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WORKING GROUP EX SITU CONSERVATION. REPORT OF ACTIVITIES 2023-2024.

29th August 2024.


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Fernando Tejerina, PhD. EX-Chair of the WG Ex Situ Conservation.




GOBIERNO
DE ESPAÑA


MINISTERIO
DE AGRICULTURA, PESCA
Y ALIMENTACIÓN



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1. Development of the EUGENA network and EUGENA Steering Board meeting (SB had its own presentation).
- Task Force on documentation software for genebanks (2022-2023). (own presentation)
- Ad hoc action on specific measures for AnGR ex situ conservation in the framework of the animal health legislation. (AHA Animal Health Regulation- Genebanks). (Own presentation)
4. Annual meeting of the WG Ex Situ conservation.
- Collaboration with Task Force AnGR Strategy-Action Plan- TF Permanent Secretariat.
- Others.
7. Workplan for 2025 by Ewa Sosin.

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1. DEVELOPMENT OF EUGENA.

“New country”: Portugal (Data updated after Lyon GA)

New genebanks:

- Banco Português de Germoplasma Animal (Portugal). (Data updated after Lyon GA).
- 11 Spanish genebanks.

Genebank removed:


- Institute of Molecular Genetics and Genetic Engineering (Serbia).

2023

13 Countries

13 Gene Banks

1869169 Samples




2024

14 Countries


24 Gene Banks

4269742 Samples




+ 1 COUNTRY + 11 GENEbanks + 2.400.573 SAMPLES (New genebanks + Information update) + 94 BREEDS.

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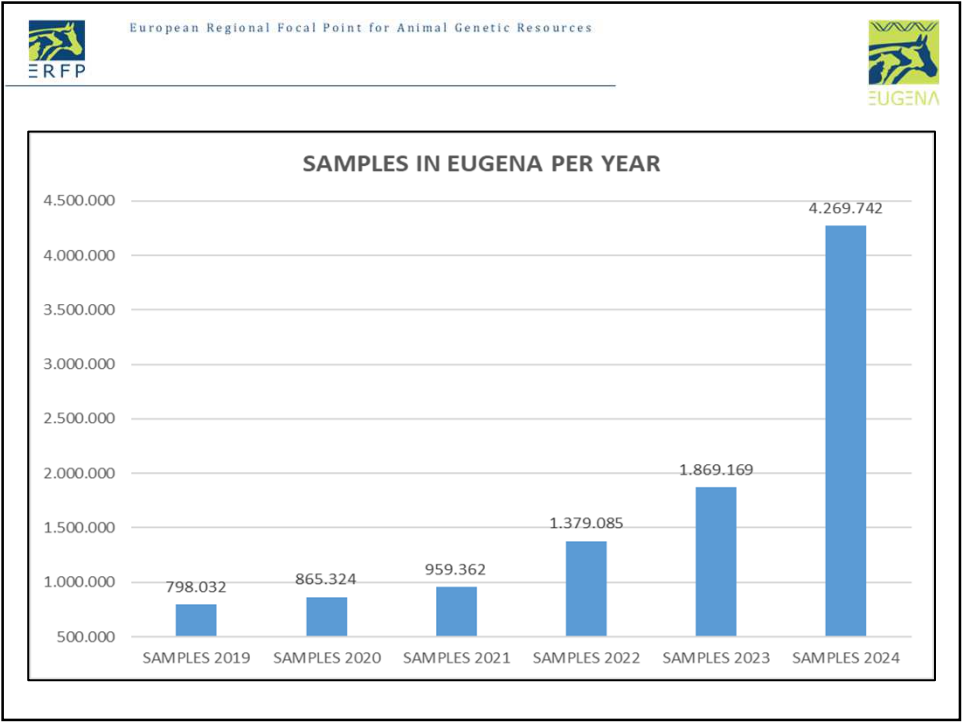
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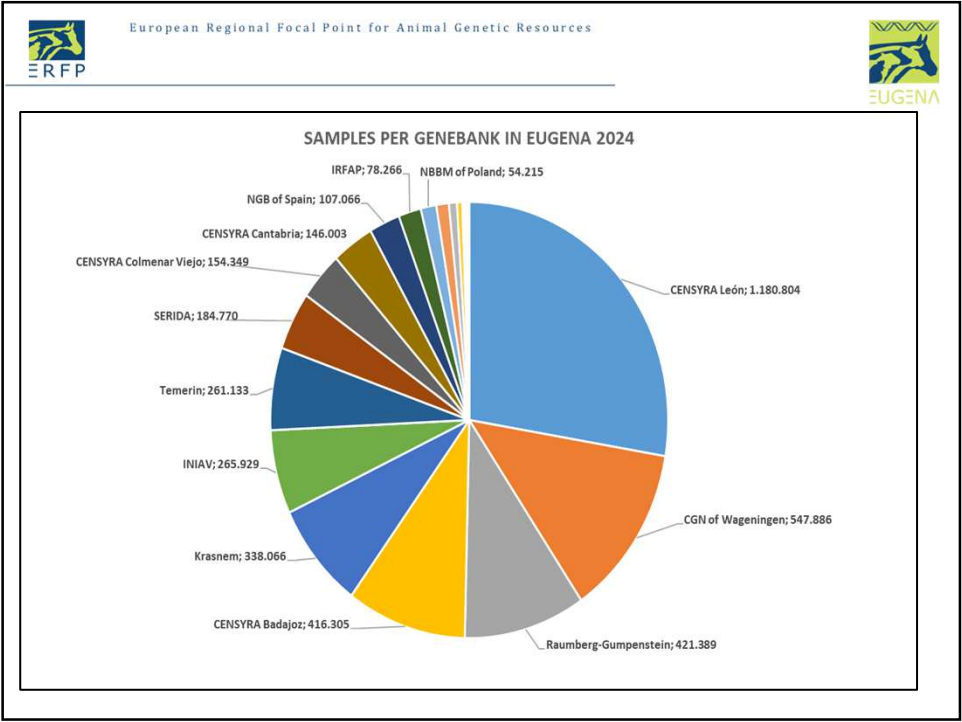
NEW “IBERIAN” GENEbanks IN EUGENA

