

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA**TECHNICAL WORKING PARTY
ON
AUTOMATION AND COMPUTER PROGRAMS****Twenty-Second Session
Tsukuba, Japan, June 14 to 17, 2004****UPOV INFORMATION DATABASES***Document prepared by the Office of the Union*

1. The purpose of this document is to provide an update on developments concerning the Plant Variety Database (UPOV-ROM), the GENIE database and the UPOV Code System and to identify where the input of the Technical Working Party on Automation and Computer Programs (TWC) has been requested by the Technical Committee (TC).

Abbreviations

CAJ:	Administrative and Legal Committee
TC:	Technical Committee
TC-EDC:	Enlarged Editorial Committee
TWP:	Technical Working Party
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
TWV:	Technical Working Party for Vegetables
WG-PVD:	<i>Ad hoc</i> Working Group on the Publication of Variety Descriptions
WG-VD:	<i>Ad hoc</i> Working Group on Variety Denominations

Background Documents (chronological order)

TC/39/13: UPOV Information Databases (considered by the TC in April, 2003)

Annex I: List of taxa (approx. 7,000) with proposed UPOV codes (botanical name order)

Annex II: Annex I sorted by UPOV code order

TC/39/14-CAJ/47/5: Review of UPOV-ROM Plant Variety Database

TWV/37/6: UPOV Information Databases

Annex I: List of taxa relevant to TWV, selected from TC/39/13 Annex I by TWV Chairman (botanical name order)

Annex II: List of taxa relevant to TWV, selected from TC/39/13 Annex I by TWV Chairman (UPOV code order)

TWA/32/3: UPOV Information Databases

Annex I: List of taxa relevant to TWA, selected from TC/39/13 Annex I by TWA Chairman (botanical name order)

Annex II: List of taxa relevant to TWA, selected from TC/39/13 Annex I by TWA Chairman (UPOV code order)

TWO/36/3: UPOV Information Databases

Annex I: List of taxa relevant to TWO, selected from TC/39/13 Annex I by TWO Chairman (botanical name order)

Annex II: List of taxa relevant to TWO, selected from TC/39/13 Annex I by TWO Chairman (UPOV code order)

TWF/34/3: UPOV Information Databases

Annex I: List of taxa relevant to TWF, selected from TC/39/13 Annex I by TWF Chairman (botanical name order)

Annex II: List of taxa relevant to TWF, selected from TC/39/13 Annex I by TWF Chairman (UPOV code order)

Annex III: New UPOV codes proposed by TWF Chairman

TC/40/6-CAJ/49/4: UPOV Information Databases (considered by the TC in March 2004, and by the CAJ in April 2004)

Annex I: Proposed modifications to the UPOV codes proposed in document TC/39/13 Annex I (botanical name order)

Annex II: Proposed modifications to the UPOV codes proposed in document TC/39/13 Annex I (UPOV Code order)

Annex III: Unchecked entries in document TC/39/13 Annexes I and II

Annex IV: Additional entries for taxa not included in TC/39/13 Annexes I and II (presented in both botanical and UPOV code order)

UPOV CODE SYSTEM

2. At its thirty-ninth session held in Geneva from April 7 to 9, 2003, the TC agreed, on the basis of document TC/39/13, to the following code construction for the UPOV Code System:

- (a) an alphabetic element of five letters (e.g. XXXXX) indicating the genus;
- (b) a three-letter element (e.g. YYY) indicating the species;
- (c) where relevant, a further element of up to three characters (e.g. ZZ1) indicating a sub-specific unit;

thus,

XXXXX YYY ZZ1

(d) in all cases, the five-letter genus code is to be provided, but the three-letter species code and the sub-specific code are only provided where necessary.

