QUESTIONNAIRE FOR THE CONSULTATION OF STAKEHOLDERS ON THE COMMUNITY PROGRAMME ON GENETIC RESOURCES IN AGRICULTURE

The European Commission, Directorate-General for Agricultural and Rural Development, is carrying out a consultation on genetic resources in agriculture. The survey and on-line consultation should help to identify current and future needs, identifying possible future objectives, and exploring measures to meet them.

The results of the survey will also be considered in the forthcoming evaluation by independent experts of the "Community programme on the conservation, characterisation, collection and utilisation (hereinafter: conservation) of genetic resources in agriculture" (Council Regulation (EC) No 870/2004).

To find some general information (background, international and EU context, relevant measures, stakeholders) click here.

General information: http://ec.europa.eu/agriculture/genetic-resources/survey/intro_en.htm

Contribution handed in by the IFOAM EU Group on 20th January 2012.

Name of organisation and main field of interest

Name of organisation  *(compulsory) (maximum 500 characters)

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Main field of interest  *(compulsory) (maximum 500 characters)

Organic farming and, in broader terms, sustainable farming practices, including but not limited to biodiversity, improving agro-biodiversity with organic breeding, food security, organic breeding programmes, farm-based sustainable seed supply, climate change mitigation and adaptation in agriculture, quality food.

1. Conserving genetic resources in agriculture
1. In your view, which are the main benefits of conserving agricultural genetic resources (max 5 choices)? (optional)

- Agronomic and/or economic advantages/benefits
- Consumer attraction /interest
- Environmental benefits (biodiversity)
- Food quality
- Food security
- Human health
- Larger products range (diversification, products offer)
- Non-tangible benefits (cultural, ethical)
- No regret strategy in case of future needs
- Scientific interest
- Other

2. If your organisation is involved in conserving genetic resources diversity in agriculture (including actions under the Community programme established by Council Regulation No 870/2004) please provide brief details of its activities. (optional) (maximum 1500 characters)

The IFOAM EU Group is an umbrella organisation. Many of its members are actively involved in the conservation, characterisation and sustainable utilisation/propagation of seeds and other plant genetic resources for food and agriculture both in a scientific context as well as in active, new on-farm breeding programmes and participatory activities, work on in-situ as well as ex-situ conservation, and officially supply the organic sector with broad ranges of OP-varieties/populations.

The IFOAM EU Group advocates for the conservation and further development of genetic resources in order to ensure the availability of a wide range of plant varieties and animal breeds for the future.

Some members of IFOAM EU (scientific institutions and one farmer’s organisation) are involved in the SOLIBAM project (under FP7).

To mention an example for scientific involvement in the conservation and further development of IFOAM EU members: The Research Institute for Organic Farming FiBL is involved in conservation and utilisation of cotton germplasms in India in order to start a participatory breeding programme for GM-free cotton for organic and low-input farming. FiBL is also involved in a breeding programme for GM-free soybean in Germany and Switzerland.
Contribution to stakeholder consultation on genetic resources in agriculture 20 January 2012

3. Are you familiar with the Community programme established by Council Regulation No 870/2004? *(compulsory)

- Yes
- No

2. Community programme established by Council Regulation No 870/2004

4. The Community programme had the objective "to help ensure and improve conservation, characterisation, collection and use of plant, animal & microbial genetic resources". To what extent has the objective been realised? (optional) (maximum 1500 characters)

The objective has not been reached. This is because the EU does not provide a framework for an integral approach to the conservation, characterisation, collection and sustainable use of genetic resources for food and agriculture.