GENEBANK	COUNTRY	SPECIES	BREEDS	% REPRODUCTIVE MATERIAL	MALE DONORS	FEMALE DONORS	FIRST YEAR OF COLLECTION	LAST YEAR OF COLLECTION
INIAV	PORTUGAL	6	40	84	19.206	25.300	1971	2022
BIOMEJAN AGR 218	SPAIN	7	19	100	198	0	2002	2023
YEGUADA CARTUJA	SPAIN	1	4	100	18	0	2020	2024
CENSYRA Badajoz	SPAIN	6	35	100	719	25	1973	2024
CENSYRA-Cantabria	SPAIN	1	3	100	177	101	1983	2024
CENSYRA-Colmenar Viejo	SPAIN	4	30	100	396	0	1970	2024
CENSYRA - LEON	SPAIN	3	24	99	4.282	8.397	1983	2024
CERSYRA-IRIAF	SPAIN	2	7	100	620	0	1992	2023
INSAVET	SPAIN	1	2	100	5	0	2020	2023
IRFAP	SPAIN	5	10	100	224	0	2004	2023
SERIDA	SPAIN	6	6	100	217	26	1981	2023
UHU	SPAIN	1	1	100	17	0	2014	2018


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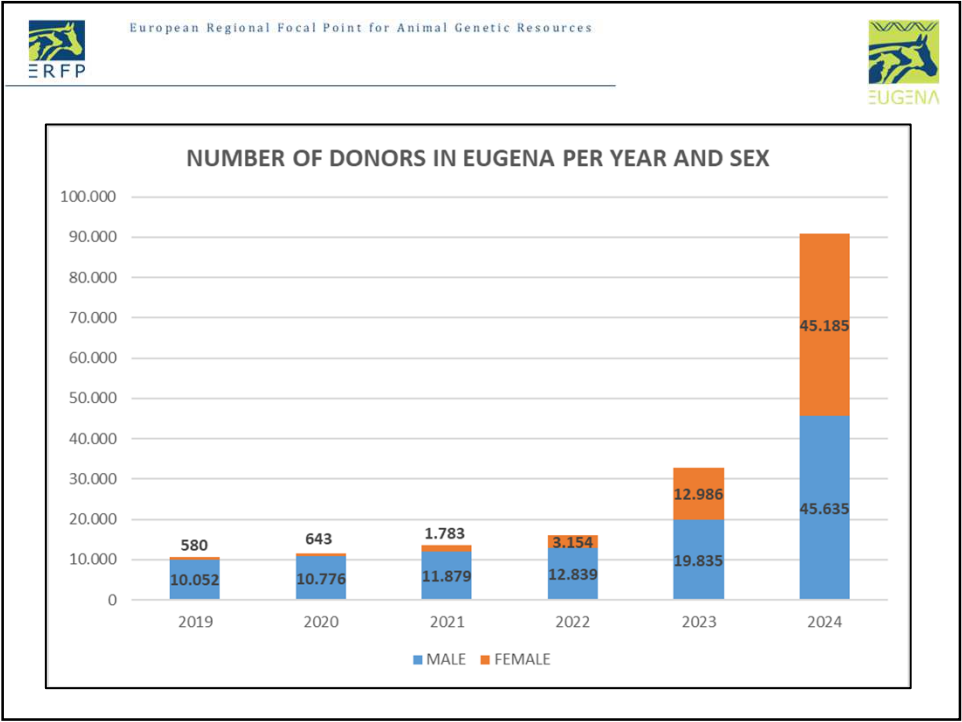
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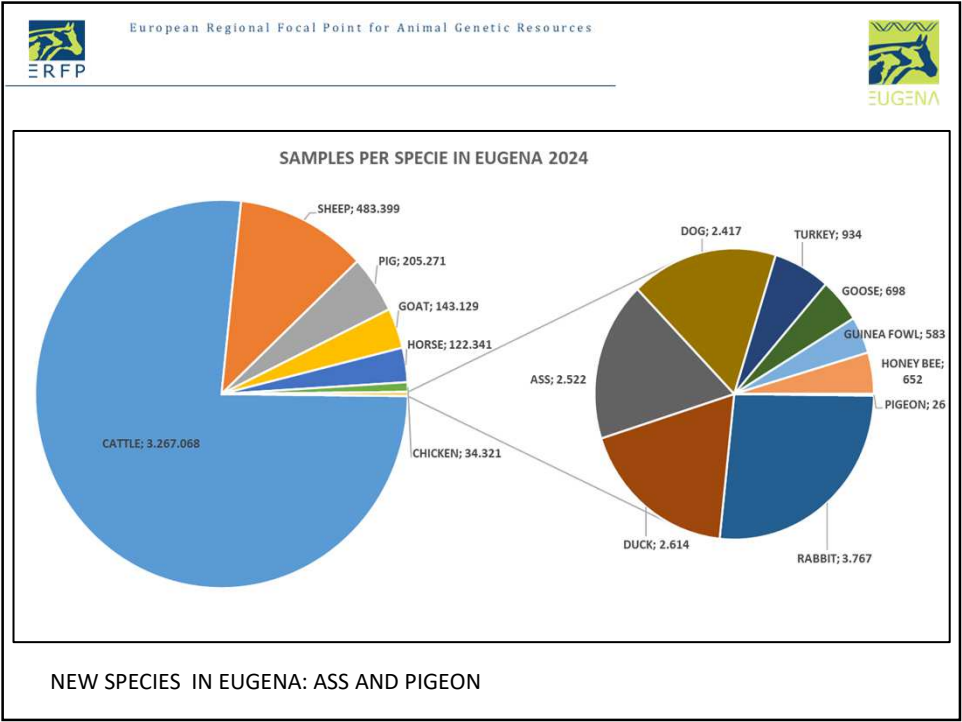
MATERIAL TYPE	SAMPLES 2019	SAMPLES 2020	SAMPLES 2021	SAMPLES 2022	SAMPLES 2023	SAMPLES 2024
Blood	1.198	1.397	1.673	3.291	11.037	10.084
DNA		0	24	1.109	4.489	58.374
Embryos	413	590	844	967	979	2.511
Primordial germ cells					540	540
Stem cells				328	339	358
Hair	48	48	218	218	218	217
Ovarian tissue					213	213
Semen	796.373	863.289	956.603	1.373.172	1.851.354	4.197.445
Total	798.032	865.324	959.362	1.379.085	1.869.169	4.269.742

