

**Working Group on Essentially Derived Varieties (WG-EDV)**

**UPOV/WG-EDV/4/2**

**Fourth Meeting  
Geneva, October 19, 2021**

**Original: English  
Date: September 3, 2021**

**REVISION OF THE EXPLANATORY NOTES ON ESSENTIALLY DERIVED VARIETIES UNDER THE 1991 ACT OF THE UPOV CONVENTION**

*Document prepared by the Office of the Union*

*Disclaimer: this document does not represent UPOV policies or guidance*

**EXECUTIVE SUMMARY**

1. The purpose of this document is to note the developments concerning the revision of document UPOV/EXN/EDV/2 “Explanatory Notes on Essentially Derived Varieties under the 1991 Act of the UPOV Convention” and to provide information to assist the Working Group on Essentially Derived Varieties (WG-EDV) in its consideration of the revision of document UPOV/EXN/EDV/2, as presented in document UPOV/EXN/EDV/3 Draft 2 “Explanatory Notes on Essentially Derived Varieties under the 1991 Act of the UPOV Convention”.

2. The WG-EDV is invited to:

(a) note the developments since its third meeting and the comments received in reply to Circular E-21/110 document UPOV/EXN/EDV/3 Draft 1 as reported in this document and its Annex;

(b) send comments on document UPOV/EXN/EDV/3 Draft 2 by October 1, 2021;

(c) note that comments received by October 1, 2021, will be posted on the WG-EDV/4 webpage and that comments that are not received in advance may also be raised at the WG-EDV/4 meeting;

(d) consider document UPOV/EXN/EDV “Explanatory Notes on Essentially Derived Varieties under the 1991 Act of the UPOV Convention”, on the basis of document UPOV/EXN/EDV/3 Draft 2; and

(e) note that document UPOV/EXN/EDV/3 Draft 2 will be presented for consideration by the CAJ at its seventy-eighth session to be held, by electronic means, on October 27, 2021 and that the recommendations of the WG-EDV, with regard to document UPOV/EXN/EDV/3 Draft 2, will be reported to the CAJ in document CAJ/78/4 Add..

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## BACKGROUND

4. The WG-EDV, at its third meeting, held via electronic means on April 27, 2021, agreed to request the Office of the Union to prepare a revision of document UPOV/EXN/EDV/2 (UPOV/EXN/EDV/3 Draft 1), on the basis of the text in Annex I of document UPOV/WG-EDV/3/2 incorporating the conclusions of the WG-EDV at its third meeting, for consideration by the WG-EDV by correspondence (see document UPOV/WG-EDV/3/3 "Report", paragraph 35).

5. The WG-EDV, at its third meeting, agreed that, on the basis of the comments received on document UPOV/EXN/EDV/3 Draft 1, the Office of the Union would prepare a new draft document UPOV/EXN/EDV/3 (UPOV/EXN/EDV/3 Draft 2) for consideration by the WG-EDV, at its fourth meeting, to be held by electronic means on October 19, 2021 (see document UPOV/WG-EDV/3/3 "Report", paragraph 36 – reproduced below)

"36. The WG-EDV recalled the following timeline agreed at its first meeting, held on December 8, 2020 (see document UPOV/WG-EDV/1/3 "Report", paragraph 9) and agreed that, on the basis of the comments received on document UPOV/EXN/EDV/3 Draft 1, the Office of the Union would prepare a new draft of document UPOV/EXN/EDV/3 (UPOV/EXN/EDV/3 Draft 2), and possible recommendations from the WG-EDV to the CAJ, as appropriate, for consideration by the WG-EDV, at its fourth meeting.

<u>June/July 2021</u> [date to be decided]	Consideration of UPOV/EXN/EDV/3/Draft 1 by correspondence (6 weeks for comments)
<u>October 2021</u> [date to be decided]	Fourth Meeting of the WG-EDV (at the fringes of the CAJ session)  - consideration of UPOV/EXN/EDV/3/Draft 2 (to be posted 6 weeks before the fourth meeting in English)"

## DEVELOPMENTS SINCE THE THIRD MEETING OF THE WG-EDV

Circular E-21/110 of July 21, 2021 (document UPOV/EXN/EDV/3 Draft 1)

6. On July 21, 2021, the Office of the Union issued Circular E-21/110 to the members of the WG-EDV, with a copy to other members of the Union that had participated or have expressed an interest to participate in the WG-EDV meetings, inviting comments on document UPOV/EXN/EDV/3 Draft 1 "Explanatory Notes on Essentially Derived Varieties under the 1991 Act of the UPOV Convention" by September 1, 2021.

7. In reply to Circular UPOV Circular E-21/110, comments were received from the following members of the WG-EDV: Australia, Association for Plant Breeding for the Benefit of Society (APBREBES), and a joint contribution from the International Seed Federation (ISF), International Community of Breeders of Asexually Reproduced Horticultural Plants (CIOFORA), CropLife International, Asia and Pacific Seed Association (APSA), Seed Association of the Americas (SAA), African Seed Trade Association (AFSTA) and Euroseeds. Comments were also received from the following members of the Union: Mexico and Spain. The comments received are reproduced in the Annex to this document.

8. The proposals contained in the comments received in reply to Circular E-21/110 have been introduced in boxes in document UPOV/EXN/EDV/3 Draft 2.

