

Enhancing the Multilateral System of the Treaty, a commercial user's perspective.

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ABSTRACT

The 11th session of the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture will meet in Lima, Peru November 24-29, 2025. Among the agenda items is a package of measures intended to enhance the functioning of the Treaty's Multilateral System. For the past 12 years, Contracting Parties have sought agreement on measures that would increase user-based income and use, including expanding the scope of Annex 1. This paper gives a perspective from a representative of commercial users of plant genetic resources from the Multilateral System on the negotiations over the last 12 years. Described below are some historical background, examples of industry's involvement and contributions to the process from 2013 to 2025, and challenges that will confront the Governing Body. Important information, which has already been presented during the enhancement process, is summarized about the factors in a final package that will influence a commercial breeder's decision to expand their use of the MLS and lead to increased monetary benefit sharing over time. This paper offers insight into the importance of benefit-sharing rates and having multiple payment options to attract seed

industry users and hence payers to the Benefit Sharing Fund. The hope is that this information will contribute to a successful outcome in Lima.

BACKGROUND

The International Treaty on Plant Genetic Resources for Food and Agriculture (Treaty) was born out of a growing concern over the state of conservation, exchange, and sustainable use of plant genetic resources (PGRFA). Their importance to breeding and food production, and the well-being of all people, had been intensely discussed for decades before the Treaty was finalized November 3, 2001, and entered into force June 29, 2004. It was recognized as a specialized access and benefit sharing instrument in harmony with the Convention on Biological Diversity (CBD). Two of the principal objectives of the Treaty are: “*establishing a global system to provide farmers, plant breeders and scientists with access to plant genetic materials*”; and “*ensuring that recipients share benefits they derive from the use of these genetic materials.*” As of April 1, 2025, there were 154 Contracting Parties to the Treaty¹.

At the time the Treaty was finalized, its Multilateral System (MLS) was seen as an innovative solution designed to facilitate access to the PGRFA under the control of a Contracting Party. The Standard Material Transfer Agreement (SMTA), finalized in 2006, was developed to facilitate access to PGRFA of 64 crops and forages. A recipient/user would sign an SMTA, receive material from a provider, and comply with the conditions therein. A user who signed an SMTA and commercialized a product that is not available without restrictions i.e., any product subject to the terms of a patent, would be required to make a yearly monetary benefit sharing payment to the Treaty’s Benefit Sharing Fund² (SMTA Article 6.7). Users that

commercialized product(s) that are available without restriction were encouraged to make voluntary payments (SMTA Article 6.8).

Since 2007, over 100,000 SMTAs have been signed by recipients primarily from public sector breeding institutions/programs³ for uses internally and in developing countries. User-based payments have been modest to date⁴, but have been growing. The monetary benefits received so far reflect the limited use of PGRFA from the MLS in commercial products that are restricted. As such, Contracting Parties felt the need to explore means to enhance the MLS including improving the SMTA and expanding the list of crops in Annex 1.

AN ALTERNATIVE TO THE CBD

Early on the Treaty and its MLS were developed to be a better alternative to the CBD and its bilateral processes for plant breeders⁵. There was a belief that the decreasing availability of germplasm via international exchanges resulted from the perception that valuable resources were being given away. The situation was exacerbated by the bilateral nature of the CBD and procedural/administrative challenges at the national level. All plant breeders were experiencing growing problems operating under the CBD and its bi-lateral approach unique to every jurisdiction. However, commercial breeders, who could operate successfully using alternative sources of germplasm, were not impacted as negatively as public and non-profit breeders. Exchange of PGRFA was becoming more difficult and costly, especially for public institutions. The SMTA was viewed as a potential solution and was welcomed because of its simplicity, especially for providers of PGRFA. A consistent and

transparent system would facilitate exchange of PGRFA and encourage use. The idea was that as products and payments materialized, benefits would be shared fairly and equitably⁶.

Consistent with the CBD, the MLS would support conservation efforts as well as corporate profits. However, monetary benefit sharing was dependent on users using PGRFA in their commercial products and restricting access to their proprietary seeds. To this point, Fowler⁵ noted:

“[T]he notion that plant genetic resources are the “common heritage” of humankind yielded to assertions of national sovereignty, visions of financial rewards, and restrictions on access. Countries saw themselves as sellers of genetic resources. The problem? Nobody’s a buyer.”

