



European Regional Focal Point for Animal Genetic Resources




WORKING GROUP EX SITU CONSERVATION. REPORT OF ACTIVITIES 2020-2021.

9th September 2021.

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1. DEVELOPMENT OF EUGENA.

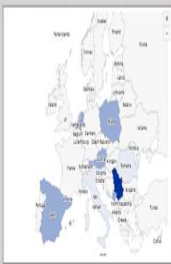
New countries on board: Latvia and Slovakia (August, 2021, data not uploaded).
New genebanks: Latvian University of Life Sciences and Technologies and VÚZV Nitra.

2020

10 Countries

8 Gene Banks

865324 Samples

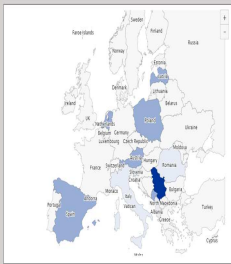


2021*

11 Countries

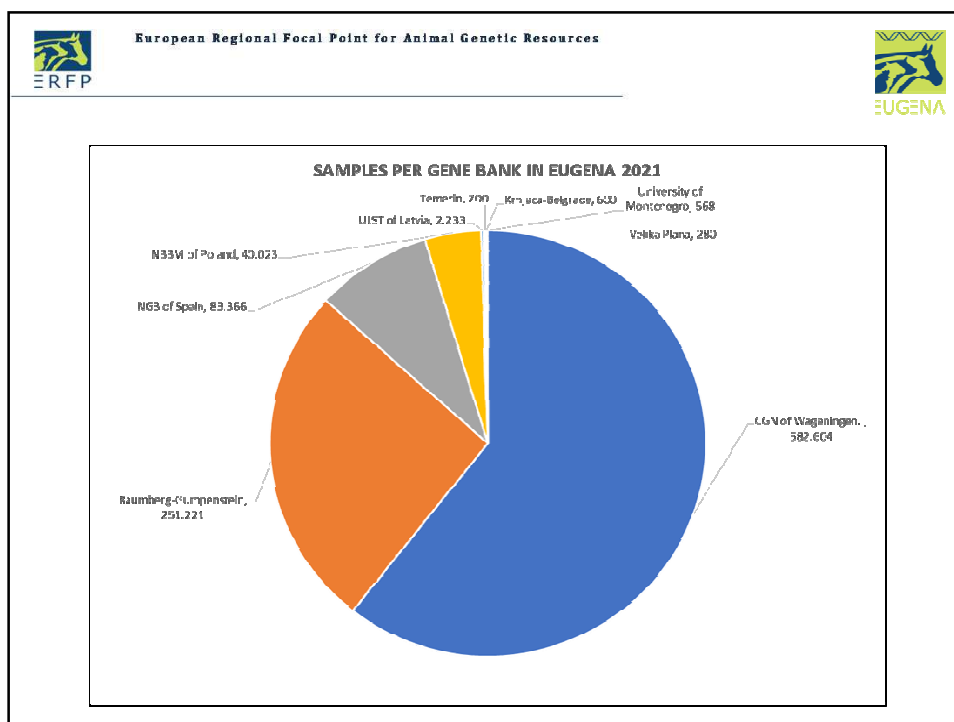
9 Gene Banks

961595 Samples



