
IMAGE

Innovative Management of Animal Genetic Resources

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DELIVERABLE D9.3

Deliverable title: Ethical considerations regarding the choice of breeds for cryoconservation

Abstract: this deliverable was proposed by the ethical committee during the review process of IMAGE. It was prepared with a survey of more than 150 actors of different profiles and showed a strong consensus for a cooperative decision-making process at the time of sampling breeds for gene banks as well as for a strong expectation towards support from public policies with dedicated funding, since gene banks answer a wide range of needs for the society, for livestock farming and for science. It also revealed different viewpoints on technological issues depending on the type of actors. Results will contribute to D7.13 but do not impact the work programme of IMAGE since no enrichment of the collections was funded by the project.

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Contributors: INRA, SAVE, BOKU, EFFAB, SGGW

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PU Public (must be available on the website)
PP Restricted to other programme participants (including the Commission Services)
RE Restricted to a group specified by the consortium (including the Commission Services) (precise to whom it should be addressed within IMAGE consortium)
CO Confidential, only for members of the consortium (including the Commission Services)

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Executive Summary

Background	IMAGE is aimed at improving the efficiency of animal gene banks. The representativeness of breeds in a gene bank is an important criterion to assess the usefulness of a gene bank. Sampling strategies for cryopreservation depend on available technologies, which are studied in WP3 and discussed with stakeholders in WP1. Yet, whatever the technique, sampling requires choices to be made at the level of the species, of the breed, of the animals within the breed. This cannot be done without the cooperation of farmers or associations who raise farm animals. Thus, choosing breeds has an ethical dimension which must be considered by gene banks.
Objectives	To study the motivations and concerns of different actors for gene-banking and their expectations regarding the decision-making process involved in the choice of breeds. To incorporate corresponding recommendations in the updated guidelines for the management of animal gene banks (D7.13).
Methods	A questionnaire-based survey was specifically elaborated by WP1 for this deliverable, with inputs from interested partners in WP2, WP3 and WP7. The survey was distributed to the participants at various meetings and events concerning gene banks and breed conservation. Analysis was performed with a multiple correspondence analysis (MCA) developed for nominal categorical data, which makes possible to reveal underlying structures in a data set. It does this by representing data as points in a low-dimensional Euclidean space
Results & implications	This survey has shown very positive views of stakeholders on the following points: <ul style="list-style-type: none"> - Gene banks are not considered as competing with conservation programmes of live populations - Gene banks should be supported by governments - Gene banks should be managed by consensus among actors All this supports the perception of genetic resources as a public good. Results also showed the relativity of positions on technologies, suggesting that a risk/benefit approach could be considered for the use of invasive technologies or sensitive biotechnologies (cloning, transgenesis). The profile of the respondents influenced this response, with a greater support among scientists. A less encouraging message was that motivations for gene banking are still very classical, showing that methods for innovative use of gene banks that are developed by IMAGE, need explanations, training and success stories. Corresponding recommendations will be integrated in the updated FAO guidelines for cryoconservation of breeds.

1- Implementation of the survey

1.1 Content

The questionnaire was organised in 4 sections:

Section 1 was aimed at collecting general information about the expertise and the field of activity of the respondent. No personal data was requested. The questionnaire was anonymous.

Section 2 addressed the motivations for breed conservation, the desired decision-making process, the possible balance between cryopreservation and conservation of live populations.

Section 3 addressed the technical innovations associated with gene banking with possible trade-offs. Part of this section has also been used for D1.5

Section 4 was a free text section to get any other opinion, but there was no contribution by the respondents.

The full text of the survey is presented in Annex 1.

An on-line version was developed, in English and in French, to facilitate recording and automatic analysis of the answers.

Printed versions were also translated and distributed in German and in Italian.

1.2 Events

During 2018, the survey was distributed to the participants at various meetings and events concerning cryobanks and breed conservation: National Coordinators for Animal Genetic Resources of FAO (side event at FAO ITWG, June 2018), members of Working Groups of the European Regional Focal Point for Animal Genetic Resources (Working GroupEx Situ (Zagreb, June 2018), and annual General Assembly meeting of National Coordinators (Zagreb, August 2018), NGO (SAVE) (SAVE meeting 2018 in Kozard, “Arca-Net”-members: www.arca-net.info), PhD students (PhD training session at Wageningen University & Research, the Netherlands, October 2018), scientists (AQUAGAMETE, November 2018), stakeholders of the French infrastructure for animal gene banks (CRB-Anim, October 2018). The number of participants is reported in Table 1 for the corresponding events.

Table 1. Events and number of respondents

Meetings / Events	Freq	%
FAO ITWG	23	14
PhD_WUR	25	16
SAVE	26	16
ERFP WG ExSitu	19	12
ERFP Assembly	12	8
AQUAGAMETE	7	4
CRB-Anim	47	30
TOTAL	159	100

1.3 Profile of the respondents

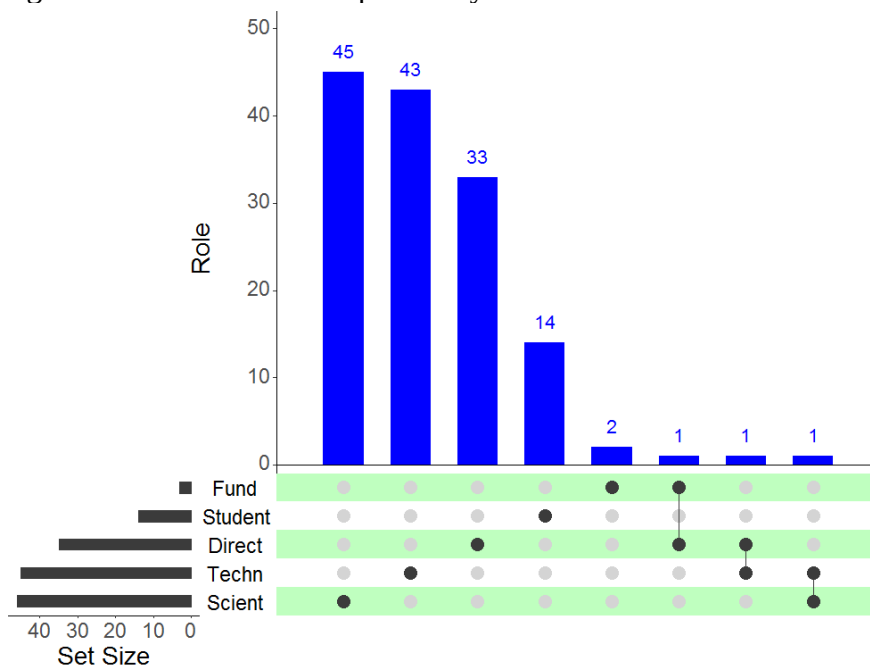
A total of 159 persons responded. Profiles of the respondents were balanced between researchers and other stakeholders (Table 2).

Table 2. Frequencies of the role of respondents

Role	Frequency
Science	46
Technician	43
Direction, management	34
Other	19
Student	14
Funding body	3

The role of respondents was diverse, including scientists, students, breed managers and cryobank managers. The most represented affiliations were research institutes or universities (51 % of the respondents), followed by breed associations (22%), government representatives (14%) and non-governmental organizations (8%) (Figure 1). In addition, some respondents played different roles or had more than one affiliation.

Figure 1. Distribution of responses by role



Various species were concerned, ruminants, poultry, pig, horses and fish (Table 3).

Table 3. Frequencies of the species of interest

No answer	3
CATTLE	18
FISH	10
GOAT	6

- the type of their institution,
- their role in the institution,
- whether they represent their own view, or the view of their institution (Table 4),
- the breeds they are working on (Table 5)

Table 4. Type of the institution, Role in the institution and the view respondents represent

Type of the institution	Short name in the next figures	Freq.
Public genebank	TYPE_BANKPUB	27
Private genebank	TYPE_BANKPRIV	5
Breeders association for single breed	TYPE_BRASSSING	14
Breeders association for various breed	TYPE_BRASSMUL	21
Breeding company/breeding industry	TYPE_BRCO	2
Biotechnology company	TYPE_BIOT	2
Science (University, research organization)	TYPE_SCI	81
Extension service	TYPE_EXT	9
Non-governmental organization	TYPE_NGO	12
Government	TYPE_GOV	22
Your role in the Institution	Short name in the next figures	Freq.
Technical Management	ROLE_TECHN	45
Funder	ROLE_FUND	3
Directorate	ROLE_DIR	35
Scientific	ROLE_SCI	46
Student	ROLE_STD	14
Other role	ROLE_OTHER	13
The view you represent	Short name in the next figures	Freq.
My own	VIEW_OWN	107
My institution	VIEW_INST	48

Table 5. Type of breeds the respondents are working on.

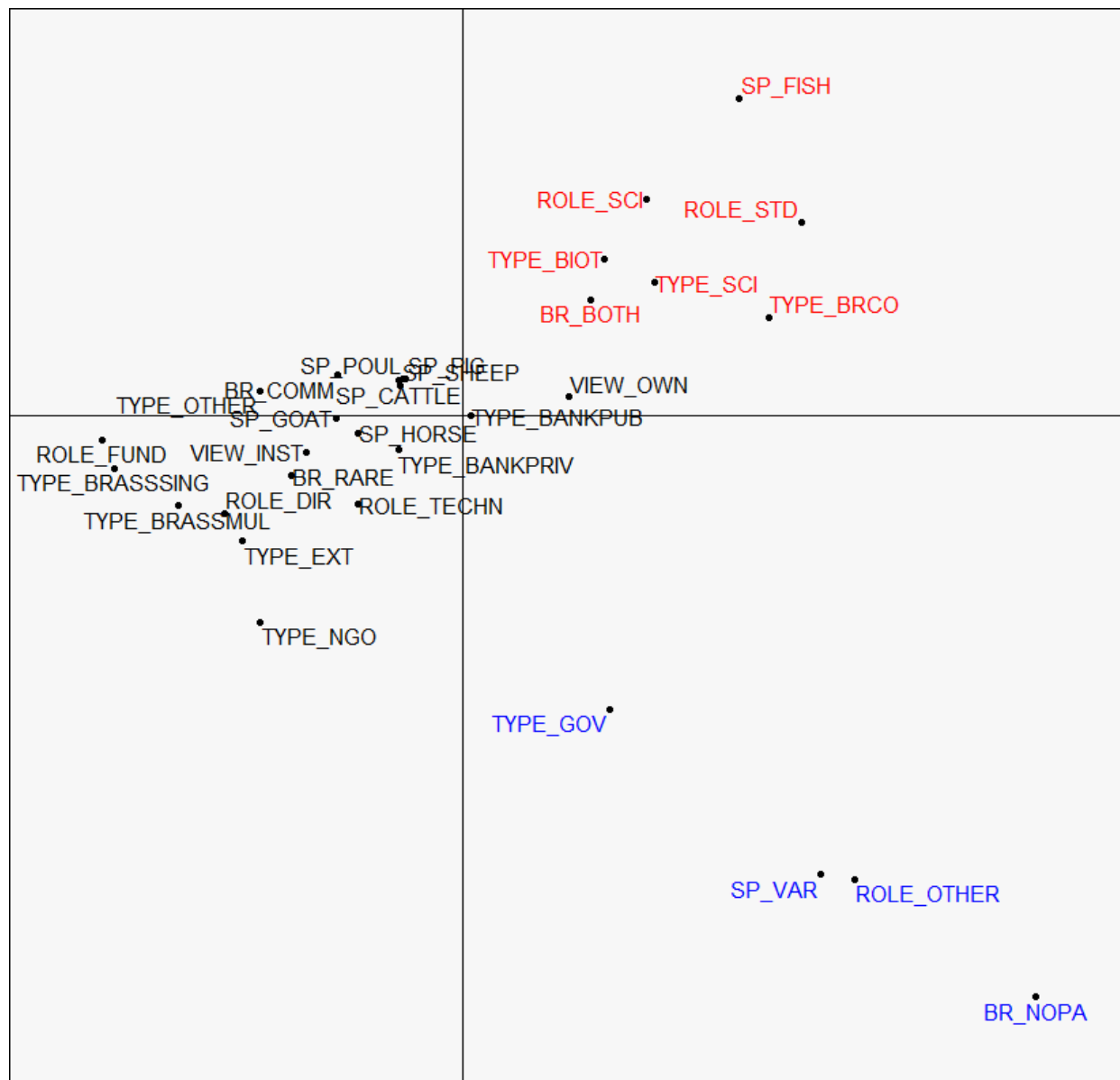
On which breeds are you working?	Short name in the next figures	Freq.
Rare breeds	BR_RARE	58
Commercial breeds	BR_COMM	19
Both	BR_BOTH	72
No particular breed	BR_NOPA	12

MCA is a multivariate exploratory analysis for visualizing large datasets of discrete variables. Its graphical visualization provides a structural organization for the variables and categories in a dimensional space that is useful for identifying patterns in the data and associations between the investigated parameters (Greenacre and Blasius, 2006; Greenacre, 2017; Blake, 2017). Typically, a MCA plot (as in Figure 3) shows the distribution of the coordinates of the different factor modalities. The closer the

distance between points represented in space, the more similar the categories become in the distribution: the proximity between the modalities of the different factors means that these modalities tend to occur together in the observations. Similarly, the proximity between two modalities of a same factor means that the groups of observations associated with these two levels are similar.