Further on, Fowler⁵ clarified:

“Plant genetic resources are more valuable economically and practically as a public good than as a commodity. As a commodity they are a flop. Exchanged and used, they bring enormous benefits.”

As Fowler⁵ noted, MLS material is more important as a common good with potential value that must be exchanged and used to develop the benefits over time. Material in the MLS is better seen as part of a larger system of conservation involving collection, characterization, exchange and development through breeding. Much of the PGRFA in the MLS, then and now, is unimproved germplasm with uncertain commercial value⁷. There remained an urgent need to curate and conserve these materials which required money. However, the value, and money, would only be realized after PGRFA was characterized and developed through breeding.

Over time conflating the intrinsic value of PGRFA with a realized economic value created tension between ideological and practical viewpoints under the Treaty. Many commercial plant breeders used the SMTA but most of the larger seed companies were cautious because of the lack of any threshold of incorporation to trigger payments and perpetual obligations (private communications). Regarding user-based payments, many proponents of the Treaty envisioned that “no one expects it to be much”⁵. To date, payments have been made under Article 6.7⁴ while no users have availed themselves of Article 6.11⁸. By 2013, when the enhancement process began, attention focused on a desire for “increased, predictable, and long-term user-based payments”⁹ broadly.

HISTORY OF THE ENHANCEMENT PROCESS AND INDUSTRY INVOLVEMENT

Governing Body (GB) 5 initiated a process in 2013 (Resolution 2/2013⁹) to address the concern that user-based income was not meeting expectations. An *ad hoc* Open-ended Working Group (OEWG) would explore increasing user-based payments and also look at “additional measures” including the scope of Annex 1 and problems for users with accessing PGRFA from Contracting Parties. After the first two OEWG meetings in 2014, GB 6 issued Resolution 1/2015¹⁰ which described, *inter alia*, guidance and the tasks for future OEWG meetings. Importantly, the Resolution directed the OEWG: “[t]o consult with existing and potential SMTA users on the attractiveness of the proposals referred to above and to obtain a realistic picture of the proposed changes”.

The International Seed Federation (ISF) assembled a delegation in 2013 to present the views of the commercial seed sector within the process. We saw our role as being the unique

source of information on the use of the MLS and the SMTA by commercial breeders. Under this assumption, we enthusiastically engaged in the discussions of the OEWG from its inception and have continued to provide valuable insights and information to the present. We consulted extensively within the seed sector and proposed changes to the SMTA to make sure the OEWG had the information it needed to make the MLS and SMTA workable to commercial stakeholders as well as other plant breeders¹¹.

Industry has been committed to the success of the enhancement process from the start. Industry representatives contributed ideas and information throughout both formally and informally. Industry made numerous formal submissions to the OEWG between 2015 and 2025^{12,13,14,15,16,17,18,19}. Industry also participated in many informal sessions including providing funding to an informal session organized by the Meridian Institute in Maccarese, Italy in 2014²⁰. Our submissions contained critical insights into the use of the MLS and SMTA as well as changes needed to improve their attractiveness.

Industry believed that good progress was being made in the negotiations prior to the 8th session of the GB in late 2019. We largely supported the draft resolution and proposed package of measures that came out of the Ninth OEWG Meeting²¹ in June 2019. Unfortunately, negotiations were suspended at GB 8. This was due, in part, to the issue of benefit sharing associated with the use of digital sequence information (DSI)²²: since DSI had not yet been taken up to a significant degree under the CBD, some negotiators felt that it created a serious loophole within the SMTA if it was not explicitly addressed. However, monetary expectations (rates) were also a prominent factor in the breakdown of negotiations.

126 After a suspension of 3 years, the GB, at its ninth session in 2022, decided “to reestablish the
127 *Ad Hoc Open-ended Working Group to Enhance the Functioning of the Multilateral System*
128 *of Access and Benefit-sharing (Working Group)*, to finalize the enhancement of the
129 *functioning of the Multilateral System by the Eleventh Session of the Governing Body*”²³. The
130 OEWG met five times since GB 9.

