

## A global assessment of plant genetic resources for food and agriculture is released by the FAO

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A sustainable cropping system is dependent on Plant genetic resources for food and agriculture (PGRFA) - plants that are currently harvested or have potential to be harvested for food and agriculture. The publication, [The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture](#) (Third Report), presents the results of a comprehensive assessment of the global status and trends, including progress made and the remaining constraints, regarding the conservation and use of PGRFA since 2011. It documents progress and constraints in the management of PGRFA.

The Third Report is part of a series of publications of the results of periodic assessments, which are prepared under the aegis of FAO's [Commission on Genetic Resources for Food and Agriculture](#). The gaps and needs identified in the past reports have triggered a policy response: the rolling Global Plan of Action for the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture, a set of agreed priorities to guide FAO Members' work on these resources that underpin agrifood systems.

This global assessment is based on information provided by 128 countries, four regional centres and 13 international centres through the [FAO World Information and Early Warning System on Plant Genetic Resources \(WIEWS\)](#). Overall, over 1 600 experts, including scientists, curators and breeders, contributed to this publication, which addresses the statuses of in situ conservation and on-farm management, ex situ conservation, and sustainable use of PGRFA, and human and institutional capacities.

The report shows a complex situation with regard to the global status of plant genetic resources for food and agriculture. Overall progress has been achieved in preserving these resources, by expanding conservation areas in the wild, enlarging collections in genebanks, as well as improving documentation and access to them, and, therefore, enhancing their use in breeding and seed systems. However, progress has been uneven and insufficient across regions and countries. This was due

to the challenges faced by national programmes in addressing environmental and social pressures. Additionally, the impressive technological advancements achieved in several fields, especially biology and informatics, have not been adequately harnessed in most countries.

The report highlights a worrisome level of threatened diversity of PGRFA. This is particularly the case for two important plant groups, crop wild relatives, which can be a unique source of adaptive traits to environmental stressors, and wild food plants. The latter are often used to complement diets by local communities. Wild food plants also provide opportunities for diversifying cropping systems through their domestication. The replacement of local varieties in cropping systems is also a matter of concern, leading to a decline in on-farm diversity and the loss of associated traditional knowledge.

Documentation of valuable information on traits, such as drought tolerance, pest resistance and nutritional content also requires attention. Furthermore, too many genebanks around the world don't take advantage of existing improved genebank management information systems, which can significantly help in carrying out good curation practices, as well as data analysis and dissemination.

In many countries, there is a need for an effective and harmonized policy framework. Many countries still lack dedicated PGRFA strategies that integrate conservation and sustainable use as a seamless process, from conservation to breeding and seed delivery systems. National PGRFA programmes often lack adequate provisions for skilled human resources and efficient infrastructure. Long-term investments for developing capacity and for raising public awareness on the importance of PGRFA, are also often missing or poorly funded. Weaknesses in collaboration and partnerships within and between national institutions, research centres, networks and international institutions also remain unaddressed in many countries.

These issues have to be addressed because the stakes are high. Here, food security and nutrition are at stake. The target audience is broad. They range from researchers to PGRFA practitioners, donors, and policymakers. The information contained in the report is a baseline for future assessments and for monitoring changes in PGRFA diversity and their use. The gaps and needs identified will be used to set priorities for the effective management of these resources. They will also feed into updating the Second Global Plan of Action for PGRFA.