A multiple correspondence analysis (MCA) was performed on the four factors describing the profile of the respondents: Type of the institution they are working for (Type), Breeds they are working with (Breed), View they are representing (View) and the role they play in the institution (Role). The resulting MCA plot is in Figure 3. From this plot, two specific clusters (in red in Figure 3) may be highlighted: (1) scientists and students (ROLE_SCI and ROLE_STD), who are overrepresented in the aquaculture sector (SP_FISH), (2) a group of categories that appear to be only indirectly concerned by genetic resources, and without specific activities: TYPE_GOV, SP_VAR, ROLE_OTHER and BR_NOPA. (in blue in Figure 3).

Figure 3. The MCA plot: Institutions, roles, views, species, breeds



2.2 Motivations for breed conservation

Objectives of cryoconservation of breeds.

The motivations for breed conservation were analysed by ranking the objectives for cryobanking of a breed, and defining the main criteria to choose between breeds. Multiple answers were possible.

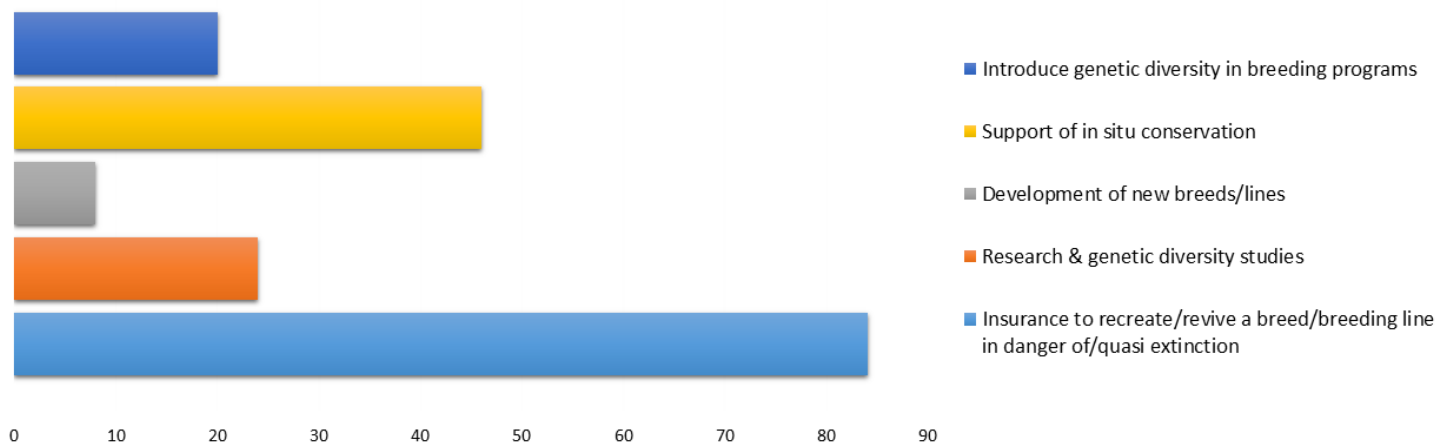
Different objectives had to be ranked by order of importance. Figure 5 gives the number of times an objective was considered to be the most important. Among the various proposed answers, the item “Insurance to recreate/revive a breed/breed line in danger of extinction” came up most frequently, followed by the items “support of in situ conservation”, and “research and genetic diversity studies”. Conversely, introducing genetic diversity in breeding programs or develop new breeds or lines are given a lower priority.

This result is consistent with the Gene bank survey (D2.2) where gene bank managers ranked the objectives as did the population of respondents to the ethical survey, which included a much broader set of respondents.

This underlines, once again, a very conservative approach of the actors, who do not consider at present to produce new genotypes or to re-orient breeding programmes thanks to gene banks. The reason for this can be traced back to the history of gene banks that were initially set-up to preserve genetic diversity in a rather static way. The easy way to communicate about gene banks has long been the concept of a back-up in case of emergency, which is fortunately a rare event, so that at present collections are kept as an asset that should not be ‘consumed’. This also shows that most respondents really expect an efficient use of frozen semen, sufficiently efficient to restore a whole population. However, WP3 has observed a great individual variety of the fertility of frozen semen, which may limit the success of a full restoration of a lost breed from a gene bank collection.

Furthermore, it could be also that stakeholders do not consider more innovative options because of a lack of understanding of their potential importance.

Figure 5. Nb of times the criterion is considered the most important



Main criteria to choose a breed for cryoconservation.

Among several criteria, the three most often mentioned criteria are:

- the high degree of endangerment,

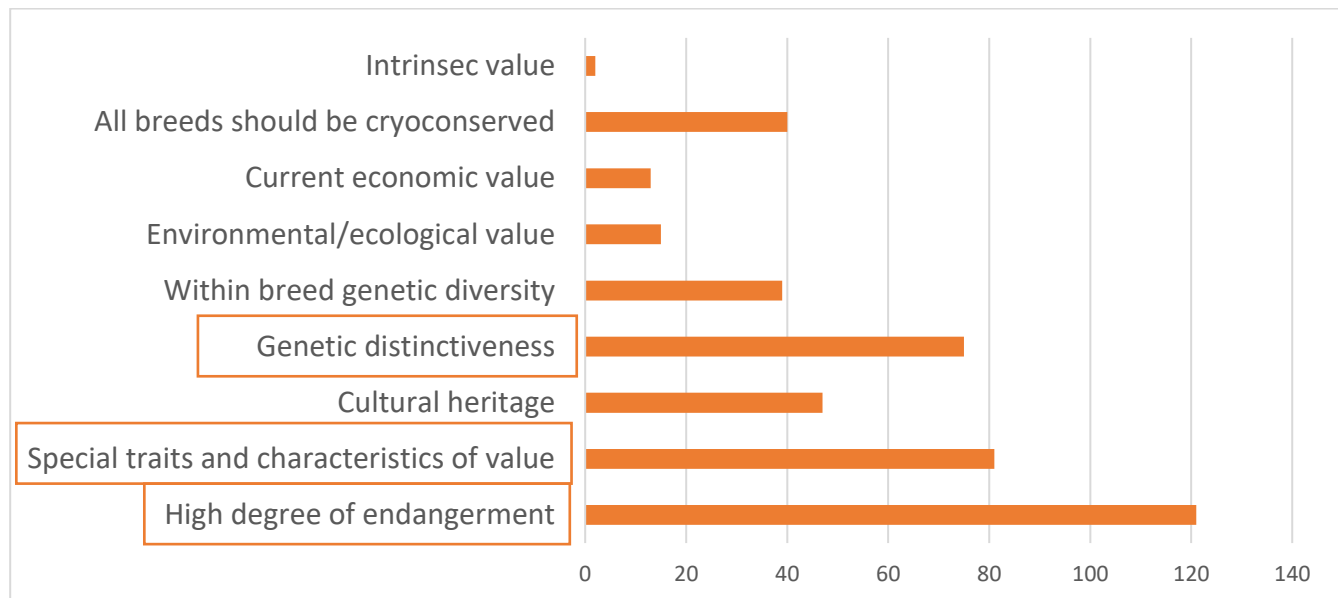
- the special traits and characteristics of value
- the genetic distinctiveness,

The economic or environmental value appear to be less important (Figure 6).

This is in accordance with the objectives considered as the most important:

- insurance to recreate/revive a breed in danger of extinction,
- support of in situ conservation.

Figure 6. Criteria to choose a breed for cryoconservation



Impact of cryoconservation on the in situ conservation.

Several answers were possible for this question. The cryoconservation impact on the *in situ* conservation was considered as positive by 89% of the respondents, which is very encouraging for IMAGE in particular, and for the development of gene banks in general. Among the positive impacts, the conservation of within-breed genetic diversity (62 %), the revitalization of blood lines (53 %) and the collaboration between breeders and research (52 %) were most frequently mentioned.

No proposal was made for the optimal balance between *in situ* and *ex situ* conservation, one reason may be that the respective costs are not well known. Whereas IMAGE has produced a new method to assess the economic optimization of gene banking, the cost of *in situ* conservation was not in the scope of the project. Comparing in situ and ex situ conservation costs is a question to be transferred to ERF.

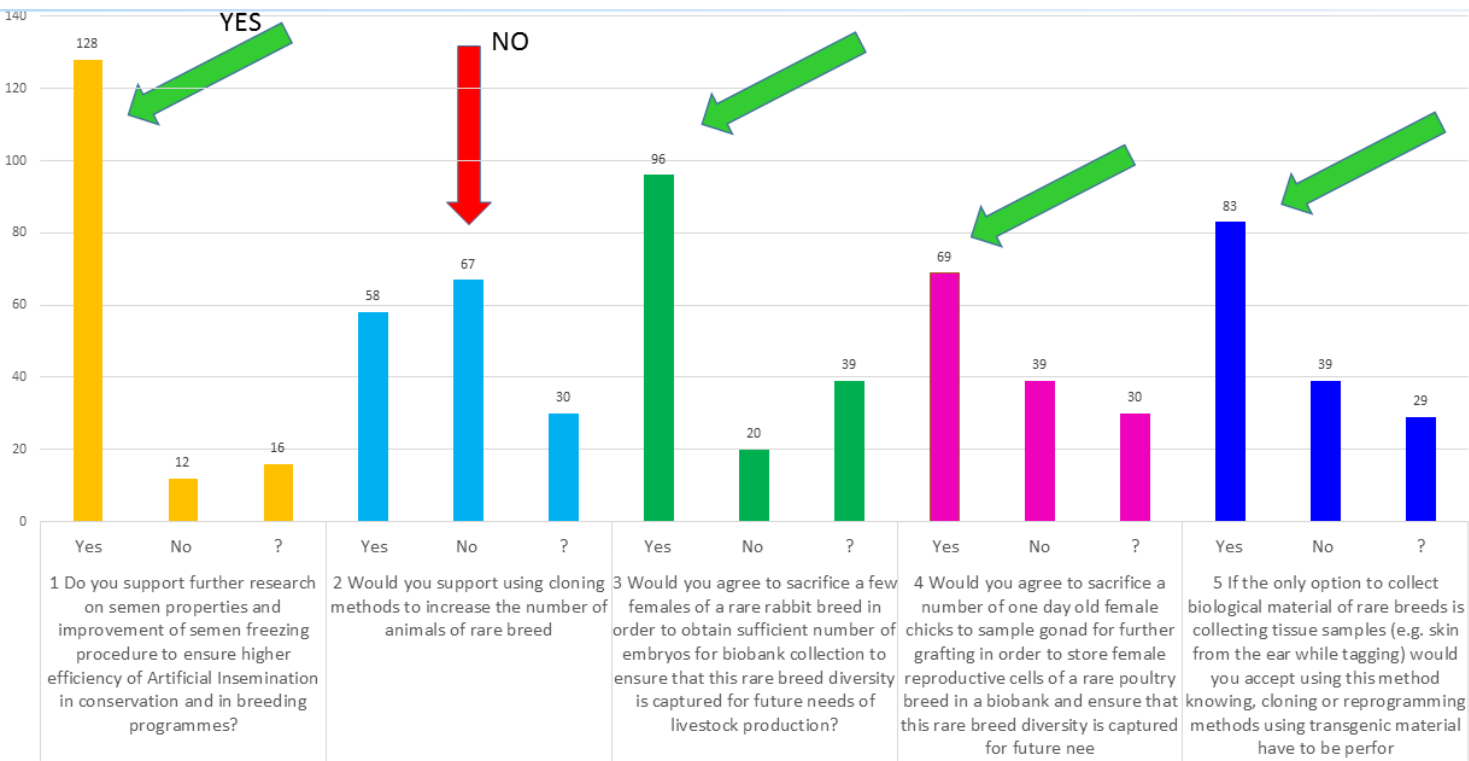
2.3 Innovations in biobanking and trades off

Acceptance of technology and ethical issues.

