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ELECTRONIC APPLICATION SYSTEMS

Document prepared by the Office of the Union

- 1. The purpose of this document, and its addendum (document CAJ/66/5 Add.), is to report on the use of standard references of the UPOV Model Application Form in the application forms of members of the Union and to consider certain matters with regard to electronic application systems.
- 2. The section on the electronic version of the UPOV Model Application Form explains the project to develop a multilingual, electronic form containing questions relevant for plant breeders' rights (PBRs) applications. In particular, members of the Union are invited to join a project to develop a prototype electronic form for selected crops/species. The aim of the prototype would be to develop an electronic form covering all relevant information required for a PBR application in the members of the Union concerned and with questions translated in the relevant languages for the members of the Union concerned.

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3. The background to the developments reported in this document can be found in document CAJ/64/9 "Electronic Application Systems".

STANDARD REFERENCES TO THE UPOV MODEL APPLICATION FORM Ι.

Introduction

- At its forty-fourth ordinary session, held in Geneva on October 21, 2010, the Council adopted document TGP/5, Section 2/3: Experience and Cooperation in DUS Testing: UPOV Model Form for the Application for Plant Breeders' Rights (see document C/44/16 "Report on the Decisions", paragraph 16). That document has been posted on the UPOV website (see http://www.upov.int/edocs/tgpdocs/en/tgp_5_section_2.pdf).
- Document TGP/5, Section 2/3, Annex I "Instructions for Converting the UPOV Model Form for the Application for Plant Breeders' Rights into an Authority's Own Form" includes the following provision for standard references to the UPOV Model Application Form:
 - "A. **General Instructions**

[...]

A standard UPOV reference has been provided for each field in the UPOV Model Form. For "0.4 example,

> for item 1.(a) Applicant(s) Name(s), the standard UPOV reference is UPOV A1: 1(a)(i)

To facilitate harmonization and to assist applicants, an Authority may include that standard UPOV reference in the corresponding field of the Authority's own form. It is a matter for each Authority to decide if the field in the Authority's own form corresponds sufficiently precisely to the field in the UPOV Model Application Form for the standard UPOV reference to be included."

Survey on the use of the standard references of the UPOV Model Application Form

- The Technical Committee (TC), at its forty-seventh session, held in Geneva from April 4 to 6, 2011, agreed that the Office of the Union should seek information on the extent to which members of the Union use the standard references to the UPOV Model Application Form in their application forms (document TC/47/26 "Report on the Conclusions", paragraph 42).
- The Administrative and Legal Committee (CAJ), at its sixty-fourth session, held in Geneva on October 17, 2011, requested the Office of the Union to issue a survey on the extent to which members of the Union use the standard references of the UPOV Model Application Form in their application forms and to present the results of that survey to the CAJ at its sixty-sixth session, to be held in Geneva on October 29, 2012 (see document CAJ/64/11 "Report on the Conclusions", paragraph 39).
- On July 10, 2012, the Office of the Union issued Circular E-12/179 "Survey on the use of standard references of the UPOV Model Application Form" to representatives to the UPOV Council, with a copy to the designated persons of members in the CAJ, requesting replies by August 10, 2012.
- 9. Circular E-12/179 requested the following information:

2.	Are the standard references of the UPOV Model Application Form indicated in your application form?
	Yes No No
3.	If "No", please indicate if you have any plans to include the standard references in the future.

- If "Yes", please go to the fourth column of pages 2 to 7 entitled "Answer 'yes' to identify the standard references indicated in the Authority's Application Form".

Note: It is a matter for each Authority to decide if the field in the Authority's own form corresponds sufficiently precisely to the field in the UPOV Model Application Form for the standard UPOV reference to be included."

A report of the replies by members of the Union will be made in an addendum to this document (document CAJ/66/5 Add.).

II. ELECTRONIC VERSION OF THE UPOV MODEL APPLICATION FORM

Linear Blank Form

11. Document TGP/5, Section 2/3, Annex II, contains the "Linear Blank Forms corresponding to Section 2: 'UPOV Model Form for the Application for Plant Breeders' Rights'" ("Linear Blank Form for PBR Applications").