## CONSIDERATION OF THE "EXPLANATORY NOTES ON ESSENTIALLY DERIVED VARIETIES UNDER THE 1991 ACT OF THE UPOV CONVENTION" (DOCUMENT UPOV/EXN/EDV/3 DRAFT 2)

9. The WG-EDV is invited to consider document UPOV/EXN/EDV/3 Draft 2 "Explanatory Notes on Essentially Derived Varieties under the 1991 Act of the UPOV Convention". For reference purposes, document UPOV/EXN/EDV/3 Draft 2 "Marked version", has been posted in the WG-EDV/4 website and presents in revision mode the changes in document UPOV/EXN/EDV/3 Draft 2 to the text of document UPOV/EXN/EDV/2.

10. In order to facilitate discussions at its fourth meeting, the WG-EDV is invited to send comments on document UPOV/EXN/EDV/3 Draft 2 by October 1, 2021. Comments received by October 1, 2021, will be posted on the WG-EDV/4 webpage. Comments that are not received in advance may also be raised at the meeting.

11. Document UPOV/EXN/EDV/3 Draft 2 will be presented for consideration by the CAJ at its seventy-eighth session to be held, by electronic means, on October 27, 2021. The recommendations of the WG-EDV with regard to document UPOV/EXN/EDV/3 Draft 2 will be reported to the CAJ in document CAJ/78/4 Add..

12. *The WG-EDV is invited to:*

(a) *note the developments since its third meeting and the comments received in reply to Circular E-21/110 document UPOV/EXN/EDV/3 Draft 1 as reported in this document and its Annex;*

(b) *send comments on document UPOV/EXN/EDV/3 Draft 2 by October 1, 2021;*

(c) *note that comments received by October 1, 2021, will be posted on the WG-EDV/4 webpage and that comments that are not received in advance may also be raised at the WG-EDV/4 meeting;*

(d) *consider document UPOV/EXN/EDV “Explanatory Notes on Essentially Derived Varieties under the 1991 Act of the UPOV Convention”, on the basis of document UPOV/EXN/EDV/3 Draft 2; and*

(e) *note that document UPOV/EXN/EDV/3 Draft 2 will be presented for consideration by the CAJ at its seventy-eighth session to be held, by electronic means, on October 27, 2021 and that the recommendations of the WG-EDV, with regard to document UPOV/EXN/EDV/3 Draft 2, will be reported to the CAJ in document CAJ/78/4 Add..*

[Annex follows]

ANNEX

COMMENTS RECEIVED IN REPLY TO UPOV CIRCULAR E 21/110 OF JULY 21, 2021

This Annex contains the following:

- (a) Appendix I: Comments from Australia
- (b) Appendix II: Comments from Mexico
- (c) Appendix III: Comments from Spain
- (d) Appendix IV: Comments from the Association for Plant Breeding for the Benefit of Society (APBREBES)
- (e) Appendix V: Comments from the International Seed Federation (ISF), International Community of Breeders of Asexually Reproduced Horticultural Plants (CIOPORA), CropLife International, Asia and Pacific Seed Association (APSA), Seed Association of the Americas (SAA), African Seed Trade Association (AFSTA) and Euroseeds

[Appendix I follows]

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ANNEX, APPENDIX I

AUSTRALIA

Australia provided the following comments in reply to UPOV Circular E-21/110 of July 21, 2021:

“To the Chair, Working Group on Essentially Derived Varieties (WG-EDV):

“Thank you for the opportunity to comment on the proposed changes to the explanatory notes on essentially derived varieties (Document UPOV/EXN/EDV/3 DRAFT 1).

“At this stage, Australia has no suggestions to make to the text of the explanatory notes.

“We do make the comment that should the proposed changes to the explanatory notes be adopted by UPOV that Australia will need to make changes to our national plant variety rights system settings to better align our approach to EDVs with the proposed explanatory notes and will make any necessary changes in due course.”

[Appendix II follows]

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ANNEX, APPENDIX II

MEXICO

[original in Spanish]

Mexico provided the following comments in reply to UPOV Circular E-21/110 of July 21, 2021:

“Comments and suggestions

“1. Suggestions for examples in paragraph 11.

<b>Para.</b>	<b>Comments</b>
11	<i>“An example is the modification of the color of a grain of white and yellow corn, whereby only the color of the grain is modified and the other morphological characteristics and of value of the initial variety remain unchanged.”</i>

“2. Comments on document UPOV/EXN/EDV/3 Draft 1, original language.

<b>Para.</b>	<b>Comments</b>
11	We would suggest amending the text to read as follows:  <b>An essentially</b> derived variety typically retains the expression of essential characteristics of the variety from which it is derived, except for those differences resulting from act(s) of derivation, which may also include differences in essential characteristics.

“3. Comments regarding the translation into Spanish of document UPOV/EXN/EDV/3 Draft 1 (with a view to ensuring the correct terminology in Spanish).