The opinions on innovations in biobanking and trades off were analysed for different technologies from the least to the most invasive. The questions firstly concerned the research on semen conservation

technology and the use of cloning or transgenesis for conservation purposes. The majority of the respondents supported the use of these techniques, except for cloning. The level of support varied according to the respondents’ profile. Particularly, it was higher for students and scientists, and for people involved in the aquaculture industry. The same scheme was observed for ethical issues, namely the use of slaughter of animals (rabbits or chicks) for sampling breeds for gene banks. Comparison of answers to questions 2 and 5 in Figure 7, showed an inversion of ranking, suggesting that respondents were able to consider trade-offs between the major risk of losing a population (motivating the Yes at question 5) and the low acceptance of cloning in general (motivating the No at question 2). The concept of acceptance is discussed further in D1.5.

Figure 7. Innovations in biobanking and trades off



Innovation, Ethics and respondent profiles.

We considered the five previous items, “CLONE”, “TRANSGENESE”, “TECHNO”, “CHICK” and “RABBIT”, As in \$2-1, a Multiple Correspondence Analyse was performed in order to help interpreting the relationships between all these items. NB. Eight answers were removed from the analysis, because of missing values.

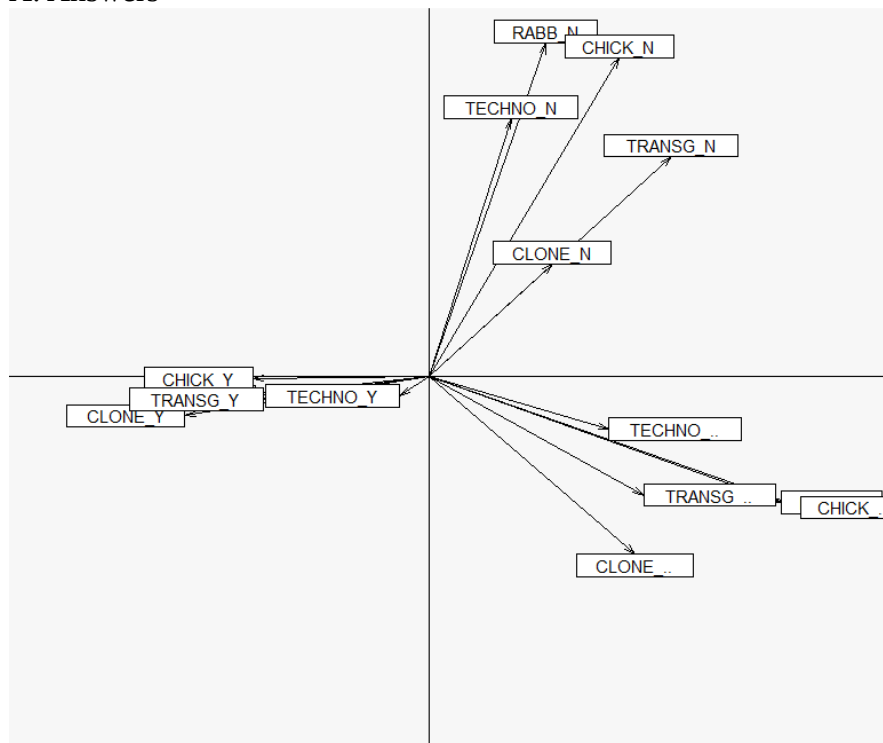
Relationships between the profile of the responders and their position regarding the ethical and technological issues can be visualized thanks to the two plots of Figure 8. For sake of interpretability, we have split the MCA plot into two subplots, 8A (at left), where the answers are plotted, while profiles of responders are plotted in Fig 8B (Right). Nevertheless, the interpretation of this Figure is the same as above: the proximity between the modalities of the different factors means that these modalities tend to appear together in the observations.

First, what can be seen on Figure 8A is the coherence of answers (Y= Yes, N=No, ..="No Answer") among items: All the "Yes" answers clustered in the same area of the plot. The same occurs for the other answers (No and "No Answer"): It means that people, globally, have the same general position regarding these issues.

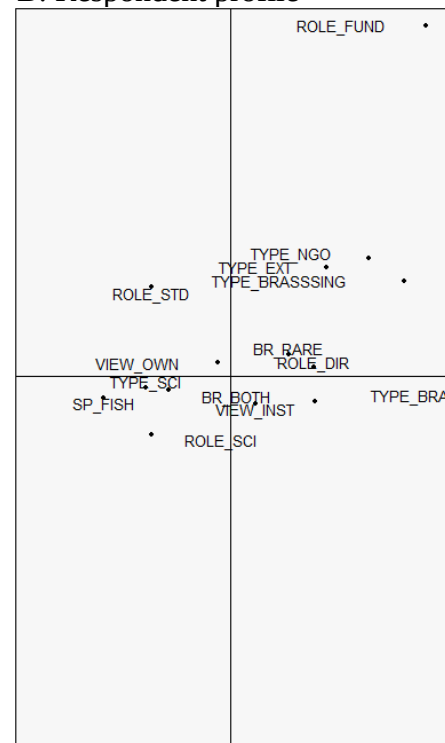
Second, looking at the respective positions of answers (Fig 8A) and respondent profiles (Fig8B), shows that a correspondence may be set between a positive attitude regarding technology and ethics, on the one hand, and the profiles of scientists, students, or aquaculture, both located at the left of the figures, on the other hand. However, funding people, and NGO agents appear to be more reluctant.

Figure 8. Multiple correspondence analysis among Techno / Ethical items. First two axes.

A: Answers



B: Respondent profile



In order to understand how the profile of the respondent determines the answers, we tested whether the answers from one group significantly deviated from the total answers of all the other groups.

After this test, we selected profiles for which the corresponding p-value was less than 0.1. The results of the test are shown in Table 6.

Table 6. List of modalities for which answers significantly deviated from all others

		pval
Type of institution Science (University, research organization)	TYPE_SCI	0.001
Role Scientific	ROLE_SCI	0.001
Rare and commercial breeds	BR_BOTH	0.001

Type of institution Breeders association for single breed	TYPE_BRASSING	0.002
Type of institution Non-governmental organization	TYPE_NGO	0.002
Role Funder (only two answers in this case)	ROLE_FUND	0.009
Species Fish	SP_FISH	0.009
Type of institution Extension service	TYPE_EXT	0.012
Type of institution Breeders association for various breed	TYPE_BRASSMUL	0.016
Role Student	ROLE_STD	0.022
Role Direction or Management	ROLE_DIR	0.027
Rare Breeds	BR_RARE	0.055
Institution view	VIEW_INST	0.081
Personal view	VIEW_OWEN	0.098

2.4 Decision and funding

For questions relative to decision and funding, a great majority of respondents considered that the decision-making process should be handed over by a multi-actor board, while the funding should be provided by national governments.

This answer about funding is consistent with the results of the survey on European Gene banks (reported in D2.2) which showed that 82% of Gene banks were managed by public institutions, which are supported by public funding.

The strong support to a multi-actor board is a major result of this survey. Typically, the option of ‘who is paying is deciding’ is not considered. This can be interpreted as a strong support to the concept that gene bank collections are public goods. Public money is supporting an activity where decisions are taken by a consensus among gene bank managers, breeders (either breed associations, breeding companies) and scientific experts.

3- Conclusions and perspectives

Before looking at the main messages we can extract from this survey, it is useful to observe that the diversity of responses shows that animal gene banks are facing a range of expectations from different actors. As recognized by Gottweis & Lauss, (2012), biobanks stand at a crossroad of different fields:

- scientific and technology
- industry and economics,
- legal and ethical issues
- agriculture policy and animal breeding.

As a consequence, governance of an animal gene bank has to cope with requirements from these fields, which may create tensions. Gottweis & Lauss stated rightly that *‘Biobank governance should therefore be understood as strategy for patterning a network of interaction that unfolds within and across a number of different fields’*. Ethical considerations are thus embedded into this complex background.

This being said, this survey has been extremely useful for the vision and management of gene banks at several levels.

It has shown very positive views from the respondents on the following points:

- Gene banks are not considered as competing with conservation programmes of live populations

- Gene banks should be supported by government
- Gene banks should be managed by a multi-actor board

These points are all consistent with the perception of genetic resources as a public good, that has to be managed by consensus to the benefits of the society.

It has shown that the positions on the use of some technologies were influenced by previous knowledge of these technologies, and by the context of their use, suggesting that a risk/benefit approach could be considered for the use of invasive technologies or sensitive biotechnologies (cloning, transgenesis).

It has shown that motivations for gene banking are still very classical and that methods for innovative use of gene banks that are developed by IMAGE have to be promoted, they need explanations, training and success stories.

These observations will be considered for the update of FAO guidelines for cryoconservation of animal genetic resources (D7.13).

It was a pity that the free text zone was not used by respondents to the survey. It may suggest that the questions covered all their concerns, but could also indicate a lack of consideration for ethical issues in their everyday activities. Also, it was disappointing to observe the low priority given to environmental value of breeds, or their adaptation to alternative production systems, as motivations for choosing breeds for cryopreservation.

Finally, we acknowledge a limitation of this survey, which was directed towards professional actors and scientists working in the livestock sector. As explained in D1.5, a 'general public' is not interested yet in gene banking for animals. An extensive background knowledge, both about the organization of the sector, the gene banking operations and the technologies available for use, should be provided as a preliminary step before extending this survey to the society as a whole. This could be recommended for the general strategy of the EUGENA network, which will inherit from the outcomes of IMAGE.

4- REFERENCES

-
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- Gottweis, H., Lauss, G. (2012) Biobank governance: heterogeneous modes of ordering and democratization. *J. Community Genetics*, 3: 61-72.
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- Greenacre, M. (2017) *Correspondence analysis in practice*. Chapman and Hall/CRC, 2017.

5- ANNEX 1 :

Survey: Innovations and ethical issues for the cryoconservation of animal genetic resources

I. General information

1. Type of your Institution

- ☐ Genebank
 - ☐ public
 - ☐ private
- ☐ Breeding company/breeding industry
- ☐ Biotechnology company
- ☐ Breeders Association
 - ☐ Single breed
 - ☐ Various breed
- ☐ Science (University, research organization)
- ☐ Extension service
- ☐ NGO
- ☐ Government
- ☐ Other, please specify.....

2. Your role in the Institution

- ☐ Technical Management
- ☐ Funder
- ☐ Directorate

3. The view you represent

- ☐ My own
- ☐ My Institution

☐ On which species are you working?

- | | | | |
|---------------------------------|----------------------------------|--------------------------------------|--|
| <input type="checkbox"/> Cattle | <input type="checkbox"/> Sheep | <input type="checkbox"/> Goats | <input type="checkbox"/> Horses |
| <input type="checkbox"/> Pigs | <input type="checkbox"/> Poultry | <input type="checkbox"/> Aquaculture | <input type="checkbox"/> No particular species |

☐ On which breeds are you working?

- ☐ Rare breeds
- ☐ Commercial breeds
- ☐ Both
- ☐ No particular breed

II. Motivation for Breed Conservation

1. What are the main objectives of cryoconservation of breeds in a gene bank?

- ☐ Insurance to recreate/revive a breed/breeding line in danger of/quasi extinction
- ☐ Research & genetic diversity studies
- ☐ Development of new breeds/lines
- ☐ Support of in situ conservation
- ☐ Introduce genetic diversity in breeding programs
- ☐ Others, please specify.....

2. What should be the main criteria to choose a breed for cryoconservation (max. 3 answers)

- ☐ Degree of endangerment
- ☐ Special traits and characteristics of value
- ☐ Cultural heritage
- ☐ Genetic distinctiveness
- ☐ Missing in-situ conservation
- ☐ All breeds should be cryoconserved
- ☐ Current economic value
- ☐ Within breed genetic diversity
- ☐ Others, please specify.....

3. Who shall prioritize and decide, which breed and to what extent should be cryoconserved (more than one answer possible)?

- ☐ Breeding organization
- ☐ Researchers
- ☐ Government
- ☐ Gene bank manager
- ☐ A multi actor Board
- ☐ Others, please specify.....

4. Do you think that cryoconservation may have an impact on in situ conservation ? Which one?

- ☐ Revitalizing blood lines or restoring within-breed diversity
- ☐ Collaboration of conservation breeders with research
- ☐ "security double"
- ☐ Policy of subsidies
- ☐ Negative for in situ conservation
- ☐ Positive for both
- ☐ Others, please specify.....