3. The following work program for the development of the UPOV Code System was agreed by the TC at its thirty-ninth session:

- (a) the TC to invite the TWPs, the WG-PVD and the WG-VD to examine the codes provided in this document, during their meetings in 2003, and make their recommendations on the suitability of the codes;
- (b) the Office of the Union (the Office) to maintain the current database, adding new taxa and codes as required, including the addition of codes for taxa contained in the UPOV-ROM which are not already included in the database;
- (c) the Office to prepare a document, explaining this approach, for consideration by the CAJ at its forty-eighth session, to be held in Geneva on October 20 and 21, 2003;
- (d) the Office to modify, where necessary, the UPOV codes on the basis of the input from the TWPs, WG-PVD, WG-VD and CAJ, and present a document for consideration by the TC at its fortieth session to be held in spring 2004;
- (e) subject to comments received from the TC and CAJ, the Office to make the necessary preparations for contributors to use the UPOV Code System, starting in Summer 2004.

4. The CAJ considered document CAJ/48/4 at its forty-eighth session, held in Geneva on October 20 and 21, 2003. It agreed to the approach for the development of a UPOV code and the work program for the development and introduction of the proposed UPOV code, as set out in paragraph 16 of document CAJ/48/4, and the proposal for the development of the GENIE database.

5. The WG-PVD did not meet in October 2003 and, therefore, has not commented on document TC/39/13. However, all members of the WG-PVD, who are also members of the TC and CAJ, have had an opportunity to comment on the document via these committees.

Recommendations on the Suitability of the Codes Proposed in Document TC/39/13

6. With regard to recommendations from the TWPs and the WG-VD on the suitability of the codes in document TC/39/13, Annex I and Annex II, the following comments were received:

(a) Inter-generic and inter-specific codes: Use of the symbol “X”

7. The TWA noted that inter-generic hybrids used the letter “X” as the fifth letter in the genus element of the UPOV code (e.g. Festulolium: UPOV code “FESTX,” Triticale: UPOV code “TRITX”). At the WG-VD, and in subsequent comments, the rapporteur of the International Code of Nomenclature for Cultivated Plants (ICNCP) noted that:

“the multiplication sign ‘X’ is used in botany as an optional device to indicate hybridity. It is not part of a name in any sense and may or may not be applied according to the wishes and opinions of a botanical author or editor. What one person considers a hybrid, may not be so considered by another, thus we may see *Solanum tuberosum* or *Solanum x tuberosum* if the writer of the second version understands the potato species to be of hybrid origin. Therefore, I would strongly suggest that you do not use the letter ‘X’ in your codes.”

8. The TC agreed to avoid the use of the letter “X” to indicate hybrids and the relevant codes have been amended accordingly.

(b) Inter-generic and inter-specific codes: Providing a UPOV code

9. It was noted by some experts that breeding developments can result in inter-generic hybrids which could result in “grey areas” between genera.

10. The TC agreed that the UPOV code should reflect the taxonomic classification. Thus, if a genus exists for a hybrid formed between two genera (e.g. Triticale), the “genus element” of the UPOV code would be based on the “hybrid” genus. Where a genus for hybrids does not exist, a code will not be created and varieties bred from two genera would be classified according to the available codes. Where confusion concerning variety denominations could arise, it would be possible to create a new variety denomination class containing, for example, two genera and hybrids between those genera.

11. Following the TC session, a further possibility to address hybrid genera (and species) has been put forward by the WIPO IT expert developing the GENIE database: A new genus (or species), formed as a hybrid between other genera (or species) would be given a new UPOV code. However, in the database, a link would be made between the parent genera (or species) and the new hybrid. Thus, when searching, it would be possible to search on a UPOV code, but to automatically receive the results on all related codes:

Example: Hybrid genus formed between *Carlus* x *Phillipus*

<u>Genus</u>	<u>UPOV Code</u>
<i>Carlus</i>	CARLU_(linked to CAPHI_)
<i>Phillipus</i>	PHILL_(linked to CAPHI_)
<i>Carlus</i> x <i>Phillipus</i>	CAPHI_(linked to CARLU_ and PHILL_)

A search on “CARLU” (*Carlus*) would automatically provide all varieties of *Carlus* and the hybrid genus *Carlus* x *Phillipus*. A search on “PHILL” (*Phillipus*) would automatically provide all varieties of *Phillipus* and the hybrid genus *Carlus* x *Phillipus*. A search on “CAPHI” (*Carlus* x *Phillipus*) would provide all varieties of *Carlus*, *Phillipus* and the hybrid genus *Carlus* x *Phillipus*. Thus, for example, if it was the case that *Carlus* and *Phillipus* were in different variety denomination classes, the hybrid could, if required, be considered in both classes.