- Article 5 of the Regulation says the programme should promote in situ conservation of genetic resources, but it has had almost no impact on their use in farming (i.e. in situ/on farm conservation).
- the financial basis of the programme is not sufficient to guarantee the conservation of genetic resources on a broad basis
- access to funding from the programme is synonymous with high bureaucratic burden; networks of smaller and often local conservation initiatives involving farmers and gardeners often can’t and are thereby disadvantaged. To reflect the diversity of conservation initiatives in the EU it would be important to channel specific funding lines to farmer organisations and seed networks that conserve and use the genetic resources at the local level
- next to the formal seed chain with variety protection, etc. informal seed exchange should be promoted
- the current EU legislation on the marketing of seed and plant propagating material hinders the conservation of a diversity of plant varieties and especially further breeding efforts for local and specific uses which could make use of these genetic resources and therewith also increase the economic value of genetic resources; also patents on living organisms hinder biodiversity.
5. A second objective was "to co-ordinate and harmonise actions in Member States with a view to reinforcing the Community's efforts and eliminating duplication of effort". To what extent has the objective been realised? (optional) (maximum 1500 characters)

Several projects have contributed to the harmonisation and coordination of scientific communities and research bodies and therewith the avoidance of duplication of efforts, but the overall impact of the programme has remained insignificant in terms of encouragement of effective conservation actions in all Member States, as by far not all organisations involved in genetic resources in agriculture have been sufficiently reached. Equitable agricultural/rural development policies to reinforce the coordination and harmonisation of all different actors involved in the sustainable utilisation of GR (farmers, consumers, seed networks) have not been achieved. Policy impacts were correspondingly small: for example the use of the option to encourage conservation of genetic resources through rural development programmes is only used in a small group of Member States and regions.

The still insecure situation of fair access and benefit sharing is hindering seed exchange across countries.

Whereas harmonisation of approaches and coordination between different actors and actions is important, a centralisation of ex-situ conservation must be avoided. Also ex-situ conservation should be decentral and accessible for local communities and farmers/gardeners.

6. A third objective was "to promote an effective information exchange between the Community main actors and the relevant organisation concerned by genetic resources in agriculture". To what extent has the objective been realised? (optional) (maximum 1500 characters)

Article 7 says that NGOs and other relevant stakeholders should be included in the accompanying actions. Information exchange between organisations has improved, but results have not been distributed widely and by far not all organisations concerned with genetic resources in agriculture have been sufficiently reached. The coordination and information exchange between farmer’s organisations, seed networks and other groups involved in the conservation and use of genetic resources should be supported by regulation 870/2004. In reality, however, information exchange and funding has been promoted only among scientific bodies; civil society has not been considered at all.

The knowledge and experience of farmers’ and gardeners’ groups and NGOs active in the conservation and further development of farm genetic resources has not been
sufficiently recognised in the programme yet; also the value and specific characteristics of genetic resources conserved and developed by those groups have not yet been sufficiently acknowledged.

7. A fourth objective was "to be multidisciplinary and to build constructive collaboration between partners (e.g. the various stakeholders including gene banks, non-governmental organisations, technical institutes, breeders, farmers, gardeners and the forest sector)". To what extent has the objective been realised? (optional) (maximum 1500 characters)

The programme has a clear focus on governmental and scientific institutions. The collaboration with stakeholders such as gardeners, private seed savers and farmers is one of the most important points missing in the entire programme.

Collaboration between partners is important. Any centralisation of conservation activities should be avoided.

8. In your view, what are the specific positive (or negative) effects that can be expected from the Community programme? (optional) (maximum 1500 characters)

The programme should:
- contribute to the visibility, systematic collection and protection of farm genetic resources
- maintain the viability, grade of variation and genetic integrity of genetic resources for food and agriculture (F&A) GR collections
- collect and study GR for F&A that are at risk of genetic erosion or have a potential use in sustainable farming systems
- promote and support programmes of in-situ and on-farm conservation and use of these resources by farmers’ organisations and seed networks, and other small-scale and participative breeding programmes for local use or specific purposes (e.g. organic farming, use for special food recipes)
- coordinate actions and organise an efficient system of ex-situ conservation with characterisation, inventory, regeneration, evaluation, documentation, and transfer of appropriate technologies with the objective of improving the sustainable use of genetic resources for F&A in sustainable farming systems, incl. agro-silvo-pastoral farming, and help maintain biodiversity in its place of origin.
- promote specific participative breeding programmes using local varieties or landraces and develop them in collaboration with organic researchers, organic
breeders and organic farmers to adapt these varieties/landraces to organic farming conditions
- send a strong signal that genetic resources form not only the landscape but are part of wider important agro-ecological systems of high scientific, social and cultural value