[text only in Spanish]

<b>Para.</b>	<b>Comments</b>
5 a	We would suggest amending the text to read as follows:  <i>Las variedades con un solo progenitor (variedades “monoparentales”) resultantes, por ejemplo, de mutaciones, modificación genética o <b>edición genómica</b> son en sí mismas derivadas principalmente de su variedad inicial.</i>
7	We would suggest amending the text to read as follows:  <i>Un carácter esencial es consecuencia de la expresión de uno o más genes <del>u otros</del> <b>determinantes heredables</b> y puede ser, entre otros, un carácter morfológico, fisiológico, agronómico, industrial (por ejemplo, un carácter del aceite) o bioquímico.</i>
8	We would suggest amending the text to read as follows:  <i>Un “carácter esencial” es aquel que es <b>fundamental</b> para la variedad en su conjunto. Debe contribuir a los principales rasgos, el rendimiento o el valor de uso de la variedad y ser relevante para uno de los actores o aspectos siguientes: quienes producen, venden, suministran, compran, reciben, utilizan el material de reproducción o multiplicación, el producto de la cosecha, los productos obtenidos directamente o la cadena de valor.</i>

<b>Para.</b>	<b>Comments</b>
16	<p>We would suggest amending the text to read as follows:</p> <p><i>El uso de las palabras “por ejemplo” en el Artículo 14.5)c) deja claro que la lista de métodos no es exhaustiva. Los ejemplos de métodos proporcionados en el Artículo 14.5)c) corresponden a los métodos que se conocían en 1991. Desde entonces, los métodos de fitomejoramiento han evolucionado y han surgido nuevas técnicas, tales como la <b>edición genómica</b>. Es posible que surjan otros métodos de mejoramiento para obtener variedades esencialmente derivadas. Esos métodos deben tenerse en cuenta si son pertinentes a efectos del Artículo 14.5)c).</i></p>
18	<p>We would suggest amending the text to read as follows:</p> <p><i>El texto del Artículo 14.5)b)i) explica que las variedades esencialmente derivadas pueden derivarse principalmente de una variedad que, a su vez, se deriva principalmente de la variedad inicial, con lo cual se indica que las variedades esencialmente derivadas pueden obtenerse, de manera directa o indirecta, de la “variedad inicial”. Las variedades pueden derivarse principalmente de una variedad inicial “A”, directamente, o bien indirectamente, por medio de las variedades “B”, “C”, “D”, o “E”, etc., y seguirán siendo consideradas como variedades esencialmente derivadas de la variedad “A” <b>si cumplen con</b> la definición que se da en el Artículo 14.5)b).</i></p>
21	<p>We would suggest amending the text to read as follows:</p> <p><i>Con independencia de que la variedad C se haya obtenido directamente de la variedad inicial A o no, se trata de una variedad esencialmente derivada de la variedad A <b>si cumple con</b> la definición que se establece en el Artículo 14.5)b).</i></p>
23	<p>We would suggest amending the text to read as follows:</p> <p><i>Las variedades esencialmente derivadas pueden recibir derechos de obtentor del mismo modo que cualquier otra variedad si cumplen las condiciones que se establecen en el Convenio (véase el Artículo 5 del Acta de 1991 del Convenio de la UPOV). Si una variedad esencialmente derivada está protegida, se requerirá la autorización del (de la) obtentor(a) de la variedad esencialmente derivada como establece el Artículo 14.1) del Convenio de la UPOV. No obstante, las disposiciones del Artículo 14.5)a)i) amplían el alcance del derecho de la variedad inicial protegida, previsto en los párrafos 1) a 4) del Artículo 14, a las variedades esencialmente derivadas. <b>Por lo tanto</b>, si la variedad A es una variedad inicial protegida, la realización de los actos que se recogen en los párrafos 1) a 4) del Artículo 14 tocantes a las variedades esencialmente derivadas requerirá la autorización del titular de la variedad A. En el presente documento, el término “comercialización” comprende los actos que se recogen en los párrafos 1) a 4) del Artículo 14. Así, cuando el derecho de obtentor se aplica tanto a la variedad inicial (variedad A) como a una variedad esencialmente derivada (variedad B), para comercializar la variedad esencialmente derivada (variedad B) es necesario contar con la autorización tanto del (de la) obtentor(a) de la variedad inicial (variedad A) como del (de la) obtentor(a) de la variedad esencialmente derivada (variedad B).</i></p>
24	<p>We would suggest amending the text to read as follows:</p> <p><i>Si una variedad esencialmente derivada (variedad B) no está protegida en sí misma para los actos que se recogen en los párrafos 1) a 4) del Artículo 14 <b>referentes</b> a la variedad B, que realicen el (la) obtentor(a) de la variedad B o un tercero, se requerirá la autorización del (de la) titular de la variedad A.</i></p>

[Appendix III follows]

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ANNEX, APPENDIX III

SPAIN

[original in Spanish]

Spain provided the following comments in reply to UPOV Circular E-21/110 of July 21, 2021:

**“General comments:** We wish to thank the Office of UPOV for the document submitted and for its efforts in trying to reflect consensus positions on such a complex subject.

