

## Draft Background on the SMTA

Monsanto supports the International Treaty on Plant Genetic Resources for Food and Agriculture (IT) in principle and is seeking means to actively engage in its access and benefits sharing provisions. Specifically, we view the multilateral system (MLS) as a valuable source of plant genetic resources for food and agriculture (PGRFA). Monsanto's plant breeding efforts would benefit if access to MLS material was allowed under acceptable terms. In return, Monsanto would be able to contribute to the fair and equitable sharing of benefits by means that include furthering the conservation and sustainable use of PGRFA in general.

Plant breeders have delivered proven benefits to human kind through acquiring, using and creating new combinations (diversity) of PGRFA, which provided improved food security and economic growth globally. Plant breeders working in industry advance and improve germplasm using the best available techniques fit for purpose in highly competitive markets. Commercial breeding programs use PGRFA that range from unimproved, "pre-bred" material<sup>1</sup> whose characteristics are poorly known to more advanced, better characterized, higher value "improved" material. It is generally understood that the value of unimproved germplasm is much lower than improved material. The investment risk of advancing from unimproved PGRFA to improved, commercial germplasm is much higher due to the low probability of any return and higher cost due to the increased time it takes to develop commercial material. Much of the cost and time involves eliminating the undesired genetic load contained in unimproved PGRFA. The majority of material in the MLS would be characterized by company breeders as having lower commercial potential (unimproved) without significant, costly and prolonged investments in making improvements<sup>2</sup>. Nevertheless, the MLS represents an important additional source of diversity for research and long-term crop improvement programs globally. This additional diversity is important considering the current need to adapt to climate change and new threats confronting farmers.

The IT established a multilateral system for facilitated access to PGRFA that uses a standard material transfer agreement (SMTA). Attractive features of the SMTA include its administrative simplicity, low-cost access to genetic resources and provisions for maintaining the PGRFA for research and breeding at the discretion of the developer. However, the SMTA also creates challenges for many companies, particularly those that use patents to protect intellectual property. Some companies have adopted a policy of SMTA-avoidance as a matter of necessity because:

1. Patenting plant breeding inventions triggers costly compliance measures. Because patenting inventions involving PGRFA are standard practice for some companies and since patents are considered to be a restriction triggering mandatory monetary benefits sharing, MLS material must be tracked in perpetuity within commercial breeding programs in order to comply with the IT.
2. The definition of PGRFA is unrealistic given commercial breeding practices. In theory, this necessitates the tracking of every gene contained in every accession obtained from the MLS in every cross to comply with the literal terms of the SMTA. In practice, tracking every accession

---

<sup>1</sup> The term "pre-bred" refers to raw accessions that may include wild relatives, landraces and other unimproved materials

<sup>2</sup> Maintaining a private source of quality germplasm is an additional cost to companies.

in perpetuity regardless of whether the material is present or confers any commercial value is cost prohibitive for a breeding program and possibly technically impossible<sup>3</sup>.

3. Payment rates are unreasonably high and put the original user (payer) at a competitive disadvantage, while secondary accession (from an initially commercialized cultivar) is unrestricted and free. In effect, this does not promote use and early adoption of PGRFA, but the converse. Many products are available in multiple countries. A patent enforced in one country affords no protection in another where patents cannot be obtained. The commercial restriction triggering payment does not restrict access in markets where a patent cannot be acquired. Thus, a developer making mandatory payments has no protection in other markets where competitors will have free access without encumbrance by either a patent or SMTA.

Currently, many technologically-based seed companies that use patents to protect their intellectual property view the SMTA as impeding breeding programs globally and achieving the goals of the IT. The treatment of patents on plant inventions as a restriction that triggers monetary benefits sharing discriminates against innovation-driven, technology companies that are committed to complying with agreements into which they have entered. For the reasons given above, the SMTA requires signatories to track individual genes and every accession in a breeding program in perpetuity, which is excessively costly, if not impossible. Importantly, the demonstrable value and probability of benefit from breeding with unimproved MLS materials is insufficient for some companies to incur the monetary risks associated with using them in commercial plant breeding programs.

Because of the above considerations, a large and important pool of PGRFA is not available to a significant portion of the private sector. The current SMTA-defined value sharing proposition is unacceptable to many companies, and negatively affects benefits returned to society in the form of improved seed and the flow of funds into the IT derived from access and sustainable use. This situation also has negative consequences on food security, economic development and sustainable use of PGRFA. It is hoped that the Governing Body of the IT will consider these and other points as they examine new approaches to enhance benefits sharing. Simple modifications could improve the SMTA and facilitate plant breeding broadly, positively impact the conservation and sustainable use of PGRFA while also ensuring the fair and equitable sharing of benefits derived from their utilization.

---

<sup>3</sup> The SMTA definition of PGRFA as a functional unit of heredity does not appropriately reflect that fact that genetic material's actual and potential value may be beneficial, neutral or detrimental to the commercial value of the progeny. A PGRFA may be present in a commercial material's lineage, but its contribution to the commercial value is negligible and the cost of removing it is prohibitive.