



## Plant Genetic Resources for Food and Agriculture<sup>1</sup>

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Plant genetic resources that are exchanged and used in a successive and continuous release of improved varieties through plant breeding have brought and continue to bring great benefits to society. While the commercial value of plant genetic resources per se is relatively small, their potential value when used in agriculture makes it essential to conserve them. This is so even if advances in biotechnology, viz. a better knowledge of the plant genome and the use of a few model plants such as *Arabidopsis thaliana*, were to render them less necessary.

As early as the 1930s breeders were part of the effort to create gene banks to conserve the genetic diversity in crops represented by landraces, wild and weed species closely related to cultivated species, special genetic stocks including elite and current breeders' lines, cultivated and obsolete varieties.

In the past 10,000 years, since the origins of agriculture, farmers have selected crop cultivars from the genetic diversity available to them. They moulded genetic resources over centuries through phenotypic selection, allowing and even facilitating genetic exchange between cultivars and weedy relatives, and by transporting cultivars from one region of the globe to another. By incorporating and re-mixing genetic diversity in new varieties, modern plant breeding has created more variation in food crops than has ever been available to farmers and consumers.

All nations are strongly dependent on each other in terms of genetic resources. Each nation grows or imports food crops whose centre of diversity lies outside their national boundaries, and are thus inherently dependent on multiple and foreign sources of germplasm. The historic wide spread use of plant genetic resources for food and agriculture is evident in the ancestry of individual crop varieties. Farmers and breeders have traditionally relied on open access to these genetic resources.

The approach mandated by the Convention on Biological Diversity (CBD) – “prior informed consent” (PIC) and on the basis of “mutually agreed terms” (MAT) with “countries of origin” – are not suited to plant genetic resources used for food and agriculture (PGRFA). Such bilateral agreements on access are detrimental to their use and conservation. Public research and small breeding companies in developing countries are particularly at risk, as an overwhelming majority of all germplasm from gene banks is accessed by them.

In order to monitor PIC and MAT, the CBD is currently debating a certificate of origin, source or legal provenance that would be required to use genetic resources for specified scientific or commercial purposes. ISF is not in favour of such a certificate, as it is not convinced of its need, true value or practical implementation.

In view of the considerable difficulty in identifying “country of origin” as defined by the CBD, ISF believes disclosure of “source” of the genetic resource, i.e. where the material was obtained, would be possible when the source is known and disclosure is not in breach of a contract. Disclosure should not be a criterion for patentability.

The International Treaty (the “Treaty”) on Plant Genetic Resources for Food and Agriculture (PGRFA) provides a legal framework that not only recognizes the need for conservation and sustainable use of PGRFA but also delineates a regime for access and benefit sharing. For the most important food crops the Treaty establishes a Multilateral System that facilitates access and tempers the concept of national sovereignty with the recognition that all countries depend largely on PGRFA originating in other countries, thereby implicitly affirming the scientific and historical soundness of the “common heritage” approach.

ISF strongly supports the Multilateral System and the principle of the Standard Material Transfer Agreement (SMTA). Successful implementation of the Treaty depends on the degree to which the SMTA is acceptable in practice for seed companies to utilise material. The main concerns of the seed industry are linked to the absence of threshold for the level of incorporation of accessed material in the final product, and to ambiguity as regards the duration of benefit sharing in case of restrictions for further research and breeding.

The Multilateral System, however, does not include all the species important for food and agriculture. In addition, the Treaty does not cover the so-called industrial crops. New uses of traditional food crops make such a differentiation meaningless. Germplasm of species not covered by the Multilateral System fall under the purview of the CBD. ISF considers that these crops should be brought into the Multilateral System of the International Treaty.

<sup>1</sup> See also ISF Position Papers on Plant Genetic Resources for Food and Agriculture: Use and Conservation (2005) and Disclosure of Origin in Intellectual Property Protection Applications (2003).