MATERIAL TYPE	MALE DONOR	FEMALE DONOR
Blood	1.566	7.894
DNA	21.727	36.650
Embryos	156	331
Hair	164	45
Ovarian tissue	0	104
Primordial Germ Cells	387	153
Stem Cells	3	8
Semen	21.632	0
MAXIMUM NUMBER OF DONORS	45.635	45.185

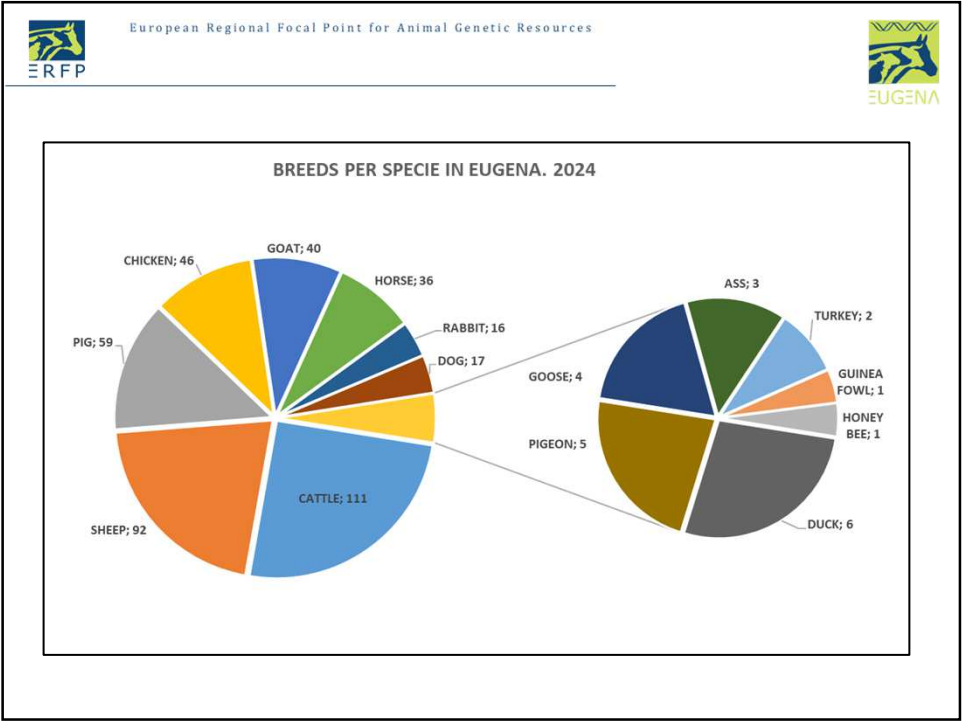
