Text for the EDV slides, seminar 22 March 2023

2. Short Introduction
Just for a short introduction: I studied Plant Breeding and Law, worked as a plant breeder and was an expert in DUS testing for PBR. And I participated in various IP fora and UPOV working groups.

3. The revision of UPOV 78 to 91
During these four years, there was extensive work and many discussions with all stakeholders, with the aim of improving the text of the new UPOV Convention. And also, much attention for the development of the EDV concept. It is clear that we can learn a lot from the records of these meetings as to the intentions of the text that was finally adopted.

4. Necessity for dependency
The necessity of dependency between original varieties and derived varieties, that profit from these original varieties, was strongly felt by the breeding companies because of the practice of selecting mutants or variants, but also the possibility of inserting genes by biotechnology.
I remember from this time the meetings with breeders where they expressed their concern about the possibility that their new varieties, released after 15 years of breeding and testing, could be taken over by shooting a new gene in that variety. And the fear that this could be done to all the varieties in the species just as easily. At that time, we were talking about classic GMOs, and nowadays new breeding techniques, but the principle is still the same.

5. The concept of essential derivation (1)
When the EDV concept was first proposed, the idea was created that if a variety is derived from one single, protected variety, the owner of the protected variety has a right to equitable remuneration. The rationale for this is that the breeder of the EDV profits more from the germplasm of the original variety than in a situation where two varieties are being used.
In the case of crossing two varieties and further selection, the breeder's exemption applies. But, with the exception of repeated backcrossing, aiming to add or change a characteristic in the initial protected variety. For these cases, dependency also applies.

6. The concept of essential derivation (2)
The methods, as shown above, the dotted line, clearly preserve the original genotype.
For the cases of repeated Backcrossing, the breeding companies in crops like maize, oil seed rape and grasses agreed to a molecular threshold. By trespassing this threshold, the breeder of the putative EDV must prove that he did not derive his variety from the protected initial variety.

7. The degree of dependency
During the discussions, the concept of equitable remuneration was replaced by exercising rights by the owner of the original variety on the EDV. It was expressly questioned whether this should also be the case if the EDV shows a higher value (substantial improvement) than the initial variety?

This is an essential question! From the discussions with all UPOV stakeholders in October 1989, it clearly shows that the value of the added or changed trait in the EDV does not influence the possibility for the original owner to exercise his rights.
3 alternatives were proposed as follows:

If a variety is essentially derived from a protected variety, *the owner of the right* to the protected variety,
[1] may ***exercise*** his rights on the essentially derived variety.

[2] shall be entitled to ***equitable remuneration*** in respect of the commercial exploitation of the new variety.

[3] may ***exercise*** his rights on the essentially derived variety.
However, where the new variety shows a substantial improvement over the protected variety, the owner of the right shall only be entitled to equitable remuneration in respect of the commercial exploitation of the new variety.

All delegations supported alternative 1, and all delegations rejected alternative 3!

8. Element of substantial improvement rejected
So, from this unanimous choice, we can clearly conclude that whether the resulting EDV is more valuable compared to the initial variety or not, or whether the added trait, like an important resistance, has a high economic value, does not make a difference.

9. Consequences of rejection alternative 3
An important and clear decision:
Each EDV is fully dependent from the protected initial variety, irrespective of the economic value of the EDV or the added trait.

10 Conditions for Dependency
The CAJ in October 1989 concluded that 1) the EDV must be almost identical to the initial variety, except for a very limited number of characteristics, typically one. But, due to pleiotropic effects, there may be additional changes, even in mutants, and 2) the variety must be the result of a breeding method leading to an EDV.

11. Basic proposal in the substantive Law - October 1990
The most important elements are the way the EDV has been bred: the genetic conformity to the initial variety and the distinctness caused by the act of derivation.

The final text differs by the acceptance of two amendments and the work of the drafting committee during the Diplomatic Conference.

12 How relevant is an essential characteristic?
The terms ‘essential’, ‘relevant’ and ‘important‘ are synonyms used in the UPOV papers for distinctness, uniformity and stability. See the technical guidelines and the introduction to DUS trials TG 1/3. There is no hierarchy between the characteristics.

Essential characteristics as used in the EDV definition do therefore not form a special subset of characteristics. In the UPOV 1978 Convention, the French sentence was translated into English: “The variety must be stable in its essential characteristics.”
The characteristics used must be suitable to distinguish varieties and to determine whether a variety is uniform and stable. Eventually, each variety must adhere to the UPOV system by meeting the DUS requirements according to these characteristics.

13 Securing investment and partnership
Cooperation between breeders and Biotech companies is possible while considering their mutual interests. *Breeders can have their varieties protected by PVR, and Biotech companies may protect edited traits by patents*. In such a case, the EDV principle ensures that both the owner of the initial variety and the owner of the patented trait have IP rights on the newly created variety with the edited trait.

In the EU, a compulsory license is possible in the case when one of the parties is not willing to cooperate, but the procedure to obtain such a license is quite complicated and cumbersome. The best way is to start early to look for a good partnership!

14 Conclusions
1. The EDV profits from the properties of the initial variety, and the EDV definition has been cautiously developed for four years with all UPOV stakeholders.
2. During the elaborations in the Diplomatic Conferences, it has been decided that the dependency of the EDV from the initial variety is unrelated to its economic value.
3. The essential, important, and relevant characteristics have all the same weight in the UPOV system.
4. Mutual partnerships, contracts and cross-licensing can well realise the cooperation between breeders and tech companies.