(c) Multiple-ranked names: *Brassica* and *Beta*

12. With regard to “multiple-ranked names”, in relation to *Brassica* and *Beta*, the rapporteur of the ICNCP commented that:

“Use of names such as *Beta vulgaris* subsp. *cicla* var. *flavescens* should be avoided [...]. The International Code of Nomenclature for Cultivated Plants in its 1995 and 2004 editions, promulgates using *Beta vulgaris* Flavescens Group which equates to *Beta vulgaris* Swiss Chard Group (in English). Your UPOV code could thus be BETAA_VUL_FG.

“Similarly, *Brassica oleracea* Gemmifera Group (BRASS_OLE_GG) (based on *B. oleracea* var. *gemmaifera* would equate to *Brassica oleracea* Brussels Sprout Group (in English) and *B. oleracea* Groupe du Chou de Bruxelles (in French) and *B. oleracea* Rosenkohl Gruppe (in German) etc.

“In fact these names could be shortened further since the epithets of infraspecific ranked names are always unique. Thus *Beta* Flavescens Group will always equate to Swiss Chard and *Brassica* Gemmifera Group will always equate to Brussels Sprout. You may therefore wish to consider using the formats [BETAA_FLA_GP] and [BRASS_GEM_GP] (the last two letters would indicate that you [are] using the Group method, especially if you ensure that the _GP combination is not used elsewhere in the UPOV Codes: it does not appear in the version you sent me).

“This simplified but accurate naming system is becoming more widely adopted by users of plant names.”

The Chairman of the TWV expressed his support for the ICNCP comments.

13. The TC noted that the proposal from the rapporteur of the International Code of Nomenclature for Cultivated Plants (ICNCP) appeared to have potential advantages. However, it was also noted that, until now, UPOV had not used this system in relation to naming for variety denomination classes and Test Guidelines. Nevertheless, it recognized that once the codes were adopted it would be difficult to introduce a change at a later time, and it therefore proposed that this matter should be considered by the TC before the codes were finalized. To avoid delay in the agreement of codes, it agreed that the Office, in conjunction with the chairmen of the TC, TWA and TWV, should develop a proposal for consideration by the TWA, TWV and the WG-VD. If the proposal was agreed by all parties, this would be the basis for codes for *Beta* and *Brassica*. In the absence of agreement by all

parties, the code would be based on the proposals presented in Annexes I and II of document TC/40/6-CAJ/49/4.

14. The Office has developed two options for simplifying the UPOV codes for *Beta* and *Brassica*. In both options, numbers are used for the groups to indicate that a group approach is being taken.

Option 1 (Groups within a species)

Groups are made within a species and the UPOV code for groups within the same species will all have the same root e.g.:

<u>Botanical name</u>	<u>Group name</u>	<u>UPOV code</u>
<i>Brassica oleracea</i> L. convar. <i>capitata</i> (L.) Alef. var. <i>alba</i> D.C	<i>Brassica oleracea</i> (White Cabbage Group)	BRASS_OLE_05
<i>Brassica oleracea</i> L. convar. <i>capitata</i> (L.) Alef. var. <i>sabauda</i> D.C	<i>Brassica oleracea</i> (Savoy Cabbage Group)	BRASS_OLE_06
<i>Brassica rapa</i> L. var. <i>rapa</i> (L.) Thell.	<i>Brassica rapa</i> (Turnip Group)	BRASS_RAP_02

This would allow all groups within a species to be linked by the UPOV code e.g. BRASS_OLE = *Brassica oleracea*.