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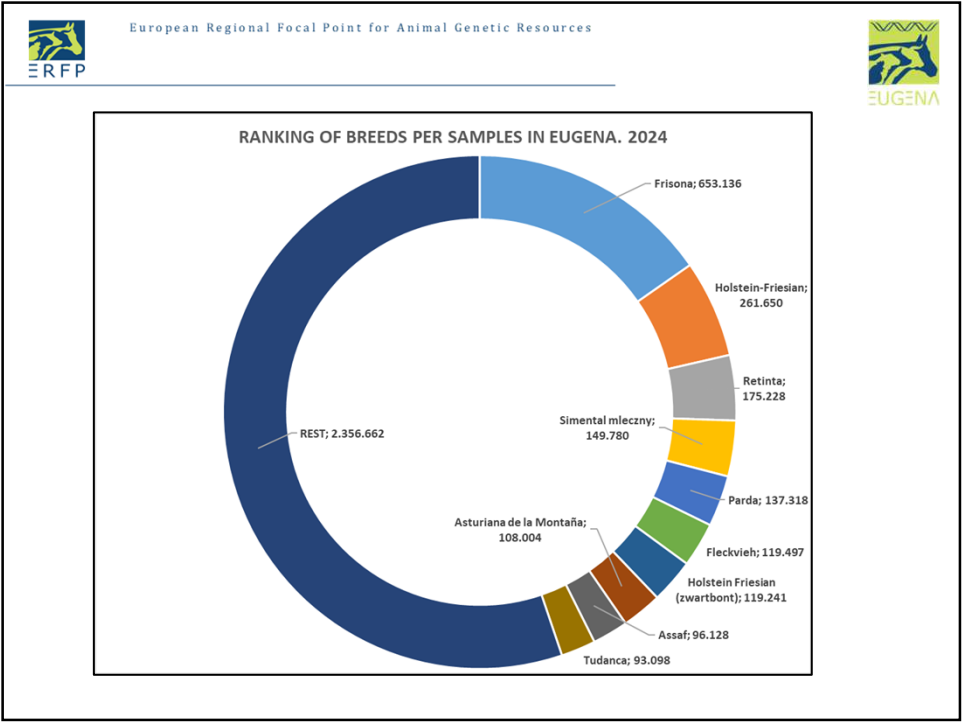
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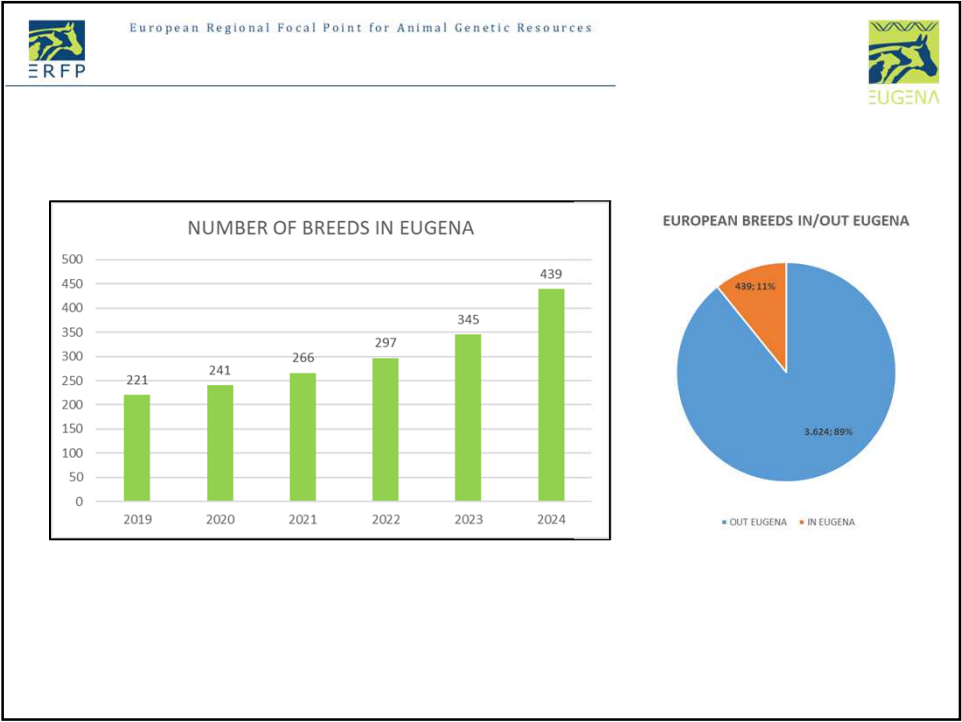
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BENCHMARKING EUGENA VS USA AND BRAZIL