9. Do you have any views on the organisational and administrative handling of the Community programme? If the programme were to be renewed, what in your opinion should be maintained and what should be modified and how often should calls for proposals be launched? (optional) (maximum 1500 characters)

Calls for proposals should be launched every year for projects of 3-5 years’ duration, or at least every 2 years for other projects

Calls should be well advertised so that all stakeholders have a chance to apply (e.g. farmers and gardeners associations), not only research institutions. Smaller projects should have the possibility to be supported by the programme. Furthermore, an effective dialogue should be promoted between non-state actors and scientific bodies, not only through occasional meetings, but through concrete partnerships in projects.

The balance between in-situ and ex-situ conservation, as well as between scientific conservation efforts and on-farm and participative conservation activities should be reconsidered. In-situ conservation and on-farm/participative activities must play a more important role in the future.

Preferably, the administration should remain on EU-level to ensure that the programme goes forward.

3. Community programme, Rural Development Policy & Research Framework Programme

10. According to your knowledge, which measures on the conservation of endangered genetic resources in agriculture or the use of traditional and local agricultural genetic resources (plant varieties/landraces and animal breeds) have been promoted under Rural Development Programmes in your region(s) and/or country (max 500 words)? (optional) (maximum 3000 characters)

In 2-3 Spanish regions, the local governments have launched funding lines for genetic resources conservation in the frame of EAFRD 2007-2013. But these lines
don’t have stable funding and have been made without coordination with farmers’ organisations and seed networks. In some Member States programmes have been limited to varieties registered in the catalogues. This is a serious obstacle for more dynamic and farmers’/gardeners’-based efforts to conserve and further develop farm genetic resources. RD measures on genetic resources are often connected to the area where conservation crops are grown. As the conservation and further development of genetic resources usually requires cooperation and networking amongst different actors within but also beyond the regions, this should be reflected in RD programmes.

11. In your opinion, what are the advantages and disadvantages of the three different types of measures, used for the conservation of genetic resources in agriculture: Rural Development Policy; Community Programme on Genetic Resources; EU Research Framework Programme? How could these measures complement each other in a meaningful manner?

Agro-biodiversity is treated in EU policies as a side issue, and the productivity of farm systems and food quality is meant to be reached through other paths. This point of view needs a significant change: The use of farm genetic resources and their further development in participative approaches, including farmers and gardeners, must be recognised as a contribution to future food security and sustainable farming; local varieties and breeds must be acknowledged as important farm inputs. Individual support schemes cannot sufficiently reflect the complexity of the maintenance of farm GR; well-defined local strategies and policies are necessary and must involve the entire food chain (breeders, farmers, producers, retailers and consumers).

Moreover, it is of utmost importance that the EU guarantees policy coherence for the maintenance and further development of farm genetic resources also beyond these 3 policies. Policies that hamper this objective such as the EU legislation on the marketing of seed and plant propagating material must be revised in a way that facilitates a successful development of farm biodiversity.

The Community Programme on Genetic Resources serves as a programme to promote pilot projects that can serve as examples for further policy action or serve immediate EU needs. It should moreover complement the Rural Development programmes by building up EU-wide networks of initiatives that maintain genetic resources. The EU Research Framework deals with research and innovation, assessment of the state of farm genetic resources, and gives scientific advice on how to create policy frameworks that encourage the maintenance of genetic resources in use. To support GR maintenance and development, it must promote participatory research and holistic approaches, taking into consideration the whole food and farm system.
Instead of financing GMO research, the food and farm-related programmes must focus more on the maintenance and further development of farm genetic resources. The new instrument of **European Innovation Partnerships** (EIP) could contribute to the maintenance and further development of farm GR. Farm genetic resources must become an objective within the EIP for agriculture. Participatory approaches for the use and further development of farm GR should be financed also under this programme.

The **Rural Development** programmes play a role in establishing long-term conservation and use of genetic resources in practice. Member States and regions should be obliged to fund the use and conservation of varieties in risk of genetic erosion under these programmes. As the maintenance of genetic resources requires network actions and cooperation between farmers and other stakeholders, LEADER type measures should be additionally considered for this purpose.

