



TWO/48/7

ORIGINAL: English

DATE: August 7, 2015

**INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS**

Geneva

**TECHNICAL WORKING PARTY FOR ORNAMENTAL PLANTS AND FOREST TREES****Forty-Eighth Session****Cambridge, United Kingdom, September 14 to 18, 2015**

## EXCHANGE AND USE OF SOFTWARE AND EQUIPMENT

*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 report on developments concerning exchange and use of software and equipment.
2. The TWO is invited to note that:
  - (a) that the Council, at its forty-eighth ordinary session, held in Geneva, on October 16, 2014, adopted the revision of document UPOV/INF/16 "Exchangeable Software" (document UPOV/INF/16/4) on the basis of document UPOV/INF/16/4 Draft 1;
  - (b) discussions on the inclusion of the SISNAVA software in document UPOV/INF/16 will be continued in the TWC, subject to the conclusion on discussions on the variation of variety descriptions over years in different locations;
  - (c) the TC, at its fifty-first session, held in Geneva, from March 23 to 25, 2015, and the CAJ, at its seventy-first session, held in Geneva, on March 26, 2015, agreed the proposed revision of document UPOV/INF/16/4 concerning the inclusion of information on the use of software by members of the Union in conjunction with the comments of the TC, as set out in Annex I to this document and that a draft of document UPOV/INF/16/5 "Exchangeable Software" will be presented for adoption by the Council at its forty-ninth ordinary session;
  - (e) the Council, at its forty-eighth ordinary session adopted document UPOV/INF/22 "Software and equipment used by members of the Union" (document UPOV/INF/22/1);
  - (f) the TC, at its fifty-first session, and the CAJ, at its seventy-first session, agreed the proposed revision of document UPOV/INF/22/1 concerning software and equipment used by members of the Union in conjunction with the comments of the TC, as set out in Annex II to this document, and a draft of document UPOV/INF/22 will be presented for adoption by the Council at its forty-ninth ordinary session, to be held in Geneva, on October 29, 2015.

3. The following abbreviations are used in this document:

TC: Technical Committee  
TC-EDC: Enlarged Editorial Committee  
TWA: Technical Working Party for Agricultural Crops  
TWC: Technical Working Party on Automation and Computer Programs  
TWF: Technical Working Party for Fruit Crops  
TWO: Technical Working Party for Ornamental Plants and Forest Trees  
TWPs: Technical Working Parties  
TWV: Technical Working Party for Vegetables

4. The structure of this document is as follows:

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## PURPOSE

5. The purpose of this document is to report on developments concerning exchange and use of software and equipment.

## DOCUMENT UPOV/INF/16 "EXCHANGEABLE SOFTWARE"

### Revision of document UPOV/INF/16

6. The TC, at its fifty-first session, held in Geneva, from March 23 to 25, 2015, and the CAJ, at its seventy-first session, held in Geneva, on March 26, 2015, noted that the Council, at its forty-eighth ordinary session, held in Geneva, on October 16, 2014, had adopted the revision of document UPOV/INF/16 "Exchangeable Software (document UPOV/INF/16/4), on the basis of document UPOV/INF/16/4 Draft 1 (see documents C/48/21 "Report on the Decisions", paragraph 25, TC/51/39 "Report", paragraph 204 and CAJ/71/10 "Report on the Conclusions", paragraph 56).

### Software proposed for inclusion in document UPOV/INF/16 "Exchangeable software"

7. The procedure for considering software proposed for inclusion in document UPOV/INF/16 "Exchangeable software" is set out in document UPOV/INF/16 "Exchangeable Software", as follows:

#### "2. Procedure for inclusion of software

"Software proposed for inclusion in document UPOV/INF/16 by members of the Union is, in the first instance, presented for review by the Technical Working Party on Automation and Computer Programs (TWC). On the basis of such presentations and the experience of members of the Union, the TWC makes a recommendation to the Technical Committee on whether to include that software in document UPOV/INF/16. In the case of a positive recommendation by the TC and by the Administrative and Legal Committee (CAJ), the software will be listed in a draft of document UPOV/INF/16, to be considered for adoption by the Council. Document UPOV/INF/16 is adopted by the Council."

### *SISNAVA software*

8. The TWC, at its thirty-second session, held in Helsinki, Finland, from June 3 to 6, 2014, received a presentation from an expert from Mexico by electronic means on the SISNAVA software, as presented in Annex V to document TWC/32/7. The TWC agreed that the procedure for the calculation of differences for variety distinctness should take into account that differences in notes in PQ characteristics do not correspond to the size of the phenotypic difference. The TWC agreed that the discussions on the inclusion of the SISNAVA software in document UPOV/INF/16 should be continued subject to the conclusion on discussions on the variation of variety descriptions over years in different locations by the TWC (see document TWC/32/28 "Report", paragraph 87).

