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SOFTWARE AND EQUIPMENT USED BY MEMBERS OF THE UNION

Document adopted by the Council
at its fifty-seventh ordinary session
on October 27, 2023

1. Requirements

1.1 Members of the Union are invited to provide information on software/equipment for inclusion on the basis that it has been used for the purposes of plant variety protection.

1.2 Information on the following should be provided by any member of the Union proposing software/equipment for inclusion in this document:

Title of software/equipment
Function (brief summary)
Source and contact details
Category(ies) of use (see section 3, below)

2. Procedure for inclusion of software/equipment

2.1 Software/equipment proposed for inclusion in this document by members of the Union is, in the first instance, presented to the Technical Committee (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. the Administrative and Legal Committee (CAJ) and the Technical Working Parties (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.

3. Categories of software/equipment

To assist users, information on software/equipment is provided in the following categories:

Administration of applications
On-line application systems
Variety denomination checking
DUS trial design and data analysis
Data recording and transfer
Image analysis
Biochemical and molecular data

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/equipment included in this document.

4.2 The information on software/equipment use by members of the Union is indicated in the columns "Member(s) of the Union using the software/equipment" 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/equipment is used.

5. Disclaimer

This document is intended to provide information on the use of software and equipment by members of the Union. Neither UPOV nor the contributing Authority are responsible for the performance of the software or equipment.

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(a) Administration of applications

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	UPOV member(s) using the software	Application by user(s)
October 29, 2015	Administrative data	Database for administrative data on plant varieties	Federal Plant Variety Office E-mail: thomas.brodek@bundessortenamt.de	DE	All species
October 29, 2015	MS Office Professional Plus 2010	Applications management and database	Plant Breeders' Rights Unit E-mail: benzionz@moag.gov.il	IL	All species
October 25, 2020	Si.Inase	Database management	National Seed Institute (INASE) - Uruguay E-mail: fboschi@inase.uy	UY	All species
October 28, 2016	Sword Ptolemy	Intellectual property case management system supporting: - PVR assessing and examining applications, and administrative tasks relating to applications and granting rights; - Management of all records relating to these activities, including correspondence, documentation and transaction histories. Also see (b) below.	http://intellect.sword-group.com/Home/Ptolemy	NZ	All species
November 2, 2018	Oracle	Database management	CCAFRA-Institute for Seed and Seedlings E-mail: marina.zoric@hcphs.hr	HR	All species
November 2, 2018	Microsoft Office Excel	Database for monitoring the registration of plant varieties [Base de datos del seguimiento del trámite de registro de variedades vegetales]	Servicio Nacional de Derechos Intelectuales - SENADI www.propiedadintelectual.gob.ec	EC	All species
November 1, 2019	Próton	Database for administrative data on plant varieties	National Plant Variety Protection Service (SNPC) E-mail: snpc@agricultura.gov.br	BR	All species
November 1, 2019	Electronic program AVETIS	Database for administrative data on plant varieties	The State Plant Service under the Ministry of Agriculture of the Republic of Lithuania E-mail: info@vatzum.lt	LT	All species
October 28, 2022	Administrative data	Database for administrative data on plant varieties	Research Centre for Cultivar Testing E-mail: m.rebarz@coboru.gov.pl	PL	All species
October 28, 2022	Navision Business Central	Database for administrative and technical data on plant varieties for listing and/or plant breeders rights	The Board for plant varieties E-mail: teamsupport@rasraad.nl	NL	All concerned species
October 27, 2023	Administrative data	Database for administrative data on plant varieties	Ukrainian Institute for Plant Variety Examination E-mail: sops@i.ua	UA	All species

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	UPOV member(s) using the software	Application by user(s)
October 27, 2023	National Automated Information System for Testing and Registration of varieties (NAIS)	Database with administrative and technical data of applications for protection and for national listing, including information on VCU and DUS testing	SE "State Inspection for Testing and Protection of Plant Varieties" E-mail: belsort@mail.ru	BY	All species
October 27, 2023	Management system DRV	Database management system for the Variety Registration Office (<i>Dirección de Registro de Variedades</i>)	National Seed Institute (INASE) - Argentina E-mail: mmangieri@inase.gob.ar	AR	All species