5. Who should pay for cryoconservation ?

- ☐ Breeding organizations ☐ Research ☐ Government

6. Which balance do you wish to see between on farm conservation (in situ) and cryoconservation (ex situ) for the use of public subsidies?

- ☐ clear prioritisation of in situ ☐ clear prioritisation of ex situ
☐ Suggestion for a balance.....

III. Innovations in bio banking and trades off

1 Do you support further research on semen properties and improvement of semen freezing procedure to ensure higher efficiency of Artificial Insemination in conservation and in breeding programmes?

- ☐ No ☐ Yes ☐ Do not know

2 Would you support using cloning methods to increase the number of animals of rare breed

- ☐ No ☐ Yes ☐ Do not know

3 Would you agree to sacrifice a few females of a rare rabbit breed in order to obtain sufficient number of embryos for biobank collection to ensure that this rare breed diversity is captured for future needs of livestock production?

- ☐ No ☐ Yes ☐ Do not know

4 Would you agree to sacrifice a number of one day old female chicks to sample gonad for further grafting in order to store female reproductive cells of a rare poultry breed in a biobank and ensure that this rare breed diversity is captured for future needs?

- ☐ No ☐ Yes ☐ Do not know

5 If the only option to collect biological material of rare breeds is collecting tissue samples (e.g. skin from the ear while tagging) would you accept using this method knowing cloning methods or reprogramming methods using transgenic materials have to be performed to recreate individuals from such biological material?

- ☐ No ☐ Yes ☐ Do not know

IV. Any other ethical issue you would like to mention regarding cryoconservation of animal genetic resources (free text)

.....
*Thank you very much for your kind collaboration*

Contexte de réponse	n° de réponse	I. General Information												
		1. Type of your Institution												
		Genebank		Breeders Association		Breeding company/breedi ng industry	Biotechnology company	Science (University, research organization)	Extension service	NGO	Government	Other, please specify		
		public	private	Single breed	Various breeds									
CONTEXT	ID	TYPE_BANKPUB	TYPE_BANKPRIV	TYPE_BRASSINGTYPE	TYPE_BRASSMULTYPE	TYPE_BRCO	TYPE_BIOT	TYPE_SCI	TYPE_EXT	TYPE_NGO	TYPE_GOV	TYPE_OTHER		
Zagreb 2018	Z1	0	0	0	0	0	0	0	0	1	0	0	0	
Zagreb 2018	Z2	0	0	0	0	0	0	0	1	0	0	0	0	
Zagreb 2018	Z3	0	0	0	0	0	0	0	1	0	0	0	0	
Zagreb 2018	Z4	0	0	0	0	0	0	0	0	0	0	1	0	
Zagreb 2018	Z5	0	0	0	0	0	0	0	1	0	0	0	0	
Zagreb 2018	Z6	0	0	0	0	0	0	0	1	0	0	0	0	
Zagreb 2018	Z7	1	0	1	0	0	0	0	1	0	0	0	0	
Zagreb 2018	Z8	0	0	0	0	0	0	0	0	0	0	1	0	
Zagreb 2018	Z9	0	0	0	0	0	0	0	0	0	0	1	0	
Zagreb 2018	Z10	0	0	0	0	0	0	0	1	0	0	0	0	
Zagreb 2018	Z11	0	1	0	1	0	0	0	0	0	0	0	0	
Zagreb 2018	Z12	1	0	0	0	0	0	0	1	0	0	0	0	
SAVE	SAVE1	0	0	0	0	0	0	0	1	0	0	0	0	
SAVE	SAVE2	0	0	0	1	0	0	0	0	0	1	0	0	
SAVE	SAVE3	0	0	0	0	0	0	0	1	0	0	0	0	
SAVE	SAVE4	0	0	1	1	0	0	0	0	0	1	0	0	
SAVE	SAVE5	1	0	0	0	0	0	0	1	0	0	0	0	
SAVE	SAVE6	0	0	0	0	0	0	0	0	0	1	0	0	
SAVE	SAVE7	0	0	0	0	0	0	0	0	0	0	0	0	
SAVE	SAVE8	0	0	0	1	0	0	0	0	0	0	0	0	
SAVE	SAVE9	0	0	0	0	0	0	0	1	0	0	0	0	
SAVE	SAVE10	1	0	0	0	0	0	0	1	0	0	0	0	
SAVE	SAVE11	0	0	1	0	0	0	0	0	0	0	0	0	
SAVE	SAVE12	1	0	0	0	0	0	0	1	0	0	0	0	
SAVE	SAVE13	1	0	0	0	0	0	0	1	0	0	0	0	
SAVE	SAVE14	0	0	0	1	0	0	0	0	0	0	0	0	
SAVE	SAVE15	0	0	0	0	0	0	0	0	0	0	1	0	
SAVE	SAVE16	0	0	0	0	0	0	0	1	0	0	0	0	
SAVE	SAVE17	0	0	0	0	0	0	0	0	0	1	0	0	
SAVE	SAVE18	0	0	0	0	0	0	0	0	1	0	0	0	
SAVE	SAVE19	0	0	0	0	0	0	0	0	1	0	0	0	
SAVE	SAVE20	0	1	0	0	0	0	0	0	1	1	0	0	
SAVE	SAVE21	0	0	0	0	0	0	0	0	0	1	0	0	
SAVE	SAVE22	0	0	0	0	0	0	0	1	0	0	0	0	
SAVE	SAVE23	0	0	0	0	0	0	0	1	0	0	0	0	
SAVE	SAVE24	0	0	0	0	0	0	0	0	0	1	0	0	
SAVE	SAVE25	0	0	0	0	0	0	0	0	0	1	0	0	
SAVE	SAVE26	0	0	0	0	0	0	0	0	0	1	0	0	
FAO ITWG	FAO1	1	0	0	0	0	0	0	0	0	0	1	0	
FAO ITWG	FAO2	1	0	0	0	0	0	0	0	0	0	1	0	
FAO ITWG	FAO3	1	0	0	0	0	0	0	0	0	0	0	0	
FAO ITWG	FAO4	0	0	0	0	0	0	0	0	0	0	1	0	
FAO ITWG	FAO5	0	0	0	0	0	0	0	0	0	0	1	0	
FAO ITWG	FAO6	1	0	0	0	0	1	1	1	0	0	1	0	
FAO ITWG	FAO7	1	0	0	0	0	0	0	0	0	0	0	0	
FAO ITWG	FAO8	0	0	0	0	0	0	0	0	0	1	0	0	
FAO ITWG	FAO9	1	0	0	0	0	0	0	0	1	0	1	0	
FAO ITWG	FAO10	1	0	0	0	0	0	0	0	0	0	1	0	
FAO ITWG	FAO11	0	0	0	0	0	0	0	0	0	0	1	0	
FAO ITWG	FAO12	0	0	0	0	0	0	0	1	0	0	0	0	
FAO ITWG	FAO13	1	0	0	0	0	0	0	1	0	0	0	0	
FAO ITWG	FAO14	1	0	0	0	0	0	0	0	0	0	1	0	
FAO ITWG	FAO15	0	0	0	0	0	0	0	0	0	0	1	0	
FAO ITWG	FAO16	0	0	0	0	0	0	0	0	0	0	1	0	
FAO ITWG	FAO17	0	0	0	0	0	0	0	0	0	0	1	0	
FAO ITWG	FAO18	0	0	0	0	0	0	0	0	0	0	0	1	

Contexte de réponse	n° de réponse	I. General Information										
		1. Type of your Institution										
		Genebank		Breeder's Association		Breeding company/breedi ng industry	Biotechnology company	Science (University, research organization)	Extension service	NGO	Government	Other, please specify
		public	private	Single breed	Various breeds							
		TYPE_BANKPUB	TYPE_BANKPRIV	TYPE_BRASSING	TYPE_BRASSMUL	TYPE_BRCO	TYPE_BIOT	TYPE_SCI	TYPE_EXT	TYPE_NGO	TYPE_GOV	TYPE_OTHER
FAO ITWG	FAO19	1	0	0	0	0	0	1	0	0	0	0
FAO ITWG	FAO20	0	0	0	0	0	0	1	0	0	0	0
FAO ITWG	FAO21	0	0	0	0	0	0	1	0	0	0	0
FAO ITWG	FAO22	0	0	0	0	0	0	0	0	0	1	0
FAO ITWG	FAO23	0	0	0	0	0	0	0	0	0	1	0
WG ExSitu	WG1	1	1	0	0	0	0	0	0	0	0	0
WG ExSitu	WG2	0	0	0	0	0	0	1	0	0	0	0
WG ExSitu	WG3	0	0	0	0	0	0	0	0	0	1	0
WG ExSitu	WG4	0	0	0	0	0	0	0	0	0	1	0
WG ExSitu	WG5	0	0	0	0	0	0	0	0	0	0	0
WG ExSitu	WG6	1	0	0	0	0	0	1	0	0	0	0
WG ExSitu	WG7	0	0	0	0	0	0	1	0	0	0	0
WG ExSitu	WG8	0	0	0	0	0	0	1	0	0	0	0
WG ExSitu	WG9	0	0	0	0	0	0	1	0	0	0	0
WG ExSitu	WG10	0	0	0	0	0	0	1	0	0	0	0
WG ExSitu	WG11	1	0	0	0	0	0	1	0	0	0	0
WG ExSitu	WG12	0	0	0	0	0	0	1	0	0	0	0
WG ExSitu	WG13	0	0	0	0	0	0	1	0	0	0	0
WG ExSitu	WG14	1	0	0	0	0	0	1	0	0	0	0
WG ExSitu	WG15	0	0	0	0	0	0	1	0	0	0	0
WG ExSitu	WG16	1	0	0	0	0	0	0	0	0	1	0
WG ExSitu	WG17	0	0	0	0	0	0	0	0	0	0	1
WG ExSitu	WG18	1	0	0	0	0	0	1	0	0	0	0
WG ExSitu	WG19	1	1	0	0	0	0	1	0	0	0	0
IMAGE PG	IMAGE1	0	0	0	0	0	0	1	0	0	0	0
IMAGE PG	IMAGE2	0	0	0	0	0	0	1	0	0	0	0
IMAGE PG	IMAGE3	0	0	0	0	0	0	1	0	0	0	0
IMAGE PG	IMAGE4	0	0	0	0	0	0	1	0	0	0	0
IMAGE PG	IMAGE5	1	1	0	0	0	0	1	0	0	0	0
IMAGE PG	IMAGE6	0	0	0	0	0	0	1	0	0	0	0
IMAGE PG	IMAGE7	0	0	1	0	0	0	1	0	0	0	0
IMAGE PG	IMAGE8	0	0	0	0	0	0	1	0	0	0	0
IMAGE PG	IMAGE9	0	0	0	0	0	0	1	0	0	1	0
IMAGE PG	IMAGE10	0	0	0	0	0	0	1	0	0	0	0
PHD_WUR	DEBAT1	0	0	0	0	0	0	1	0	0	0	0
PHD_WUR	DEBAT2	0	0	0	0	0	0	1	0	0	0	0
PHD_WUR	DEBAT3	0	0	0	0	0	0	1	0	0	0	0
PHD_WUR	DEBAT4	0	0	0	0	0	0	1	0	0	0	0
PHD_WUR	DEBAT5	0	0	0	0	0	0	1	0	0	0	0
PHD_WUR	DEBAT6	0	0	0	0	0	0	1	0	0	0	0
PHD_WUR	DEBAT7	0	0	0	0	0	0	1	0	0	0	0
PHD_WUR	DEBAT8	0	0	0	0	0	0	1	0	0	0	0
PHD_WUR	DEBAT9	0	0	0	0	0	0	1	0	0	0	0
PHD_WUR	DEBAT10	0	0	0	0	0	0	1	0	0	0	0
PHD_WUR	DEBAT11	0	0	0	0	0	0	1	0	0	0	0
PHD_WUR	DEBAT12	0	0	0	0	0	0	1	0	0	0	0
PHD_WUR	DEBAT13	0	0	0	0	0	0	1	0	0	0	0
PHD_WUR	DEBAT14	0	0	0	0	0	0	1	0	0	0	0