9. The TC, at its fifty-first session, and the CAJ, at its seventy-first session, noted that the discussions on the inclusion of the SISNAVA software in document UPOV/INF/16 would be continued in the Technical Working Party on Automation and Computer Programs (TWC), subject to the conclusion on discussions on the variation of variety descriptions over years in different locations (see documents TC/51/39, paragraph 205 and CAJ/71/10, paragraph 57).

#### Information on use by members

10. Section 4 of document UPOV/INF/16 “Exchangeable Software” provides the following:

“4. Information on use by members of the Union

“4.1 A circular is issued to members of the Union on an annual basis, inviting them to provide information on their use of the software included in document UPOV/INF/16.

“4.2 The information on software use by members of the Union is indicated in the columns ‘Member(s) of the Union using the software’ and ‘Application by user(s)’. With regard to the indication of ‘Application by user(s)’, members of the Union can indicate, for example, crops or types of crop for which the software is used.”

11. On December 10, 2014, the Office of the Union issued Circular E-14/303 to the designated persons of the members of the Union in the TC, inviting them to provide or update information regarding the use of the software included in document UPOV/INF/16. The information received from Uruguay in response to the circular is included in Annex I to this document.

12. The TC, at its fifty-first session, and the CAJ, at its seventy-first session, approved the proposed revision of document UPOV/INF/16/4 concerning the inclusion of information on the use of software by members of the Union, as set out in Annex I to document TC/51/8 (see documents TC/51/39, paragraph 206 and CAJ/71/10, paragraph 58).

13. The TC, at its fifty-first session, noted that the comments of the TC concerning the use of software by members of the Union would be reported to the CAJ at its seventy-first session (see document TC/51/39, paragraph 207).

14. The CAJ, at its seventy-first session, agreed that a draft of document UPOV/INF/16 “Exchangeable Software” be presented for adoption by the Council at its forty-ninth ordinary session, to be held on October 29, 2015 (see document CAJ/71/10, paragraph 59).

#### DOCUMENT UPOV/INF/22 “SOFTWARE AND EQUIPMENT USED BY MEMBERS OF THE UNION”

##### Adoption of document UPOV/INF/22/1

15. The TC, at its fiftieth session, held in Geneva, from April 7 to 9, 2014, and the CAJ, at its sixty-ninth session, held in Geneva, on April 10, 2014, agreed to propose document UPOV/INF/22 “Software and equipment used by members of the Union” for adoption by the Council at its forty-eighth ordinary session, to be held in Geneva on October 16, 2014 (see documents TC/50/36 “Report on the Conclusions”, paragraph 110 and CAJ/69/13 “Report of the Conclusions”, paragraph 41).

16. The Council, at its forty-eighth ordinary session, held in Geneva, on October 16, 2014, adopted document UPOV/INF/22/1 “Software and Equipment Used by Members of the Union”, on the basis of document UPOV/INF/22/1 Draft 1, and noted the plan to issue a circular to the designated persons of the members of the Union in the TC, inviting them to provide information regarding non-customized software and equipment used by members of the Union (see document C/48/21 “Report on the Decisions”, paragraph 26).

17. The TC, at its fifty-first session, and the CAJ, at its seventy-first session, noted that the Council, at its forty-eighth ordinary session had adopted document UPOV/INF/22/1 “Software and equipment used by members of the Union” (see documents TC/51/39, paragraph 208 and CAJ/71/10, paragraph 60).

##### Software/Equipment proposed for inclusion in document UPOV/INF/22

18. The procedure for considering software and equipment proposed for inclusion in document UPOV/INF/22 is set out in document UPOV/INF/22/1, as follows:

“2.1 Software/equipment proposed for inclusion in this document by members of the Union is, in the first instance, presented to the TC.

“2.2 The TC will decide whether to:

- a) propose to include the information in the document;
- b) request further guidance from other relevant bodies (e.g. CAJ and TWPs); or
- c) propose not to include the information in the document.

“2.3 In the case of a positive recommendation by the TC and, subsequently by the CAJ, the software/equipment will be listed in a draft of the document, to be considered for adoption by the Council.”

19. On December 10, 2014, the Office of the Union issued Circular E-14/303 to the designated persons of the members of the Union in the TC, inviting them to provide information for document UPOV/INF/22. The information received from Croatia, Germany, Israel, Republic of Korea and Uruguay in response to the circular is included in Annex II to this document.