**“Specific comments:**

**“Paragraphs 11 and 13.** The phrase ‘which may also include differences in essential characteristics’ does not appear in Article 14(5)(b)(iii). It is, therefore, entirely interpretative and even inconsistent with Article 14(5)(b)(i). In a case such as the one indicated, where both the conditions under subparagraphs (i) and (ii) are met, and the difference resulting from the derivation is a characteristic such that it results in an essential characteristic, the variety should not automatically be considered as essentially derived, and each case should be reviewed on a case-by-case basis. Indeed, it contradicts what is stated in paragraph 34 to the effect that the titleholder of the initial variety must establish, by DNA-based genetic analysis, the conformity of the supposed EDV variety with the essential characteristics of the initial variety. That is not possible if the difference consists of a characteristic which is itself essential. Otherwise, one would be favoring classic plant breeding technologies and penalizing any technological advance that includes genomic technologies allowing mono-parental breeding. It is important to point out that rights are being granted for new plant varieties that can hardly be said to differ essentially from commonly known varieties. It would be all the more surprising if obstacles were to be placed in the way of granting rights for new varieties that do indeed possess unique essential characteristics in comparison with existing varieties. The meaning of the final wording of this explanatory note is crucial, as it could change the spirit of the Convention as drafted.

**“Paragraph 14.** By this definition, only classic plant-breeding technologies would be taken into account. All available technologies are needed to meet the enormous challenges facing agriculture. Breeders cannot and should not be penalized for using the new technologies available to them. Let us recall the mission of UPOV, as set forth on its website: *‘To provide and promote an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society.’* The system must, therefore, promote the development of new varieties to meet the challenges facing society by encouraging new plant breeders with new techniques and ensuring that they may, in turn, benefit from the UPOV system to make their varieties available to farmers.

**“Paragraph 15.** Possible methods are included, but it should not be assumed that the end result will automatically be an EDV. Rather, results should be assessed on a case-by-case basis.

**“Paragraph 17.** This conclusion is interpretative and should be deleted. Many genetically-improved varieties arising from mono-parental modifications do not result in EDVs. Very few protected varieties with mono-parental modifications are considered EDVs by the courts.

**“Paragraph 20.** The last sentence reads: ‘Variety C is essentially derived from initial variety A, but is predominantly derived from variety B.’ On the basis of that conclusion, the following tables should be amended:

“Table 3, page 9: **predominantly derived from ‘B’**, not from ‘A’.

“Table 6, page 9: **predominantly derived from ‘Z-1’**, not from ‘A’.

“Table 3, page 11: **predominantly derived from ‘B’**, not from ‘A’.

“Table 6, page 11: **predominantly derived from ‘Z-1’**, not from ‘A’.

“Table 3, page 12: **predominantly derived from ‘B’**, not from ‘A’.

“Table 6, page 12: **predominantly derived from ‘Z-1’**, not from ‘A’.

“Table 3, page 13: **predominantly derived from ‘B’**, not from ‘A’.

“Table 6, page 13: **predominantly derived from ‘Z-1’**, not from ‘A’.”

[Appendix IV follows]



ASSOCIATION FOR PLANT BREEDING FOR THE BENEFIT OF SOCIETY (APBREBES)

APBREBES provided the following comments in reply to UPOV Circular E-21/110 of July 21, 2021:

**“Comment concerning the Section III: OPTIONS FOR THE ENFORCEMENT OF BREEDERS’ RIGHTS IN RELATION TO ESSENTIALLY DERIVED VARIETIES and Section II: ASSESSMENT OF ESSENTIALLY DERIVED VARIETIES**

“A new section III «Options for the enforcement of breeders’ rights in relation to essentially derived varieties» was inserted in the draft «Explanatory Notes on Essentially Derived Varieties under the 1991 Act of the UPOV Convention» and provides options for the titleholders for the enforcement of their breeders rights. This is not the task of explanatory notes (EXN) of UPOV which should give guidance to member states to implement the Convention.

“The only place where enforcement is mentioned in the 1991 Act is :

*“Article 30 Implementation of the Convention (1) [Measures of implementation] Each Contracting Party shall adopt all measures necessary for the implementation of this Convention; in particular, it shall: (i) provide for appropriate legal remedies for the effective enforcement of breeders’ rights; (UPOV 91)*

“There is an explanatory note on Art. 30, which states that, *‘while the UPOV Convention requires members of the Union to provide for appropriate legal remedies for the effective enforcement of breeders’ rights, it is a matter for breeders to enforce their rights.’* and further provides a non-exhaustive list of enforcement measures, which might be considered by members of the Union.

**“How titleholders enforce their rights is not part of the UPOV Convention – and should therefore not be part of an explanatory note on EDVs.**

“The UPOV Convention is a treaty between States. The explanatory notes to the Convention are generally not addressed to other stakeholders. It is not the task of member states to give advice to breeders on how they should enforce their rights. And UPOV has not done so, thus far.

“All explanatory notes (except the one on EDV) have the same preambular text :

*“The purpose of these Explanatory Notes is to provide guidance on [xy] under the [1991 Act of the] International Convention for the Protection of New Varieties of Plants. The only binding obligations on members of the Union are those contained in the text of the UPOV Convention itself, and these Explanatory Notes must not be interpreted in a way that is inconsistent with the relevant Act for the member of the Union concerned.’*

“In order to establish coherence between the EXNs, the preamble of the EXN on Essentially derived varieties should therefore be adapted to the others.

“There is no reason why breeders’ rights in relation with EDV should be handled differently compared to other parts of breeders’ rights.

“We are not aware of any other multilateral IP Agreement which gives any recommendations to rights holders on how to enforce their rights.

“The draft text of section II on the assessment of essentially derived varieties has been adapted in the same direction. It gives guidance explicitly to the titleholders on how to establish if a variety is an EDV.

