Leaders of the Ad Hoc action: Delphine Duclos (Institut de l'Elevage).

ERFP Ad Hoc Action (AHA)

Use of the IMAGE self-diagnostic tool to support the development of a quality management system (QMS) in European animal gene banks

AHA objective:

The goal of this AHA was to help standardize and further improve the management practices in animal genebanks and to guide them towards implementation of a QMS.

1) The genebanks involved

The first activity was to organize online meeting with 10 voluntary genebanks to discuss with an identified expert the IMAGE self-assessment tool and make a first assessment.
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

10 genebanks accepted to be involved in the online meetings:

Country	Genebank
Finland	Luke – 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

2) The IMAGE self-diagnostic tool

The survey is organized with 37 questions divided into 10 fields. For each question, the answer can be:

- No : 0 point
- Work in progress : 1 point
- Done: 2 points

The total score indicates the position of the genebank in relation to the QMS. The field's scores help to identify in which area the efforts should be focused.

3) The results of the 10 surveys

The results are summarized in the table below.

	Genebank											
Field of the questions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	Average score	*Maximum score*
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*

Table 1 : Scores of the 10 genebanks obtain during the survey (random order)

The total scores of the genebanks are quite high with on average more than 56/74. 5 genebanks even have a score equal or superior to 62 points. It means that for them, a quality management system is already well established and, if a QMS certification is not already obtained, it will not be too difficult to get it.

The fields with the lowest scores are: “general genebank management” and “general quality management”. An hypothesis can be that these questions directly linked with the management are often the last things that are formalized during a QMS development. On the contrary, the fields in the genebank's core business have very high scores as for “material collection” or “material storage”, or at least high as for: “genebank equipment” or “genebank personnel”.

To complete this very general overview, each genebank also received from the expert that conducted the survey, a general conclusion of the on line interview based on the self-assessment questionnaire. .

4) The on-site visits

After the online meeting, the AHA proposed to organize on-site visits for some genebanks particularly interested in the process of developing a QMS for their genebank. After a discussion between the 3 experts who conducted the interviews and Delphine Duclos, who led the AHA, first priority was given to the genebanks that seemed most motivated by the approach and with a short-term certification objective.

According to the availability of the experts and the budget allowed, it was decided to plan a visit of:

- the German National genebank by Mélanie Martignon and Sipke-Joost Hiemstra
- the genebank’s of Luke in Finland by Mélanie Martignon and Delphine Duclos (Institut de l’Elevage).

The aim of the on-site visit was to know if this kind of complete approach (online survey + on-site visit) is a good way to help genebanks to go further in their QMS development and to get a certification.

The on-site visit from the German national genebank was done in February 2025 and the visit of Luke in April.
For both, Mélanie Martignon presented slides about “Development and implementation of a QMS and continuous improvement”. Each structure gave a general explanation of how they work and showed their facilities. These sessions gave rise to rich discussions between the representatives of the genebanks and the experts, but also between the representatives themselves. The work was concluded with the start of a SWOT analysis for each genebank.

Both visits were very appreciated by the 2 genebanks and the participants indicated that it could be good, to follow up this AHA to strengthen the collaboration and exchange of knowledge between European genebanks.

5) Presentation of the results during the meeting of the ex situ WG

In May 2025 in Athens, the last step of this AHA was to present the results to the members of the ERFP ex situ working group. Some proposals to continue the work were done :

- 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 think about 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 are needed, and travel costs could maybe be (partly) covered by ERFP/EUGENA.

Finally, the next general assembly will discuss which follow-up will be given to this AHA.

Conclusion

This AHA confirmed the interest in using the IMAGE self-diagnostic tool to get an initial overview of progress towards a QMS development for a genebank. In particular, it helps to identify the strengths and weaknesses that still need to be addressed.
Discussions with experts, as proposed during on-site visits, have also proved useful in moving the process forward and exchanging views on the progress made and the points to be developed or improved. One single visit is not enough to make significant progress, but it does help to highlight the obstacles and try to find solutions to the problems encountered.
This type of exchange could be continued if the General Assembly deems it useful.