131 As noted above, industry, primarily represented through ISF, consistently contributed expert
132 input from the perspective of the users who are expected to provide monetary benefits after
133 use (commercialization). Our operating premise was that enhancement is predicated on
134 increasing the use of PGRFA from the MLS and with the SMTA. ISF’s counsel to the OEWG
135 was that, to enhance the MLS, the SMTA must be modified and made more attractive in terms
136 of expiration of payment obligations and withdrawal terms (see references 13-20). With
137 these impediments addressed, more breeders would use MLS material in their breeding
138 programs to explore their potential to improve commercial materials. Many of these
139 structural improvements were present in a package of measures the GB took up in 2019.

140 Recognizing the importance placed by some negotiators on the need for immediate
141 payments to the Benefit Sharing Fund, a number of seed companies signed a Declaration of
142 Commitment¹³ in 2017, committing to an upfront payment using a subscription payment
143 option. They agreed to pay a fixed percentage of the sales of their portfolio of Annex 1 crops
144 – a subscription payment – under conditions that made “business sense”. Many within the
145 seed industry saw this as an opportunity to initiate the process of enhancement at an
146 acceptable cost. The hope was to start a long-term process to improve the MLS over time
147 and hopefully realize new commercial products through an upfront investment.

148 Unfortunately, the projected income from the Declaration was judged to be insufficient by
149 some negotiators. With the suspended process at GB 8, the Declaration was withdrawn and
150 there was no incentive to increase use by commercial users and user-based payments.

151 Throughout the negotiation, ISF representatives pointed out that multiple payment options
152 would be attractive to the greatest number of potential commercial users²⁴. Most recently,
153 ISF spokespeople noted that a combination of an upfront payment (a subscription) and
154 single access (Articles 6.7 & 6.8) will optimize use of PGRFA from the MLS and maximize
155 user-based payments from commercial breeders over time as long as the rates are
156 reasonable. In two recent informal sessions^{25,26}, we shared results from surveys we
157 conducted that showed how the use of PGRFA from the MLS in commercial breeding
158 programs is modest. Exact, quantitative information was not available due to the
159 confidential nature of the data, but the trends provide valuable insights. The total number of
160 SMTAs signed is not indicative of what and how MLS material is being used in commercial
161 breeding programs²⁷. We pointed out in these sessions, for example, that while certain crops
162 are bred for large scale agricultural production, such as commercial maize and other row
163 crops like soybeans and cotton²⁸, the use of MLS material in breeding programs of these
164 crops is effectively zero. To date, MLS material with the greatest commercial interest has
165 been in vegetable crops, especially certain non-Annex 1 crops. Stated another way,
166 companies primarily use sources of germplasm other than the MLS for their commercial
167 breeding programs. The challenge for the GB is to finalize a package that accepts the current
168 economic realities so the Treaty can effectively incentivize the use of the MLS by a larger
169 number of commercial breeders.

170 **CURRENT STATE OF PLAY**

171 The GB of the Treaty will meet for the 11th time in Lima, Peru in late November this year.
172 Among the agenda items they will discuss is finalizing a draft package of measures designed
173 to enhance the functioning of the multilateral system (MLS) of the Treaty. According to IT-
174 OWG-EFMLS/14/25/Report (July 7-11, 2025), the shared aims of the process were:

- 175 • *“Increase the benefits that arise from the Multilateral System for all*
176 *Contracting Parties and users, both monetary and non-monetary;*
- 177 • ***Increase user-based income to the Benefit-sharing Fund in a sustainable***
178 ***and predictable long-term manner;** (emphasis added)*
- 179 • *Expand the crops and plant genetic diversity available through the*
180 *Multilateral System;*
- 181 • *Improve the availability of PGRFA in the Multilateral System;*
- 182 • *Make the Multilateral System more dynamic given that there are*
183 *developments and emerging issues in science, innovation, plant breeding*
184 *and global policy environment;*
- 185 • *Create legal certainty, administrative simplicity and transparency for*
186 *everyone participating in the Multilateral System.”*

187 While the package has been under intense discussion for over 12 years, finding agreement
188 will be no small task. Seemingly irreconcilable views on equity with respect to access to and
189 use of plant genetic resources for food and agriculture (PGRFA) and benefit sharing resulting
190 from the use of these genetic resources remain to be sorted out.