“There is no role foreseen for titleholders in the 1991 Act of the UPOV Convention regarding the assessment if a variety is an EDV. Therefore it is inappropriate that member states develop guidance for the titleholders on this issue in an explanatory note.

**“How titleholders assess if a variety is an EDV is not part of the UPOV Convention – and should therefore not be part of an explanatory note on EDVs.**

“Based on the above concerns, we propose the following amendments:

- “1. Section III of the draft Explanatory Note on Essentially Derived Varieties under the 1991 Act of the UPOV Convention should be deleted. Any advice to titleholders on how to enforce their rights should be excluded from the Explanatory Note.
- “2. Section II of the draft Explanatory Note on Essentially Derived Varieties under the 1991 Act of the UPOV Convention should not be changed. The version adopted by the Council on April 6, 2017 should be retained.
- “3. The preamble of the Explanatory Note on Essentially Derived Varieties under the 1991 Act of the UPOV Convention should be amended in the following way :  
‘The purpose of tThese Explanatory Notes is to provide guidance on ‘Essentially Derived Varieties’ under the 1991 Act of the International Convention for the Protection of New Varieties of Plants (UPOV Convention).~~The purpose of this guidance is to assist members of the Union and relevant stakeholders in their considerations in matters concerning essentially derived varieties.~~ The only binding obligations on members of the Union are those contained in the text of the UPOV Convention itself, and these Explanatory Notes must not be interpreted in a way that is inconsistent with the relevant Act for the member of the Union concerned.’

[Appendix V follows]

INTERNATIONAL SEED FEDERATION (ISF), CROPLIFE INTERNATIONAL,  
INTERNATIONAL COMMUNITY OF BREEDERS OF ASEXUALLY REPRODUCED HORTICULTURAL  
PLANTS (CIOPORA), EUROSEEDS, ASIA AND PACIFIC SEED ASSOCIATION (APSA),  
AFRICAN SEED TRADE ASSOCIATION (AFSTA) AND SEED ASSOCIATION OF THE AMERICAS (SAA)  
(JOINT COMMENTS)

ISF, CropLife International, CIOPORA, Euroseeds, APSA, AFSTA, and SAA provided the following joint comments in reply to UPOV Circular E-21/110 of July 21, 2021:

**“Contribution to UPOV Circular E-21/110**

“Dear Mr. Button,

“The International Seed Federation, CIOPORA, Crop Life International, Euroseeds, APSA (Asia and Pacific Seed Alliance), AFSTA (African Seed Trade Association), SAA (Seed Association of the Americas) 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-21/110, we would like to provide you some examples to be potentially used to help the understanding of the revision of the Explanatory Note on Essentially Derived Varieties but not to be specifically included in the revision of document UPOV/EXN/EDV/3 Draft 1.

“We are providing you below an example related to cotton crop, an example related to apple crop, and an example related to corn crop, illustrating that the proposed changes to the UPOV Explanatory Notes on EDV are intended to make it clear that changes in one or a few essential characteristics, either morphological or agronomic, are not sufficient to avoid being an EDV if the new variety has been predominantly derived from a PBR-protected variety.

“The examples are presented under the following format:

- Description of the initial variety and EDV
- Description of the act of derivation
- Description of the differences: essential and non-essential

**“Example 1**

1) “Description of the initial variety and EDV

CHARACTERISTIC	VALUE	VALUE
	<b>Variety A</b> Species: <i>Gossypium</i> <i>hirsutum L</i>	<b>Variety B (EDV)</b> Species: <i>Gossypium</i> <i>hirsutum L</i>
<b>AREAS OF ADAPTATION</b>		
1.	Eastern	Eastern
2.	Delta	Delta
3.	Central	Central
4.	Blacklands	Blacklands
5.	Plains	Plains
6.	Western	Western
7.	Arizona	Arizona

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CHARACTERISTIC	VALUE	VALUE
	<b>Variety A</b> Species: <i>Gossypium hirsutum L</i>	<b>Variety B (EDV)</b> Species: <i>Gossypium hirsutum L</i>
<b>GENERAL PLANT TYPE</b>		
Plant Habit	Intermediate	Intermediate
Foliage	Intermediate	Intermediate
Stem Lodging	Intermediate	Erect
Fruiting Branch	Normal	Normal
Growth	Intermediate	Intermediate
Leaf Color	Dark Green	Medium green
Boll Shape	Length more than width	Length more than width
Boll Breadth	Broadest at middle	Broadest at middle
<b>MATURITY</b>		
Days till maturity	138	146
<b>PLANT</b>		
cm to 1 <sup>st</sup> Fruiting Branch (from cotyledonary node)	24	23.3
No. of Nodes to 1st Fruiting Branch (excluding cotyledonary node)	6	6.6
Mature Plant Height in cm (from cotyledonary node to terminal)	110	98.6
<b>LEAF (Upper most, fully expanded leaf)</b>		
Type	Normal	Normal
Pubescence	Sparse	Sparse
Nectaries	Present	Present
<b>STEM</b>		
Stem Pubescence	Intermediate	Intermediate
<b>GLANDS (Gossypol)</b>		
Leaf	Normal	Normal
Stem	Normal	Normal
Calyx Lobe (normal is absent):	Normal	Normal
<b>FLOWER</b>		
Petals	Cream	Cream
Pollen	Cream	Cream
Petal Spot	Absent	Absent
<b>SEED</b>		
Seed Index (g/100 seeds, fuzzy basis)	10.25	9.30