(b) On-line application systems

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	UPOV member(s) using the software	Application by user(s)
October 29, 2015	E-Application	Electronic application for the protection of plant varieties and approval including qualified electronic signature	Federal Plant Variety Office E-mail: thomas.brodek@bundessortenamt.de	DE	All species
October 29, 2015	PDF	Application for the protection of plant varieties	National Seed Institute (INASE) - Uruguay E-mail: fboschi@inase.uy	UY	All species
October 28, 2016	Office (Word) and PDF	E-application for the protection of plant varieties and approval including qualified electronic signature	Oficina Nacional de Semillas Registro de Variedades Vegetales galizaga@ofinase.go.cr	CR	All species
October 28, 2016	eAkte	Electronic system for processing and filing variety files	Federal Plant Variety Office E-mail: thomas.brodek@bundessortenamt.de	DE	All species
October 28, 2016	Sword Ptolemy	Intellectual property case management system supporting: - PVR assessing and examining applications, and administrative tasks relating to applications and granting rights; - Management of all records relating to these activities, including correspondence, documentation and transaction histories. Also see (a) above.	http://intellect.sword-group.com/Home/Ptolemy	NZ	All species
November 1, 2019	CultivarWeb	- Electronic application system for the protection of plant varieties - Management of applications - Electronic signature - Fee administration	National Plant Variety Protection Service (SNPC) E-mail: snpc@agricultura.gov.br	BR	All species

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	UPOV member(s) using the software	Application by user(s)
October 25, 2020	VATIS	Electronic applications for Plant Variety Rights and for the National listing. Language(s): Lithuanian and English	The State Plant Service under the Ministry of Agriculture of the Republic of Lithuania: info@vatzum.lt	LT	All species
October 27, 2023	Remote Procedures Platform (TAD)	Applications for plant variety protection and national listing	National Seed Institute (INASE) - Argentina E-mail: mmangieri@inase.gob.ar	AR	All species

(c) Variety denomination checking

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	UPOV member(s) using the software	Application by user(s)
October 29, 2015	Variety denomination similarity	Checking of variety denominations in national procedures according to phonetic rules	Federal Plant Variety Office E-mail: thomas.brodek@bundessortenamt.de	DE	All species
October 28, 2016	Sword Accepto	Trade mark and design search tool supporting the searching for prior use of proposed denominations.	http://intellect.sword-group.com/Home/Accepto	NZ	All species
October 26, 2017	Variety denomination similarity	Checking of variety denominations in national procedures according to phonetic rules as a supplement to testing	State Commission of the Russian Federation for Selection Achievements Test and Protection E-mail: gsk@gosortrf.ru	RU	All species
September 21, 2021	SI.INASE	Database to control denominations that have been commercialized in Uruguay	National Seed Institute (INASE) - Uruguay E-mail: fboschi@inase.uy	UY	All species
October 28, 2022	Variety denomination similarity	Checking of variety denominations in national procedures	Research Centre for Cultivar Testing E-mail: m.rebarz@coboru.gov.pl	PL	All species
October 27, 2023	Variety denomination similarity	Checking of variety denominations in national procedures	Ukrainian Institute for Plant Variety Examination E-mail: sops@i.ua	UA	All species
October 27, 2023	COMPARA	Allows comparison of a proposed denomination with the database of varieties registered and in process of being registered in Argentina	National Seed Institute (INASE) - Argentina E-mail: mmangieri@inase.gob.ar	AR	All species

(d) DUS trial design and data analysis

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	UPOV member(s) using the software	Application by user(s)
October 29, 2015	Register (DUS)	Cultivation design, data capture, compilation of lists, distinctness program, COYD and COYU, description of variety	Federal Plant Variety Office E-mail: thomas.brodek@bundessortenamt.de	DE	All species
October 29, 2015	INFOSTAST, R and GAIA	Study of varietal differentiation and analysis of results	National Seed Institute (INASE) - Uruguay E-mail: fboschi@inase.uy	UY	All species
October 28, 2016	SAS and R	Design and analysis		KE	All species
October 26, 2017	Register (DUS)	Cultivation design, data capture, compilation of lists, COYD and COYU, description of variety	Centre of Estonian Rural Research and Knowledge (METK) E-mail: sordi@metk.agri.ee	EE	All species
November 2, 2018	Microsoft Access, and Excel	Trial design, statistical analysis. Making reports and variety descriptions.	Microsoft	SE	Sugar beet hybrids and hybrid components
November 2, 2018	SPSS	Statistical analysis (not COYD)	IBM	SE	Sugar beet hybrids and hybrid components
October 28, 2022	DUSCEL (EXCEL+VBA+UI)	1.Checking abnormal data by validation, boxplot and standard deviation methods. 2.Analysis of uniformity by off-type, relative variance, COYU. 3.Converting original data to note by a fixed scale and changed standard varieties' actual value. 4.Analysis of stability by COYS and pictures. 5.Analysis of distinctness by note level, data level and photo level. 6. Methods for verification of Characteristics and trial by CorrelCh, QLFrDis, QNFrDis, EstDat and EstRat.	China: Mr. Kun Yang E-mail: yangkun@caas.cn	CN	Maize, tomato, cucumber, squash, French bean, asparagus, chrysanthemum, cabbage, Chinese cabbage, pepper, petunia, lycoris, yam, carrot, onion
October 28, 2022	STATSIMG	Statistical analysis (COYU and COYD)	National Plant Variety Office E-mail: martin.tlaskal@ukzuz.cz	CZ	Oilseed rape, grasses and lucerne
October 28, 2022	Excel	Trial design	Naktuinbouw E-mail: teamsupport@rasraad.nl	NL	All concerned species
October 28, 2022	GenStat	Statistical analysis (COYU and COYD)	Naktuinbouw E-mail: teamsupport@rasraad.nl	NL	All concerned species
October 27, 2023	Web application for DUS and VCU tests / R scripts and Shiny	Field trials design, data capture, reference varieties selection for DUS, description of variety / Statistical analysis	Ukrainian Institute for Plant Variety Examination E-mail: sops@i.ua	UA	All species