ANIMAL GERMPLASM RESOURCES INFORMATION NETWORK







SAMPLES:	4.269.742
DONORS:	90.820*
BREEDS:	439

SAMPLES:	1.287.417
DONORS:	65.744*
BREEDS:	174

SAMPLES:	2.054.459
DONORS:	30.167*
BREEDS:	94

*as maximum

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Euro Functional Annotation of Animal Genomes (EUROFAANG) research infrastructure.

- Aim: Establish the concept for an infrastructure to facilitate research and innovation for genotype to phenotype research in farm animals to achieve sustainable, efficient and socially accepted farmed animal production.
- Run time: 2023-2025.
- The Project brings together several Horizon 2020 projects:




- EuroFAANG Project was presented in the WG meeting and EUGENA was invited to collaborate in the Project.
- EUGENA Steering Board members approved the participation in EuroFAANG
- ERFP SC authorised the participation of EUGENA in the Project activities.

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4. ANNUAL MEETING OF THE WG EX SITU CONSERVATION. Nicosia (Cyprus), 22nd – 23rd April.

1. Inform on activities of the WG in the last year.
2. Report the advances of the Ad Hoc Action Animal Health Regulation and Genebanks, presentation and discussion on the first draft of the Guidelines for the development of national animal health regulations for material intended to be kept in gene banks.
3. Report on the EUGENA status and proposal of improvements in EUGENA webpage-database, which were approved by the WG members.
4. Report the advances of the Task Force on documentation software for genebanks.
5. Analyze the use of genomic information in genebanks and discuss options to work in this topic in the future.

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4. ANNUAL MEETING OF THE WG EX SITU CONSERVATION. Nicosia (Cyprus), 22nd – 23rd April.

6. Know the project EUROFAANG and analyze the links with EUGENA and options for future collaboration.
7. Know the work develop in the French National Genebank to assessing the potential of the collection for the management of its genetic diversity.
8. Boost the development of the AHA on QMS.
9. **Elect a new WG Chair: Ewa Sosin, from Poland, was elected as a new ex situ conservation WG Chair.**
10. Propose the Workplan for 2025.
11. Analyze the integration of in situ and ex situ conservation activities, in collaboration with In Situ Conservation WG in an specific joint session.

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5. COLLABORATION WITH TASK FORCE AnGR
STRATEGY-ACTION PLAN AND TF PERMANENT
SECRETARIAT.


7. OTHER ACTIVITIES.

- Collaborate with ERFP Secretariat in the dissemination of information and knowledge in the ERFP Webpage and Social Media.
- AHA «*Use of the IMAGE self-diagnostic tool to support the development of a quality management system in European animal gene banks*»

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8. PROPOSAL OF PLAN AND PRIORITIES FOR 2024-2025.

1. Disseminate and promote the guidelines with recommendations to implement derogations for the collection, processing, storage and use of germinal products intended to be kept in genebanks. (AHA Animal Health Regulation and Genebanks)
2. Promote the incorporation of the ex situ conservation activities in the breeding programs of breeders societies together with in situ conservation activities
3. Development of EUGENA
4. Sharing knowledge and expertise in relation with ex situ conservation
5. Support the implementation of a modern genebank documentation software (Task Force on documentation software for genebanks)
6. Support the utilization of Quality Management Systems in Genebanks
7. Analyse the incorporation of ex situ – in vivo facilities to EUGENA, in collaboration with the in situ Conservation WG
8. Spread information about ex situ conservation and EUGENA in collaboration with the Communication Strategy of the ERFP

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