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CHARACTERISTIC	VALUE	VALUE
	<b>Variety A</b> Species: <i>Gossypium hirsutum L</i>	<b>Variety B (EDV)</b> Species: <i>Gossypium hirsutum L</i>
Lint Index (g lint/100 seeds)	7.93	5.98
<b>BOLL</b>		
Lint percent (%), Picked	43.5	41.2
Number of seeds per boll	28.0	31.4
Grams Seed Cotton per Boll	2.86	4.69
Boll Type	Storm Resistant	Storm Resistant
<b>FIBER PROPERTIES</b>		
Specify Method (HVI or other)	HVI	HVI
Length (inches, 2.5% SL)	1.13	1.27
Uniformity (%)	81.22	84.0
Strength, T1 (g/tex)	31.4	32.9
Elongation, E1 (%)	6.8	5.2
Micronaire	5.5	4.4
<b>DISEASES</b>		
Alternaria macrospora0	Susceptible	Susceptible
Anthracnose	Susceptible	Susceptible
Ascochyta Blight	Susceptible	Susceptible
Bacterial Blight (Race 1)	Susceptible	Susceptible
Bacterial Blight (Race 2)	Susceptible	Susceptible
Bacterial Blight (Race 18)	Resistant	Resistant
Diplodia Boll Rot	Susceptible	Susceptible
Fusarium Wilt	Susceptible	Susceptible
Phymatotrichum Root Rot	Susceptible	Susceptible
Pythium (specify species)	Susceptible	Susceptible
Rhizoctonia solani	Susceptible	Susceptible
Southwestern Cotton Rust	Susceptible	Susceptible
Thielaiopsis basicola	Susceptible	Susceptible
Verticillium Wilt	Moderately Susceptible	Moderately Susceptible
<b>NEMATODES, INSECTS AND PESTS</b>		
Root-Knot Nematode	Susceptible	Susceptible
Boll Weevil	Susceptible	Susceptible
Bollworm	Susceptible	Resistant
Cotton Aphid	Susceptible	Susceptible

CHARACTERISTIC	VALUE	VALUE
	<b>Variety A</b> Species: <i>Gossypium hirsutum L</i>	<b>Variety B (EDV)</b> Species: <i>Gossypium hirsutum L</i>
Cotton Fleahopper	Susceptible	Susceptible
Cotton Leafworm	Susceptible	Susceptible
Cutworm (specify species)	Susceptible	Susceptible
Fall Armyworm	Susceptible	Susceptible
Reniform Nematode	Susceptible	Susceptible
Grasshopper (specify species)	Susceptible	Susceptible
Lygus (specify species)	Susceptible	Susceptible
Pink Bollworm	Susceptible	Resistant
Spider Mite (specify species)	Susceptible	Susceptible
Stink Bug (specify species)	Susceptible	Susceptible
Thrips (specify species)	Susceptible	Susceptible
Tobacco Bud Worm	Susceptible	Resistant

2) Description of the act of derivation

Breeding History Summary of EDV Variety "VARIETY B":

<u>Generation</u>	<u>Year</u>	<u>Description</u>
Cross	2011	Cross was made in Location1 between donor parent [Y2B2R2*2/ Z4-BRC-BC2F2-F1] (containing the gene event for lepidopteron tolerance and gene event for glyphosate tolerance) and conventional recurrent parent VARIETY_A.
F <sub>1</sub>	2011	Plants were grown in Location1 and advanced using bulk based on event of interest selection.
BC1	2011	Cross was made in Location1 using an F <sub>1</sub> plant selection and VARIETY_A as the recurrent parent.
BC1F <sub>1</sub>	2011	Plants were grown in Location1 and advanced using plant selection for event of interest.
BC2	2012	Cross was made in Location2 using a BC1F <sub>1</sub> plant selection and VARIETY_A as the recurrent parent.
BC2F <sub>1</sub>	2012	Plants were grown in Location2 and advanced using plant selection based on event of interest and MABC recovery of recurrent parent.
BC3	2012	Cross was made in Location2 using a BC2F <sub>1</sub> plant selection and VARIETY_A as the recurrent parent.
BC3F <sub>1</sub>	2012	Plants were grown in Location2 and advanced using plant selection based on event of interest and MABC recovery of recurrent parent.

<u>Generation</u>	<u>Year</u>	<u>Description</u>
Cross	2013	Cross was made in Location2 using the BC3F <sub>1</sub> plant selection and BC3F <sub>1</sub> plants from the pedigree [VARIETY_A*4/DPV1-BRD-BC1-F2] (containing the gene event for dicamba and glufosinate tolerance). The BC3F <sub>1</sub> from [VARIETY_A*4/DPV1-BRD-BC1-F2] was derived in a similar manner of crossing between the conventional recurrent parent VARIETY_A and trait donor parent DPV1-BRD-BC1-F2.
F <sub>1</sub>	2013	Plants were grown in Location2 and advanced using plant selection based on event of interest and MABC recovery of recurrent parent.
F <sub>2</sub>	2013	Plants were grown in Location2 and advanced using plant selection based on homozygosity of the intended trait events.
F <sub>3</sub>	2014	Plants were grown in Location2 and advanced using plant selection based on homozygosity of the intended trait events.
F <sub>4</sub>	2014	Plants were grown in Location2 and advanced using bulk based on gene purity.