### 4. Identifying needs and objectives

12. In your views, which sector could benefit in particular from efforts to conserve genetic resources in agriculture (max -5 choices)?

(optional)

- a. Agri-food industry
- b. Biotechnology industry
- c. Other industry
- d. Botanical and zoological gardens
- e. Breeders
- f. Consumers
- g. Farmers
- h. Scientific bodies
- i. Tourism
- j. Other

Seed suppliers for organic and low-input farm systems; farmers and gardeners that are active in breeding, participatory breeding initiatives.

Please explain your choice (optional) (maximum 3000 characters)
The conservation of genetic resources is crucial to food security! It can also lead to economic benefits for the food and farming sector. The availability of a broad variety of genetic resources allows farmers and breeders to develop varieties that are adapted to local conditions, a changing environment (for instance due to climate change) and to changing conditions, requirements (e.g. increased carbon storage) or consumption patterns.

For organic farmers, the conservation of genetic resources as well as new breeds and varieties bred from them, is even more important because they opt for robust plants and farm animals to avoid (or in some cases significantly reduce) the use of external input (fertilisers, pesticides, medical treatment).

Finally, the consumer benefits – already today – from the availability of natural agricultural products with different tastes and appearances, as well as the choice of GMO-free seeds, are enormous.

13. Which of the existing initiatives and activities of EU and other organisations do you consider to be most relevant for the conservation of genetic resources in agriculture? Please choose 5 out of the following possibilities (optional)

- [X] a. EU Community programme (Council Regulation No 870/2004)
- b. EU Rural Development Policy
- c. Other relevant measures applied under EU Common Agriculture Policy
- d. EU Research Framework Programmes
- e. EU Biodiversity Strategy
- [X] f. EU legislation on the protection of intellectual property rights
- [X] g. Other EU policies (e.g. propagating material and zoo-technical legislation)
- h. Activities of the UN-Food and Agriculture Organisation (FAO)
- i. Convention on Biological Diversity (CBD), incl. the Nagoya protocol
- j. European cooperative Programme for Plant Genetic Resources (ECPGR)
- k. European Forest Genetic Resources Programme (EUFORGEN)
- l. European Regional Focal Point for Animal Genetic Resources (ERFP)
- [X] m. International Treaty on Plant Genetic resources for Food and Agriculture
- n. International Plant Protection Convention (IPPC)
- o. World Organisation for Animal Health (OIE)
- [ ] p. Other
Practical and information activities of non-governmental organisations and associations, farmers'/gardeners’ networks (informal seed sector) play an important role. As the maintenance of genetic resources is influenced by many policies and institutions, it is hard to make a choice from the list; many others, e.g. rural development policies, are also of importance for this complex subject.

What should be modified or strengthened in order to enhance the effectiveness of the selected initiatives and actions (max 500 words)?

( optional ) ( maximum 3000 characters )

**Coherence in EU policies** regarding biodiversity targets, especially in the EU legislation on seed and plant propagating material, as well as on plant variety property rights: These legislations pose a serious threat to the conservation, use and further development of genetic diversity. The revision of these policies should promote (genetic) diversity instead of uniformity. It must lead to possibilities of less bureaucratic registration of conservation varieties, but also to new varieties that will be – due to their specific purpose or to the broader genetic basis and lower purity – attractive to a smaller number of end-users (farmers and gardeners), as has been achieved under the relieved registration of niche varieties in the revised Swiss seed law. The informal seed sector that exists in the EU must finally be given legal status that facilitates its work.

EU legislation on the protection of intellectual property rights, for instance the Biotech directive (98/44/EG), must be adapted in a way that no patents are allowed on plant or animal genetic resources. Such patents restrict the free use of genetic material by breeders and farmers, increase monopolisation in the seed sector and pose a great threat to food security.

**GMO contamination** poses a threat to the maintenance and further development of genetic resources in the EU. As an ad-hoc measure, the establishment of GMO-free regions to maintain genetic resources without the risk of GMO contamination must be encouraged. In the long term, policies must ensure that any contamination of non-GM crops with GMOs is avoided.