20. The TC, at its fifty-first session, and the CAJ, at its seventy-first session, agreed the information in Annex II to document TC/51/8 for inclusion in document UPOV/INF/22, subject to corrections provided by Germany and checking of the data provided by Uruguay (see documents TC/51/39, paragraph 209 and CAJ/71/10, paragraph 61).

21. On the above basis, the TC, at its fifty-first session, and the CAJ, at its seventy-first session, agreed that a draft of document UPOV/INF/22 “Software and equipment used by members of the Union” be presented for adoption by the Council at its forty-ninth ordinary session (see documents TC/51/39, paragraph 210 and CAJ/71/10, paragraph 62).

22. *The TWO is invited to note that:*

*(a) the Council, at its forty-eighth ordinary session adopted the revision of document UPOV/INF/16 “Exchangeable Software” (document UPOV/INF/16/4 on the basis of document UPOV/INF/16/4 Draft 1;*

*(b) discussions on the inclusion of the SISNAVA software in document UPOV/INF/16 will be continued in the TWC, subject to the conclusion on discussions on the variation of variety descriptions over years in different locations;*

*(c) the TC, at its fifty-first session and the CAJ, at its seventy-first session, agreed the proposed revision of document UPOV/INF/16/4 concerning the inclusion of information on the use of software by members of the Union in conjunction with the comments of the TC, as set out in Annex I to this document and a draft of document UPOV/INF/16/5 “Exchangeable Software” will be presented for adoption by the Council at its forty-ninth ordinary session;*

*(d) the Council, at its forty-eighth ordinary session adopted document UPOV/INF/22 “Software and equipment used by members of the Union” (document UPOV/INF/22/1); and*

*(e) the TC, at its fifty-first session, and the CAJ, at its seventy-first session, agreed the proposed revision of document UPOV/INF/22/1 concerning software and equipment used by members of the Union in conjunction with the comments of the TC, as set out in Annex II to this document, and a draft of document UPOV/INF/22 will be presented for adoption by the Council at its forty-ninth ordinary session.*

[Annexes follow]

PROPOSED REVISION TO DOCUMENT UPOV/INF/16 "EXCHANGEABLE SOFTWARE"  
 (Information regarding the use of the software provided by Uruguay in reply to Circular E-14/303: appears highlighted)

(a) Administration of applications

Date added	Program name	Programming language	Function (brief summary)	Source & contact details	Condition for supply	Member(s) of the Union using the software	Application by user(s)
October 24, 2013	ZAJVKA	SQL Windows	Information on applications (name and address of applicants, proposed denomination, date of application etc) and registration (denomination, date of registration)	Russian Federation: State Commission of the Russian Federation for Selection Achievements Test and Protection, Valentin Sherbina, Chief of IT Department E-mail: <a href="mailto:gossort@gossort.com">gossort@gossort.com</a>	Only available in Russian	RU	all crops
October 16, 2014	SIVAVE	Database: Mysql 5.1  PHP Version 2.5.9 Ajax. Javascript.  Routines are integrated with Java Applets and several Java Archives (JARS).  Complements: Zend Optimizer 3.3  Compilers: Zend Studio ScriptCase	Allows for the real-time dissemination of the status of proceedings concerning applications for breeders' rights in Mexico.	Mexico: E-mail: <a href="mailto:enriqueta.molina@snics.gob.mx">enriqueta.molina@snics.gob.mx</a> / <a href="mailto:eduardo.padilla@snics.gob.mx">eduardo.padilla@snics.gob.mx</a>	Written application and justification of need for use.	MX	all crops

- (b) On-line application systems
- (c) Variety denomination checking
- (d) DUS trial design and data analysis

Date added	Program name	Programming language	Function (brief summary)	Source & contact details	Condition for supply	Member(s) of the Union using the software	Application by user(s)
October 21, 2010	DUSTNT	FORTRAN 90	General program for analysis of data from DUS trials. Includes facilities for COY analysis and a wide range of multivariate analysis techniques	United Kingdom: Dr. Sally Watson Email: <a href="mailto:sally.watson@afbini.gov.uk">sally.watson@afbini.gov.uk</a>		GB	Herbage, Pea (Field & Veg), Parsnip, Swede, Onion, Brussels Sprout, Winter Oilseed Rape, Sugar Beet, Faba Beans, Spring Oilseed Rape, Kale, Linseed
						CZ	Oilseed Rape, Grasses and Luzerne
						EE	Grasses and Legumes
						KE	Maize
						VN	Maize, Flowers, Rice, Tomato, Potato, Soybean, Vegetables, and other species
October 21, 2010	GAIA	Windev	Computes comparisons of varieties for management of reference collections	France: Email: <a href="mailto:christophe.chevalier@geves.fr">christophe.chevalier@geves.fr</a>		FR	Sorghum, Sugar Beet, Maize, Wheat, Barley, Oats, Rapeseed, Sunflower, Triticale, Pea
						CZ	Maize, Wheat, Barley, Oats, and Pea
						HR	Barley, Maize, Soybean, Wheat
						UY	Sorghum, Sugar Beet, Maize, Wheat, Barley, Oats, Rapeseed, Sunflower, Triticale, Pea