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**Advanced Testing**

<u>Generation</u>	<u>Year</u>	<u>Selection</u>
F <sub>5</sub>	2015	Selected based on the lint yield, lint percent, fiber quality and trueness to type with the recurrent parent.
F <sub>6</sub>	2016	Selected based on the lint yield, lint percent, fiber quality and trueness to type with the recurrent parent.
F <sub>7</sub>	2017	Selected based on the lint yield, lint percent, fiber quality and trueness to type with the recurrent parent.

3) Description of the differences

The Initial variety Variety A and Variety B EDV differ in the following list of characteristics observed:

Characteristics	Initial Variety = VARIETY_A	EDV = VARIETY B
Stem Lodging	Intermediate	Erect
Leaf Color	Dark Green	Medium Green
Bollworm	Susceptible	Resistant
Pink Bollworm	Susceptible	Resistant
Tobacco Bud Worm	Susceptible	Resistant

4) Conclusion

Even though there are differences between in essential characteristics between Variety A and Variety B, this does not prevent Variety B to be considered an Essentially Derived Variety.

**Example 2**

1) Description of the initial variety and EDV

Initial Variety <b>Variety A: Cripps Pink</b> Species: <i>Malus domestica</i>				EDV <b>Variety B: Barnsby - PLBAR B1</b> Species: <i>Malus domestica</i>			
UPOV N°	Characteristic	Level of expression	Note	OCVV or National N°	Characteristic	Level of expression	Note
	<u>Tree</u>				<u>Tree</u>		
1 a	vigour	strong	7	1	vigour	medium	5
2	type	divergent	3-5	2	type	ramified	2
				3	only varieties with ramified tree- type habit	spreading	2
6	type of bearing	on spurs and short shoots	1-2	4	type of bearing	on spurs and long shoots	2
	<u>One-year-old-shoot</u>				<u>One-year-old-shoot</u>		
9	thickness	thin	3	5	thickness	medium to thick	6
				6	length of internode	medium to long	6
				7	colour on sunny side	light brown	3
7	pubescence (on distal half of shoot)	medium	5	8	pubescence (on distal half of shoot)	medium	5
12	number of lenticels	medium	5	9	number of lenticels	medium to many	6
	<u>Leaf</u>				<u>Leaf</u>		
32	attitude in relation to shoot	horizontal	5	10	attitude in relation to shoot	outwards	2
33	size	medium	5				
	<u>Leaf blade</u>				<u>Leaf blade</u>		
				11	length	long	7
				12	width	medium to broad	6
36	ratio length/width	medium	5	13	ratio length/width	medium	5
				14	intensity of green colour	medium	5
				15	incisions of margin (upper half)	biserrate	5
				16	pubescence on lower side	medium	2
	<u>Petiole</u>				<u>Petiole</u>		
47	length	long	7	17	length	medium	5
				18	extent of anthocyanin coloration from base	medium	5
	<u>Flower</u>				<u>Flower</u>		
				19	predominant colour at balloon stage	dark pink	4
23	diameter with petals pressed into horizontal position	Small to medium	3-5	20	diameter with petals pressed into horizontal position	large	7
27	color inside	Pink white					
26	color outside	White pink					
				21	arrangement of petals	intermediate	2
				22	position of stigmas relative to anthers	same level	2



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Initial Variety <b>Variety A: Cripps Pink</b> Species: <i>Malus domestica</i>				EDV <b>Variety B: Barnsby - PLBAR B1</b> Species: <i>Malus domestica</i>			
UPOV N°	Characteristic	Level of expression	Note	OCVV or National N°	Characteristic	Level of expression	Note
					<b>Young Fruit</b>		
				23	extent of anthocyanin over colour	small	3
	<b>Fruit</b>				<b>Fruit</b>		
49a	size	medium	5				
				26	diameter	medium	5
				27	ratio height/diameter	medium to large	6
50	general shape	ellipsoidal	4	28	general shape	cylindrical	4
53	ribbing	absent	1	29	ribbing	absent or weak	1
54	crowning at calyx end	absent	1	30	crowning at calyx end	absent or weak	1
57	size of eye	medium	5	31	size of eye	medium to large	6
59	length of sepal	short	3	32	length of sepal	medium	5
68	bloom of skin	absent	1	33	bloom of skin	absent or weak	1
69	greasiness of skin	absent	1	34	greasiness of skin	moderate	2
73	ground colour	yellow green	3	35	ground colour	yellow	3
74	relative area of over colour	large	7	36	relative area of over colour	medium to large	6
75	hue of over colour - with bloom removed	red	2	37	hue of over colour - with bloom removed	pink red	2
				38	intensity of over colour	medium	5
76	pattern of over colour	striped and mottled	1-2	39	pattern of over colour	flushed, striped and mottled	7
				40	width of stripes	medium	5
				41	area of russet around stalk attachment	absent or small	1
				42	area of russet on cheeks	absent or small	1
				43	area of russet around eye basin	absent or small	1
				44	number of lenticels	medium to many	6
79	size of lenticels		5	45	size of lenticels	medium	5
64	length of stalk	medium	5	46	length of stalk	medium to long	6
63	thickness of stalk	thin	3	47	thickness of stalk	thin to medium	4
65a	depth of stalk cavity	deep	7	48	depth of stalk cavity	deep	7
66	width of stalk cavity	small	3	49	width of stalk cavity	medium	5
				50	depth of eye basin	deep	7
				51	width of eye basin	medium to broad	6
81	firmness of flesh	very firm	7	52	firmness of flesh	medium	5
82	colour of flesh	greenish	3	53	colour of flesh	cream	2
87	aperture of locules (in transverse section)	open	1	54	aperture of locules (in transverse section)	closed or slightly open	1
90	time of beginning of flowering	early	3	55	time of beginning of flowering	early	3
				56	time for harvest	late	7
92	time of eating maturity	very late	9	57	time of eating maturity	late	7