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Contexte de réponse		I. General Information																			
		2. Your role in the Institution					3. The view you represent		4. On which species are you working? Multiple options are possible.									5. On which breeds are you working?			
		Technical Management	Funder	Directorate	Scientific	Student	Other_role	My own	My institution	Cattle	Sheep	Goats	Horses	Pigs	Poultry	Aquaculture	No particular species	Rare breeds	Commercial breeds	Both	No particular breed
CONTEXT	ID	ROLE_TECHN	ROLE_FUND	ROLE_DIR	ROLE_SCI	ROLE_STD	ROLE_OTHER	VIEW_OWN	VIEW_INST	SP_CATTLE	SP_SHEEP	SP_GOAT	SP_HORSE	SP_PIG	SP_POUL	SP_FISH	SP_VAR	BR_RARE	BR_COMM	BR_BOTH	BR_NOPA
Zagreb 2018	Z1	0	0	1	0	0	0	0	1	0	0	1	1	1	0	0	0	1	0	0	0
Zagreb 2018	Z2	1	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	1	0	0
Zagreb 2018	Z3	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0
Zagreb 2018	Z4	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0
Zagreb 2018	Z5	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	0	1	0	0	0
Zagreb 2018	Z6	0	0	0	1	0	0	1	0	1	1	1	1	1	1	0	0	0	0	1	0
Zagreb 2018	Z7	1	0	0	1	0	0	0	1	1	1	1	1	1	1	1	0	0	0	1	0
Zagreb 2018	Z8	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	1
Zagreb 2018	Z9	1	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	1	0	0	0
Zagreb 2018	Z10	0	0	1	0	0	0	0	1	0	1	1	1	0	1	0	0	1	0	0	0
Zagreb 2018	Z11	1	0	1	0	0	0	0	1	1	1	1	1	1	1	1	0	1	0	0	0
Zagreb 2018	Z12	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0
SAVE	SAVE1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0
SAVE	SAVE2	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	1	0	0	0
SAVE	SAVE3	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0
SAVE	SAVE4	0	1	1	0	0	0	1	0	1	1	1	0	1	1	1	0	1	0	0	0
SAVE	SAVE5	0	0	0	1	0	0	1	0	1	1	1	1	0	0	0	0	0	0	0	1
SAVE	SAVE6	0	0	1	0	0	0	0	1	1	1	1	1	1	1	1	0	1	0	0	0
SAVE	SAVE7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SAVE	SAVE8	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	1	0	0	0
SAVE	SAVE9	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1
SAVE	SAVE10	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	1	0	0
SAVE	SAVE11	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0
SAVE	SAVE12	0	0	0	1	0	0	1	0	1	1	0	1	0	1	1	0	1	0	0	0
SAVE	SAVE13	0	0	0	1	0	0	1	0	1	1	0	0	0	1	0	0	1	0	0	0
SAVE	SAVE14	0	0	1	0	0	0	0	1	1	0	0	1	0	1	0	0	1	0	0	0
SAVE	SAVE15	0	0	0	0	0	1	1	0	1	1	1	1	1	1	0	0	0	0	1	0
SAVE	SAVE16	0	0	0	1	0	0	1	0	1	1	1	1	1	1	0	0	0	0	1	0
SAVE	SAVE17	0	0	1	0	0	0	0	1	1	1	1	1	0	0	1	0	1	0	0	0
SAVE	SAVE18	1	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	1	0	0	0
SAVE	SAVE19	1	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	1	0	0	0
SAVE	SAVE20	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0
SAVE	SAVE21	0	0	1	0	0	0	0	1	1	1	1	1	1	1	1	0	0	1	0	0
SAVE	SAVE22	0	0	0	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	1	0
SAVE	SAVE23	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0
SAVE	SAVE24	0	0	1	0	0	0	0	1	1	1	1	1	1	1	1	0	1	0	0	0
SAVE	SAVE25	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0
SAVE	SAVE26	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	1
FAO ITWG	FAO1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0
FAO ITWG	FAO2	0	0	1	0	0	0	1	0	1	1	1	1	1	0	1	0	0	1	0	0
FAO ITWG	FAO3	0	0	1	0	0	0	0	1	1	1	1	1	0	1	1	0	0	1	0	0
FAO ITWG	FAO4	1	0	0	0	0	0	0	1	1	0	1	0	0	1	1	0	0	0	1	0
FAO ITWG	FAO5	0	0	1	0	0	0	0	1	1	0	0	0	0	1	0	0	0	1	0	0
FAO ITWG	FAO6	0	0	0	1	0	0	1	0	1	1	1	1	1	1	1	1	0	0	1	0
FAO ITWG	FAO7	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1	0	0	0	1	0
FAO ITWG	FAO8	0	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	0	0	1	0
FAO ITWG	FAO9	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0
FAO ITWG	FAO10	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	0	0	0	1	0
FAO ITWG	FAO11	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1
FAO ITWG	FAO12	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	1	0	0	0
FAO ITWG	FAO13	0	0	0	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	1	0
FAO ITWG	FAO14	1	0	0	0	0	0	1	0	1	1	1	1	1	1	0	1	0	0	1	0
FAO ITWG	FAO15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1
FAO ITWG	FAO16	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	1	0
FAO ITWG	FAO17	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	1	0
FAO ITWG	FAO18	1	0	0	0	0	0	1	0	1	1	1	1	1	1	1	0	0	0	1	0

Contexte de réponse	n° de réponse	I. General Information																				
		2. Your role in the Institution					3. The view you represent		4. On which species are you working? Multiple options are possible.								5. On which breeds are you working?					
		Technical Management	Funder	Directorate	Scientific	Student	Other_role	My own	My institution	Cattle	Sheep	Goats	Horses	Pigs	Poultry	Aquaculture	No particular species	Rare breeds	Commercial breeds	Both	No particular breed	
CONTEXT	ID	ROLE_TECHN	ROLE_FUND	ROLE_DIR	ROLE_SCI	ROLE_STD	ROLE_OTHER	VIEW_OWN	VIEW_INST	SP_CATTLE	SP_SHEEP	SP_GOAT	SP_HORSE	SP_PIG	SP_POUL	SP_FISH	SP_VAR	BR_RARE	BR_COMM	BR_BOTH	BR_NOPA	
	FAO ITWG	FAO19	0	0	0	1	0	0	1	0	1	1	0	0	0	1	0	0	0	0	1	0
	FAO ITWG	FAO20	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0
	FAO ITWG	FAO21	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	1
	FAO ITWG	FAO22	1	0	0	0	0	0	1	0	1	1	1	0	1	1	0	0	0	0	1	0
	FAO ITWG	FAO23	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	1	0
	WG ExSitu	WG1	0	0	0	0	0	1	1	0	1	1	1	1	1	1	1	0	0	0	1	0
	WG ExSitu	WG2	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	0	0	0
	WG ExSitu	WG3	1	0	0	0	0	0	1	0	1	1	1	1	1	1	0	0	0	0	1	0
	WG ExSitu	WG4	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	1
	WG ExSitu	WG5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WG ExSitu	WG6	0	0	0	0	0	1	0	1	1	1	1	1	1	1	0	0	0	0	1	0
	WG ExSitu	WG7	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0
	WG ExSitu	WG8	0	0	0	1	0	0	0	1	1	1	1	1	1	1	1	0	0	0	1	0
	WG ExSitu	WG9	0	0	0	1	0	0	0	1	1	1	1	1	1	1	1	0	0	0	1	0
	WG ExSitu	WG10	1	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	1	0	0	0
	WG ExSitu	WG11	0	0	0	1	0	0	0	1	1	1	1	0	0	0	1	0	1	0	0	0
	WG ExSitu	WG12	0	0	0	1	0	0	0	1	1	1	1	0	0	0	0	0	1	0	0	0
	WG ExSitu	WG13	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	1	0
	WG ExSitu	WG14	1	0	0	0	0	0	1	0	1	1	1	1	1	1	0	0	1	0	0	0
	WG ExSitu	WG15	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0
	WG ExSitu	WG16	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
	WG ExSitu	WG17	0	0	1	0	0	0	1	0	1	1	1	0	0	1	0	0	1	0	0	0
	WG ExSitu	WG18	1	0	0	0	0	0	1	0	1	1	1	0	1	0	0	0	0	0	1	0
	WG ExSitu	WG19	0	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	0	0	1	0
	IMAGE PG	IMAGE1	0	0	0	1	0	0	1	0	1	0	0	0	1	1	0	0	0	1	0	0
	IMAGE PG	IMAGE2	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0
	IMAGE PG	IMAGE3	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0
	IMAGE PG	IMAGE4	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1
	IMAGE PG	IMAGE5	0	0	0	1	0	0	1	0	1	1	1	0	1	1	0	0	0	0	1	0
	IMAGE PG	IMAGE6	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	1	0
	IMAGE PG	IMAGE7	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0
	IMAGE PG	IMAGE8	0	0	0	1	0	0	1	0	1	1	1	0	1	0	0	0	0	1	0	0
	IMAGE PG	IMAGE9	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0
	IMAGE PG	IMAGE10	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1
	PHD_WUR	DEBAT1	0	0	0	1	0	0	1	0	0	0	0	0	1	1	1	0	0	0	1	0
	PHD_WUR	DEBAT2	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0
	PHD_WUR	DEBAT3	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0
	PHD_WUR	DEBAT4	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0
	PHD_WUR	DEBAT5	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0
	PHD_WUR	DEBAT6	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	1	0	0	0
	PHD_WUR	DEBAT7	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0
	PHD_WUR	DEBAT8	0	0	0	1	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	0
	PHD_WUR	DEBAT9	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0
	PHD_WUR	DEBAT10	0	0	0	0	1	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0
	PHD_WUR	DEBAT11	0	0	0	1	0	0	1	0	1	1	0	0	0	0	1	0	0	0	1	0
	PHD_WUR	DEBAT12	0	0	0	0	1	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0
	PHD_WUR	DEBAT13	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0
	PHD_WUR	DEBAT14	0	0	0	1	0	0	1	0	1	1	1	0	1	1	1	0	0	1	0	0