+ 96.241 SAMPLES (New Latvian genebank + information update) + 99 BREEDS.*

*Data from Slovakia not uploaded



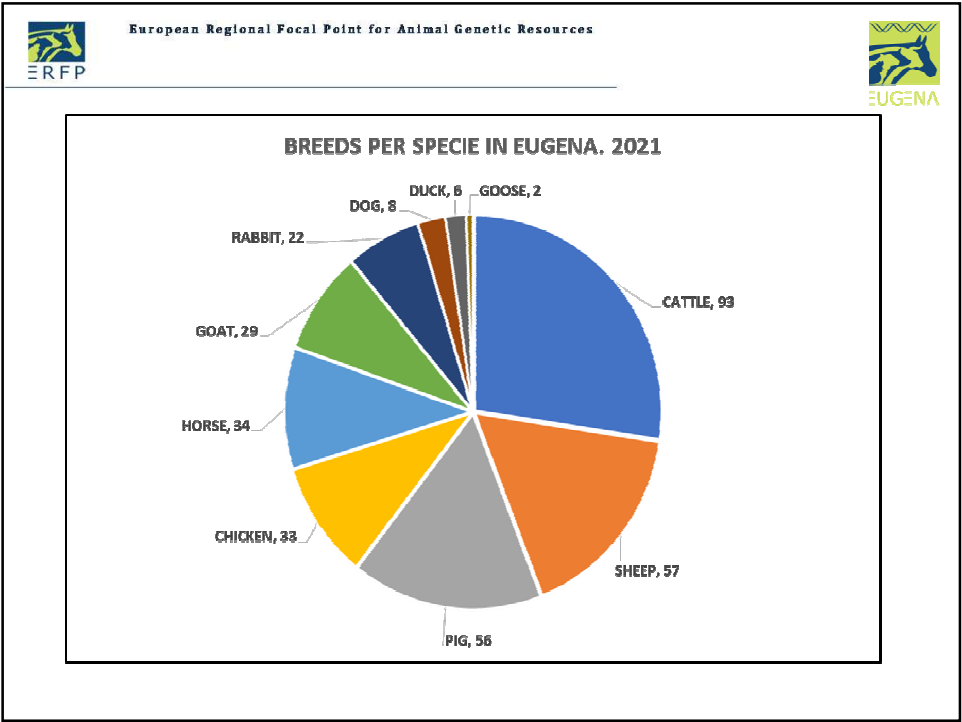
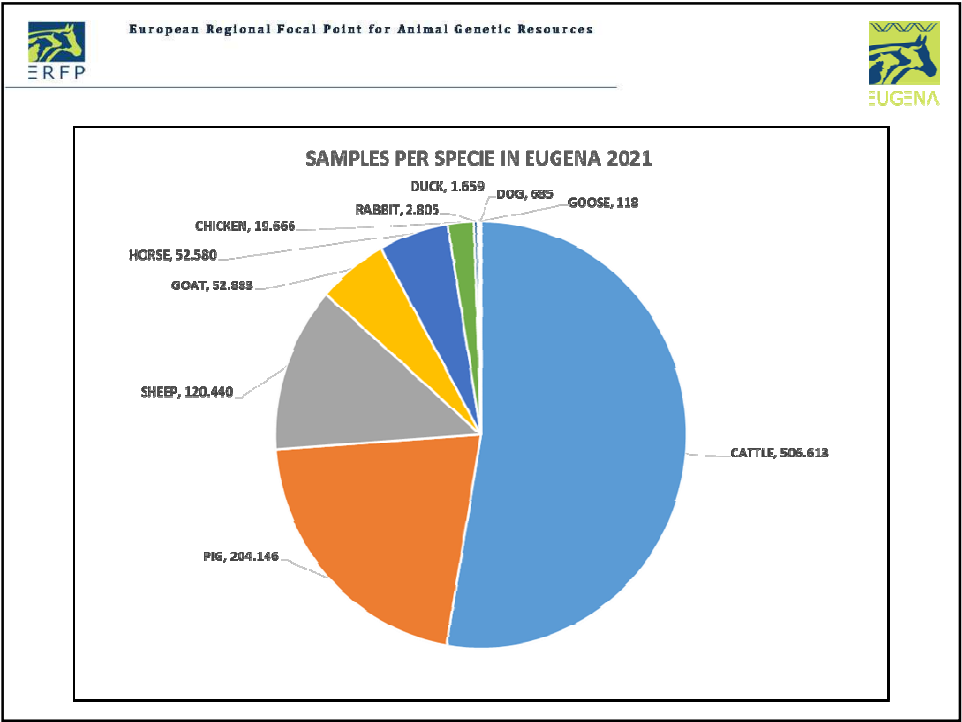
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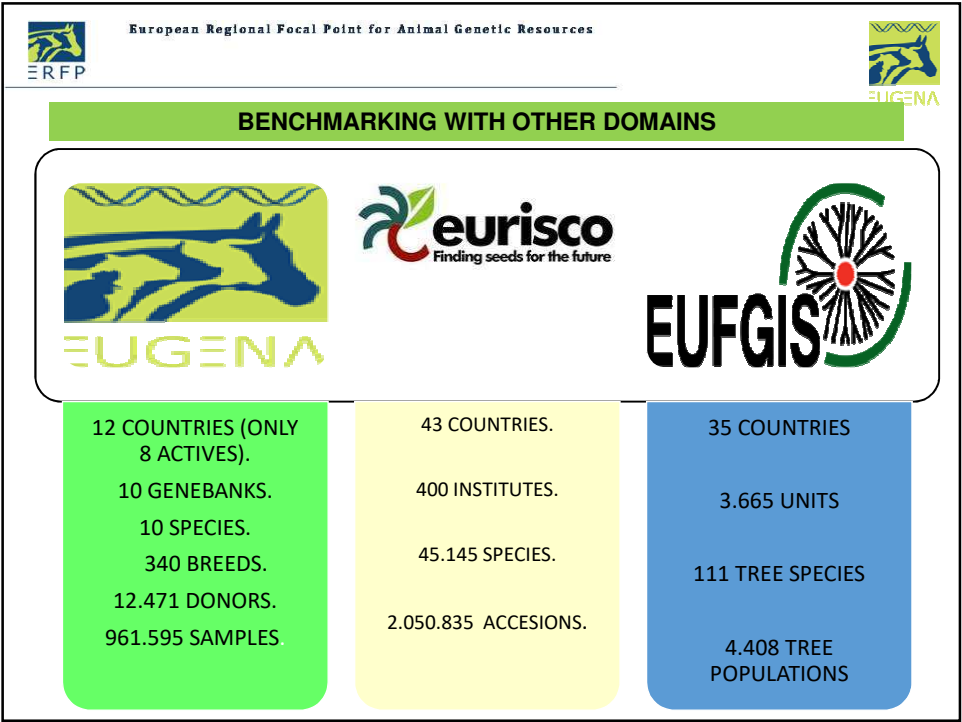
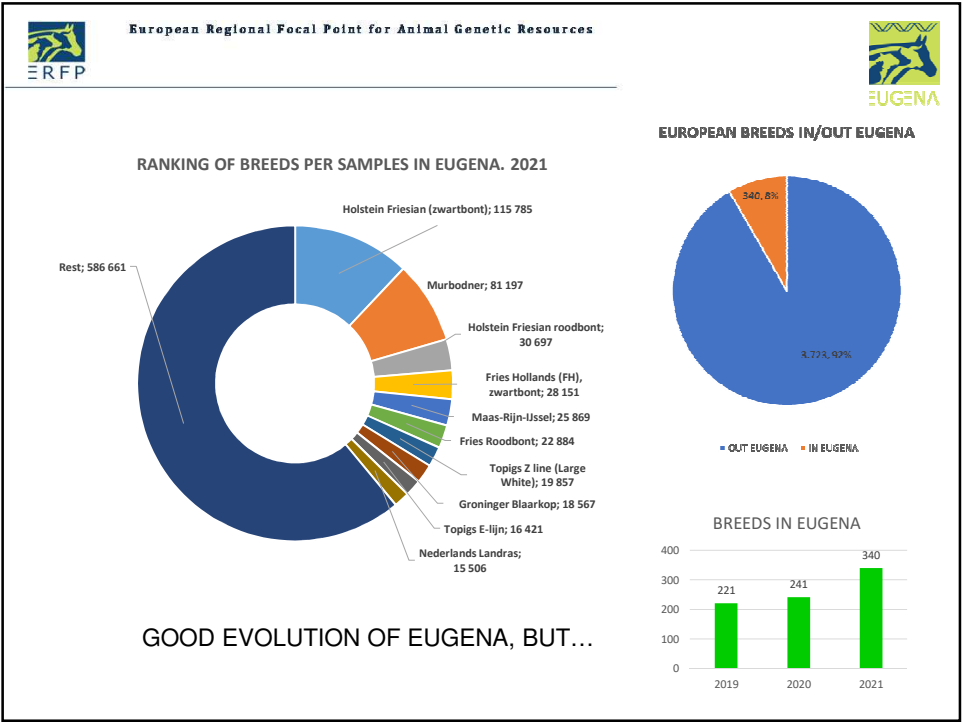
ERFP