2) Description of the act of derivation

PLBAR B1 is a mutation of Cripps Pink.

3) Description of the differences

The main difference, which results from the derivation, is the earlier maturity

Denomination of similar variety	Characteristic in which the similar variety is different	Similar variety State of expression	Candidate variety State of expression
<b>Cripps Pink</b>	56 Time for harvest Remark: Harvest 20 to 25 days before Cripps Pink	<b>9 very late</b>	<b>7 late</b>

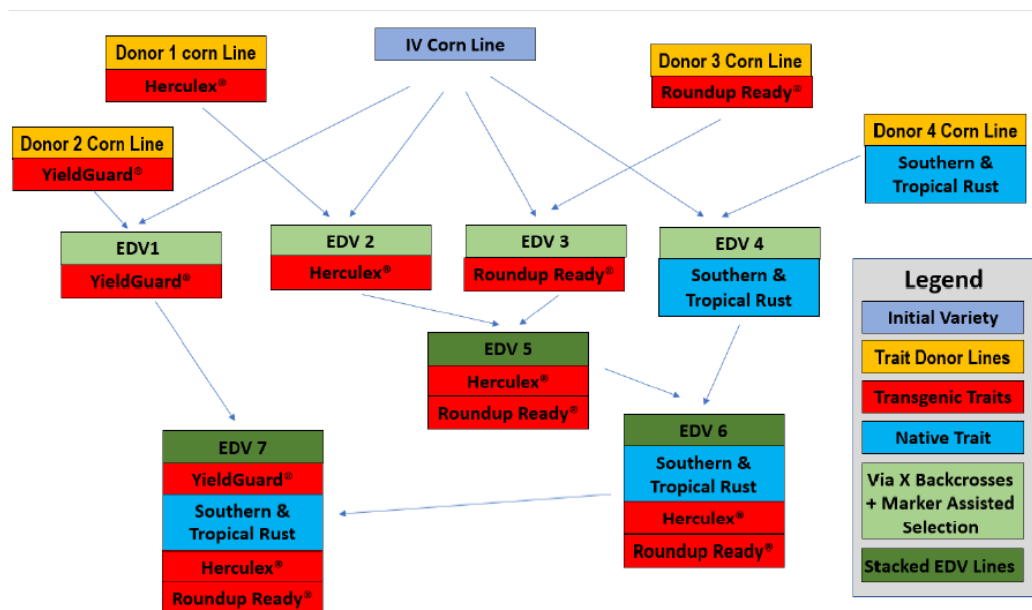
4) Conclusion

The Judicial Court of Rennes (N° 20/00293 of 07 December 2020) has ruled that PLBAR B1 is an EDV of Cripps Pink, as it retains the essential characteristics of Cripps Pink, even though there is a difference in maturity of the fruits.

**Example 3**

Example from corn varieties where multiple essential characteristics are different from the Initial Variety.

1) Description of the act of derivation



2) Description of the differences

All the traits, transgenic or native, are essential characteristics and all the differences in those essential characteristics are introduced via backcrossing which amount to predominant derivation therefore leading to the creation of the first generation of EDVs with one trait each.

Crossing such EDVs to stack their respective traits in a subsequent corn inbred line results in creating the second, third and fourth generations of EDVs as, an EDV can be obtained either from the initial variety itself (i.e. : 1st generation EDVs with 1 trait) or from a variety that is itself predominantly derived from the initial variety as stipulated in article 14-5-b-I of the Act of 1991 (i.e. : 2nd, 3rd and 4th generations EDVs).

3) Conclusion

“Given the living nature of the corn lines, there may be slight non-essential morphological differences/nuances from the Initial Variety although the experience shows that by using molecular marker sets generating several thousands of data points and dihaploids production during the above process, leads to the elimination of the slightly deviating progenies to end-up with a stacked EDV which is morphologically identical to the Initial variety except for the 4 traits introgressed.

We hope these three examples may be useful if and when needed for any further discussion within the UPOV WG -EDV.

We are staying at your disposal may you have further questions,

Sincerely Yours,

[signed]

Michael Keller  
ISF Secretary General

[signed]

Dr. Edgar Krieger  
CIOPORA Secretary General

[signed]

Kanokwan Chodchoey  
APSA Executive Director

[signed]

Szonja Csörgő  
Euroseeds IP Director

[signed]

John Mc Murdy  
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[signed]

Justin Rakotoarisona  
AFSTA Secretary General

[signed]

Diego Risso  
SAA Executive Director

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