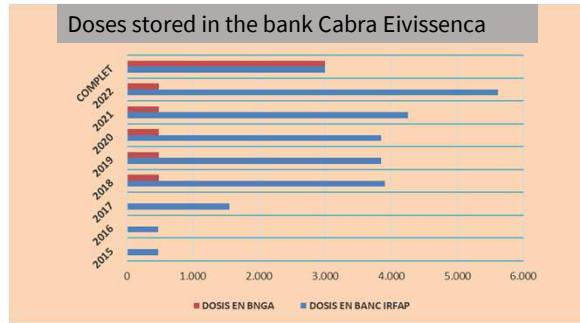
Sheep: Ovella Mallorquina

Complete collection in IRFAP and in BNGA



Goat: Cabra Eivissenca

(Complete collection in terms of IRFAP dose)



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STORED MATERIAL

IRFAP BANK

Guarantees the conservation of the animal genetic resources of the Balearic Islands.

Mallorca BG0401
ES04002 Collection center

Menorca BG0403
ES04005 Collection center

DUPPLICATED BNGA

Guarantees the conservation of genetic resources and cryopreserved semen collections..

(MINISTRY AGREEMENTS
MAPA – Breed associations)

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STORED MATERIAL

Information 31/12/2022

IRFAP BANK (14)

MALLORCA (11 RACES):		
Asno Balear	11	2.730
Caballo Mallorquín	15	2.646
Bovino Mallorquín	11	6.072
Bovino Menorquín	12	12.191
Bovino de la Reina (AGR)	6	7.562
Ovella Eivissenca	9	1.409
Ovella Mallorquina	27	10.066
Ovella Roja Mallorquina	24	10.761
Caprino Ibicenco	13	5.612
Caprino Mallorquín	23	7.210
Porc Negre d'Eivissa i (AGR)	1	110

MENORCA (4 RACES):		
Bovino Menorquín	33	14.289
Bovino de la Reina (AGR)	9	2.210
Ovella Menorquina	25	5.984
Caballo Menorquín	17	802

NATIONAL BANK (BNGA) (6)

Bovino Mallorquín	3	493
Bovino Menorquín	1	135
Ovella Mallorquina	25	3.000
Ovella Roja Mallorquina	23	2.760
Cabra Mallorquina	3	473
Cabra Eivissenca	3	488
Caballo Menorquin (Perdida de dosis en transporte)		

PENDING BREEDS TO INCORPORATE
 Gallinas: Eivissenca, Mallorquina, Menorquina
 Porc Negre Mallorquí

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GROWTH STRATEGY

How we will grow in the future

CONSOLIDATE OBJECTIVES

- Complete collection in IRFAP
- Complete collection in BNGA
- Maintenance and growth for use.

MATERIAL USE

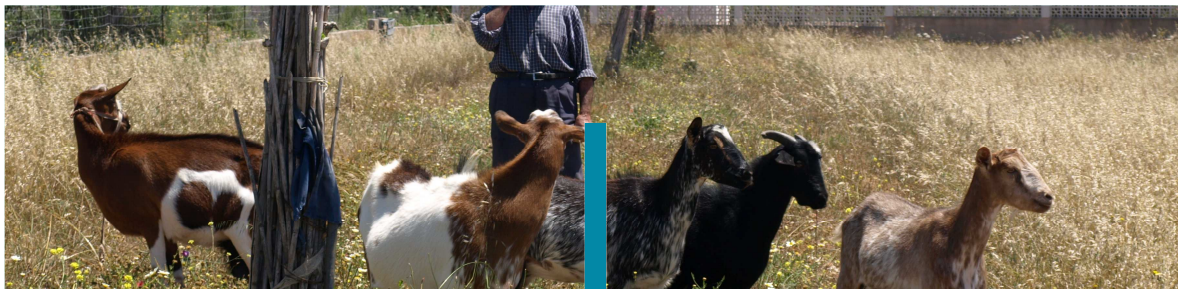
- Recovery of the population (catastrophe)
- Application in conservation or improvement programs

FUTURE

- Conservation of all resources:
Poultry Breeds
Canine Breeds
Racial Groupings.
- Expand the bank with other reproductive material (embryos or other cells)

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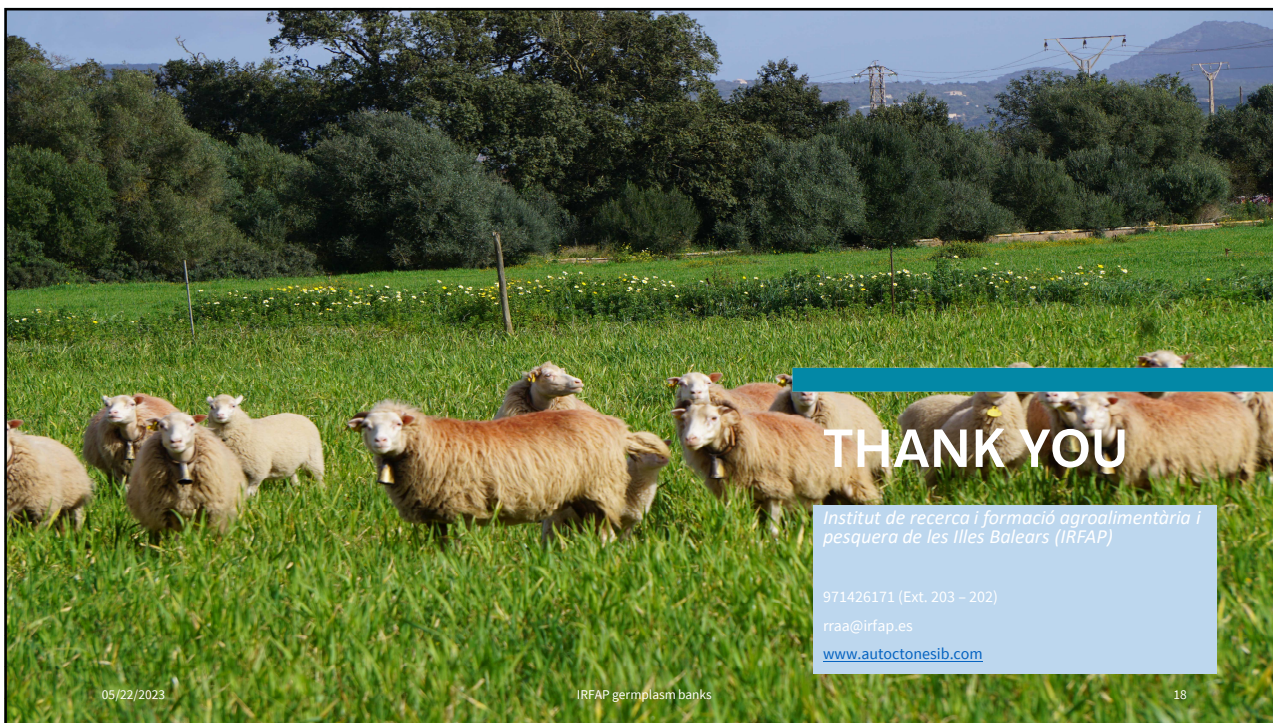
SUMMARY

- ❖ The creation and maintenance of germplasm banks requires trained personnel, infrastructure and economic support.
- ❖ The current lack of direct aid for its creation and maintenance is a new handicap when considering the project.
- ❖ Having a complete collection and its duplicate, based on the established criteria, is feasible, as long as all the agents involved are involved in the project.

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RESUMEN



THANK YOU

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