**Common programme for farm genetic resources**: The programme must allow easier access for networks of farmer’s groups and NGOs to the programme and market, as also these non-scientific groups play an important role in the conservation of genetic resources and in the communication process around it (adaptation of UPOV criteria). The programme should enhance especially crops that have been neglected by commercial breeding companies, like grain legumes or traditional vegetables and fruits for local consumption and markets. For animal breeders, there is a need to pay more attention and lend support to introduce organic breeding programmes in existing associations of indigenous
breeds, as many are doing important work in this field, but not following organic principles.

The conservation, selection and dynamic management of farm genetic resources done by farmers, gardeners, citizen initiatives, breeders, scientists and networks thereof must be recognised as essential contributions to increase the resilience of farm systems, reduce the use of external inputs in agriculture, adapt to climatic changes, sequester carbon, increase biodiversity and foster rural employment.

14. In your opinion, which is the impact of the EU seed and propagating material and zootechnical legislation on actions, including farming practises, relevant for the conservation of genetic resources diversity?

(optional) (maximum 1500 characters)

Up to now, European legislation only viewed conservation of agricultural GR from a scientific standpoint, essentially supporting scientific bodies, networking amongst researchers and ex-situ seed banks. ‘Officially’, the seed sector was not affected. Whereas in this sense the Directives 2008/62/EC, 2009/145/EC and 2010/60/EU on conservation varieties are an important step towards the recognition of the fact that seed regulations since the 1960s have contributed to the genetic erosion of agricultural diversity, these rules fail to enable effective conservation and small-scale breeding work. This is due to:

- high bureaucratic burden in many Member States to register these “conservation” varieties
- the standard set for “homogeneity” neither reflects reality, nor the objectives in conservation and farm breeding work: a broader inter-varietal genetic diversity is a wanted characteristic in those specific varieties to guarantee the adaptability to changing environmental conditions
- the possibility of registering newly-bred varieties for organic farming or small-scale use with broader inter-varietal genetic diversity is not foreseen for agricultural crops

The legislation on the marketing of S&PM as well as the legislation on plant variety property rights continue to hinder and reduce the maintenance and improvement of agro-biodiversity and must therefore be drastically revised to comply with the targets outlined in the EU 2020 Biodiversity Strategy and the new objectives of the CAP.

15. In your opinion what would be the most effective and efficient approaches to encouraging actors (including farmers, breeders, up-stream and down-stream industry, scientists, and others) at local, regional, national, and European levels to engage in the conservation of agricultural genetic resources in their habitat (in situ) and outside their habitat (ex situ)?

(optional) (maximum 1500 characters)
- Revise the relevant EU legislation in a way that finally recognises the important work of the informal seed sector by creating exemptions from registration requirements for the informal sector
- Ease market access for amateur varieties, landraces, farmers breeds, breeds for special purposes and population mixtures
- Work on international level for the adaptation of UPOV rules to biodiversity targets
- Adapt the DUS criteria, in particular uniformity and stability, to allow more genetic diversity within varieties
- Acknowledge efforts made for conservation
- Support conservation and new breeding efforts of farmer organisations (in situ) and participatory breeding and research in sustainable organic farming systems
- Support awareness-raising and promotion towards consumers; training activities for farmers in e.g. seed-saving and selection
- Establish support for silvo-agri-pastoral systems under the CAP
- Support regional projects which aim to market genetic diversity, for instance by producing and selling bread from a local wheat variety.

Genetic resources will only be maintained if a certain use or benefit can be derived from it. This could be achieved best by developing unique local products from crops with traditional importance, e.g. beer from old landraces in mountainous areas, or special maize for human consumption and with regional label. Therefore, a holistic approach including research, farming, marketing and consumption should be promoted.

16. With respect to decisions on different types of measures and their implementation, which role should be attributed to the local, regional, and national level? Which decisions and which types of action should be undertaken specifically at the EU level?

