



Mr. Peter Button
UPOV
34 chemin des Colombettes
CH-1211 Geneva 20

9 April 2020

Contribution in response to UPOV Circular E-19/233

Dear Mr. Button,

The International Seed Federation (ISF), the International Community of Breeders of Asexually Reproduced Horticultural Plants (CIOPORA), Crop Life International (CLI), Euroseeds, the Asia and Pacific Seed Alliance (APSA), the African Seed Trade Association (AFSTA), the Seed Association of the Americas (SAA), altogether, represent the interests of thousands of companies active in research, breeding, production and marketing of agricultural, horticultural, ornamental and fruit plant varieties.

Following your request expressed in Circular E-19/223, the undersigned associations surveyed members companies in February 2020 to better understand how well companies understand the concept and system of essentially derived varieties (EDVs) under the UPOV Convention and what steps the companies are taking to respond to the EDV provisions and system conditions. We are pleased to be communicating to you a summary report of the survey results, which accompanies this cover letter, and the following main conclusions regarding the use of the concept of EDV by breeders, and policy recommendations.

Main conclusions:

EDV is a well-known notion within breeding companies. However, the technical scope and details of the EDV concept are not always entirely clear, because considerable doubts seem to subsist among breeders on how EDVs can be determined and proven. A particular challenge is to stay up-to-date regarding the heterogeneous interpretation of the EDV concept across UPOV members where the concept exists. Despite all this, companies are closely monitoring the presence of putative EDVs of their varieties, as well as their own practices. We do recognize an important need and opportunity for UPOV and the plant breeding industry to collaborate to help clarify these technical questions.

The vast majority of respondents (80%) considered that the EDV provision had an anticipatory and clarifying effect regarding the development and marketing of predominantly derived varieties without an agreement. At the same time, almost 50% of the respondents have rated the effectiveness of the EDV provision in making sure that the breeder of the initial variety gets

the necessary compensation as being absent or low. To a large group of the respondents, the EDV provision has proven to be valuable, nonetheless it is also clear that further clarification is needed. Any attempt to diminish its value by narrowing its scope or otherwise, would greatly endanger the breeding incentive for cross breeding and could possibly lead to a decrease in breeding effort, genetic variation and biodiversity. This will eventually result in fewer varieties for users which might threaten the whole UPOV system.

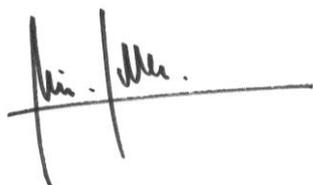
Our members clearly indicate that in their understanding:

- the modification of one or more characteristics in an initial variety, for example via the latest breeding methods, **does not automatically lead the new variety to be out of the scope of EDVs;**
- it **does not matter** whether the characteristic(s) in which the EDV differs from the protected initial variety is (are) of economic, agronomic or societal importance, essential or trivial. EDV principles remain the same and **predominant derivation from an initial variety is a key requirement** for a variety to be considered an EDV.

These conclusions and the summary report attached are extracted from the survey results confirm the request of our organizations to open-up the UPOV Explanatory Notes on EDV and to provide a sufficiently broad interpretation of the EDV concept.

We remain at your disposal may you have further questions,

Sincerely Yours,



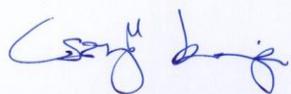
Michael Keller
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Euroseeds IP Director



