Synergy between CBD/Nagoya Protocol and ITPGRFA on access and benefit-sharing on plant genetic

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Abstract. Utilization of plant genetic resources (PGR) is a prerequisite for benefit-sharing. However, scientists cannot fully utilize PGR because access to their PGR has been governed by Material Transfer Agreement (MTA) on Mutually Agreed Terms (MAT). For example, plant breeders face difficulties when they hybridize PGR accessed under CBD/Nagoya Protocol (CBD/NP) with PGR received from the Multilateral System (MLS) under the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). The difficulties of plant breeders could be overcome through developing a Breeding Model combining bilateral and multilateral approaches, with particular focus on transaction of PGR from in situ to ex situ. The bilateral element in the Breeding Model is expected to be acceptable by providing countries since the benefit will be shared back to them. It will also make the MLS more attractive to users since it will introduce new PGR from in situ.

Keywords: ABS, breeding model, CBD, ITPGRFA, Nagoya protocol.

1. Introduction
Although Access and Benefit-Sharing (ABS) of PGR has been a hot topic of international debate for more than quarter of a century, few people have analyzed it comprehensively, from the perspective of both the Nagoya Protocol (NP) of the Convention on Biological Diversity (CBD) and the International Treaty on Plant Genetic Resources for Food Agriculture (ITPGRFA). Breeders who utilize PGR may raise questions on how to share the benefits arising from the hybridization of PGR governed by different ABS conditions. Contrary to this, if two or more PGR are crossed, where all of which had been accessed under the Standard Material Transfer Agreement (SMTA) conditions, then only one payment is required [1].

Even for crop species listed in Annex 1 to ITPGRFA, not all the PGR are exchanged using the SMTA, because Contracting Parties are obliged “to include all the PGR listed in Annex 1 and that are under the management and control of the Contracting Parties and in the public domain” (Article 11.2 of the ITPGRFA). PGR held in private sector or university are not necessarily in the Multilateral System (MLS): SMTA does not automatically apply to these PGR [2].

To improve the MLS, we should combine the two different rules, i.e. bilateral rules under CBD/NP and multilateral rules under ITPGRFA. We can merge the two rules into a Breeding Model utilizing Article 13.2 (h) of the ITPGRFA, which stipulates that “access to PGR for food and agriculture found in in situ conditions will be provided according to national legislation or, in the absence of such
legislation, in accordance with such standards as may be set by the Governing Body”. To make it attractive to all stakeholders, incentives to utilize the Breeding Model should be carefully designed.

2. Question from the seed industry
In Japan, some seed companies have raised question on ABS in crop breeding. “When I incorporate two PGR into a new variety, one from CBD/NP world and the other from ITPGRFA world, should I make two cumulative benefit-sharing payments for the new variety?” (Figure 1).

To avoid such a complication, the MLS of ABS of ITPGRFA was carefully designed so that hybridization among PGR accessed through the system will not create problem in the benefit-sharing, since (a) no need to negotiate Mutually Agreed Terms (MAT) to access to PGR (as in NP), since SMTA is used for all transfers, and (b) no cumulative benefit-sharing payments as stipulated in Para 2 of the Annex 2 to the SMTA “Where a Product contains a Plant Genetic Resource for Food and Agriculture accessed from the Multilateral System under two or more material transfer agreements based on the Standard Material Transfer Agreement only one payment shall be required under paragraph 1 above”.

The author considers that few people participating in the respective governing body sessions have ever imagined such a question because legally speaking, CBD/NP and ITPGRFA are independent. But in a real-world of PGR exchange, plant breeders cannot say that these two instruments are independent.

