Genetic Resources - Cooperation models

What are the bottlenecks that limit cooperation between the different types of stakeholders? How can cooperation between them be promoted?

The EIP-AGRI Focus Group on Genetic Resources brought together 20 experts to address the bottlenecks that limit cooperation between European farmers, breeders, researchers and advisers in the field of conservation and use of genetic resources in agriculture. The experts analysed different types of successful ongoing cooperation agreements, and proposed new ways to motivate public and private stakeholder to engage in joint actions.

Another goal was to find ways to promote the use of locally adapted and under-used crops, varieties and breeds. To this end, the Focus Group made suggestions on how to:

- broaden the genetic basis that is used in plant and animal breeding
- strengthen the development of varieties and breeds that are particularly adapted to social, economic and ecological conditions.

Ideas for Operational Groups

- Developing the cooperation between various value chain actors, using business and success stories
- Enhancing the development of better adapted crops and breeds through cooperation between ex situ conservation of genetic resources and on-farm management. Producing varieties that are sustainable, resource-efficient and resilient to future climate changes
- Providing good quality and healthy food at affordable prices. Better accessibility to local products. Facilitating the interaction between local animal and crop genetic resources
- Affordable innovative technologies for breeding

"Taking part in the Focus Group on Genetic Resources in agriculture exposed me to the sheer depth and breadth of expertise that exists in the EU Member States. Thanks to the EIP-AGRI, we had the opportunity to discuss a wide range of topics, designed to benefit European farming in a practical and tangible way."

- Professor Dianna Bowles, expert from the EIP-AGRI Focus Group on Genetic Resources -

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Research needs

For Animal Genetic Resources

- Evaluating the risk of 'genetic drift' for unique traits in traditional breeds and varieties
- Methods / tools to encourage recording pedigrees for traditional breeds, and to improve management systems in the absence of pedigrees
- Identifying genes that contribute to the ability to adapt to local conditions and to robustness
- Optimisation of genomic programmes
- Interdisciplinary initiatives that combine characterisation and enhancement of the genetic resource with business development and marketing, including the study of emerging consumer attitudes and needs, and the sustainability of local breeds
- Socio-economic aspects addressing opportunities for product innovation and differentiation

For Plant Genetic Resources

- Optimising ex situ collections and strategies for in situ conservation; establishing better links between ex situ and in situ conservation
- Coherent research programmes, to obtain genomid data on accessions in collections, and to link sequenced data with genetic and genomic information
- Pre-breeding; identification and evaluation of germplasm for adaptive traits in Crop Wild Relative populations, especially for disease resistance, drought tolerance, and climate change adaptation
- Stress interactions with crop growth and yield, better understanding of the rhyzospehe, root functions and plasticity, reproductive failure under stress, epigenetic effects perenniality, etc.
- Monitoring changes in genetic diversity over time
- Knowledge transfer along the value chain the agro-food sector
- Creating a pan-European network of farmers and researchers on yield stability

More ideas for Operational Groups and research needs available in the Focus Group report

More information on the EIP-AGRI website

Focus Group webpage	Focus Group report

Contact: EIP-AGRI Service Point - Avenue de la Toison d'Or 72 - 1060 Brussels - BELGIUM
Tel +32 2 543 73 48 - servicepoint@eip-agri.eu - www.eip-agri.eu

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Register to www.eip-agri.eu where you can find peers, projects, ideas and resources to catalyse innovation in agriculture, forestry and horticulture together.