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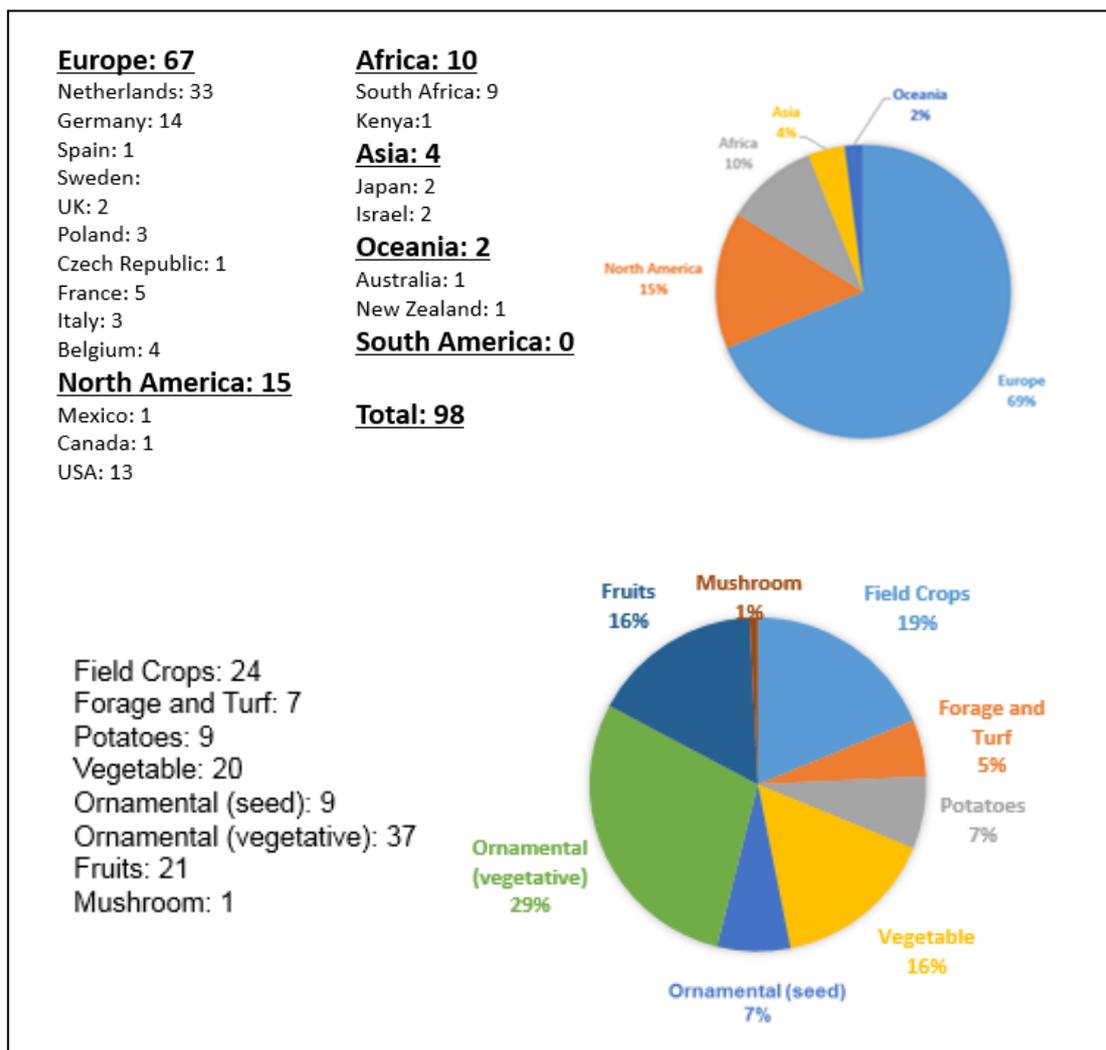


Diego Risso
SAA Executive Director

Summary Report of EDV Survey Results and Comments

1. Survey demographics

We received **98 answers** from actors active in various agricultural crops, ornamentals, fruits and vegetables and from various continents and countries (Box 1). We believe this is a fair representation of the breeding sector experiences and needs in relation to the concept of EDV and especially in the forthcoming work of the revision of the “Explanatory Notes on Essentially Derived Varieties under the 1991 Act of the UPOV Convention”.



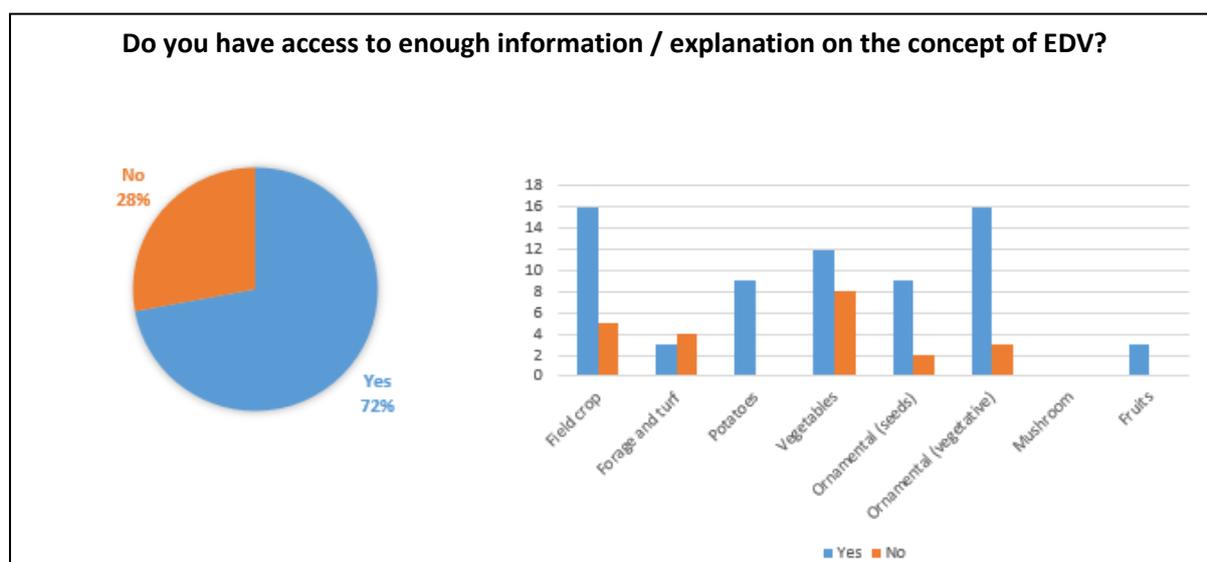
Box 1: Geographical and crop scope of the respondents

2. The EDV Concept

75% of the respondents are satisfied with the quantity of information they get on the concept of EDV (Box 2). However, although most people feel they have access to enough information, they note that it is not clear what can be considered an EDV and what is not an EDV; they also note that it is at least not easy to prove that a variety is an EDV. A particular challenge is also to stay up-to-date with regard to the interpretation of the EDV concept in multiple jurisdictions.