3. Comparative analysis of the ABS rules in CBD/NP and ITPGRFA
To understand why Japanese seed industry has raised such a question, we need to briefly analyze the two ABS instruments, bearing in mind the pros and cons of each instrument. The CBD/NP is designed on the principle of “the sovereign rights of States over their natural resources” (Article 15, para 1 of CBD). Therefore, acquisition of PGR is subject to Prior Informed Consent (PIC) of providing country and on MAT (Article 15, para 5 and 4 of CBD). This means that the ABS rules under CBD/NP are based on “bilateralism” [3]. The pros of the rule are flexibility in setting ABS conditions (through MAT negotiation), and the benefits are definitely returned to the providing country. The cons are time-consuming negotiations and accumulation of benefit-sharing payments if more than one PGR are involved because all the MTA for the PGR are equally valid.

Contrary to this, ITPGRFA is designed on “multilateralism” [4]. The pros are easy and uniform ABS conditions and avoidance of cumulative payments as long as the PGR in the MLS are hybridized to each other. The con is the fact that the benefits do not necessarily return to the providing country because the MLS shares the benefits through the Benefit-Sharing Fund.

Figure 1. A question from seed industry.
4. Synergetic implementation of the ABS instruments

To answer the questions raised by the seed industry and help them to fully benefit from the ABS instruments, the author introduces a new Breeding Model combining the pros of the two instruments. The idea is to fully utilize the Article 13.2 (h) of the ITPGRFA, which stipulates that “access to PGR found in in situ will be provided according to national legislation, or in the absence of such legislation, in accordance with such standards as may be set by the Governing Body of the ITPGRFA.” The author believes that Article 13.2 (h) is the point of contact between the two instruments, which enables the synergetic implementation of CBD/NP and ITPGRFA [5].

The skeleton of the Breeding Model is as follows:

(a) Provider and user jointly explore and evaluate PGR found in in situ conditions of the providing country, and both start plant breeding program for developing new variety of plants for their respective needs. Within a certain period of time (for example, five years), materials collected in the joint exploration will be used exclusively by the provider and user.

(b) After that period of time, the materials collected in the above joint exploration will be released into the MLS of the ITPGRFA.

(c) Then, the MLS will be more attractive to users since the available gene-pool for the MLS is enriched with new and unique materials.

(d) At the time of transfer to the MLS, materials already under development by the provider and the user are allowed to enjoy special treatment. Such materials already under development are regarded as if they were derived from the MLS (Figure 2).

Figure 2. Time advantage of the proposed breeding model.

The incentives for the provider and user to employ this model are:

(a) The benefits derived from the utilization of the materials will go back to the provider.

(b) The provider and user enjoy the time advantage in developing new variety of plants. They have already started plant breeding programs (Y-X) years earlier than any other competitors who will receive the materials from the MLS (after year Y at the earliest).

The Breeding Model also enriches genetic diversity in the MLS because many samples in the MLS are duplicated materials from other ex situ collection. MLS will become more attractive to users because its contents will be enriched through the introduction of fresh materials originating from in situ conditions.

5. Concluding remarks

Synergetic implementation of CBD/NP and ITPGRFA should be strengthened to assist the exchange of PGR in everyday business of plant breeders. The proposed Breeding Model is an idea aiming at breaking through the present situation, combining the pros of these instruments, as well as bridging in situ and ex situ. It also enriches MLS under ITPGRFA through the introduction of new materials collected from in situ.
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7. References
[1] Pratibha B and Vandana T 2017 Access and benefit sharing mechanism under the multilateral system of the International Treaty on Plant Genetic Resources for Food and Agriculture Biodiversity for Sustainable Development (Switzerland: Springer International Publishing) pp 17–29
[2] Walloe T M 2015 Access to plant genetic resources - legal questions for material on its way into the plant treaty LEAD J. 11 35
[3] Morgera E 2012 Bilateralism at the service of community interests? non-judicial enforcement of global public goods in the context of global environmental law Eur. J. Int. Law 23 743–67
[4] SGRP 2010 The Importance of Recognizing the International Treaty in the CBD’s Protocol on Access and Benefit Sharing (Rome: SGRP)
[5] CBD and ITPGRFA Secretariats 2017 Workshop for Nagoya Protocol and Plant Treaty National Focal Points in South and Southeast Asia