APBREBES **Association for Plant Breeding for the Benefit of Society**

Access to Seed Index Shows: Implementation of UPOV 1991 Unnecessary For the Development of a Strong Seed Market

A Policy Brief by the Association for Plant Breeding for the Benefit of Society (APBREBES)

Abstract : **It is often argued by the proponents of the UPOV system, that membership of UPOV is a prerequisite to promote breeding activities and support development of a national seed market. But the recently published Access to Seed Index data seems to confirm that there is no causal relationship between the UPOV system and a dynamic seed sector. On the contrary, countries with a non-UPOV sui generis plant variety protection (PVP) legislation or even without a PVP legislation have in some regions the most vibrant seed sector.**

Introduction

Proponents of the UPOV system (i.e. the UPOV Secretariat, the seed industry, and developed countries) often argue that introduction of plant variety protection in line with UPOV 1991 strengthens a country's seed market. UPOV's Frequently Asked Questions on its website claims that the benefits of UPOV membership are *inter alia*:

- increased breeding activities,
- greater availability of improved varieties,
- increased number of new varieties,
- increased number of foreign new varieties,
- improved access to foreign plant varieties and enhanced domestic breeding programs.

These statements reiterate the conclusions of studies commissioned by UPOV.

Similarly, the 2009 World Seed Conference concluded: *« A country's membership of UPOV is an important global signal for breeders to have the confidence to introduce their new varieties in that country. »*

However, are these assertions based on credible evidence? And do they stand up to scrutiny when compared to non-UPOV members?

The new figures published in the Access to Seed Index 2019 provide some answers to these questions.

The Access to Seed Index[1]

The figures published in the Access to Seed Index 2019 show, *inter alia*, the number of seed companies (out of a selected group) with activities (sales, breeding, production) in developing countries. Regional indices provide in-depth analysis of South and Southeast Asia, Eastern and Southern Africa, and Western and Central Africa regions. All numbers found in the tables below have been extracted from the Access to Seed Index website[2]. More information about their methodology can be obtained from their website.

South and Southeast Asia – Top 10 (out of 13 countries)

	Number seed companies* with sales activities	Number seed companies* with breeding activities	Number seed companies* with production activities	Total presence**	PVP System in place
India	21	18	18	57	Sui Generis
Thailand	17	11	13	41	Sui Generis
Indonesia	18	8	10	36	Sui Generis
Vietnam	18	4	8	30	UPOV 91
Philippines	15	6	7	28	Sui Generis
Bangladesh	20	3	4	27	None
Pakistan	17	2	3	22	Sui Generis
Nepal	15	1	2	18	None
Sri Lanka	16	0	1	17	None
Myanmar	12	0	3	15	Sui Generis

*The analysis includes 24 leading seed companies in South and Southeast Asia
** adding up activities by seed companies (sales, breeding and production).

By far, the most activities by breeders can be found in India, which has a sui generis PVP law that differs in many essential aspects from UPOV 1991, especially with regard to the protection of Farmers' Rights. Similarly, neither Thailand in second place and Indonesia in third place are members of UPOV, but have significantly unique national PVP laws. More companies are engaged in breeding activities in those three countries compared to Vietnam, the only UPOV member in South and Southeast Asia. Even countries without a PVP legislation such as Bangladesh, have a robust seed market – also compared to other regions.

[1] The Access to Seeds Index is published by the Access to Seeds Foundation, a non-profit organization based in The Netherlands and funded by Bill and Melinda Gates Foundation, Government of the Netherlands and AgriCord.

[2] https://www.accesstoseeds.org/the-index/

Western and Central Africa – Top 10 (out of 22 countries)

	Number seed companies* with sales activities	Number seed companies* with breeding activities	Number seed companies* with production activities	Total presence**	PVP System in place
Nigeria	14	4	6	24	None
Senegal	12	3	4	19	UPOV 91***
Burkina Faso	11	2	5	18	UPOV 91***
Mali	10	2	3	15	UPOV 91***
Côte d'Ivoire	10	0	1	11	UPOV 91***
Ghana	8	1	2	11	None
Cameroon	6	2	2	9	UPOV 91***
Niger	6	0	1	7	UPOV 91***
DR Congo	6	0	0	6	None
Benin	3	1	1	5	UPOV 91***

*The analysis include 24 leading seed companies in Western and Central Africa
** adding up activities by seed companies (sales, breeding and production).
** UPOV member through the African Intellectual Property Organization (OAPI)

Most of the countries in the region are members of the African Intellectual Property Organization (OAPI), which administers the Bangui Agreement. This Agreement includes a chapter on PVP that is consistent with UPOV 1991. Nevertheless, by far the country with the highest number of seed companies with sales, breeding and production activities in Western and Central Africa is Nigeria, a country without a PVP system. Interestingly, Nigeria also has the highest number of seed companies from outside the region and continent. Ghana which is also not a member of UPOV 1991 features a relatively strong seed market in the region compared to other countries in the region that have a UPOV 1991 PVP system in operation[3].