EU level: The Community programme for the conservation of genetic resources and financing thereof should remain at EU level, but decentralised local actions should be promoted most. The definition of the term “farm genetic resources” should be determined on EU level. EU legislation has to change to ensure easier handling of farm genetic resources as outlined in other points (and in IFOAM EU answers: http://www.ifoam-eu.org/workareas/policy/pdf/Contribution_IFOAMEU_Consultation_SPM_May2010.pdf). The Rural Development and Research programmes should get a clearer focus on the conservation and further development of farm genetic resources.

National/regional level: Integration of genetic resources in national and regional rural development programmes, implementation of legislation to allow exemptions for the informal seed sector, and easier registration for farm breeds, breeds with a higher intra-varietal genetic diversity and breeds for specific purposes (adapted DUS criteria, lower bureaucratic burden, etc.).
Local level: Local communities and authorities should encourage the setting up of networks and cooperation including farmers, gardeners, breeders, researchers and consumers for the maintenance and further development of genetic resources in use.

17. The main objectives of the Community Programme on Genetic Resources are "to help ensure and improve conservation, characterisation, evaluation, collection, documentation, development and use of [...] genetic resources". How far do these objectives correspond to relevant needs? Which other objectives should be pursued?

(optional) (maximum 1500 characters)

All objectives are relevant, but they should be prioritised for funding purposes. On-farm conservation should be included as an objective, and utilisation should be strengthened by promoting also participatory breeding and market chain development.

18. Priorities in genetic resources

In view of ensuring the most effective use of resources devoted to the conservation of agricultural biodiversity, which priority should be given to the items listed below. Please provide a ranking from top (1) to bottom (8).

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<td>Characterisation</td>
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<td>collection</td>
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<td>6</td>
<td>collection maintenance &amp; updating</td>
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<td>4</td>
<td>conservation</td>
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<td>development of genetic diversity (level of populations)</td>
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<td>3</td>
<td>documentation (such as Web-based inventories)</td>
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<td>5</td>
<td>Evaluation</td>
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<td>Use</td>
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19. In view of ensuring the most effective use of resources devoted to the conservation of genetic resources, which relative importance should be given to the different types of conservation actions? (choose one option)
Contribution to stakeholder consultation on genetic resources in agriculture 20 January 2012

a. Only in situ conservation

X b. In situ > ex situ

c. in situ = ex situ

d. in situ < ex situ

e. only ex situ

Please, explain your choice (optional) (maximum 1500 characters)

The most effective conservation of agro-biodiversity comes through the use of crops. In-situ conservation allows (i) the active interaction and adaptation of plant and animal genetic resources to a changing environment; (ii) the phenotypic characterisation and evaluation of agronomic performance; and (iii) easy access for participatory breeding and utilisation of genetic resources. In-situ conservation, selection and dynamic management of farm genetic resources by farmers, gardeners, citizen initiatives, breeders, scientists and networks contribute to increase the resilience of farm systems, reduce the use of external inputs in agriculture, help adapt to climatic changes, assist in carbon sequestration, increase biodiversity and improve rural employment.

If one were to go for only ex-situ conservation we would record a loss of diversity, but of course ex-situ is also necessary to support in-situ and as back-up.

20. In your view, how far could an EU-wide lists of endangered breeds and plant varieties (e.g. the " list of endangered local breeds in danger of being lost" and "plants under threat of genetic erosion" used for Rural Development Programmes - Regulations 1698/2005 and 1974/2006 - Annex IV) be useful for the implementation of a possible future EU-Community programme?

(optional) (maximum 1500 characters)

A European-wide list of endangered local breeds and plant varieties would be helpful to get an overview of the situation in different EU Member States and to identify needs for action under the following conditions:

- the use of the concerned breeds and plant varieties, as well as the marketing of the concerned plant propagation material and seed must be allowed without any restrictions
- the European list must be based on lists on regional or local level; in order to guarantee close links between local authorities, researchers, farmers and consumers with an interest in conservation of genetic resources, the main work of documentation should be done at local or national level. See for example the Italian case study (Bertacchini, 2009), where regions have established such lists.
- the list should not be a fixed and closed list, but allow for updates of characteristics, as local varieties tend to adapt to changing conditions in time
- the lists should include recent and traditional varieties and types

21. Priority in in situ conservation

Which priority should be given to the different types of actions, listed below, supporting in situ conservation at farm level? Please provide a ranking from top (1) to bottom (6).