Respondents see that the EDV concept provided by UPOV is a way to solve disputes upfront between breeders. However, the latest UPOV Explanatory Notes on EDV (2017) created confusion among the breeders, particularly if that would mean that mutants of protected initial varieties are no longer seen as EDVs. They recognize the interest of the alternative dispute resolutions put in place by trade associations.

However, small companies note that it is hard for them to get the full picture of the evolution of the EDV concept (interpretation of UPOV Explanatory Notes, court cases with different outcomes). Maybe they would benefit from clearer guidance / more simplified explanatory material from UPOV.

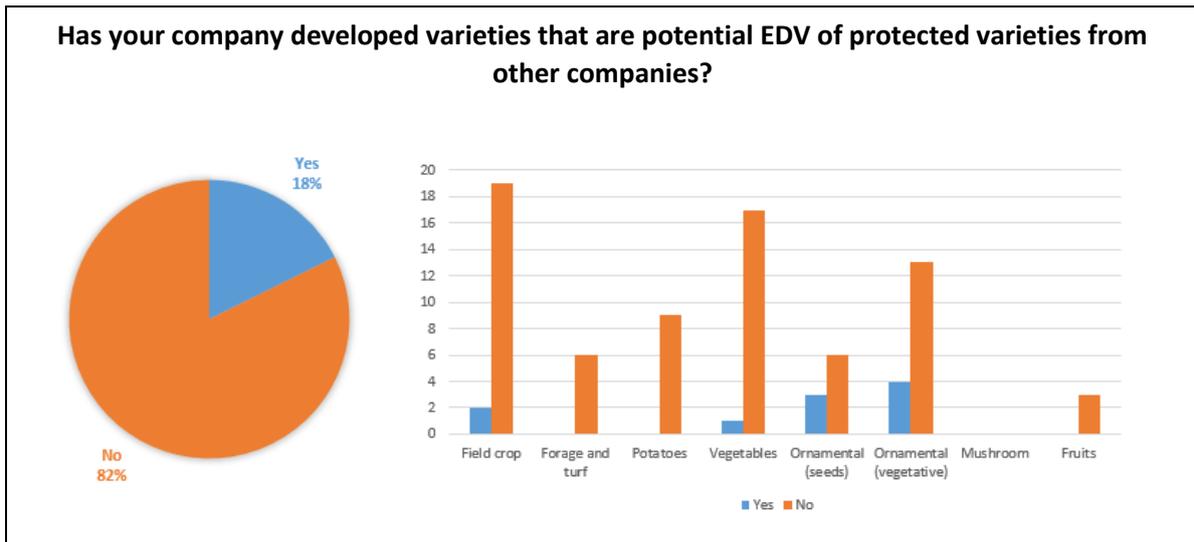


Box 2: Access to information / explanation on the concept of EDV

3. Practices of breeding companies

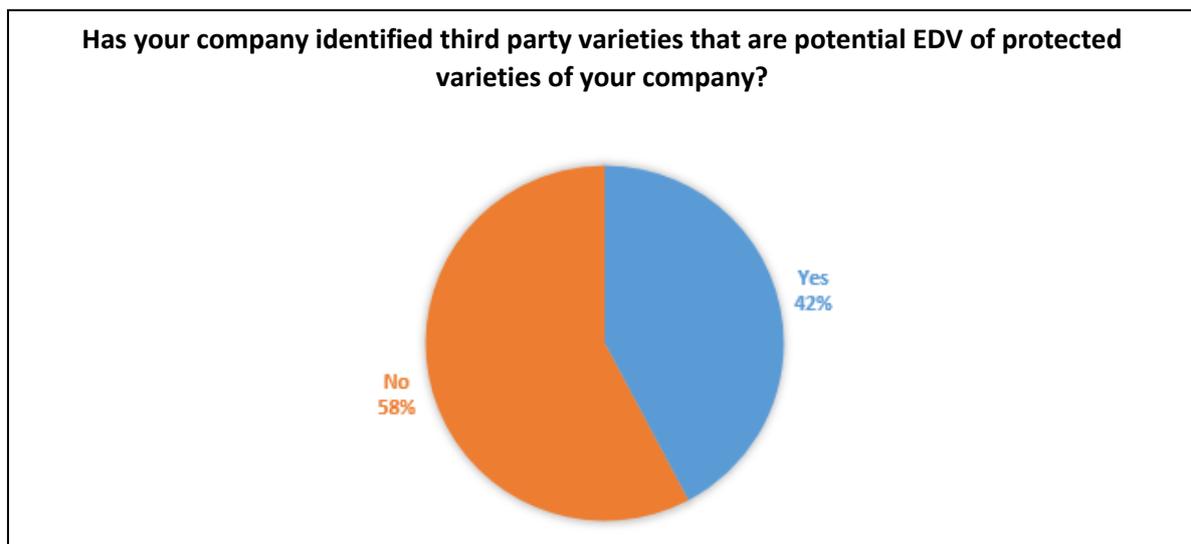
82% of the respondents declared that their company did not actively develop varieties that are potential EDV of protected varieties from other companies (Box 3).