Option 2 (Groups within a genus)

Groups are made within a genus and the UPOV code for groups within the same species will not have a common root e.g.:

<u>Botanical name</u>	<u>Group name</u>	<u>UPOV code</u>
<i>Brassica oleracea</i> L. convar. <i>capitata</i> (L.) Alef. var. <i>alba</i> D.C	<i>Brassica</i> (White Cabbage Group)	BRASS_007
<i>Brassica oleracea</i> L. convar. <i>capitata</i> (L.) Alef. var. <i>sabauda</i> D.C	<i>Brassica</i> (Savoy Cabbage Group)	BRASS_008
<i>Brassica rapa</i> L. var. <i>rapa</i> (L.) Thell.	<i>Brassica</i> (Turnip Group)	BRASS_014

15. The new codes according to these two option are presented for *Beta* in Annex I and *Brassica* in Annex II. In the case of *Brassica*, part (a) is presented in current UPOV code order; part (b) in UPOV code order according to Option 1; and part (c) in UPOV code order according to Option 2.

16. Option 1 would allow all groups within a species to be linked by the UPOV code e.g. BRASS_OLE = *Brassica oleracea* and would require little change to the existing database of codes. However, the UPOV code could not, for example, be used to group White Cabbage,

Red Cabbage and Savoy Cabbage varieties – currently combined under *Brassica oleracea* L. convar. *capitata* (L.) Alef. (BRASS_OLE_C) in the database.

17. Option 2 would not allow any inter-group linking directly by means of the UPOV code. Thus, the UPOV code could not be used to group *Brassica rapa* into a single group as distinct from, for example, *Brassica oleracea*. It would also be necessary to decide how to code the species for which groups had not been created (see entries 74-128 in Annex II, part (c)) and, in particular, if they would continue to use the current UPOV code basis of genus / species / subspecies, or if all taxa within such genera would have to be classified into groups.

18. If option 1 or 2, or another proposal, is not agreed, the current proposed UPOV codes, as set out in the second column of Annexes I and II of this document, will be retained.

(d) Checking of Codes

19. During the course of 2003, the chairpersons of each TWP selected genera and species from document TC/39/13, Annexes I and II, which were reviewed by their respective TWP. Annexes I and II of document TC/39/13 each contain around 7,000 entries. A total of around 4,500 entries was selected for checking by at least one TWP. Of the 2,500 entries which were not allocated to a TWP, around 1,800 were linked to names stabilized by the International Seed Testing Association (ISTA) and the TC-EDC, at its meeting on January 14, 2004, considered that, on that basis, it was not necessary to seek checks on the codes.

20. Annex I (presented in order of botanical name) and Annex II (presented in UPOV code order) of document TC/40/6-CAJ/49/4 containing amendments recommended by the appointed experts, to document TC/39/13 Annexes I and II, were presented to the TC at its fortieth session.

21. In addition to checking the codes presented in the Annexes to document TC/39/13, some of the appointed experts proposed codes for genera and species which were not already included in the list. Furthermore, the Office reviewed the UPOV-ROM (version 2003/03) and identified other genera and species for which codes were required. Annex IV to document TC/40/6-CAJ/49/4 proposed codes for those genera and species, together with the countries/organizations entering data in the UPOV-ROM and what was considered to be the most relevant TWP for checking purposes.

22. Concerning the approximately 600 previously unchecked entries presented in Annex III to document TC/40/6-CAJ/49/4 and the new entries proposed in Annex IV to document TC/40/6-CAJ/49/4, the TC agreed that these should be checked by the appropriate TWP during the 2004 sessions. Where, after consultation with the TWP chairmen, an appropriate TWP could not be clearly identified, the country contributing data for the genera / species concerned would be identified and requested to check the code. In the meantime, the codes in Annexes III and IV of document TC/40/6-CAJ/49/4 would be included in the GENIE database.