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<td>5</td>
<td>Communication</td>
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<td>6</td>
<td>Innovation</td>
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<td>4</td>
<td>Knowledge transfer</td>
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<td>2</td>
<td>Networking (optional)</td>
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<td>3</td>
<td>Training</td>
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<td>Other (optional)</td>
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If other, please specify (optional) (maximum 500 characters)

The use of genetic material must be made legal and the use of those breeds/populations/varieties in the market must be supported, also by marketing and consumer information. Additionally, traditional genetic resources as well as farmers’ varieties must be excluded from any possibility to set exclusive private claims (plant variety protection, patenting). Exchange of seeds on international level (“open source seed bank”) should be facilitated. GMO contamination must be prevented.

Please explain your choice for the 3 top ranking actions (optional) (maximum 1500 characters)

Whereas networking and training are very important in order to fill the generational gap between old and young farmers and to ensure knowledge (and seed) transfer between them, the overall legal framework is of utmost importance. If genetic resources – seed, propagating material, derived products – can not be freely sold on the market, the maintenance and further development would lack any sustainable economic basis.

The case would be similar if companies would claim a plant variety right or patent right on the use of certain genetic resources: this would immediately exclude small users, but also breeders from using them, and therefore be a threat to the further development of farm biodiversity.

The innovation potential and knowledge of farmers and gardeners has to be recognised in networking efforts.
Ex-situ conservation should be decentralised in order to be close to those that conserve and develop genetic resources in-situ. Farmers’ and gardeners’ initiatives and NGOs working on the conservation and further development of farm genetic resources should be granted access to material in ex-situ conservation facilities (seed banks) in order to strengthen their capacities of in-situ conservation and further development of these genetic resources.

22. Priority in ex situ conservation

Which priority should be given to the different types of actions, listed below, supporting ex situ conservation? Please provide a ranking from top (1) to bottom (9).

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<tr>
<th>Rank</th>
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<tr>
<td>6</td>
<td>Centralisation of database &amp; collections (optional)</td>
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<td>5</td>
<td>Development of database &amp; collections (optional)</td>
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<tr>
<td>2</td>
<td>Maintaining &amp; updating databases &amp; collections (optional)</td>
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<td>8</td>
<td>Centralised collection of cryopreserved samples (optional)</td>
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<td>3</td>
<td>Networking (optional)</td>
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<td>Other (optional)</td>
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If other, please specify (optional) (maximum 500 characters)

- Protection against GMO-contamination: storage and growing of any GMO-material in and nearby ex-situ conservation locations must be forbidden
- Stable and well-balanced financing of ex-situ collections in the long-term
- Improved documentation of plant characteristics of different accessions
- Conservation of minor crop species
- DNA analysis to maintain maximum genetic diversity in small but manageable core collections; agronomic evaluation of these core collections

Please explain your choice for the 4 top ranking actions (optional) (maximum 1500 characters)

The coordination between ex-situ and in-situ conservation must be improved, and synergies must be better explored.
23. In your view, which are the most relevant obstacles to valorise under-utilised crops and animal species and traditional varieties and breeds? How could these obstacles be overcome?

(conditional) (maximum 1500 characters)

For plant varieties:

Problems: Difficulties in obtaining high-quality seed, a lack of suitable varieties, no or little breeding efforts and knowledge lost about the management of minor crops, resulting in reduced profitability. These problems are partly consequences of the current legal framework that makes the use and marketing of seed and plant propagating material of many genetic resources, and even more so of farm-bred varieties, many open pollinating varieties and varieties bred by breeders for specific purposes (and small markets) difficult, partly impossible, and expensive. Moreover, subsidies within the CAP have over years targeted high productivity and low diversity, which have further pushed this development.

Solutions:
1. Interest can be evoked if special products can be produced which are related to such under-utilised crops such as green spelt in south Germany.
2. A legal framework that facilitates the marketing of conservation varieties (crops/varieties/breeds/etc.) and new open pollinating varieties for special purposes (e.g. for organic farming).
3. The informal seed sector and seed exchange must be exempted from registration requirements.
4. Subsidies have to be redirected to small-scale and biodiversity-maintaining structures, not to big industries and farm systems.