The vast majority of breeders try to avoid developing EDVs e.g. by working with their own material when conducting mutagenesis breeding or by performing cross breeding when working with material of competitors. However, some note that it is not the purpose to absolutely avoid EDV development, and they mention that they initiate dialog with the owner of the initial variety when needed.



Box 3: Development of varieties potentially EDVs of protected varieties of other companies

Moreover, many companies conduct surveillance in this regard, sometimes with the help of molecular markers. 42% of the respondents have declared that their company has identified third party varieties that are potential EDV of their own protected varieties (Box 4).



Box 4: Identification of potential EDVs from their own protected varieties

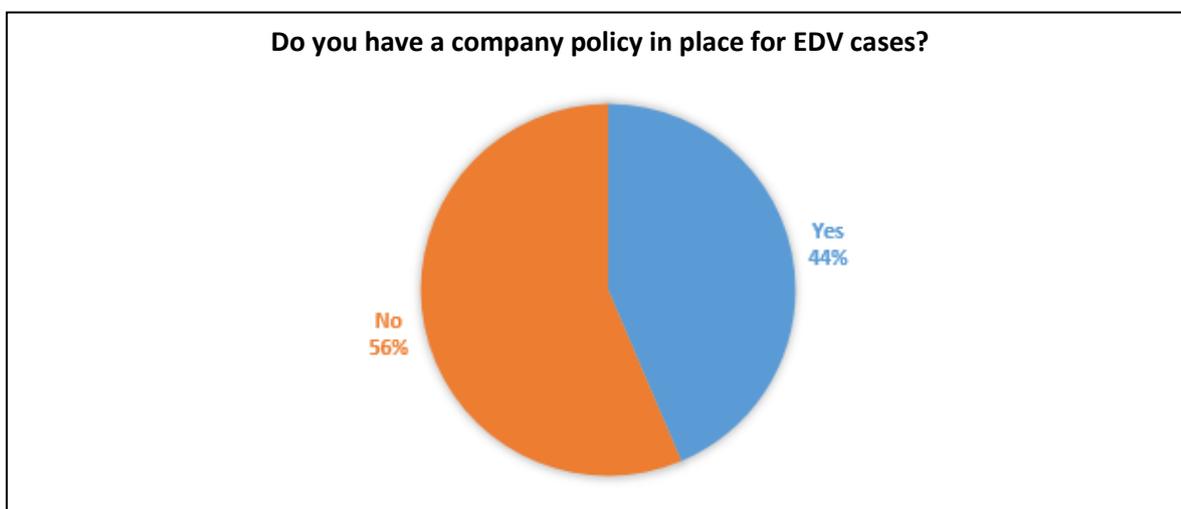
Some of those who commented state that when third parties developed EDVs it was possible to agree with the third parties and come to a settlement/license agreement. If spontaneous mutants or sports were found by growers (e.g. in ornamentals or fruits) there are often contracts in place that require reporting.

Some note that they do not actively monitor EDV development by third parties.

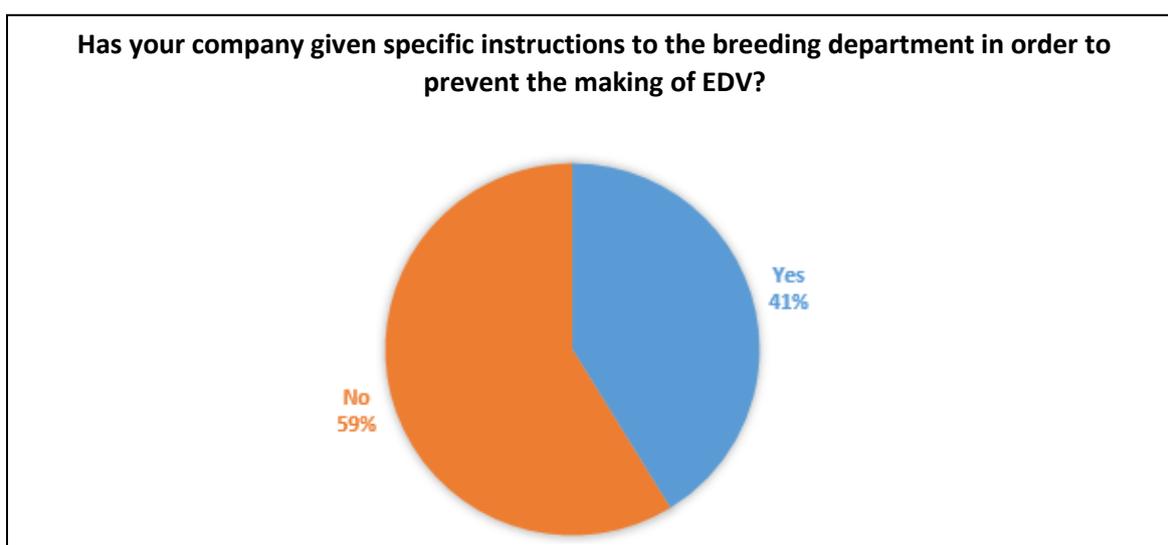
Some reported that even though they had suspicions of potential third party EDVs it often did not come to actual legal actions, because enforcement is difficult: the existence of an EDV is sometimes hard to prove, and uncertainty exists due to the lack of clarity around the EDV concept and what the unaltered expression of essential characteristics means for a specific crop.