Electronic Form

Background

- 12. The Technical Working Party for Fruit Crops (TWF), at its forty-first session, held in Cuernavaca, Morelos State, Mexico, from September 27 to October 1, 2010, agreed that, as a means of providing information in a convenient [electronic] form, consideration should be given to authorities having the possibility to receive information in the UPOV linear form, *in addition to the forms that the authority required for an application*¹ [italics added for emphasis] (see document TWF/41/30 Rev. "Revised Report", paragraph 50).
- 13. In addition to the Linear Blank Form for PBR Applications being published as Annex II to document TGP/5, Section 2/3, the intention of the Office of the Union had been to make the Linear Blank Form for PBR Applications available in Word and Excel formats. However, the discussions at the TWF and subsequent discussions with the International Seed Federation (ISF) indicated that there could be considerable benefit in developing a Linear Blank Form for PBR Applications with additional functionality.
- 14. At its sixty-third session, held on April 7, 2011, the CAJ expressed its support to develop a Linear Blank Form for PBR Applications with the following features (see document CAJ/63/10 "Report", paragraphs 61 to 63):
- (a) users could select the language in which the items in the Linear Blank Form for PBR Applications would be presented (Input Template language);
- (b) users could select (a) language(s) in which the completed Linear Form for PBR Applications could be downloaded (Output Template language);
- (c) users could choose the format in which to download the completed Linear Form for PBR Applications: Word, Excel, XML and/or PDF;
- (d) users could choose to store the input data in an associated database (hosted by UPOV), in order, for example, to allow further downloading in different languages and/or formats. The data would be password protected and the password would only be issued to the user concerned; and
- (e) a disclaimer that the use of the information associated with the Linear Blank Form for the filing of an application for a breeder's right with the authority of a member of the Union would be the responsibility of the user.
- 15. The CAJ noted that the languages in which the Linear Blank Form for PBR Applications would be developed would be prioritized on the basis of discussions with the international breeders' organizations and according to available resources. In the case of languages other than English, French, German and Spanish, interested members of the Union would be consulted before the relevant language versions were made available on the UPOV website. In addition, there would be an explanation that the translations had not been adopted by the Council.

The text in italics has been emphasized to clarify that the proposal discussed in the TWF did not relate to the use of the Linear Blank Form for PBR Applications as an application for a breeder's right. The potential use of the UPOV Model Application Form to provide information to an authority as a part of an application for a breeder's right is considered in Section III of this document "Use of Information Provided in an Electronic Version of the UPOV Model Application Form and UPOV Model TQ".

The term "user" is used instead of "applicant" or "breeder", in order to avoid any implication that the use of the Linear Blank Form for PBR Applications might indicate that an application is being filed for a plant breeder's right.

- 16. The CAJ noted that ISF would be willing to contribute financial resources to the development of the Linear Blank Form for PBR Applications on the basis of the concept set out above. The development of a Linear Blank Form for PBR Applications on the basis of the concept set out above is henceforth referred to as the "Electronic Blank Form". Since the sixty-third session of the CAJ, ISF has confirmed that it would contribute 7,500 Swiss Francs to the development of the Electronic Blank Form.
- 17. The TC, at its forty-seventh session, held in Geneva from April 4 to 6, 2011, had noted that it was planned that the Linear Blank Form for PBR Applications be developed with the features set out in paragraphs 14 to 16.

Meetings with interested parties

- 18. On May 20, 2011, the Office of the Union met with Mr. Marcel Bruins, Secretary General of ISF, and colleagues from the Internet Services Section of the World Intellectual Property Organization (WIPO) in order to discuss how to proceed with the development of the Electronic Blank Form. In accordance with the CAJ recommendation to take into account developments concerning the Community Plant Variety Office of the European Union (CPVO) online application system (see document CAJ/64/9, paragraphs 27 and 28), it was agreed that it would be useful to discuss the project with the CPVO.
- 19. On June 22, 2011, the Vice Secretary-General met with Mr. Jean Maison, Deputy Head of the Technical Unit of the CPVO, and Mr. Marc Rouillard, Webmaster of the CPVO. One of the issues that was raised at the meeting was that, in the experience of the CPVO, an essential element for the Electronic Blank Form would be the possibility for certain users (breeders) to input data electronically in XML format, directly from their databases. In that regard, it was recognized that it would be necessary to develop a standardized system of electronic data exchange.
- 20. As a result of those discussions, it was agreed between the Office of the Union, ISF and CPVO, that a meeting should be arranged to discuss that issue and also to receive information on the work of CPVO to develop online application systems in cooperation with its individual member States. It was agreed that ISF would invite interested breeders and CPVO would invite experts involved in the CPVO project to attend that meeting in order to reflect the needs of those parties. It was also agreed that UPOV would invite an expert from WIPO to present its work on standards for electronic exchange of data.
- 21. A meeting was hosted by UPOV in Geneva on August 18, 2011. The meeting was attended by: the Office of the Union; WIPO Internet Services Section (responsible for the development of the UPOV Electronic Blank Form project); WIPO Standards Section; WIPO Global Database Service (responsible for the UPOV Plant Variety Database); CPVO accompanied by experts from the Bundessortenamt (Germany), GEVES (France) and Naktuinbouw (Netherlands); and ISF, accompanied by experts from Monsanto, Nunhems Netherlands B.V., Rijk Zwaan Zaadteelt en Zaadhandel B.V. and Syngenta.
- 22. A summary of the meeting of August 18, 2011, is provided on the CAJ/65 and TC/48 website. At the meeting, the Office of the Union explained that any broadening of the scope of the UPOV project on the Electronic Blank Form would be subject to consideration within UPOV and that any proposals in that regard would, in the first instance, be presented to the CAJ at its sixty-fourth session, held in Geneva on October 17, 2011.
- 23. A summary of the proposals developed at the meeting of August 18, 2011, which the CAJ was invited to consider at its sixty-fourth session, follows:

SUMMARY OF PROPOSALS

General

The participants agreed that further investigation and work was needed with regard to the matters raised at the meeting before further consideration could be made. In that regard, it identified the following two aspects, which could be pursued separately but in parallel:

1. UPOV Electronic Application Form (UPOV Project)

(a) General design

The design concept of the CPVO forms, e.g. "expanding" questions, should be explored for the (UPOV Project).

(b) Core set and additional questions

UPOV should consider the concept of having a "core" set of UPOV questions, to which individual members of the Union could add their additional questions. In that respect, the UPOV Model Application Form and UPOV Technical Questionnaire should be considered as the "core" set of questions, to which, for example, the CPVO and other members of the Union could add their additional questions, if so desired.

Consideration would need to be given to the translation of the additional questions to be added by individual members of the Union. It was agreed that the UPOV Project should consider a small number of crops/species in the first instance in order to assess the feasibility of the project on a wider scale.

(c) Data format

The UPOV Electronic Application Form should retain the possibility for users to input data manually and the possibility for output forms to be generated in paper and electronic formats. With regard to the development of possibilities for electronic transmission of data in XML format from breeders to the UPOV form, there was a need for further work in order to develop a standardized system of data exchange for PBR applications.

2. Development of a Standardized System of Data Exchange for PBR Applications

A common data structure and common dictionary would be necessary to be able to exchange data in an efficient way. It was agreed that XML should be the common data structure. With regard to the data dictionary, it was noted that the work of WIPO on XML schemas should form a starting point.

The development of a standardized system of data exchange for PBR applications should use the WIPO standard ST.96, which is due for adoption in late 2011 or early 2012, as the starting point. The first step would be to review the ST.96 standard in order to identify fields in the UPOV and CPVO forms that would be covered by ST.96 and those that would not be covered. CPVO would undertake that analysis and develop proposals for common design rules for fields that would not be covered by ST.96.

- 24. In order to facilitate consideration by the CAJ of the proposals, UPOV, CPVO and WIPO Standards Section provided presentations at the sixty-fourth session of the CAJ, held in Geneva on October 17, 2011, based on those made at the meeting in Geneva on August 18, 2011. Copies of those presentations are available on the CAJ/65 and TC/48 section of the UPOV website.
- 25. At its sixty-fourth session, the CAJ endorsed the matters set out in paragraph 23 of this document as a basis for the continuation of meetings between experts of UPOV, WIPO, CPVO and ISF in order to develop proposals for consideration by the CAJ.
- 26. A second meeting of experts from UPOV, WIPO Internet Services Section, WIPO Standards Section, WIPO Global Database Service, CPVO and ISF, was held in Geneva on December 8, 2011. A copy of the

report has been posted on the CAJ/65 and TC/48 section of the UPOV website. A summary of the key elements of that meeting follows:

1. UPOV Electronic Application Form (UPOV Project)

(a) UPOV-CPVO cooperation in IT development

CPVO had approached UPOV to discuss how best to cooperate in the development of the UPOV Project and CPVO online application system. One option that had been considered had been to use a single developer for both projects. However, it had been concluded that there would be a number of practical difficulties with such an approach, which were likely to significantly outweigh any potential advantages. It had been concluded that the most beneficial approach would be for UPOV and CPVO colleagues to share information and ideas as extensively as possible in the development process. It was agreed that such an approach would be the most appropriate and would also be aided by the joint UPOV, WIPO, CPVO and ISF meetings to discuss Electronic Application Forms;

(b) General design

It was agreed that the design concept of the CPVO forms, e.g. "expanding" questions, should be pursued for the UPOV Project.