Notably, 8 other OAPI members (Equatorial Guinea, Gabon, Mauritania, Chad, Togo, Guinea-Bissau, Guinea, Central African Republic) that implement UPOV 1991 have no breeding and production activities reported at all.

These findings are consistent with the recently published APBREBES Working Paper «A Dysfunctional Plant Variety Protection System: Ten Years of UPOV Implementation in Francophone Africa»[4] which also concluded that UPOV 1991 has failed to promote the seed industry in West Africa.

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[3] Already back in 2005 a study by the World Bank found that «*By far the most dynamic private seed sector in the sample (India) has grown and diversified without benefit of any IPRs but in the context of quite liberal seed laws and in many cases through the use of hybrids as a means of appropriation."* Louwaars et al, 2005, https://www.iprsonline.org/resources/docs/LouwaarsCGN_Plants_05.pdf.

[4] Available at http://apbrebes.org/news/new-publication-dysfunctional-plant-variety-protection-system-ten-years-upov-implementation

Eastern and Southern Africa – Top 10 (out of 19 countries)

	Number seed companies* with sales activities	Number seed companies* with breeding activities	Number seed companies* with production activities	Total presence**	PVP System in place
Kenya	12	6	8	26	UPOV 91
South Africa	10	8	7	25	UPOV 78
Tanzania	12	3	8	23	UPOV 91
Zambia	13	4	5	22	Sui Generis
Uganda	12	4	6	22	Sui Generis
Zimbabwe	9	4	3	16	Sui Generis
Malawi	10	1	5	16	None
Mozambique	11	1	3	15	Sui Generis***
Ethiopia	7	2	4	13	Sui Generis
Rwanda	10	0	2	12	Sui Generis

*The analysis include 22 leading seed companies in Eastern and Southern Africa.
** adding up actvities by seed companies (sales, breeding and production).
*** similar to UPOV 91[5]

Kenya is leading in the table above. Kenya joined UPOV 1978 in 1999 and became a member of UPOV 1991 in 2016. Importantly, Kenya had a dynamic seed sector even before joining UPOV 1978 especially in the horticultural sector. Eaton which examined if there was any co-relation between UPOV membership and imports of planting material as an indicator of the scope and strength of intellectual property affecting the plant breeding sector, notes that «Kenya's imports were increasing prior to the adoption of the UPOV 1978 Act in 1999, which was followed by further steady growth. [….]Kenya's experience does not suggest though that UPOV membership has "kick-started" seed imports, and other factors have likely played a more important role»[6]

South Africa is a member of UPOV 1978. South Africa, is not really comparable in economic terms to the rest of Sub-Saharan Africa.

Interestingly, countries that are not members of UPOV seem to have an active seed market. Zambia, which has not joined UPOV, has the highest number of seed companies with sales activities. The total presence of seed companies in non-UPOV countries (e.g. Zambia and Uganda) does not differ significantly from UPOV 1991 countries (ie. Tanzania and Kenya) suggesting that other factors influence the development of the seed market. Zambia, Uganda and Zimbabwe also have more companies engaged in breeding activities than Tanzania, which joined UPOV in October 2015.

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[5] https://acbio.org.za/sites/default/files/documents/Mozambique-UPOV-1991.pdf
[6] See Eaton, D. 2013. Trade and Intellectual Property Rights in the Agricultural Seed Sector https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2323595

Conclusion :

The Access to Seed Index data reveals in a fairly elaborate way the strength of the commercial seed markets in various countries. It is apparent from this data that there is no causal link between UPOV membership or implementation of UPOV legislation with the presence and engagement of seed companies and their breeding activities. The data confirms that countries implementing alternative non-UPOV sui generis PVP systems have been able to maintain and develop national seed markets (e.g. India or Thailand). In Western Africa, Nigeria without a PVP law has seen the most activities of seed companies in the whole region.
It is apparent that the development of a seed market and breeding activities and even more the improvement of access to seeds for smallholder farmers must not be reduced to the question of UPOV membership or implementation of intellectual property. Doing so would be naive. As shown above these factors are not decisive. The reasons for a well developed seed system are much more complex. This has also been shown in various academic articles in the last years[7].

In the light of these, the advertorial language used by the UPOV Secretariat and other promoters of UPOV 91, that UPOV is THE System to promote breeding activities and access to seeds lacks any foundation.

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7 See for example „Intellectual property protection in plant varieties: A worldwide index (1961-2011); Campi M., Nuvolari, A; Res. Policy 2014 or „Towards better metrics and policymaking for seed system development: Insights from Asia's seed industry“; David J. Spielman and Adam Kennedy; Agric Syst. 2016 Sep; 147: 111–122.