(e) Data recording and transfer

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	UPOV member(s) using the software	Application by user(s)
October 29, 2015	Reg.mobile	Mobile data capture with transmission of layout plan and data transfer to PC	Federal Plant Variety Office E-mail: thomas.brodek@bundessortenamt.de	DE	All species
October 29, 2015	PANASONIC CF-U1 TOUGHBOOK	Data recording	Croatia E-mail: bojan.markovic@hcphs.hr	HR	Maize
October 29, 2015	Motorola MC55A0 PDA	Field DUS tests data acquisition	Plant Breeders' Rights Unit E-mail: benzionz@moag.gov.il	IL	All species
October 28, 2016	PANASONIC CF-U1 TOUGHBOOK	Data recording	Finnish Food Safety Authority E-mail: Kaarina.paavilainen@evira.fi	FI	Mainly cross pollinated plants
October 26, 2017	PANASONIC FZ-G1 TOUGH PAD	Data recording	SASA E-mail: lesley.mccarthy@sasa.gov.scot	GB	All species
October 28, 2022	Mobile Field Register	Data recording, the trial definition transmission from the central database	Research Centre for Cultivar Testing E-mail: m.rebarz@coboru.gov.pl	PL	All species
October 28, 2022	Handheld	Data recording and transfer of data to Navision Business Central	Naktuinbouw E-mail: teamsupport@rasraad.nl	NL	All concerned species
October 27, 2023	Handheld	Data recording, transfer to the central database	Ukrainian Institute for Plant Variety Examination E-mail: sops@i.ua	UA	All species
October 27, 2023	National Automated Information System for Testing and Registration of varieties (NAIS)	Data recording at testing units and transfer data to the central database of Inspection	State Inspection for Testing and Protection of Plant Varieties of Belarus E-mail: belsort@mail.ru	BY	All species

(f) Image analysis

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	UPOV member(s) using the software	Application by user(s)
October 29, 2015	Image analysis	Automatic measurement of leaf characteristics in various plant species	Federal Plant Variety Office E-mail: thomas.brodek@bundessortenamt.de	DE	Employees of Federal Plant Variety Office
October 26, 2017	IMAGIN	Automatic measurement of leaf characteristics in various plant species	Biomathematics and Statistics Scotland E-mail: a.roberts@bioass.ac.uk	GB	Pea, parsnip, carrot, brassicas
November 1, 2019	STATSIMG	Automatic measurement of leaf characteristics	National Plant Variety Office E-mail: martin.tlaskal@ukzuz.cz	CZ	Oilseed rape, pea
September 21, 2021	Image analysis	Automatic measurement of leaf and flower petals characteristics	Variety Testing Department E-mail: lubomir.basta@uksup.sk	SK	Oilseed rape

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	UPOV member(s) using the software	Application by user(s)
October 28, 2022	GenStat	Statistic and image analysis for concerned species	Naktuinbouw E-mail: teamsupport@rasraad.nl	NL	All concerned species

(g) Biochemical and molecular data

Date added	Title of software/equipment	Function (brief summary)	Source & contact details	UPOV member(s) using the software	Application by user(s)
October 29, 2015	NTSYSpc (version 2.21m)	Multivariate data analysis program	Applied Biostatistics, Inc.	KR	Clustering analysis for DNA marker development
September 21, 2021	Applied Biosystems/ Excel	Designation of allelic variants of each SNP of a predefined set for the identification of soybean varieties	National Seed Institute (INASE) - Uruguay E-mail: fboschi@inase.uy ; mmenoni@inase.uy	UY	Identify different cultivars molecularly with allelic variants by means of SNP in soybeans
October 27, 2023	R scripts	Genetic distances calculation	Ukrainian Institute for Plant Variety Examination E-mail: sops@i.ua	UA	All species
October 27, 2023	Molecular database	Platform that allows the creation of molecular databases by species and calculations of genetic distances by pairs of varieties	National Seed Institute (INASE) - Argentina E-mail: eloponto@inase.gob.ar ; mmangieri@inase.gob.ar	AR	The genetic distances calculated with this platform are uploaded to the GAIA software for comparisons that combine morphological and molecular distances. It is currently used on soybeans, rice and cotton.

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