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Contexte de réponse	n° de réponse	II. Motivation for Breed Conservation																
		1. What are the main objectives of cryoconservation of breeds in a gene bank? (please put in order of importance(1 is most important, e.g. 4-3-2-1-5,))						2. What should be the main criteria to choose a breed for cryoconservation (max. 3 answers)										
		Insurance to recreate/revive a breed/breeding line in danger of/quasi extinction	Research & genetic diversity studies	Development of new breeds/lines	Support of in situ conservation	Introduce genetic diversity in breeding programs	Others, please specify	High degree of endangerment	Special traits and characteristics of value	Cultural heritage	Genetic distinctiveness	Within breed genetic diversity	Environmental/ ecological value	Current economic value	All breeds should be cryoconserved	Intrinsic value		
CONTEXT	ID	OBJ_REBIRTH	OBJ_SCI	OBJ_DEV	OBJ_INSITU	OBJ_DIV	OBJ_OTHER	WHY_DANGER	WHY_TRAITS	WHY_CULTURE	WHY_ORIG	WHY_DIVERS	WHY_ENV	WHY_ECON	WHY_CRYO	WHY_INTRINSIC		
Zagreb 2018	Z1	1	4	5	3	2	5	1	1	0	1	0	0	0	0	0		
Zagreb 2018	Z2	5	4	2	3	1	5	1	1	0	1	0	0	0	0	0		
Zagreb 2018	Z3	1	2	5	3	5	5	1	1	0	1	0	0	0	0	0		
Zagreb 2018	Z4	1	4	5	2	3	5	1	1	0	1	0	0	0	0	0		
Zagreb 2018	Z5	1	5	5	1	1	5	1	0	1	1	0	0	0	0	0		
Zagreb 2018	Z6	2	1	5	4	3	5	1	1	0	0	0	0	0	1	0		
Zagreb 2018	Z7	1	4	5	3	2	5	1	0	1	0	0	0	0	1	0		
Zagreb 2018	Z8	1	1	5	1	1	5	1	0	0	1	1	0	0	0	0		
Zagreb 2018	Z9	1	4	5	2	3	5	1	0	1	0	1	0	0	0	0		
Zagreb 2018	Z10	4	3	5	1	2	5	1	1	0	0	1	0	0	0	0		
Zagreb 2018	Z11	1	5	5	1	5	5	1	0	0	1	0	0	0	0	0		
Zagreb 2018	Z12	3	2	4	1	5	5	1	1	0	0	1	0	0	0	0		
SAVE	SAVE1	1	2	5	4	2	5	1	1	0	1	0	0	0	0	0		
SAVE	SAVE2	5	5	5	5	5	5	0	0	0	0	0	0	0	0	0		
SAVE	SAVE3	5	5	5	5	1	5	1	0	0	0	1	0	0	1	0		
SAVE	SAVE4	1	5	5	1	5	5	1	0	0	0	0	0	0	1	0		
SAVE	SAVE5	1	2	4	3	5	5	1	1	0	1	0	0	0	0	0		
SAVE	SAVE6	1	5	5	5	5	5	0	0	0	0	0	0	0	0	0		
SAVE	SAVE7	1	5	5	1	5	5	1	1	1	0	1	0	0	1	0		
SAVE	SAVE8	5	5	5	1	1	5	1	0	0	0	1	0	1	0	0		
SAVE	SAVE9	1	2	3	5	5	5	0	1	0	1	0	1	0	0	0		
SAVE	SAVE10	5	1	5	5	5	5	0	0	0	0	0	0	1	0	0		
SAVE	SAVE11	5	5	5	5	5	5	0	0	0	0	0	0	0	0	0		
SAVE	SAVE12	1	2	5	5	5	5	1	0	1	0	0	0	0	0	0		
SAVE	SAVE13	1	2	5	5	5	5	1	0	1	0	0	0	0	0	0		
SAVE	SAVE14	1	4	5	2	3	5	1	0	0	1	0	0	0	1	0		
SAVE	SAVE15	3	5	4	1	1	5	1	0	0	0	1	1	0	0	0		
SAVE	SAVE16	3	4	5	5	1	2	1	0	1	0	0	1	0	0	0		
SAVE	SAVE17	1	4	5	2	3	5	1	1	1	0	0	0	0	0	0		
SAVE	SAVE18	1	3	5	2	4	5	1	0	0	1	0	0	0	1	0		
SAVE	SAVE19	1	3	5	2	4	5	1	0	0	1	0	0	0	1	0		
SAVE	SAVE20	1	5	2	3	5	5	1	1	0	0	0	1	0	0	0		
SAVE	SAVE21	1	3	5	4	2	5	0	1	0	0	0	0	0	1	0		
SAVE	SAVE22	5	2	3	1	4	5	1	1	1	0	0	0	0	0	0		
SAVE	SAVE23	5	2	4	1	3	5	1	0	1	1	0	0	0	0	0		
SAVE	SAVE24	1	4	5	2	3	5	1	0	1	0	1	0	0	0	0		
SAVE	SAVE25	5	5	5	1	5	5	0	0	0	0	0	1	0	0	0		
SAVE	SAVE26	1	5	5	1	5	5	0	0	1	0	1	1	0	0	0		
FAO ITWG	FAO1	3	2	5	1	5	5	1	1	1	0	0	0	0	0	0		
FAO ITWG	FAO2	2	3	5	1	4	5	0	0	0	0	0	0	0	0	0		
FAO ITWG	FAO3	5	5	5	1	5	0	1	1	0	1	0	0	0	0	0		
FAO ITWG	FAO4	5	2	1	3	4	5	1	1	0	0	0	0	0	1	0		
FAO ITWG	FAO5	3	1	4	5	2	5	0	1	0	0	1	0	0	1	0		
FAO ITWG	FAO6	1	3	5	2	4	5	1	1	0	0	0	0	0	1	0		
FAO ITWG	FAO7	1	3	5	2	4	5	1	1	1	0	0	0	0	0	0		
FAO ITWG	FAO8	1	1	5	1	5	5	1	1	1	0	0	0	0	0	0		
FAO ITWG	FAO9	5	5	1	5	5	5	1	1	0	0	0	1	0	0	0		
FAO ITWG	FAO10	5	5	5	5	1	5	0	0	0	0	0	0	1	1	0		
FAO ITWG	FAO11	5	1	4	2	3	5	0	0	0	0	0	0	0	0	0		
FAO ITWG	FAO12	2	4	5	1	3	5	1	1	0	1	0	0	0	0	0		
FAO ITWG	FAO13	1	2	0	2	2	5	1	1	0	1	0	0	0	0	0		
FAO ITWG	FAO14	1	4	5	3	2	5	1	0	0	1	0	0	0	1	0		
FAO ITWG	FAO15	2	5	4	1	3	5	1	0	1	0	0	1	0	0	0		
FAO ITWG	FAO16	5	4	3	2	1	5	1	1	0	0	0	0	1	0	0		
FAO ITWG	FAO17	5	2	1	4	3	5	0	1	0	1	0	0	0	1	0		
FAO ITWG	FAO18	1	2	5	3	4	5	1	1	0	1	0	0	0	0	0		

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CONTEXT	ID	OBJ_REBIRTH	OBJ_SCI	OBJ_DEV	OBJ_INSITU	OBJ_DIV	OBJ_OTHER	WHY_DANGER	WHY_TRAITS	WHY_CULTURE	WHY_ORIG	WHY_DIVERS	WHY_ENV	WHY_ECON	WHY_CRYO	WHY_INTRINSIC	
FAO ITWG	FAO19	1	3	4	2	5	5	1	1	0	0	0	0	0	0	0	1
FAO ITWG	FAO20	4	2	3	1	5	5	1	0	0	0	0	0	0	1	0	0
FAO ITWG	FAO21	5	5	5	5	1	5	1	1	0	1	0	0	0	0	0	0
FAO ITWG	FAO22	1	3	5	2	4	5	1	1	0	1	0	0	0	0	0	0
FAO ITWG	FAO23	4	3	5	1	2	5	1	1	0	0	0	0	0	0	1	0
WG ExSitu	WG1	1	3	5	4	2	5	1	1	0	0	0	0	0	0	1	0
WG ExSitu	WG2	5	5	5	5	5	5	0	1	1	1	0	0	0	0	0	0
WG ExSitu	WG3	1	4	5	2	3	5	1	0	0	1	0	0	0	0	0	0
WG ExSitu	WG4	5	5	5	5	5	5	1	0	1	1	1	0	0	0	0	0
WG ExSitu	WG5	5	5	5	5	5	5	0	0	0	0	0	0	0	0	0	0
WG ExSitu	WG6	1	3	5	2	4	5	1	0	1	0	0	0	0	0	1	0
WG ExSitu	WG7	1	1	5	5	1	5	0	0	0	1	0	0	0	0	0	0
WG ExSitu	WG8	2	3	5	1	4	5	1	1	0	0	1	0	0	0	0	0
WG ExSitu	WG9	2	3	5	1	4	5	1	1	0	0	1	0	0	0	0	0
WG ExSitu	WG10	1	3	5	2	4	5	1	1	0	0	1	0	0	0	0	0
WG ExSitu	WG11	2	4	5	1	3	5	1	1	0	1	0	0	0	0	0	0
WG ExSitu	WG12	2	4	5	1	3	5	1	1	0	0	1	0	0	0	0	0
WG ExSitu	WG13	5	2	5	1	5	5	1	1	0	0	1	0	0	0	0	0
WG ExSitu	WG14	4	5	1	3	2	5	1	1	1	0	0	0	0	0	0	0
WG ExSitu	WG15	1	4	5	3	2	5	1	0	1	1	0	0	0	0	0	0
WG ExSitu	WG16	1	5	5	2	3	5	1	1	0	1	0	0	0	0	0	0
WG ExSitu	WG17	2	4	5	1	3	5	1	1	0	1	0	0	0	0	0	0
WG ExSitu	WG18	2	3	5	1	4	5	0	1	0	1	0	0	0	0	1	0
WG ExSitu	WG19	4	2	5	3	1	5	1	1	0	1	0	0	0	0	0	0
IMAGE PG	IMAGE1	1	4	5	2	3	5	1	1	0	1	0	0	0	0	0	0
IMAGE PG	IMAGE2	5	4	3	1	2	5	1	0	0	1	0	0	0	0	0	0
IMAGE PG	IMAGE3	1	2	5	3	4	5	1	0	0	1	0	1	0	0	0	0
IMAGE PG	IMAGE4	3	1	2	4	5	5	0	1	0	1	0	0	1	0	0	0
IMAGE PG	IMAGE5	2	1	5	3	4	5	1	1	0	0	0	1	0	0	0	0
IMAGE PG	IMAGE6	1	4	5	2	3	5	1	0	0	1	1	0	0	0	0	0
IMAGE PG	IMAGE7	1	2	3	5	4	5	0	1	0	1	0	0	0	0	0	1
IMAGE PG	IMAGE8	4	5	2	3	1	5	1	0	0	1	0	0	0	0	1	0
IMAGE PG	IMAGE9	1	1	5	1	1	5	0	0	0	0	0	0	0	0	1	0
IMAGE PG	IMAGE10	1	3	5	4	2	5	1	1	0	1	0	0	0	0	0	0
PHD_WUR	DEBAT1	1	1	5	5	5	5	1	0	0	1	0	0	0	0	0	0
PHD_WUR	DEBAT2	1	2	5	3	4	5	1	1	0	1	0	0	0	0	0	0
PHD_WUR	DEBAT3	1	3	4	5	2	5	1	1	0	1	0	0	0	0	0	0
PHD_WUR	DEBAT4	1	0	1	0	1	5	0	1	0	1	0	0	0	1	0	0
PHD_WUR	DEBAT5	1	2	5	3	4	5	1	1	0	1	0	0	0	0	0	0
PHD_WUR	DEBAT6	1	2	5	3	4	5	1	0	1	1	0	0	0	0	0	0
PHD_WUR	DEBAT7	1	4	5	2	3	5	0	1	0	1	1	0	0	0	0	0
PHD_WUR	DEBAT8	1	4	5	2	3	5	1	0	0	1	1	0	0	0	0	0
PHD_WUR	DEBAT9	1	4	5	3	2	5	0	1	1	1	0	0	0	0	0	0
PHD_WUR	DEBAT10	1	4	5	3	2	5	1	1	0	1	0	0	0	0	0	0
PHD_WUR	DEBAT11	4	3	5	2	1	5	1	1	0	1	0	0	0	0	0	0
PHD_WUR	DEBAT12	5	3	4	1	2	5	0	0	1	1	0	1	0	0	0	0
PHD_WUR	DEBAT13	4	3	5	1	2	5	0	1	0	1	0	0	0	0	0	0
PHD_WUR	DEBAT14	1	4	5	2	3	5	1	1	0	1	0	0	0	0	0	0