23. On the basis explained in (a) to (d) above, the TC agreed to the codes as presented in Annexes I and II of document TC/40/6-CAJ/49/4. In agreeing the codes, the TC noted that, with the exception of some of the codes developed for taxa with the International Seed Testing Association (ISTA) stabilized names, these Annexes presented codes as checked and amended by the appointed TWP experts.

Procedure for Introduction and Amendment of Codes

24. The TWC agreed with the structure of the code and the proposed program for its introduction. It recommended that the database should indicate which TWP would be responsible for checking the validity of each code. It also agreed that, where appropriate, the GENIE database should indicate the relevant Test Guidelines for each code and, furthermore, that the third element of the code should be used to generate different codes for different types of varieties of the same species or sub-species, which were covered by different Test Guidelines. The TWC agreed that new codes created by the Office could be used immediately but such new codes should be reviewed by the relevant TWP at their annual sessions.

25. The TWC recommended that the code should, in general, not be changed as a result of a change in the botanical name of a species. However, it recognized that a change in the structure and content of a genus may require a change in the UPOV code to ensure that the first element of the code could be used to sort species into the correct genus - this being of particular importance for variety denomination purposes (see Recommendation 9 of document UPOV/INF/12 Rev. "UPOV Recommendations on Variety Denominations").

26. It was recognized that new UPOV codes and amendments to existing codes would need to be introduced in a timely manner to ensure the effectiveness of the databases which are built around the UPOV Code System. It was also recognized that the information linked to the codes may need to be updated from time to time, for example to introduce synonyms generated by taxonomic developments.

27. The following procedure for the introduction and amendment of codes was agreed by the TC on the basis of the comments received:

(1) Responsibility for the UPOV Code System

The Office is responsible for the UPOV Code System and the individual codes.

(2) Repository of UPOV Codes

The definitive collection of UPOV codes will exist exclusively in the GENIE database.

(3) Introduction of New UPOV Codes / Amendments to UPOV Codes

(a) In the first instance, the Office will draft a code on the basis of the Germplasm Resources Information Network (GRIN) database, or other suitable references if the species concerned is not included in the GRIN database.

(b) Where the Office is aware of relevant experts for the genus or species concerned, or is advised of such experts, for example by the proposer of a new code, it will, wherever possible, check its proposals with those experts before creating the code.

(c) New codes might be proposed by any party, but it is expected that the majority of proposals will be made by contributors to the Plant Variety Database. Where the Office receives such proposals, it will respond by updating the GENIE database with the new codes in a timely manner and, in particular, will seek to ensure

that new codes are available to allow their use for the forthcoming edition of the Plant Variety Database. In addition, the Office will add new codes where it identified a need.

(d) In general, amendments to codes will not be made as a result of taxonomic developments unless these result in a change to the genus classification of a species. The UPOV recommendations on variety denominations are based on the general principle that, unless the list of classes applies, all taxonomic units which belong to the same genus are closely related. Therefore, it is important that the first element of the code can be used to sort species into the correct genus. The codes will also be amended if there are consequences for the content of a variety denomination class where the list of classes applies. Amendments to UPOV codes will be handled by the same procedure as the introduction of new codes as in paragraphs (a) and (b), above. However, in addition, all members of the Union and contributors of data to the Plant Variety Database will be informed of any amendments.

(e) New and amended codes will be presented to the relevant TWP(s) for comment at their first available session. If the TWP recommends any change, this will be treated as an amendment according to paragraph (d), above.

(4) Updating of Information Linked to UPOV Codes

(a) UPOV codes might need to be updated to take account of, for example, changes in taxonomic classification, new information on common names, etc. In the case of changes of taxonomic classification, this might, although it is emphasized that this is not necessarily the case (see section (3)(d), above), result in a need to change the UPOV code. In such cases, the procedure is as explained in section (3), above. In other cases, the Office will amend the information linked to the existing code as appropriate.

(b) The TC, the TWPs and individual communications from members and observers of these bodies will be the principle routes by which the Office will update its information.

