Ad hoc action
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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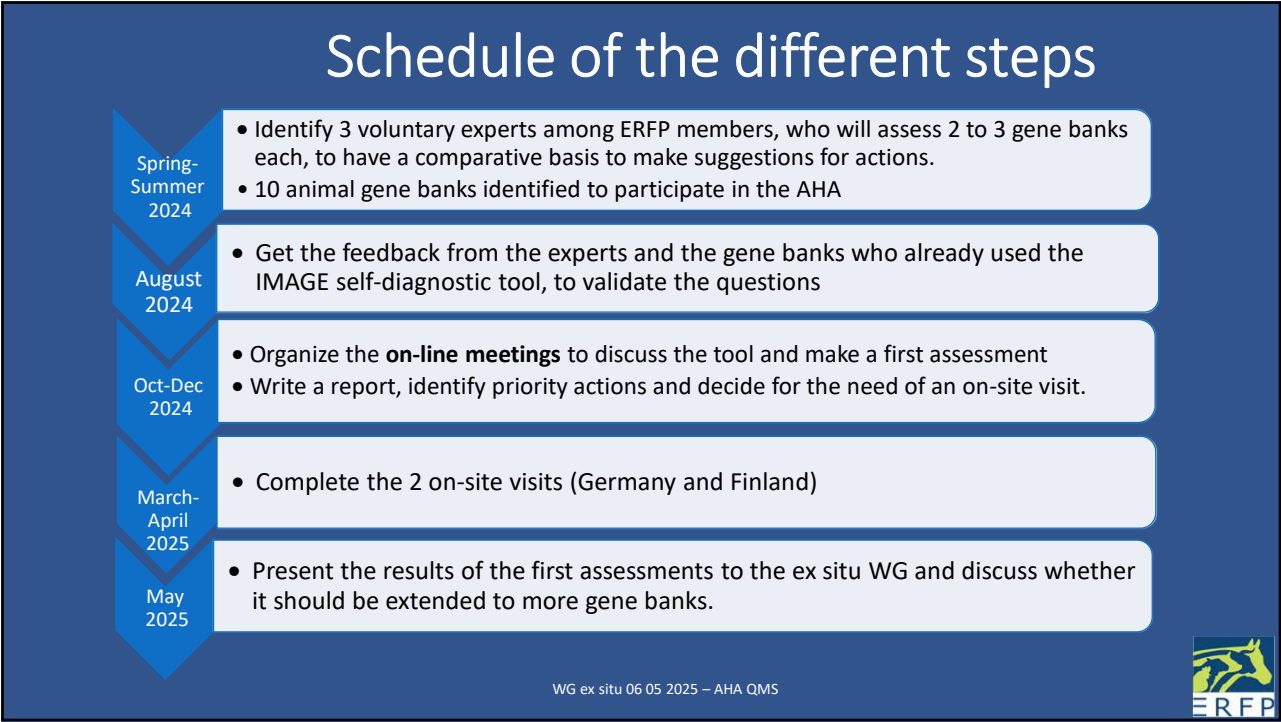
General information

- <u>Proposition</u> initially made by Michèle Tixier-Boichard (INRAE) and validated by the ERFP SC in 2021 but delayed due to time constraints. EUGENA and now EU Reference Centre on Endangered Animal Breeds are also interested in the approach

- <u>Goal</u> : help standardize the management practices in animal gene banks and guide them towards implementation of a QMS

- <u>How</u> ? Using the self-diagnostic tool prepared during the H2020 IMAGE project to help a gene bank to assess its progress towards a full QMS
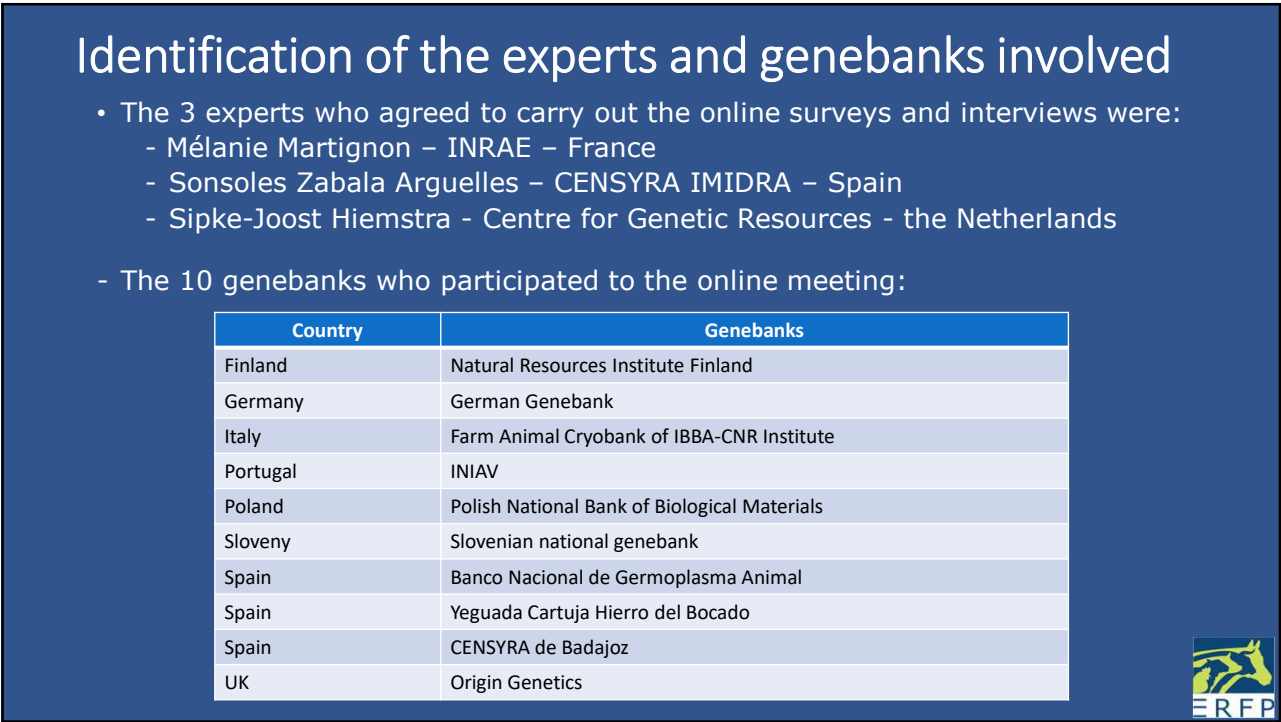
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Schedule of the different steps