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CONTEXT	ID	OBJ REBIRTH	OBJ SCI	OBJ DEV	OBJ INSITU	OBJ DIV	OBJ OTHER	WHY DANGER	WHY TRAITS	WHY CULTURE	WHY ORIG	WHY DIVERS	WHY ENV	WHY ECON	WHY CRYO	WHY INTRINSIC
PHD_WUR	DEBAT15	2	1	4	5	3	5	0	1	0	1	0	1	0	0	0
AQUAGAMET	Aqua1	5	1	5	5	5	0	0	1	0	0	0	0	0	0	0
AQUAGAMET	Aqua2	1	4	3	5	0	2	1	0	0	0	0	0	1	1	0
AQUAGAMET	Aqua3	1	4	5	3	2	0	1	0	1	0	1	0	0	0	0
AQUAGAMET	Aqua4	5	1	3	4	2	0	0	1	0	1	1	0	0	0	0
AQUAGAMET	Aqua5	4	1	5	3	2	0	1	1	0	0	0	0	0	1	0
AQUAGAMET	Aqua6	5	1	3	1	2	0	0	1	0	0	0	0	1	1	0
AQUAGAMET	Aqua7	2	2	1	1	1	0	1	0	0	0	0	0	1	1	0
Questionnaire	CRBAnim-Frei	4	5	2	1	3	6	1	0	0	0	0	0	0	0	0
Questionnaire	CRBAnim-Frei	2	1	3	4	5	6	0	0	1	0	1	0	1	0	0
Questionnaire	CRBAnim-Frei	1	3	5	2	4	5	1	0	1	0	0	0	0	1	0
Questionnaire	CRBAnim-Frei	1	1	5	1	1	6	1	0	1	0	0	0	0	0	1
Questionnaire	CRBAnim-Frei	4	1	4	3	2	5	1	0	0	0	1	0	0	1	0
Questionnaire	CRBAnim-Frei	1	2	4	1	4	6	1	0	0	0	0	0	0	1	0
Questionnaire	CRBAnim-Frei	1	2	6	5	4	3	1	1	0	0	0	1	0	0	0
Questionnaire	CRBAnim-Frei	5	2	3	4	2	6	1	0	1	0	1	0	0	0	0
Questionnaire	CRBAnim-Frei	1	3	5	2	4	6	1	0	1	0	1	0	0	0	0
Questionnaire	CRBAnim-Frei	2	3	5	1	4	6	1	0	1	1	0	0	0	0	0
Questionnaire	CRBAnim-Frei	5	5	1	5	5	1	1	1	0	1	1	0	0	0	0
Questionnaire	CRBAnim-Frei	2	1	5	4	3	6	1	0	1	0	0	0	0	1	0
Questionnaire	CRBAnim-Frei	2	4	3	5	1	6	0	0	0	0	0	0	0	1	0
Questionnaire	CRBAnim-Frei	4	1	3	5	2	6	0	0	0	0	0	0	0	1	0
Questionnaire	CRBAnim-Frei	1	4	6	1	6	6	1	0	1	1	0	0	0	0	0
Questionnaire	CRBAnim-Frei	1	2	5	4	3	6	1	0	0	1	1	0	0	0	0
Questionnaire	CRBAnim-Frei	1	2	3	4	2	2	1	0	1	0	0	0	0	0	0
Questionnaire	CRBAnim-Frei	1	3	6	2	2	6	0	0	0	0	0	0	0	1	0
Questionnaire	CRBAnim-Frei	1	3	5	2	4	6	1	0	1	1	0	0	0	0	0
Questionnaire	CRBAnim-Frei	1	3	5	2	4	6	0	0	1	0	1	0	0	0	0
Questionnaire	CRBAnim-Frei	1	3	5	2	4	6	1	0	0	1	0	0	0	1	0
Questionnaire	CRBAnim-Frei	1	2	4	2	2	6	1	0	0	1	0	0	0	1	0
Questionnaire	CRBAnim-Frei	0	5	3	6	6	1	0	0	0	1	1	0	0	1	0
Questionnaire	CRBAnim-Frei	2	4	6	3	5	1	1	0	0	1	0	0	0	1	0
Questionnaire	CRBAnim-Frei	1	3	5	2	4	6	1	1	0	0	0	0	0	1	0
Questionnaire	CRBAnim-Frei	2	3	5	1	4	6	1	0	0	1	1	0	0	0	0
Questionnaire	CRBAnim-Frei	1	4	5	2	3	6	1	0	0	1	1	0	0	0	0
Questionnaire	CRBAnim-Frei	1	4	6	5	2	3	1	0	1	0	0	0	0	1	0
Questionnaire	CRBAnim-Frei	3	2	5	1	4	6	1	0	1	0	0	0	0	0	0
Questionnaire	CRBAnim-Frei	1	1	4	2	2	6	1	1	1	0	0	0	0	0	0
Questionnaire	CRBAnim-Frei	1	3	4	5	2	6	1	1	0	1	1	0	0	0	0
Questionnaire	CRBAnim-Frei	1	4	2	5	3	6	1	1	0	1	1	1	0	0	0
Questionnaire	CRBAnim-Frei	3	2	5	1	2	6	1	0	1	1	0	0	0	0	0
Questionnaire	CRBAnim-Frei	1	3	5	2	4	6	1	1	0	0	1	0	0	0	0
Questionnaire	CRBAnim-Frei	1	5	4	3	2	6	1	1	0	0	0	0	0	1	0
Questionnaire	CRBAnim-Frei	1	2	5	4	3	6	1	1	0	1	0	0	0	0	0
Questionnaire	CRBAnim-Frei	1	3	4	5	2	1	1	0	0	1	1	0	0	0	0
Questionnaire	CRBAnim-Frei	1	2	5	3	4	6	1	1	0	1	0	0	0	0	0
Questionnaire	CRBAnim-Frei	4	2	6	3	5	1	1	1	1	0	0	0	0	0	0
Questionnaire	CRBAnim-Frei	4	1	5	2	3	6	1	1	1	0	0	0	0	0	0
Questionnaire	CRBAnim-Frei	1	2	3	1	4	1	1	0	0	0	1	0	0	1	0
Questionnaire	CRBAnim-Frei	2	4	5	1	3	6	1	1	1	0	0	0	0	0	0
Questionnaire	CRBAnim-Frei	2	5	5	3	5	1	0	1	0	1	1	0	0	0	0
Questionnaire	CRBAnim-Frei	3	1	6	1	1	6	1	0	1	1	0	0	0	0	0
Questionnaire	CRBAnim-Frei	2	1	4	4	2	6	0	0	1	0	1	0	0	0	0
Questionnaire	CRBAnim-Frei	1	2	5	4	3	6	1	0	1	1	0	0	0	0	0
Questionnaire	CRBAnim-Frei	1	5	2	4	3	6	1	1	0	0	0	0	1	0	0
Questionnaire	CRBAnim-Frei	2	2	2	1	2	6	0	1	1	0	0	1	0	0	0

Contexte de réponse	n° de réponse	II. Motivation for Breed Conservation																	
		3. Who shall prioritize and decide, which breed and to what extend should be cryoconserved (more than one answer possible)?					4. Do you think that cryoconservation may have an impact on in situ conservation? Which one?					6. Which balance do you wish to see between on farm conservation (in situ) and cryoconservation (ex situ) for the use of public subsidies?				5. Who should pay for cryoconservation ?			
		Breeding organization	Gene bank manager	Researchers	A multi actor Board	Government	Revitalizing blood lines	Collaboration of conservation breeders and research	Conservation of withinbreed genetic diversity	Negative effect on support/subsidies for in situ conservation	Others, please specify	clear prioritisation of in situ	clear prioritisation of ex situ	Suggestion for a balance (in situ/ex situ) (% of in situ)	Breeding organizations	Research	Government	EU	
CONTEXT	ID	DEC_BRORG	DEC_BANK	DEC_SCI	DEC_MULT	DEC_GOV	SITU_REVITAL	SITU_COLLAB	SITU_DIV	SITU_NEG	SITU_OTH	BAL_INS	BAL_EXS		PAY_BRORG	PAY_SCI	PAY_GOV	PAY_EU	
Zagreb 2018	Z1	1	0	0	1	1	0	1	0	0	0	0	70	30	0	0	0	1	0
Zagreb 2018	Z2	0	0	0	1	1	0	0	1	0	0	0	50	50	0	0	0	1	0
Zagreb 2018	Z3	0	0	0	1	0	1	0	1	1	0	0	100	0	0	1	0	1	0
Zagreb 2018	Z4	0	0	0	0	1	0	0	1	1	0	0	60	40	0	0	0	1	0
Zagreb 2018	Z5	0	0	0	0	1	0	1	1	0	0	0	100	0	0	0	0	1	0
Zagreb 2018	Z6	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0
Zagreb 2018	Z7	0	0	0	0	1	0	0	1	0	0	0	33	67	0	0	0	0	1
Zagreb 2018	Z8	1	0	0	0	1	0	0	1	0	0	0	100	0	0	1	1	1	0
Zagreb 2018	Z9	1	0	0	0	0	1	1	0	0	0	0	100	0	0	0	0	1	0
Zagreb 2018	Z10	1	0	0	1	0	1	0	1	1	0	0	50	50	0	0	0	1	0
Zagreb 2018	Z11	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1
Zagreb 2018	Z12	0	0	0	0	1	0	1	1	0	0	0	50	50	0	1	1	1	0
SAVE	SAVE1	1	0	0	1	0	0	0	1	1	0	0	50	50	0	0	0	1	0
SAVE	SAVE2	0	0	0	0	0	0	0	0	0	0	0	100	0	0	1	0	1	0
SAVE	SAVE3	0	0	0	1	0	0	0	0	1	0	0	100	0	0	1	0	0	0
SAVE	SAVE4	1	0	0	0	1	1	1	0	1	1	0	100	0	0	0	0	1	0
SAVE	SAVE5	0	0	0	0	1	0	1	1	0	0	0	50	50	0	1	0	1	0
SAVE	SAVE6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SAVE	SAVE7	1	1	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0
SAVE	SAVE8	1	0	0	1	1	0	0	1	1	0	0	100	0	0	0	0	1	0
SAVE	SAVE9	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	1	0
SAVE	SAVE10	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0
SAVE	SAVE11	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
SAVE	SAVE12	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0
SAVE	SAVE13	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0
SAVE	SAVE14	1	1	0	1	1	1	1	1	1	1	0	1	0	0	1	1	1	0
SAVE	SAVE15	0	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	0
SAVE	SAVE16	0	0	0	1	1	0	1	1	1	0	0	0	0	0	1	0	1	0
SAVE	SAVE17	0	0	0	0	1	0	1	0	1	0	0	1	0	0	1	1	1	0
SAVE	SAVE18	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	1	0
SAVE	SAVE19	0	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	1	0
SAVE	SAVE20	1	0	0	0	1	0	0	0	0	1	0	1	0	0	0	1	0	0
SAVE	SAVE21	1	1	0	0	1	0	0	1	0	0	0	1	0	0	1	0	1	0
SAVE	SAVE22	1	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	1	0
SAVE	SAVE23	1	0	0	1	0	0	1	1	1	0	0	1	0	0	0	0	1	0
SAVE	SAVE24	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	1	0
SAVE	SAVE25	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0
SAVE	SAVE26	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	1	0
FAO ITWG	FAO1	1	0	0	0	0	1	0	1	1	0	0	1	0	0	1	1	1	0
FAO ITWG	FAO2	1	0	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	0
FAO ITWG	FAO3	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0
FAO ITWG	FAO4	0	0	0	1	0	1	1	0	1	0	0	1	0	0	0	0	1	0
FAO ITWG	FAO5	0	0	0	1	0	1	0	1	1	0	0	0	0	0	0	0	1	0
FAO ITWG	FAO6	0	1	0	0	1	0	1	1	1	0	0	0	1	0	0	0	1	0
FAO ITWG	FAO7	0	1	0	1	1	0	0	1	1	0	0	0	0	0	0	0	1	0
FAO ITWG	FAO8	0	0	0	0	1	0	1	1	1	0	0	0	0	0	1	0	1	0
FAO ITWG	FAO9	0	0	0	1	0	1	1	0	0	0	0	1	0	0	1	0	1	0
FAO ITWG	FAO10	0	1	0	1	0	1	0	1	0	0	0	0	1	0	1	0	1	0
FAO ITWG	FAO11	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	0
FAO ITWG	FAO12	0	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0
FAO ITWG	FAO13	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0	1	0
FAO ITWG	FAO14	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0
FAO ITWG	FAO15	1	1	0	1	1	0	1	1	1	0	0	1	0	0	1	0	1	0
FAO ITWG	FAO16	1	1	0	1	1	0	1	1	1	0	0	0	0	0	1	1	1	0
FAO ITWG	FAO17	1	0	0	0	1	0	0	1	1	0	0	0	0	0	1	0	1	0
FAO ITWG	FAO18	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	0