191 The notion that global seed sales are highly dependent on the use of material from the MLS
192 seems to persist. Extrapolations of possible benefit-sharing payments based on the
193 aggregate number of SMTAs signed to date to the use of these materials in commercial
194 breeding programs, while flawed, seem to prevail among negotiators. There are wide-
195 ranging expectations about user-based payments (second bullet above) ranging from no
196 specific amount to tens of millions of dollars per annum. Constructing a package of
197 measures that ensures monies will be collected from company users (commercial breeding
198 companies who sell seeds) remains challenging.

199 GB 11 will need to confront the tricky issue of rates, which has always been recognized as an
200 important and challenging topic. Assuming all other structural elements of the SMTA are
201 acceptable to commercial users, a decision on using materials from the MLS in commercial
202 breeding will come down primarily to the quality of the material and the payment rate.
203 Selecting rates too low will lead to less-than-optimal monetary benefits in the Benefit
204 Sharing Fund (under valuing). Setting rates too high will force companies to avoid using MLS
205 material and no increased monetary benefits (overvaluing).

206 While it is not possible to declare a particular rate as “acceptable” to every company, at the
207 14th OEWG, industry noted that the current rate for Article 6.7 might be seen as largely
208 acceptable since it has led to some monetary benefit sharing payments already. It was also
209 noted that a portfolio-based subscription rate around 0.01% has a level of acceptance
210 historically based on the Declaration of Commitment from 2017¹⁵. During the negotiations,
211 our recommendation was to make Article 6.8 mandatory at a rate 10x lower than Article 6.7.

212 We believe these assumptions remain reasonable counsel for the GB to continue
213 negotiations on rates.

214 Further complicating the landscape are other “hot spot” issues like expansion of Annex 1 to
215 all PGRFA under the control of the Contracting Party and a range of expectations on benefit
216 sharing from the use of DSI. Several Parties have declared that expansion of Annex 1 is
217 predicated on collecting user-based payments as early as possible. Discussions in Lima in
218 November will be lively and likely last well into the early hours of the morning.

219 **CONCLUSION**

220 In conclusion, the challenges to agree on a package of measures that will be acceptable to
221 Parties and commercial users of PGRFA in the MLS are significant. Industry representatives
222 have provided experience-based, honest, prudent counsel to the OEWG since the
223 enhancement process began. We have given our input on structural changes needed to
224 make the SMTA more acceptable to most companies, and we feel that the current draft
225 package reflects well these suggestions. We have provided important information on the
226 current use of MLS material in many commercial breeding programs and expressed
227 optimism that a solution is within reach.

228 From a commercial user perspective, success will require an honest assessment of key
229 assumptions on use and commercial value to be realized. Commercial users/plant breeders
230 are concerned that some Contracting Parties have an unrealistic understanding of how
231 much material from the multilateral system is being used in commercial breeding, leading
232 to an inflated expectation as to the monetary value products from the use of MLS PGRFA

should command in the near-term. A new system predicated on flawed assumptions about commercial use and value runs a risk of resulting in a system that fails to make enhancements to the MLS that are achievable and needed. Industry has stressed that some companies will likely be interested in working with MLS materials, especially in conjunction with projects focused on niche markets, with an improved SMTA in place. Lastly, we stress that setting rates based on the feedback we received from many of the larger companies - rates should be set at the lower end of those in the 2019 package of measures – is critically important.

ISF accepts that final decision-making authority resides with the GB. Industry has done its best to give honest input from the perspective of “*existing and potential SMTA users on the attractiveness of the proposals referred to above and to obtain a realistic picture of the proposed changes*”. We are confident that an acceptable package of measures is within reach that could lead to increased monetary benefits in the Benefit Sharing Fund over time and an enhanced MLS that is sustainable for the future.

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COMPETING INTERESTS

When the OEWG met initially in 2013, the author was employed by Monsanto Company. Since 2017, the author has been a consultant for the American Seed Trade Association paid

254 under a grant from the United States Department of Agriculture, Foreign Market
255 Development Program.

256 REFERENCES and NOTES

¹ [Overview | International Treaty on Plant Genetic Resources for Food and Agriculture | Food and Agriculture Organization of the United Nations](#)

² Payments are calculated based on Article 6.7 of the SMTA: 1.1% of the sales of restricted products (less 30%). The Benefit Sharing Fund is under the authority of the Food and Agriculture Organization.