EUGENA

MATERIAL TYPE	SAMPLES 2020	SAMPLES 2021
Blood	1.397	2.864
DNA	0	1.066
Embryos	590	844
Hair	48	218
Semen	863.289	956.603
Total	865.324	961.595


MATERIAL TYPE	MALE DONOR	FEMALE DONOR
Blood	563	1.617
DNA	114	952
Embryos	56	121
Hair	165	45
Semen	11.095	0
Maximum	11.879	1.783








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- AnGR DOMAIN NEEDS DATABASES FOR THE SUSTAINABLE MANAGEMENT OF BREEDS BUT ALSO TO SHOW THE HIGH NUMBER OF ACTORS INVOLVE AND THEIR RELEVANCE IN FUTURE CROSS DOMAIN PROJECTS.
- EUGENA, SHOULD BE THE REFERENCE DATABASE FOR EX –SITU CONSERVATION ACTIVITIES BUT ITS DEVELOPMENT IS VERY SLOW.
- WE HAVE IDENTIFIED 125 INSTITUTIONS HOSTING GENE BANKS IN 26 DIFFERENT EUROPEAN COUNTRIES = BIG GROWTH CAPACITY
- POSSIBLE OBSTACLES:
 - LACK OF INTEREST OF COUNTRIES AND GENE BANKS TO JOIN EUGENA.
 - LEGAL PROBLEMS TO SIGN THE MoU (ERFP is not a legal international body).
 - SIGNING MoU AND LoA IS A COMPLEX PROCESS IN SOME COUNTRIES WHERE THE NATIONAL RULES ON INTERNATIONAL MoU HAVE TO BE RESPECTED.
 - COUNTRIES HAVE NOT DEFINED IN THEIR REGULATION WHAT IS A “GENEBANK”.
 - EUGENA DO NOT OFFER CLEAR ADVANTAGES (By the moment because few genebanks and countries are enrolled in the net)






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TURN OUR WEAKNESS INTO STRENGTHS

- AS ERFP IS NOT A LEGAL INTERNATIONAL BODY, IS NOT MANDATORY USE A MoU TO JOIN COUNTRIES OR GENE BANKS.
- AS A LOT OF COUNTRIES HAVE NOT REGULATION TO RECOGNIZE GENE BANKS, WE SHOULD WORK ON THE BASE OF DECLARATION FROM NC OR OTHER COMPETENT AUTHORITIES IN RELATION WITH THE OBJECTIVES OF THE INSTITUTIONS INTENDED TO JOIN TO EUGENA.
- THE COMMITMENTS OF GENE BANKS SHOULD BE AS SOFTER AS POSSIBLE, AND IN COHERENCE WITH THE ADVANTAGES WHICH EUGENA OFFERS CURRENTLY.



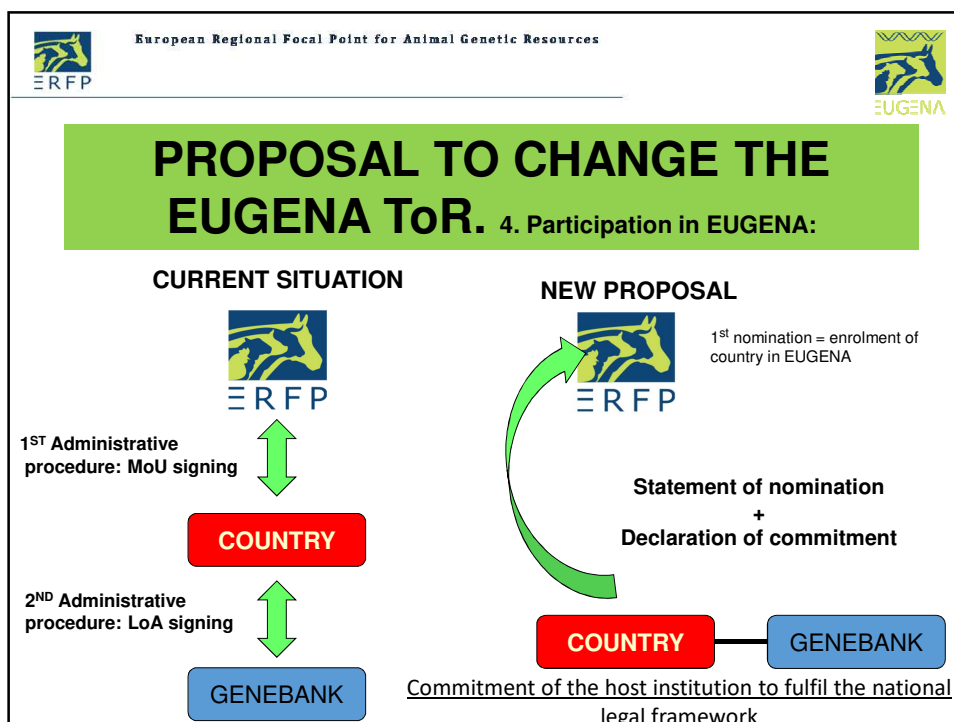
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PROPOSAL: UPDATE EUGENA ToR TO INCLUDE MORE FLEXIBILITY IN THE ENROLLMENT OF COUNTRIES AND GENE BANKS.