28. The TC agreed that members of the Union and other contributors should be encouraged to start to use the UPOV codes when contributing data to the UPOV-ROM as soon as the GENIE database is made available on the UPOV Website. Guidance on how to use the GENIE database for this purpose will be issued at that time. However, in the first instance, such use will be optional.

PLANT VARIETY DATABASE

29. The TC, at its thirty-ninth session, and the CAJ, at its forty-eighth session, approved a program to improve the effectiveness of the UPOV-ROM Plant Variety Database as set out in document TC/39/14-CAJ/47/5.

30. Document TC/39/14-CAJ/47/5 explained that certain aspects, raised by the responses to the Questionnaire on how the effectiveness of the UPOV-ROM might be improved ("the questionnaire"), could be addressed without any structural changes to the UPOV-ROM and could be undertaken by the Office within the "short term," i.e. during the course of 2003. However, other aspects would require major structural improvements, such as moving to a Web-based database which would need careful consideration in terms of resource

requirements for both the Office and the members of the Union who contribute data. Nevertheless, it was considered appropriate for the Office to investigate these aspects and undertake a preliminary assessment of benefits and costs during the course of 2003.

31. A factor which has been taken into account in the program to improve the Plant Variety Database has been the project for a centralized database of variety denominations being undertaken by the Community Plant Variety Office (CPVO) ("the CPVO variety denomination database"). That project is intended to develop a Web-based database for variety denomination examination purposes, but relies on a database of information which should be essentially the same as that of the UPOV Plant Variety Database. It was recognized that there would be mutual benefit in both parties cooperating in their work and a Memorandum of Agreement (the Memorandum) is being developed. The purpose of that Memorandum is to set out cooperation for the development and maintenance of the Web-based UPOV Plant Variety Database and CPVO variety denomination database in a way which will minimize the overall cost of development, maximize the completeness of the UPOV Plant Variety Database and CPVO variety denomination database and secure compatibility of both databases. In addition to a close cooperation in the development of the database, another important field of collaboration will be the sharing of the UPOV-CPVO efforts to collect information for populating and maintaining the database, thereby avoiding duplication of work.

32. With regard to moving the Plant Variety Database to a Web-based system, it has been concluded that it will be possible for this to be undertaken within available resources. The CPVO plans to have a first version of the CPVO variety denomination database available on line at the end of 2004 and it is recognized that, in order to maximize efficiency in the work, the CPVO variety denomination database and Plant Variety Database should, as far as possible develop side-by-side. It is also noted that the development of the UPOV Code System and GENIE database are critical for both databases. With regard to a timetable for the introduction of the Web-based Plant Variety Database, it is anticipated that a prototype would be presented to the TC and CAJ at their forty-first and fifty-first sessions, respectively, in 2005, with a view to the launch taking place later in 2005. The following aspects, concerning the development of a Web-based database, are explored for information and detailed proposals will be put forward with the prototype.

Development of a Web-based Plant Variety Database

Data to be Included

33. An important aspect of the Web-based Plant Variety Database will be the fields which should be completed by contributors. At its thirty-ninth session, the TC clarified that any proposals to change the fields in the UPOV-ROM to be considered as mandatory would need to be agreed by the members of the Union. The TWA agreed that the Web-based Plant Variety Database should have a field which allowed the variety denomination class for each UPOV code to be indicated. The TWC agreed that consideration should be given to the creation of a field to indicate whether the variety denomination is in the form of a "code," rather than a "fancy name."

34. With regard to the indication of the UPOV variety denomination class for each UPOV code, this information will be provided by the GENIE database which would be linked to the

Plant Variety Database. Similarly, the botanical name(s) and common name(s) would also be provided by the GENIE database.

Maintenance, Transfer and Use of Data and Access to Data

(a) Maintenance of Data

35. The responses to the questionnaire and discussions with the CPVO concerning the CPVO variety denomination database highlighted that the quality and completeness of the data in the Plant Variety Database is crucial for its value. The importance of this is such that certain key ways in which UPOV and CPVO can cooperate in ensuring high quality data are planned to be included in the Memorandum.