So far, the majority of the respondents do not have a company policy in place to deal with EDV-related issues (Box 5). However, many companies have given instructions internally, to their breeders to avoid the making of EDV's, either by using plant material of other breeders only for making crossings or by doing mutation breeding on own material only (Box 6). Some companies working with hybrid crops report instructions not to make too many back crossings and to check that the new variety is distinct enough. Some breeders report that although they have no written policy, their staff is aware of the issue.

Many companies report that they monitor varieties of other breeders, some do this by use of DNA analysis. Some companies report they have contracts with growers for the situation that spontaneous mutants occur. Other companies have a policy not to develop EDV's themselves. Some companies don't see the need for a policy as EDV's are not an issue in their crops or are considering to develop a policy in the near future. Regarding spontaneous mutants that occur in ornamental and fruit crops mostly at the premises of growers, many breeders reply that their policy is to find agreement on commercialising the EDV if there is added value of bringing this mutant to the market.

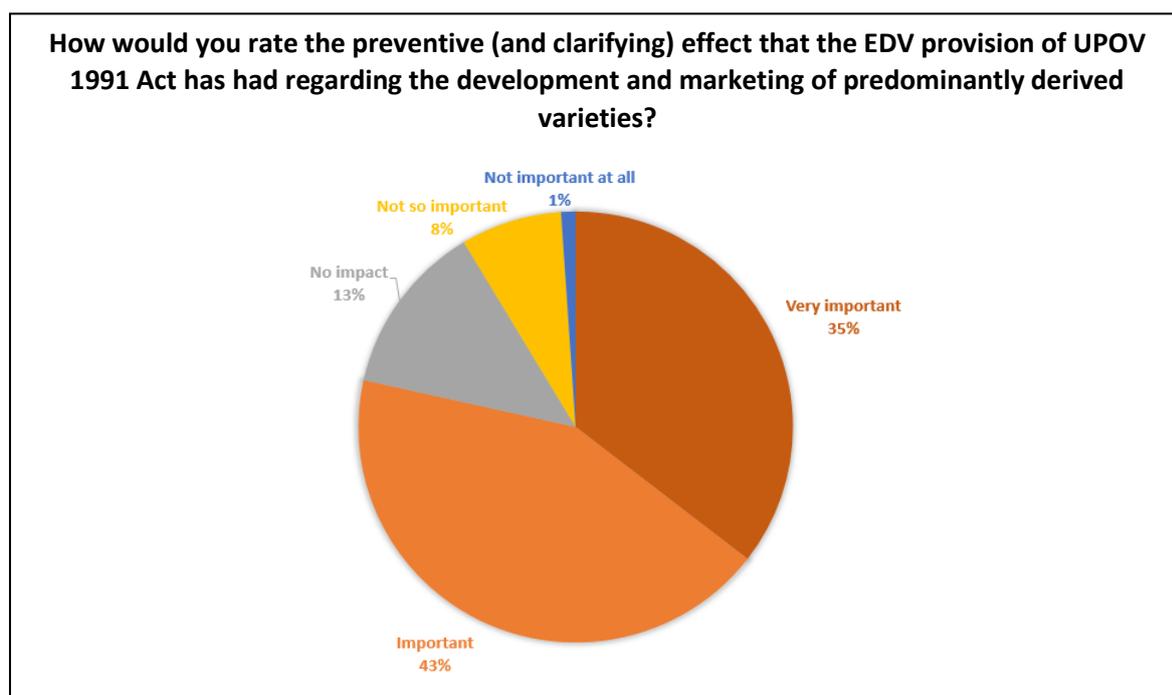


Box 5: Internal company policy for EDV cases



Box 6: Specific instructions to the breeding department to prevent the making of EDV

4. Impressions on the effects of the EDV provision of UPOV 1991 Act



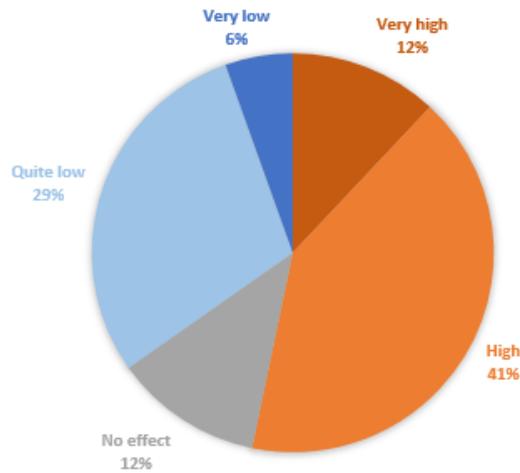
Box 7: Preventive effect of the EDV provision of UPOV 1991 Act

The vast majority of respondents (80%) acknowledged the preventive and clarifying effect that the EDV provision of UPOV 1991 Act has had regarding the development and marketing of predominantly derived varieties without an agreement (Box 7). It has led breeding companies to monitor their practices and there has been an auto-regulation of practices.