New ToR, Summary of Changes:

- Update of introduction and EUGENA objectives: SDG and new AHL.
- 6. Conditions for the acquisition and the access of genetic material: updated with guidelines for MTAs and MAA.
- 7. Documentation and inventory reports: NC reports to the EUGENA portal.
- Annex: update of MoU model, LoA model, model of statement of nomination, model of declaration of commitment, MTA-MAA guidelines.





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2. ADVANCES IN THE DEVELOPMENT OF SPECIFICATIONS FOR A MODERN GENE BANK DOCUMENTATION SOFTWARE.

Background:

- Genebanks have a proven need of modern documentation software. Currently they are use Cryoweb, other databases or excels
- Ex-situ WG developed the AHA for the development of specifications for a modern genebank documentation software, lead by Zhivko DucheV.
- ERFP GA propose the development of the new software in a common project.




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EX SITU WG HAVE WORKED IN THE LAST YEAR TO ANALYSIS THE OPTIONS TO DEVELOP THIS PROYECT, BY:

- THE DESIGNING OF A BASIC REQUIREMENTS FOR THE SOFTWARE BY ZHIVKO DUCHEV, WHICH WAS APPROVED AFTER THE WG MEETING.
- ASK FOR AN STIMATION OF BUDGET TO THE NEXT COMPANIES (“Market study”):
 - Ruralbit from Portugal.
 - Pyramis from Spain.
 - BioAware from Belgium.
 - Agilebio from France.
 - Consortium Comtechsys Ltd. + Technical University –Sofia-Technologies from Bulgaria.
 - Tragsa from Spain.




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MARKET STUDY:
Complete development of software for the ERFP and annual maintenance.

COMPANY	COUNTRY	DEVELOPMENT BUDGET	ANNUAL MAINTENANCE
Ruralbit	Portugal	200.000 €	Basic: 3.000 €/year. Pro-active: 30.000 €/y.
Pyramis	Spain	239.000 €	Technical/small developments: 25.000 €/y. Total support: 18.000 €/y.
Consortium Comtechsys Ltd. + Technical University –Sofia- Technologies	Bulgaria	225.000 €	4.000 €/year.
		90.000 €*	
Tragsa	Spain	232.159,30 €	¿?

*The offer is for a perpetual license to use a development not base in open sources.



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MARKET STUDY:
Product developed yet, the company sell the license for their use and allow customization in the product in function of the needs from the client.

COMPANY	COUNTRY	LICENSE	ANNUAL MAINTENANCE
Bioaware (Biologics)	Belgium	Desktop version: 1.999 €/y.* Desktop + web version: 3.999 €/y. * Unlimited number of licenses: 98.000 €/y	0 €
Agilebio (Labcollector)	France	25.480 €. Perpetual license.	4.700 €/year




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MARKET STUDY:

Product developed yet, and the ERFP should participate in their further development and maintenance.

COMPANY	COUNTRY	LICENSE- DEVELOPMENT	ANNUAL MAINTENANCE
USDA (Animal-GRIN)	USA-CANADA	0 €	40.000-60.000 €/y




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CONCLUSIONS.