24. Microorganisms and invertebrates

In your view, what are the priority areas regarding conservation and sustainable use of genetic resources of agriculturally relevant microorganisms and invertebrates? Please provide a ranking from top (1) to bottom (6).

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<tr>
<th>Rank</th>
<th>Priority Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Agro-industry microorganism (optional)</td>
</tr>
<tr>
<td>4</td>
<td>Bio-control microorganisms (optional)</td>
</tr>
<tr>
<td>5</td>
<td>Pest and disease (used in breeding programs) (optional)</td>
</tr>
<tr>
<td>3</td>
<td>Plant &amp; animal health microorganism (optional)</td>
</tr>
<tr>
<td>1</td>
<td>Soil biodiversity (optional)</td>
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<tr>
<td>2</td>
<td>Other (optional)</td>
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</tbody>
</table>
Interactions between (soil) micro-organisms, plants and cultivation techniques, as well as impacts on food quality.

Please explain your choice for the 4 top ranking actions (optional) (maximum 1500 characters)

Soil biodiversity: In particular micro-organisms involved in the nutrient cycle (e.g. N-fixing Rhizobia, P-solubilising mycorrhiza) as well as Plant health and disease suppression (e.g. Pseudomonates and other PGPR) are of crucial importance to meet the challenges of long-term food security, climate change and resource efficiency.

25. In your opinion, what would be the link between securing product quality (and quantity) and the conservation and sustainable use of genetic resources in agriculture and what should be done in this respect?

When talking about securing product quality one must distinguish between three things:

1. Food security: Conservation and the sustainable utilisation of genetic resources in agriculture could contribute to maintain local and regional food security and enable farmers and breeders to adapt to changing conditions and mitigation.

2. A clean and sustainable production process (a whole market chain concept involving all stakeholders of a given region) can provide consumers with fresh, natural, tasty and diverse food.

3. Nutritional product quality characteristics: scientific research has shown that modern varieties are much less nourishing than old varieties (cf. Murphy, Reeves, Jones, 2008; Hussain et al., 2010). Modern varieties have often been bred towards higher productivity only and contain less vitamins and essential minerals.

In relation to point 1, further programmes for the evaluation of conservation crop varieties could be developed in order to evaluate their performance under different environmental conditions. The association, crop rotation and diversification of food production systems could increase quantity and quality through further breeding initiatives. Again, the collaboration between farmers/gardeners, breeders, researchers, retailers and consumers is important to maximise opportunities, resources and efforts and also interchange knowledge. The diversification of food production systems contributes also to the diversification of the consumers’ diet and its nutritional value.
26. How far could short food supply chains help promoting the use of traditional and local agricultural or underutilised genetic resources?

(optional) (maximum 1500 characters)

Short food supply chains will have a big impact, as they will make it possible for farmers to sell their products with a story. It is a means of valorising local varieties and makes consumers more willing to pay a higher price for a special, local product. For this to happen, legalising the informal seed sector and access to market is paramount!

27. Other comments & suggestions

(optional) (maximum 1500 characters)

A summary of our demands:

1. Change of EU legislation on the marketing of seed and plant propagating material to exempt the informal seed sector from any registration and testing requirements, and to facilitate registration and market access for open pollinating varieties, farmers’ varieties, varieties bred for special purposes (and often lower homogeneity and stability)
2. Facilitate access for NGOs and farmers'/gardeners’ initiatives to funding through the community programme of farm genetic resources
3. Change in the CAP/Research framework towards the support of sustainable farm systems with organic farming as a leading measure, crop diversity, network initiatives to maintain, further develop and market genetic resources, as well as participative research, breeding and innovation initiatives to work with genetic resources
4. Support for the conservation of cultural landscapes/heritages
5. Legal and in-practice protection against GMO-contamination (zero tolerance in seeds)
6. Protection against private claims on genetic resources and biodiversity (no patents on life, no plant variety rights on farmers’ and traditional varieties)

References