Some breeders mention that the EDV concept is not preventing the development and marketing of EDV's; it is regulating it. The occurrence of spontaneous mutants cannot be prevented anyway. Some breeders mention that no one will prevent the commercialization of a truly valuable mutant, but the EDV concept can make sure no one in the industry is damaged by a multitude of unstable or inferior mutants being introduced on the market.

However, respondents note that some further clarity on the concept, on genetic thresholds or on essential characteristics would be welcome. Additionally, concerns have been raised as regards the multiple interpretations of how to apply the EDV concept in different jurisdictions. It was also noted that the concept of EDV does not restrict biodiversity but rather enhances it as breeders are incentivized to work with broader germplasm if they want to avoid developing an EDV.

How would you rate the effectiveness of the EDV provision of UPOV 1991 Act, in making sure that the breeder of the initial variety gets the necessary compensation?



Box 8: Effectiveness of the EDV provision of UPOV 1991 Act

Almost 50% of the respondents have rated the effectiveness of the EDV provision in making sure that the breeder of the initial variety gets the necessary compensation as being absent or rather low (Box 8). Main reasons were the legal uncertainties around the EDV concept, the high costs and uncertainty of enforcement, the little likelihood as a small company to succeed in enforcement and the lack of guidance or wrong guidance given in the latest UPOV Explanatory Note. Few also commented that the EDV concept brings with itself the risk that it is being interpreted by some companies as an opportunity for them to block others.

Some estimate that the EDV provision is rather effective in making sure that the breeder of the initial variety receives compensation, but there are more who base this statement on a theoretical assumption than on concrete experience from being approached by third parties to negotiate.

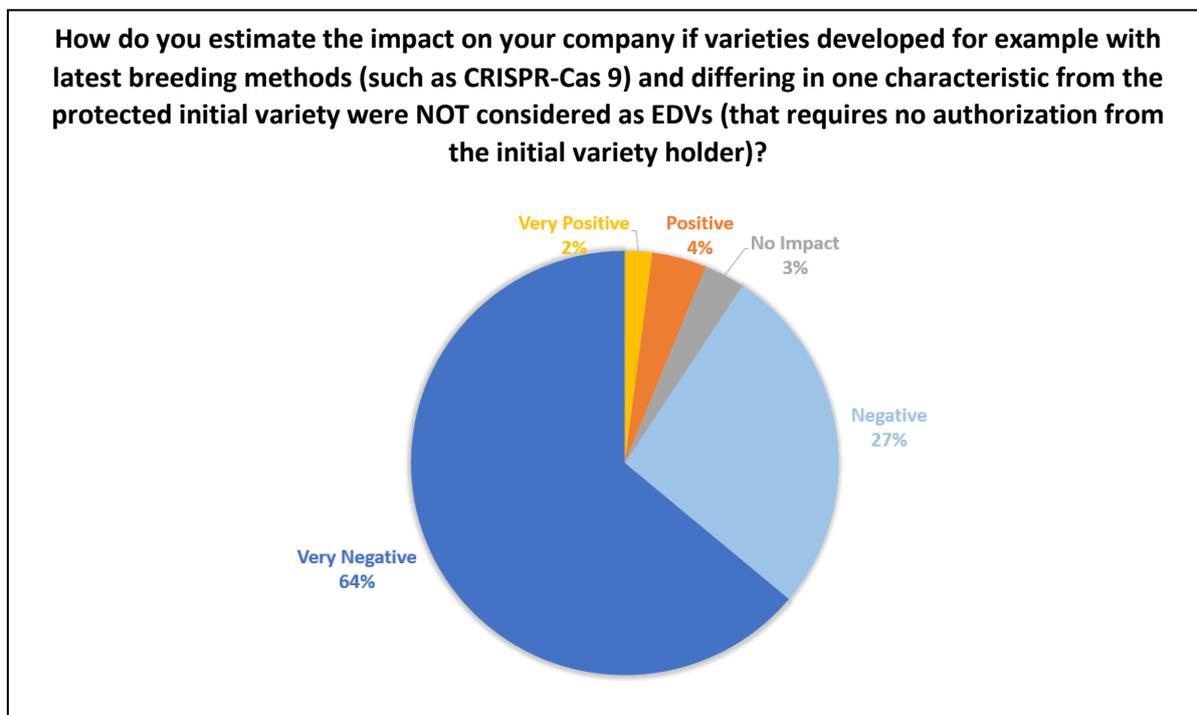
Some note that the effect of the provision is not that much in ensuring compensation but rather in companies avoiding breeding an EDV.

It was mentioned that without a good EDV policy the value of the PVR system will be considerably lower. Protection is then sought in a restricted licensing policy in which the new varieties might no longer be available for small growers.