- There are different options in the market to cover the needs of software from the genebanks or for a new development.
- A common project for all ERFP countries is not realistic:
 - A common project demands **all** ERFP countries invest money in it (currently several countries do not pay their annual contributions).
 - Some countries (as Germany and Portugal) have modern software and possibly do not participate in a common project.
 - Some of the options allow the use of a modern software individually with low costs.
- Proposal:
 - Countries with economical and personal resources should shown their interest in a short time after the GA and propose a **Task Force** where analyse in deep the offers, take a decision and manage the development and maintenance of the new software by their own.
 - ERFP covers the cost of the Task Force operation, but not the cost of the Software development o license purchase.
 - The Task Force share the experience to the rest of ERFP countries which could enrol the TF in the future.
 - Ex situ WG members involve in the AHA and 2021 tasks could advise this task force.
- The customisation of a product in the market open a way to collaborate between countries with interest in the development of a set of common fields with options of national adaptations.
- Do not forget the option of A-GRIN for its strategic value.



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3. AHA STRENGTHENING NATIONAL CAPACITIES TOWARDS THE DEVELOPMENT OF A NATIONAL GENE BANKS STRATEGY.


- The aim of the AHA is assess current situation, needs and barriers and define solutions and priorities to support national efforts towards the development of a national cryo-conservation strategy.
- Team of experts (12 countries).
- Designing a questionnaire to analyses the ex-situ conservation activities.
- Identification and ranking of the drawbacks operating against ex-situ conservation.
- Workshop on 26th of may to identify solutions.
- Further steps: analyses the countries presentations and develop a guidelines with good practices and a publication.




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4. **COLLABORATE IN THE DEVELOPMENT OF AHA TRANSBOUNDARY BREEDS IN EUROPE. PROMOTE CONCERTED ACTION BETWEEN COUNTRIES.**
5. **COLLABORATION WITH AHA GENRES BRIDGE PROJECT – EUROPEAN STRATEGY ON ANIMAL GENETIC RESOURCES.**
6. **ANNUAL MEETING OF THE WG EX SITU CONSERVATION, 2ND JUNE (WEBCONFERENCE).**
 - Modern genebank documentation software
 - EUGENA
 - European Strategy for Animal Genetic Resources.
 - AHA Strengthening national capacities towards the development of a national gene Banks strategy.
 - Election of Chair for 2021-2024.
 - Workplan for 2021-2022.
7. **WEBINAR ON EX SITU CONSERVATION ISSUES, 16ST JUNE.**
 - Creation of a Spanish poultry breeds cryobank: Optimization of freezing procedure and influence of endogenous and environmental factors on sperm cryoresistance.
 - Self-assessment tool of quality management for livestock gene banks.



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8. OTHER ACTIVITIES.

- Dissemination of last IMAGE outputs.
- Collaborate with ERFP Secretariat in the dissemination of information and knowledge in the ERFP Webpage and Social Media.
- Presentation on EUGENA in the International Congress on the Breeding of Sheep and Goats (15th October, Bonn, Germany).



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5. PROPOSAL OF PLAN AND PRIORITIES FOR 2021-2022.

1. Development of EUGENA.
2. Development of a modern genebank documentation software.
3. Supporting the development of national regulation about germinal products collection intended to be kept in genebanks and the recognition of genebanks at national level (AHA).
4. Collaboration in the development of the European genetic resources strategy and specific European strategy for animal genetic resources.
5. Sharing knowledge and expertise in relation with cryopreservation protocols by species.
6. Support the utilization of Quality Management Systems in Genebanks (AHA).
7. Develop AHA strengthening national capacities towards the development of a national genebank strategy.
8. Supporting the application of the new regulation of germinal products in relation with the procedure for germinal products moved to genebanks in another Member State (AHA).
9. Collaboration in the development of tools for the assessment of breeding programmes.
10. Collaboration with the Ad Hoc Action: Transboundary breeds in Europe. Promote concerted action between countries.
11. Spread information about ex situ conservation and EUGENA in collaboration with the Communication Strategy of the ERFP.