Contexte de réponse		n° de réponse		II. Motivation for Breed Conservation																	
				3. Who shall prioritize and decide, which breed and to what extend should be cryoconserved (more than one answer possible)?					4. Do you think that cryoconservation may have an impact on in situ conservation? Which one?					6. Which balance do you wish to see between on farm conservation (in situ) and cryoconservation (ex situ) for the use of public subsidies?				5. Who should pay for cryoconservation ?			
				Breeding organization	Gene bank manager	Researchers	A multi actor Board	Government	Revitalizing blood lines	Collaboration of conservation breeders and research	Conservation of withinbreed genetic diversity	Negative effect on support/subsidies for in situ conservation	Others, please specify	clear prioritisation of in situ	clear prioritisation of ex situ	Suggestion for a balance (in situ/ex situ) (% o in situ)	Breeding organizations	Research	Government	EU	
CONTEXT	ID	DEC_BRORG	DEC_BANK	DEC_SCI	DEC_MULT	DEC_GOV	SITU_REVITAL	SITU_COLLAB	SITU_DIV	SITU_NEG	SITU_OTH	BAL_INS	BAL_EXS			PAY_BRORG	PAY_SCI	PAY_GOV	PAY_EU		
	FAO ITWG	FAO19	1	1	1	1	1	0	1	1	1	0	0	0	0	1	1	1	0		
	FAO ITWG	FAO20	1	0	0	0	1	0	1	1	0	0	0	0	0	1	0	0	0		
	FAO ITWG	FAO21	1	0	1	0	0	0	0	1	0	0	0	0	0	0	1	1	0		
	FAO ITWG	FAO22	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	1	0		
	FAO ITWG	FAO23	1	0	0	1	0	1	1	0	1	0	1	0	0	1	1	1	0		
	WG ExSitu	WG1	0	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	0		
	WG ExSitu	WG2	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	1	0		
	WG ExSitu	WG3	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0		
	WG ExSitu	WG4	0	0	0	1	0	0	0	0	0	1	1	0	0	1	1	1	0		
	WG ExSitu	WG5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	WG ExSitu	WG6	1	0	1	1	0	0	1	0	0	0	0	0	0	1	0	1	1		
	WG ExSitu	WG7	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	0		
	WG ExSitu	WG8	1	0	1	1	0	1	1	1	0	0	1	0	0	1	0	1	0		
	WG ExSitu	WG9	1	0	1	1	0	1	1	1	0	0	1	0	0	1	1	1	0		
	WG ExSitu	WG10	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0		
	WG ExSitu	WG11	1	0	1	1	0	0	1	1	0	0	1	0	0	0	0	1	0		
	WG ExSitu	WG12	1	0	1	1	0	0	0	1	0	0	1	0	0	1	0	0	0		
	WG ExSitu	WG13	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0		
	WG ExSitu	WG14	0	0	0	1	0	0	1	1	0	0	0	0	0	1	0	1	0		
	WG ExSitu	WG15	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0		
	WG ExSitu	WG16	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	1	0		
	WG ExSitu	WG17	1	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	0		
	WG ExSitu	WG18	0	0	0	1	0	1	1	1	1	0	1	0	0	1	0	1	0		
	WG ExSitu	WG19	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	0	0		
	IMAGE PG	IMAGE1	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0		
	IMAGE PG	IMAGE2	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0		
	IMAGE PG	IMAGE3	0	1	1	0	1	0	1	1	0	0	1	0	0	0	1	1	0		
	IMAGE PG	IMAGE4	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0		
	IMAGE PG	IMAGE5	1	0	1	0	1	1	1	0	0	0	1	0	0	1	1	1	0		
	IMAGE PG	IMAGE6	0	0	1	0	1	1	1	0	0	0	1	0	0	1	0	1	0		
	IMAGE PG	IMAGE7	1	0	1	0	1	1	0	1	0	0	0	0	0	1	1	1	0		
	IMAGE PG	IMAGE8	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0		
	IMAGE PG	IMAGE9	1	1	1	1	1	1	0	1	0	0	0	0	0	1	0	1	0		
	IMAGE PG	IMAGE10	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0		
	PHD_WUR	DEBAT1	0	0	0	1	0	1	0	0	1	0	0	0	0	1	1	0	0		
	PHD_WUR	DEBAT2	1	0	1	1	1	1	0	1	0	0	1	0	0	1	1	1	0		
	PHD_WUR	DEBAT3	0	0	0	1	1	0	1	1	0	0	0	0	0	1	0	0	0		
	PHD_WUR	DEBAT4	1	0	1	1	1	0	0	0	0	0	0	0	0	1	0	1	0		
	PHD_WUR	DEBAT5	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0		
	PHD_WUR	DEBAT6	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	0	0		
	PHD_WUR	DEBAT7	0	1	1	0	1	0	0	1	0	0	0	1	0	0	0	1	0		
	PHD_WUR	DEBAT8	0	0	0	1	0	1	0	1	0	0	0	0	0	1	1	0	0		
	PHD_WUR	DEBAT9	1	0	1	0	0	0	1	0	0	0	1	0	0	1	1	1	0		
	PHD_WUR	DEBAT10	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0	1	0		
	PHD_WUR	DEBAT11	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0	0	0		
	PHD_WUR	DEBAT12	0	0	0	1	0	0	1	0	0	0	1	0	0	1	1	1	0		
	PHD_WUR	DEBAT13	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	0		
	PHD_WUR	DEBAT14	0	0	1	1	1	1	0	0	1	0	1	0	0	0	0	1	0		

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Contexte de réponse	n° de réponse	III. Innovations in bio banking and trades off															IV. Any other ethical issue you would like to mention regarding	
		1 Do you support further research on semen properties and improvement of semen freezing procedure to ensure higher efficiency of Artificial			2 Would you support using cloning methods to increase the number of animals of rare breed			3 Would you agree to sacrifice a few females of a rare rabbit breed in order to obtain sufficient number of embryos for biobank collection to ensure			4 Would you agree to sacrifice a number of one day old female chicks to sample gonad for further grafting in order to store female reproductive cells			5 If the only option to collect biological material of rare breeds is collecting tissue samples (e.g. skin from the ear while tagging) would you accept using			Yes (proposals)	No (if no proposal written)
		Yes	No	Do not know	Yes	No	Do not know	Yes	No	Do not know	Yes	No	Do not know	Yes	No	Do not know	0	0
CONTEXT	ID	TECHNO_Y	TECHNO_N	TECHNO_?	CLONE_Y	CLONE_N	CLONE_?	RABB_Y	RABB_N	RABB_?	CHICK_Y	CHICK_N	CHICK_?	TRANSG_Y	TRANSG_N	TRANSG_?		
Zagreb 2018	Z1	1	0	0	0	1	0	1	0	0	1	0	0	1	1	0	0	0
Zagreb 2018	Z2	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0
Zagreb 2018	Z3	0	0	1	0	0	1	1	0	0	1	0	0	1	0	0	0	0
Zagreb 2018	Z4	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0
Zagreb 2018	Z5	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0
Zagreb 2018	Z6	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0
Zagreb 2018	Z7	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0
Zagreb 2018	Z8	1	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0
Zagreb 2018	Z9	1	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0
Zagreb 2018	Z10	1	0	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0
Zagreb 2018	Z11	1	0	0	0	1	0	0	0	0	1	0	0	1	0	0	1	0
Zagreb 2018	Z12	1	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0
SAVE	SAVE1	1	0	0	1	0	0	1	0	0	1	0	0	1	1	0	0	0
SAVE	SAVE2	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0
SAVE	SAVE3	1	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0
SAVE	SAVE4	0	1	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0
SAVE	SAVE5	1	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0
SAVE	SAVE6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SAVE	SAVE7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SAVE	SAVE8	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0
SAVE	SAVE9	1	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0
SAVE	SAVE10	1	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0
SAVE	SAVE11	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0
SAVE	SAVE12	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0
SAVE	SAVE13	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0
SAVE	SAVE14	1	0	0	0	1	0	1	0	0	1	0	0	0	0	1	0	0
SAVE	SAVE15	1	0	0	1	0	0	1	0	0	1	0	0	0	0	1	0	0
SAVE	SAVE16	1	0	0	1	0	0	1	0	0	1	0	0	0	0	1	0	0
SAVE	SAVE17	0	0	1	0	1	0	1	0	0	1	0	0	0	1	0	0	0
SAVE	SAVE18	1	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0
SAVE	SAVE19	1	0	0	0	1	0	0	1	0	1	0	0	0	1	0	0	0
SAVE	SAVE20	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0
SAVE	SAVE21	0	0	1	0	1	0	0	0	1	0	0	1	0	0	1	0	0
SAVE	SAVE22	0	1	0	0	1	0	0	1	0	0	0	1	0	1	0	0	0
SAVE	SAVE23	0	0	1	0	1	0	1	0	0	1	0	0	0	1	0	0	0
SAVE	SAVE24	1	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0
SAVE	SAVE25	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0
SAVE	SAVE26	0	1	0	0	1	0	1	0	0	1	0	0	0	1	0	0	0
FAO ITWG	FAO1	1	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0
FAO ITWG	FAO2	1	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0
FAO ITWG	FAO3	1	0	0	0	1	0	1	0	0	1	0	0	0	1	0	0	0
FAO ITWG	FAO4	1	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0	0
FAO ITWG	FAO5	1	0	0	0	1	0	1	0	0	1	0	0	0	1	0	0	0
FAO ITWG	FAO6	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0
FAO ITWG	FAO7	1	0	0	1	0	0	0	0	1	0	1	0	0	0	1	0	0
FAO ITWG	FAO8	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0
FAO ITWG	FAO9	1	0	0	0	1	0	1	0	0	1	0	0	0	0	1	0	0
FAO ITWG	FAO10	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0
FAO ITWG	FAO11	1	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	0
FAO ITWG	FAO12	0	0	1	1	0	0	1	0	0	1	0	0	1	0	0	0	0
FAO ITWG	FAO13	1	0	0	1	0	0	1	0	0	1	0	0	0	0	1	0	0
FAO ITWG	FAO14	1	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0
FAO ITWG	FAO15	1	0	0	0	1	0	0	0	1	0	0	1	1	0	0	0	0
FAO ITWG	FAO16	1	0	0	1	0	0	1	0	0	1	0	0	0	0	1	0	0
FAO ITWG	FAO17	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0
FAO ITWG	FAO18	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0

Contexte de réponse	n° de réponse	III. Innovations in bio banking and trades off															IV. Any other ethical issue you would like to mention regarding	
		1 Do you support further research on semen properties and improvement of semen freezing procedure to ensure higher efficiency of Artificial			2 Would you support using cloning methods to increase the number of animals of rare breed			3 Would you agree to sacrifice a few females of a rare rabbit breed in order to obtain sufficient number of embryos for biobank collection to ensure			4 Would you agree to sacrifice a number of one day old female chicks to sample gonad for further grafting in order to store female reproductive cells			5 If the only option to collect biological material of rare breeds is collecting tissue samples (e.g. skin from the ear while tagging) would you accept using			Yes (proposals)	No (if no proposal written)
		Yes	No	Do not know	Yes	No	Do not know	Yes	No	Do not know	Yes	No	Do not know	Yes	No	Do not know	0	0
CONTEXT	ID	TECHNO_Y	TECHNO_N	TECHNO_?	CLONE_Y	CLONE_N	CLONE_?	RABB_Y	RABB_N	RABB_?	CHICK_Y	CHICK_N	CHICK_?	TRANSYG_Y	TRANSYG_N	TRANSYG_?		
FAO ITWG	FAO19	1	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	0
FAO ITWG	FAO20	0	0	1	1	0	0	0	1	0	0	0	1	1	0	0	0	0
FAO ITWG	FAO21	1	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0
FAO ITWG	FAO22	1	0	0	0	0	0	1	1	0	0	1	0	0	1	0	0	0
FAO ITWG	FAO23	1	0	0	1	0	0	0	0	0	1	0	0	1	1	0	0	0
WG ExSitu	WG1	1	0	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0
WG ExSitu	WG2	1	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0
WG ExSitu	WG3	1	0	0	1	0	0	1	0	0	0	1	0	0	1	0	0	0
WG ExSitu	WG4	0	0	1	0	1	0	0	0	0	1	0	1	0	0	1	0	0
WG ExSitu	WG5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WG ExSitu	WG6	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0
WG ExSitu	WG7	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0
WG ExSitu	WG8	1	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	0
WG ExSitu	WG9	1	0	0	0	0	0	1	1	0	0	1	0	0	1	0	0	0
WG ExSitu	WG10	0	1	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0
WG ExSitu	WG11	1	0	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0
WG ExSitu	WG12	1	0	0	0	0	0	1	1	0	0	1	0	0	1	0	0	0
WG ExSitu	WG13	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0
WG ExSitu	WG14	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0
WG ExSitu	WG15	1	0	0	0	0	0	1	1	0	0	0	0	1	0	0	1	0
WG ExSitu	WG16	1	0	0	0	0	1	0	0	0	1	0	0	1	1	0	0	0
WG ExSitu	WG17	1	0	0	0	1	0	0	0	0	1	0	0	1	1	0	0	0
WG ExSitu	WG18	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0	0
WG ExSitu	WG19	1	0	0	1	0	0	1	0	0	0	1	0	0	1	0	0	0
IMAGE PG	IMAGE1	1	0	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0
IMAGE PG	IMAGE2	1	0	0	0	1	0	0	0	0	1	0	0	1	0	0	1	0
IMAGE PG	IMAGE3	1	0	0	1	0	0	0	0	1	0	1	0	0	1	0	0	0
IMAGE PG	IMAGE4	1	0	0	1	0	0	0	1	0	0	0	1	0	1	0	0	0
IMAGE PG	IMAGE5	1	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0
IMAGE PG	IMAGE6	1	0	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0
IMAGE PG	IMAGE7	1	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0
IMAGE PG	IMAGE8	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0
IMAGE PG	IMAGE9	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0
IMAGE PG	IMAGE10	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
PHD_WUR	DEBAT1	0	0	1	0	1	0	1	0	0	0	1	0	0	1	0	0	0
PHD_WUR	DEBAT2	1	0	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0
PHD_WUR	DEBAT3	1	0	0	1	0	0	1	0	0	0	1	0	0	1	0	0	0
PHD_WUR	DEBAT4	1	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	0
PHD_WUR	DEBAT5	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0
PHD_WUR	DEBAT6	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0
PHD_WUR	DEBAT7	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0
PHD_WUR	DEBAT8	1	0	0	1	0	0	0	0	0	1	0	0	1	1	0	0	0
PHD_WUR	DEBAT9	1	0	0	1	0	0	0	0	1	0	1	0	0	1	0	0	0
PHD_WUR	DEBAT10	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	1	0
PHD_WUR	DEBAT11	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0
PHD_WUR	DEBAT12	1	0	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0
PHD_WUR	DEBAT13	1	0	0	1	0	0	0	1	0	0	0	1	0	1	0	0	0
PHD_WUR	DEBAT14	0	1	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0

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