³ Document IT/GB-10/23/9.1, [Report on Implementation and Operations of the Multilateral System](#), Tenth Session of the Governing Body, Rome, Italy, November 20-24, 2023.

⁴ See: The Benefit Sharing Fund Report: 2022-2023: [The Benefit-sharing Fund: 2022–2023 report](#)

⁵ Fowler, C., Science [297](#), 257, 12 July 2002. Sharing Agriculture’s Genetic Bounty.

⁶ Article 13.1 of the Treaty states: “[t]he Contracting Parties recognize that facilitated access to plant genetic resources for food and agriculture which are included in the Multilateral system constitutes itself a major benefit of the Multilateral System and agree that benefits accruing therefrom shall be shared fairly and equitably in accordance with the provisions of this Article.”

⁷ This is especially true for the major crops (in terms of sales) like maize, soybean, and cotton.

⁸ It is important to also note that a French Seed Association (SEMAE) made voluntary contributions to the Benefit Sharing Fund over a 3-year period⁴ (which could be viewed as voluntary payments requested under Article 6.8 by members of SEMAE). These contributions have accounted for over \$1.17M to the Benefit Sharing Fund (see reference 4).

⁹ Governing Body Resolution 2/2013, Part IV, paragraphs 20-25: [Financial Rules of the Governing Body](#)

¹⁰ Governing Body Resolution 1/2015: [content](#)

¹¹ Industry believes an all-inclusive MLS is best for plant breeding in general since breeding involves many important non-commercial activities like characterization and supporting gene bank operations.

¹² Meeting Document, IT/OWG-EFMLS-4/15/Inf.3, [IT/GB-4 Bureau 1](#)

¹³ Meeting Document, IT/OWG-EFMLS-5/16/Inf.3, [IT/GB-4 Bureau 1](#)

¹⁴ Companies’ Declaration of Commitment, [content](#)

¹⁵ Meeting Document, IT/OWG-EFMLS-8/18/Inf.6, [IT/OWG-EFMLS-8/18/Inf6](#)

¹⁶ Meeting Document, IT/OWG-EFMLS-9/19/Inf.3 (See Appendix 11), [IT/OWG-EFMLS-8/18/Inf6](#)

¹⁷ Meeting Document, IT/OWG-EFMLS-12/24/3/Inf.3 (See Appendix 6), [content](#)

¹⁸ See ISF Statement on the Enhancement Process, [content](#)

¹⁹ Meeting Document, IT/OWG-EFMLS-14/25/5/Inf.2 Rev.2 (See Appendix 8), [content](#)

²⁰ Facilitator's Summary: Informal Stakeholder Workshop on Multilateral System of the ITPGRFA, November 20, 2014, [Microsoft Word - PGR_FacilitatorSummary.docx](#)

²¹ Interim Report from the Ninth Meeting of the OEWG, IT/OWG-EFMLS-9/19/Interim Report, [content](#)

²² Aubry S (2019) The Future of Digital Sequence Information for Plant Genetic Resources for Food and Agriculture. Front. Plant Sci. 10:1046. doi: 10.3389/fpls.2019.01046

²³ [Resolution 3/2022 - Enhancement of the Multilateral System of Access and Benefit-Sharing](#)

²⁴ ISF also believes that multiple payment obligations and better structural elements in the SMTA would also be attractive to non-commercial breeders.

²⁵ Facilitator's Summary of the Informal Meeting in Frascati, [content](#). Unfortunately, the summary only cursorily mentions the survey and presentation made by representatives from the ISF. More information is found in reference 18.

²⁶ Presentations were made at informal sessions in Frascati, Italy, December 2024 (see ref 21) and immediately prior to the 13th Meeting of the OEWG in Rome, April 2025. The purpose of these presentations was to inform Working Group members of commercial use of the MLS to inform the negotiations.

²⁷ Recent information from representatives of the CGIAR confirms that over 90% of SMTA's signed to date are with non-commercial breeders.

²⁸ Sales of Maize, Soybean, and Cotton accounted for approximately 66% of global seed sales in 2023. Unpublished data from Shoham, J. S&P Global Crop Sciences 2023.