(c) Core set and additional questions

It was agreed that it would be very beneficial for UPOV and CPVO to consider the extent to which the UPOV and CPVO core sets of questions could be harmonized as far as possible. It was noted that an aspect that needed further consideration was the numbering of the "additional questions". It was agreed that it would be desirable for the "core" questions to conserve their numbering, whilst allowing the "additional questions" to be inserted in a logical sequence.

In the UPOV Project, consideration will need to be given to the translation of the additional questions to be added by individual members of the Union. In that regard, it had been agreed that the UPOV Project should consider a small number of crops/species in the first instance in order to assess the feasibility of the project on a wider scale. The following species/crops were mentioned as possibilities for further consideration: lettuce; maize (hybrids); peach; potato; rose; tomato; wheat. However, it was agreed that further information was needed in order to assess the most suitable crops/species. ISF agreed to consult its members with regard to suitable species/crops and emphasized that the International Community of Breeders of Asexually Reproduced Ornamental and Fruit Plants (CIOPORA) should be consulted with regard to asexually reproduced ornamental and fruit plants.

It was agreed that the PLUTO Plant Variety Database should be used to find the crops/species with the highest number of PBR applications and in the highest number of UPOV members. The discussions on this aspect highlighted the difficulty in identifying applications were made for the same variety in different territories because of the absence of a unique variety identifier. It was noted that the possibility of creating of a unique variety identifier had been discussed within UPOV in the past, but had not been pursued (see document TC/39/14 – CAJ/47/5, paragraphs 14 to 18). It was agreed that the CAJ should be informed of the discussion in order that it might consider whether the matter was worthy of further discussion.

2. <u>Development of a Standardized System of Data Exchange for PBR Applications</u>

WIPO Standard Section, provided a report on developments in WIPO concerning the "XML4IP Project" (see Report of August 11, 2011 meeting, Annex 6). It was explained that WIPO had not yet adopted the ST.96 standard.

3. <u>Summary of Future actions</u>

- (a) UPOV Project: design concept of the CPVO forms, e.g. "expanding" questions, to be pursued;
- (b) UPOV and CPVO to consider the extent to which the UPOV and CPVO core sets of questions could be harmonized as far as possible;
- (c) UPOV and CPVO to give further consideration to the numbering of "additional questions";
- (d) ISF to consult ISF members with regard to suitable species/crops to assess the feasibility of the UPOV Project;

- (e) UPOV to consult CIOPORA with regard to suitable species of asexually reproduced ornamental and fruit plants to assess the feasibility of the UPOV Project;
- (f) UPOV to research PLUTO Plant Variety Database to find the crops/species with the highest number of PBR applications and in the highest number of UPOV members.

4. Future meetings

It was agreed that a meeting should be scheduled for May 10, 2012, to be held in Geneva. UPOV agreed to investigate the possibility for the meeting to offer participation by WebEx.