(e) Data recording and transfer

Date added	Program name	Programming language	Function (brief summary)	Source & contact details	Condition for supply	Member(s) of the Union using the software	Application by user(s)
October 21, 2010	SIRIUS	Windev	Hand-Held Data Capture Software	France: Email: <a href="mailto:christophe.chevalier@geves.fr">christophe.chevalier@geves.fr</a>		FR	Sorghum, Sugar Beet, Maize, Wheat, Barley, Oats, Rapeseed, Sunflower, Triticale, Pea, Herbage

(f) Image analysis

Date added	Program name	Programming language	Function (brief summary)	Source & contact details	Condition for supply	Member(s) of the Union using the software	Application by user(s)
October 24, 2013	AIM	Windows	Image processing software	France: E-mail: <a href="mailto:christophe.chevalier@geves.fr">christophe.chevalier@geves.fr</a>		FR	Rapeseed, Sunflower, Hydrangea, Flax, Peas, Carrot, Maize, Winter wheat, Orchids

(g) Biochemical and molecular data

[Annex II follows]

PROPOSED REVISION TO DOCUMENT UPOV/INF/22/1 "SOFTWARE AND EQUIPMENT USED BY MEMBERS OF THE UNION  
(Information provided by Croatia, Germany, Israel, Republic of Korea and Uruguay in reply to Circular E-14/303)

(a) Administration of applications

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	Member(s) of the Union using the software/equipment	Application by user(s)
	Administrative data	Database for administrative data on plant varieties	Federal Plant Variety Office E-mail: <a href="mailto:uwe.meyer@bundessortenamt.de">uwe.meyer@bundessortenamt.de</a>	DE	All species
	MS Office Professional Plus 2010	Applications management and database		IL	
	Access			UY	

(b) On-line application systems

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	Member(s) of the Union using the software/equipment	Application by user(s)
	E- Application	Electronic application for the protection of plant varieties and approval including qualified electronic signature	Federal Plant Variety Office E-mail: <a href="mailto:uwe.meyer@bundessortenamt.de">uwe.meyer@bundessortenamt.de</a>	DE	All species
	PDF			UY	

(c) Variety denomination checking

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	Member(s) of the Union using the software/equipment	Application by user(s)
	Variety denomination similarity	Checking of variety denominations in national procedures according to phonetic rules as a supplement to testing	Federal Plant Variety Office E-mail: <a href="mailto:uwe.meyer@bundessortenamt.de">uwe.meyer@bundessortenamt.de</a>	DE	All species

(d) DUS trial design and data analysis

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	Member(s) of the Union using the software/equipment	Application by user(s)
	Register (DUS)	Cultivation design, data capture, compilation of lists, distinctness program, COYD and COYU, description of variety	Federal Plant Variety Office E-mail: <a href="mailto:uwe.meyer@bundessortenamt.de">uwe.meyer@bundessortenamt.de</a>	DE	All species
	GAIA; INFOSTAST	Study and analysis of results		UY	

(e) Data recording and transfer

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	Member(s) of the Union using the software/equipment	Application by user(s)
	Mobida	Mobile data capture with transmission of layout plan and data transfer to PC	Federal Plant Variety Office E-mail: <a href="mailto:uwe.meyer@bundessortenamt.de">uwe.meyer@bundessortenamt.de</a>	DE	All species
	PANASONIC CF-U1 TOUGHBOOK	Data recording	Croatia E-mail: <a href="mailto:bojan.markovic@hcphs.hr">bojan.markovic@hcphs.hr</a>	HR	Maize
	Motorola MC55A0 PDA	Field DUS tests data acquisition		IL	

(f) Image analysis

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	Member(s) of the Union using the software/equipment	Application by user(s)
	Image analysis	Automatic measurement of leaf characteristics in various plant species	Federal Plant Variety Office E-mail: <a href="mailto:uwe.meyer@bundessortenamt.de">uwe.meyer@bundessortenamt.de</a>	DE	Pea, oilseed rape, pelargonium and others

(g) Biochemical and molecular data

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	Member(s) of the Union using the software/equipment	Application by user(s)
	NTSYSpc(version 2.21m)	Multivariate data analysis program	Applied Biostatistics, Inc.	KR	Clustering analysis for DNA marker development