5. Considerations on the characteristics

Almost all responding companies (more than 90%) consider it **negative or very negative** if varieties developed with latest breeding methods (such as CRISPR-Cas 9 or other recombinant DNA technologies) and differing in at least one characteristic from the protected initial variety were **not** considered as EDVs (Box 9). They are of the opinion that this would give the users of these new technologies a very easy manner to take over varieties which would diminish the incentive to develop new varieties. It is expected that this will lower the

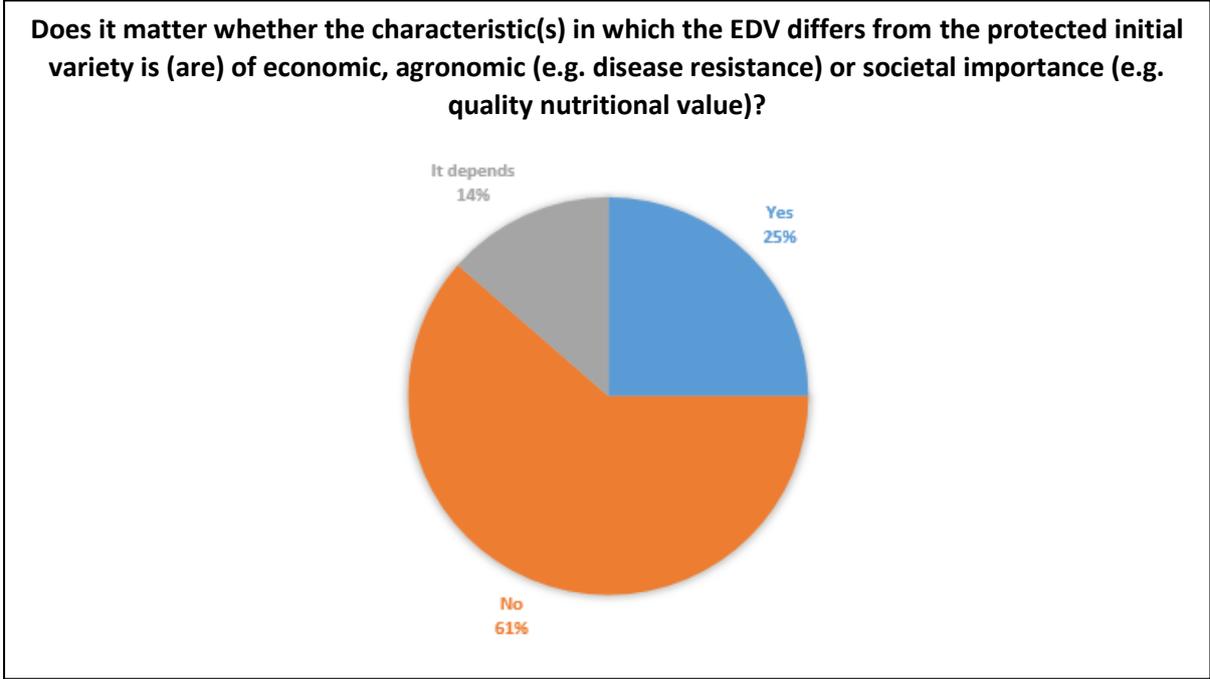
development of segregating variation and thus reduce genetic gain. Interestingly at least 10 companies are of the opinion that they will not be able to use such new technologies themselves due to a lack of critical size and fear that this will benefit larger and multinational companies with larger research budgets. On the other hand, some companies state that there would be no impact as these technologies cannot be used yet anyway (in the EU). Three companies see this as positive, although no further motivation is provided.



Box 9: Impact of varieties developed with the latest breeding methods and differing in one characteristic from the initial variety NOT being considered as EDVs

Moreover, a vast majority of respondents declared that it does not matter whether the characteristic(s) in which the EDV differs from the protected initial variety is of economic, agronomic or societal importance (Box 10). They emphasized that as long as the variety is predominantly derived from the initial variety, **it remains “derived from”** and should be treated as an EDV.

Some companies indicate that the quality of the characteristics is important when entering into negotiations, with a more important trait the developer of the EDV can ask for a larger portion of the license fee.



Box 10: Nature of the differing characteristic(s)

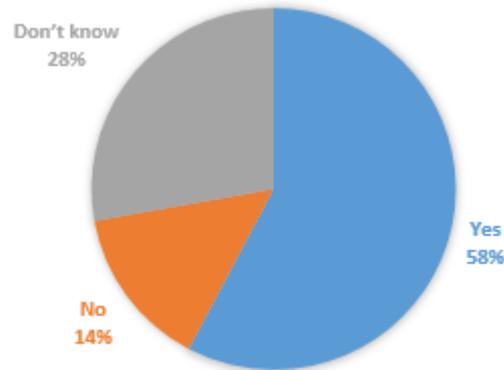
6. Handling EDVs and dispute resolution

Most respondents consider that conditions (threshold, protocols, etc...) to classify varieties as an EDV should be developed by breeders or at least with the involvement of breeders familiar with the crops, preferably at the global level in order to avoid differences country by country. Some hold the view that independent authorities should also be involved in such work (Box 11).