36. It is expected that improving the ease of transfer of data (see section (b)(i) below, “Transfer of Data: Data Format”) will help to remove obstacles for some authorities which do not currently contribute data. Nevertheless, it is recognized that there may remain authorities which do not have the resources to contribute data electronically and where UPOV would need to consider provisions for manual inputting of data from printed gazettes. In this respect, two options are possible. One option is for the Office to divert some of its resources to this activity. A second option is for members of the Union to assist in this work.

(b) Transfer of Data

(i) Data Format

37. A key development in the introduction of the Web-based Plant Variety Database will be to make the transfer of data by contributors easier. At present, the data must be submitted in a specified “TAG” format. However, it is anticipated that, for the Web-based Plant Variety Database, it will be possible to submit data in simple table form (e.g. Microsoft Word table or Excel spreadsheet), thus making it much easier for authorities without specialized IT resources to submit data. Nevertheless, it is emphasized that the Web-based Plant Variety Database will continue to accept data in the current format as provided for the UPOV-ROM.

(ii) Data Quality Checks

38. At present, it is not practical to perform meaningful checks on the quality of data transferred. However, electronic checking systems would be introduced to check the accuracy of the data being transferred into the database. These would be able to identify, for example, unexpected dates for a field, inconsistent formats, etc.

(iii) Frequency of Data Submission

39. Currently, for the UPOV-ROM, contributors are requested to provide data on a bimonthly basis. Clearly, increasing the frequency of updating data will improve the value of the Plant Variety Database. However, in their responses to the questionnaire, a number of contributors indicated that increasing the frequency of submission of data might not be achievable. The Web-based Plant Variety Database will be developed in such a way that data can be submitted at any frequency (e.g. a daily basis) but would allow, as is the case for the UPOV-ROM, for contributors to update their data at a frequency less than the standard frequency.

(c) Use of Data

40. The Plant Variety Database is of primary value in relation to variety denomination information for authorities. However, UPOV would like to retain the possibility, which exists with the UPOV-ROM, to utilize the information which will be contained in the Web-based Plant Variety Database in order to provide additional services to breeders and other users in a way which would, if considered appropriate, allow income generation for UPOV.

41. In order to develop the possibility of UPOV using the Web-based Plant Variety Database for income generation, it would be important for recipients of the raw data to use the data in a way which did not undermine such an approach. In particular, it is anticipated that use of the data by authorities to allow breeders to check possible compliance of variety denominations would not, in itself, undermine the income generating possibilities of the database. However, it would be necessary for each authority to consider how to use the data in a way which did not undermine the UPOV scope for income generation without affecting the service it offered to breeders with regard to variety denomination requirements, which it may wish to make free of charge.

(d) Access to Raw Data for Third Parties

42. The entire data in electronic form is considered as the raw data. It is proposed that the current UPOV policy with regard to access to raw data for parties other than members of the Union and contributors of data (third parties) be retained. Thus, raw data would only be available to members of the Union and contributors of data and would not be available to third parties.

43. In making this proposal it is recognized that it would be important for the Web-based Plant Variety Database to have an effective search capability, which would satisfy the demands of third party users, without a need for access to the raw data as such.

Links to Other Websites

44. It is anticipated that allowing breeders to check, in advance, their proposed variety denominations in all territories in which their variety might be registered would reduce the risk of a different variety denomination subsequently being required in different territories. Therefore, one aim in the development of the Web-based Plant Variety Database will be to create a single point of reference for variety denomination checking purposes. Thus, a breeder wishing to check a proposed variety denomination for suitability in several territories could visit the UPOV Website to navigate around the relevant sources of information. Some members of the Union may provide their variety denomination checking software to UPOV in order that users might check their proposed variety denominations on the UPOV Website. However, in other cases, such services may only be available via the authority itself, although it is hoped that their database would be based on the Web-based Plant Variety Database. In such cases, the UPOV Website could provide links to the Websites of such authorities.