- 27. As reported above, the discussions at the second meeting of experts from UPOV, WIPO, CPVO and ISF, highlighted the difficulty in identifying applications that were made for the same variety in different territories because of the absence of a unique variety identifier. It was noted that the possibility of creating of a unique variety identifier had been discussed within UPOV in the past, but had not been pursued (see document TC/39/14 CAJ/47/5, paragraphs 14 to 18). It was agreed that the CAJ should be informed of the discussion in order that it might consider whether the matter was worthy of further discussion.
- 28. The CAJ, at its sixty-fifth session, held in Geneva on March 29, 2012, discussed issues concerning the creation of a unique variety identifier and agreed that the Office of the Union should prepare a document to explain the issues, for consideration at its sixty-sixth session in October 2012 (see document CAJ/65/12 "Report on the Conclusions", paragraph 63). Those matters are explained in document CAJ/66/7, which will be considered by the CAJ at its sixty-sixth session, to be held in Geneva on October 29, 2012, under agenda item 7 "Issues concerning a unique variety identifier".
- 29. The CAJ, at its sixty-fifth session, held in Geneva on March 29, 2012, noted the developments concerning meetings between experts of UPOV, WIPO, CPVO and ISF, in order to develop proposals for consideration by the CAJ (see document CAJ/65/12 "Report on the Conclusions", paragraph 62).
- 30. A third meeting of experts was held in Geneva on May 12, 2012. Experts from UPOV, WIPO Internet Services Section, WIPO Standards Section, WIPO Global Database Service, CPVO, ISF (some experts via web conference) and CIOPORA (via web conference) attended. The key elements of the meeting were as follows:
 - (a) UPOV and CPVO agreed that the next step should be for the WIPO Internet Service Section experts responsible for the UPOV project to visit CPVO in order to familiarize themselves with the design concept of the CPVO forms. Thereafter, it would be necessary to consider the extent to which the UPOV and CPVO core sets of questions could be harmonized as far as possible and to give further consideration to the numbering of "additional questions".
 - (b) The CPVO experience was that the creation of forms in different languages added considerably to the workload. In that regard, it was agreed that a similar approach to UPOV-CPVO cooperation for the UPOV Plant Variety Database should be considered for the Electronic Application Form project. On the basis that data could be exchanged between the UPOV and CPVO electronic application systems (at the applicant's instigation), UPOV would not seek to provide translations of its electronic form for languages that were covered by the CPVO online application system (except for English, French, German and Spanish) and CPVO would not seek to develop translations of its online application system for languages that were provided for the UPOV electronic form. It was noted that such an approach would substantially avoid duplication of work.
 - (c) In accordance with an ISF proposal, it was agreed that the following crops should be included in the initial phase of the project: Wheat; Maize; Potato; Lettuce; Tomato; Pea and *Lolium* L.. In accordance with the CIOPORA proposal, it was agreed that the following crops should be included in the initial phase of the project: Rose; Chrysanthemum; *Dianthus* L.; Pelargonium; Petunia; Peach and Apple.
 - (d) It was agreed that the next meeting should be scheduled for the morning of October 18, 2012, to be held in Geneva, with the possibility of participation by web conference.

Prototype Electronic Application Form

- 31. On the basis of the proposals set out in paragraph 26 of this document and the discussions of those proposals in meetings with experts from UPOV, WIPO Internet Services Section, WIPO Standards Section, WIPO Global Database Service, CPVO, ISF and CIOPORA, it is proposed to develop a prototype electronic form for interested members of the Union.
- 32. The key aspects of the prototype from the perspective of members of the Union would be as follows:

Form Content: The UPOV electronic form would contain all items required by the participating

members of the Union, i.e. it would contain all items in the UPOV Model Application Form and, in addition, items required for an application in the participating member of the Union concerned. Applicants would select the members of the Union in which they wish to make an application and all relevant items for the selected members of

the Union would be presented for completion.

Status: Participating members of the Union would decide the status of any data provided via

the UPOV electronic form for their own situation.

Data format: The UPOV electronic form would enable data to be transferred to participating

members of the Union in Word, Excel, PDF or XML format. The participating members of the Union would decide in which format(s) to accept data. In the case of XML format, a standard format would be developed, based on WIPO standard

ST.96.

Languages: The UPOV electronic form would present all items (questions) in English, French,

German and Spanish. Translations for all items (questions) in other languages would be provided by the participating members of the Union, with a suitable

disclaimer.

Crops/species: Crops/species for the prototype would be one or more of:

Wheat (*Triticum aestivum* L.); Maize (*Zea mays* L.);

Potato (Solanum tuberosum L.); Lettuce (Lactuca sativa L.);

Tomato (Solanum lycopersicum L.); Pea (Pisum sativum L.); and Ryegrass

(Lolium L.);

and one or more of:

Rose (Rosa L.); Chrysanthemum (Chrysanthemum L.);

Carnation (*Dianthus* L.); Pelargonium (*Pelargonium* L'Hér. ex Ait.); Petunia (*Petunia* Juss.); Peach (*Prunus persica* (L.) Batsch); and Apple (*Malus*

domestica Borkh.).

Participating members of the Union would be able to select the crops/species in which to participate, i.e. the UPOV electronic form for each crop/species could have different participating members of the Union. The selection of the crops/species for the prototype would be made by the Office of the Union in consultation with the participating members of the Union, ISF and CIOPORA.

Partners: The partners in the development of the prototype would be the participating

members of the Union (including the continued participation of the Community Plant Variety Office of the European Union (CPVO)), Office of the Union, WIPO Internet Services Section, WIPO Standards Section, WIPO Global Database Service, ISF

and CIOPORA.

Meetings: Meetings for the development of the prototype would, in general, be held in Geneva

with an option to participate by web conference.

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33. The CAJ is invited to:

- (a) consider the proposal for the development of a prototype electronic application form, as set out in paragraphs 31 and 32; and, if appropriate,
- (b) invite members of the Union to indicate their interest to be participating members of the Union in the prototype.

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