Spring-Summer 2024	• Identify 3 voluntary experts among ERFP members, who will assess 2 to 3 gene banks each, to have a comparative basis to make suggestions for actions. • 10 animal gene banks identified to participate in the AHA
August 2024	• Get the feedback from the experts and the gene banks who already used the IMAGE self-diagnostic tool, to validate the questions
Oct-Dec 2024	• Organize the **on-line meetings** to discuss the tool and make a first assessment • Write a report, identify priority actions and decide for the need of an on-site visit.
March-April 2025	• Complete the 2 on-site visits (Germany and Finland)
May 2025	• Present the results of the first assessments to the ex situ WG and discuss whether it should be extended to more gene banks.

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Identification of the experts and genebanks involved

• The 3 experts who agreed to carry out the online surveys and interviews were:
  - Mélanie Martignon – INRAE – France
  - Sonsoles Zabala Arguelles – CENSYRA IMIDRA – Spain
  - Sipke-Joost Hiemstra - Centre for Genetic Resources - the Netherlands

- The 10 genebanks who participated to the online meeting:

Country	Genebanks
Finland	Natural Resources Institute Finland
Germany	German Genebank
Italy	Farm Animal Cryobank of IBBA-CNR Institute
Portugal	INIAV
Poland	Polish National Bank of Biological Materials
Sloveny	Slovenian national genebank
Spain	Banco Nacional de Germoplasma Animal
Spain	Yeguada Cartuja Hierro del Bocado
Spain	CENSYRA de Badajoz
UK	Origin Genetics

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Results of the 10 on-line meetings – IMAGE survey

Field of the questions	Genebank										Average score	Maximum score
	1	2	3	4	5	6	7	8	9	10		
A- General gene bank management	7	5	7	5	10	3	10	7	10	9	7,3	12
B- General quality management	5	6	6	10	16	6	12	16	14	16	10,7	16
C- Gene bank equipment	6	6	2	4	4	6	6	6	6	5	5,1	6
D- Gene bank personnel	7	4	4	8	7	8	6	6	6	8	6,2	8
E- Genetic material database	1	6	6	6	6	5	4	6	6	5	5,1	6
F- Genetic material acquisition	1	2	0	2	2	2	2	2	2	2	1,7	2
G-Material collection (if relevant)	6	6	6	6	6	6	6	6	6	6	6,0	6
H- Introduction of previously processed material (if relevant)	8	3		8	5	3	6	7	7	4/4	5,9	8
I- Material storage	5	6	6	6	4	6	6	6	6	6	5,7	6
J- Material distribution	2	4		4	2	2	4	4	4	4	3,3	4
TOTAL score	48	48	37/62	59	62	47	62	66	67	65	56,1	74

➤ High total scores for many genebanks

➤ Fields with high score: material collection, mat. storage, equipment =>genebank's core business

➤ Fields with low scores: general management and quality management =>not linked with the operational activities, important to develop them during the process but maybe lack of tools or methods to achieve ?

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The 2 on-site visits

➤According to the budget, the limited availability of the experts and the choice to send 2 persons for each visit, 2 genebanks were visited to benefit of personalised advices and awarness of ISO 9001:

    - the German National genebank by Mélanie Martignon and Sipke-Joost Hiemstra   in March

    - the Natural Resources Institute of Finland by Mélanie Martignon and Delphine Duclos in April.

➤Feedbacks show that the approach is worthwhile for genebanks interested in the process to develop a QMS (particularly when it is not too advanced), especially with a two-person team: one person with expertise in QMS and a second with the experience of its own genebank. Mélanie's approach showing the process with "DEMING Circle" was particularly appreciated or the work on a SWOT analysis.

Of course, a single on-site visit is not enough to really go deep in the formalisation of the QMS but it does provide an opportunity for interesting discussions and external feedback to suggest methods or possible improvements for the future.

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How to continue the work, some proposals

➢ The IMAGE self-diagnostic tool seems to be a good way to identify strengths and points to be developed. The total score can indicate whether the process is advanced or not (e.g. : more than 60 points, the process is almost complete)

➢ Facilitate the exchanges of document templates needed for a QMS (for example: table of relevant stakeholders, PESTEL analysis for external factors, SWOT analysis…).
=> More generally, what kind of documents/protocols could be shared (translated) between genebanks for inspiration at ERFP level ?

➢ Organise a peer review/on-site visit system for interested genebanks (e.g. within EUGENA) seems to be interesting. Volunteer experts needed, and travel costs could be (partly) covered by ERFP/EUGENA ?

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What would we like to propose to the next general assembly ?

➢ Suggest a number of visits per year (or for 2-3 years) with expert travels ?

➢ New ad hoc action needed ?

➢ Part of EUGENA budget ?

➢ Who will coordinate it ?

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