Some seed breeders consider that having an EDV threshold by the sector is important but state that having the possibility to go for a legal action and a final decision by an independent body (e.g. a court) should be available.

Some thought this question was not so easy to answer. Either because some felt that an independent authority would be better placed to delineate objectively between an EDV and the normal offspring from standard crosses; or because some considered that interests between breeders of the initial varieties and developers of EDVs will obviously differ.

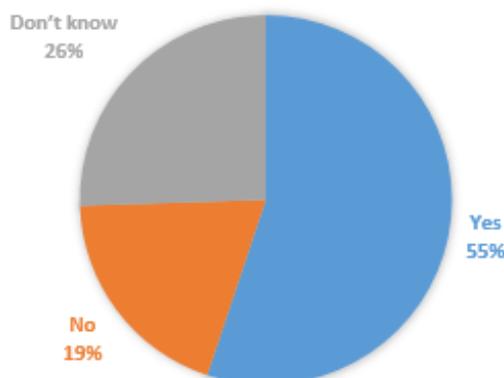
Do you agree that establishing the existence of a relationship of essential derivation between varieties (e.g. through EDV thresholds or otherwise) is a matter for the breeders of the varieties concerned?



Box 11: Role of the breeders in the establishment of a relationship of essential derivation between varieties

Most companies prefer decision by courts or arbitration, but some see also a role for PVP authorities in respect of technical questions (Box 12). It is often said that PVP authorities are expected to have a better (technical) knowledge than courts and/or arbitrators, depending on specific country situation. Therefore, the involvement of PVP offices as experts in a court or an arbitration panel can be valuable. Some would like to see that PVP authorities make a decision regarding potential EDV-status of a variety during the application procedure (which is expected to be cheaper than a court procedure) which could be followed by a procedure to go to court or arbitration. Others are of the opinion that PVP authorities should remain independent and not choose side in a dispute between companies. Furthermore, in a legal dispute many questions will be raised which require legal expertise and go beyond the expertise of a PVP authority, such as the validity of the title(s), the acts of infringement, liability and the level of compensation.

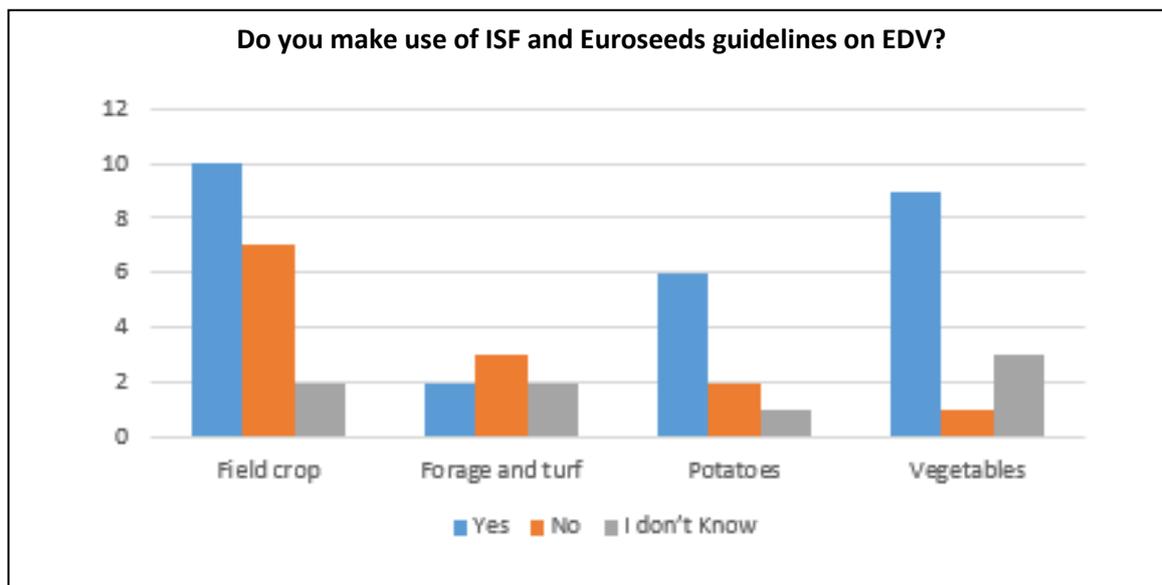
Do you agree that in case of an EDV dispute the decision should be made by arbitrators or courts and not by the PVP authorities?



Box 12: Decision makers in EDV disputes

Finally, many respondents from the seed sector indicated that they make use of the tools developed by the seed industry to prevent and help dispute resolutions (Box 13). ISF and Euroseeds have developed guidelines on EDV, setting genetic thresholds related to perennial ryegrass, maize, oilseed rape, cotton, lettuce and potatoes. <https://www.worldseed.org/our-work/trade-rules/#essential-derivation>
<https://www.euroseeds.eu/app/uploads/2019/07/12.0838.pdf>

These initiatives from the private sector, valuing the work of breeders, have to be encouraged and further developed.



Box 13: Use of ISF / Euroseeds guidelines