45. It is proposed that members of the Union should inform the Office if they wish the UPOV Website to include their software for searching the suitability of variety denominations.

46. In addition to the type of data already included in the UPOV-ROM, there is certain information which may be useful for the examination of proposed variety denominations, but is not considered appropriate for inclusion in the database itself. Examples of such data include information on trademarks and the information held by the International Cultivar Registration Authorities (ICRAs). In order for the UPOV Website to provide a common point of reference for variety denomination checking purposes, it is proposed that the UPOV Website would provide indices and links to the appropriate Web pages or contact details of trademark offices, ICRAs and other useful sources of information.

47. The TC noted the information above and welcomed the program of cooperation between UPOV and the Community Plant Variety Office (CPVO) in the development of software and maintenance of data concerning their respective databases.

48. The TC noted that the Office would present an initial prototype of its Web-based Plant Variety Database at the forty-first session of the TC in 2005, together with proposals concerning the fields to be included and proposals for which fields might be considered to be mandatory. The TC considered that the matter of frequency of updating of the Web-based Plant Variety Database should be considered in conjunction with the presentation of the prototype and that consideration of the establishment of links to relevant Websites for variety denomination checking purposes could also be considered at that time.

49. With regard to the proposal for manual inputting of data from printed gazettes, the TC noted that improving the ease of contributing data was likely to increase the number of countries contributing data and that it would be appropriate to assess the need for manual input of data at a later stage.

Short-Term Improvements to the UPOV-ROM

50. A consequence of progress on moving the Plant Variety Database to a Web-based system is that the proposed program concerning the short-term improvements to the UPOV-ROM, as identified in paragraph 23 of document TC/39/14-CAJ/47/5, has been revised. Given that a new Web-based version of the Plant Variety Database is planned to be available during 2005, it would not be an efficient use of the Office's resources to pursue the developments listed below for the existing UPOV-ROM:

- revise the user's guide, including translation into all four UPOV languages;
- provide the user's guide on the UPOV Website;
- include UPOV documents which provide information on members of the Union with experience of a particular species;
- develop a "leaflet" summarizing the uses of the UPOV-ROM for authorities and other users;
- investigate the possibility of saving or printing lists of sorted / selected data; and
- investigate the possibility of including the set-up software with each UPOV-ROM.

51. It was proposed, instead, that the developments listed above, with regard to the UPOV-ROM, should be cancelled and incorporated into the introduction of the new Web-based Plant Variety Database.

52. One proposal for short-term improvements was to develop proposals for training for the purposes of contributing data to the UPOV-ROM and for use of the UPOV-ROM. In that respect, it had been planned to include training on the Plant Variety Database in the UPOV Workshops on Data Handling, held in conjunction with the TWC. It is now planned that this will go ahead, but will be modified to reflect the latest developments.

53. The remaining short-term proposals are related to improving the completeness of data provided by contributors and consideration of making raw data available to third party users for an additional charge. These matters are covered above in relation to the development of the Web-based Plant Variety Database.

54. The TC agreed that, in the light of developments concerning a Web-based Plant Variety Database, the planned short-term improvements to the UPOV-ROM should not be pursued. However, it agreed that training for the purposes of contributing data to the Plant Variety Database and for its use should go ahead. The TC noted that the UPOV-ROM would continue to be produced on the current basis and noted that, for some users, a CD-ROM media may offer advantages compared to a Web-based system. The Office confirmed that it would not discontinue production of the CD-ROM without further consultation.

GENIE DATABASE

55. The GENIE database cannot be launched until the UPOV codes have been approved. However, document TC/40/4 "List of species in which practical knowledge has been acquired or for which national test guidelines have been established" was produced from the GENIE database in its prototype form. During the course of summer 2004 the GENIE database will be increasingly populated with UPOV codes and corresponding information, with the aim of completing the prototype database in October 2004. The launch of the GENIE database on the UPOV Website is scheduled to take place at the end of 2004 / beginning of 2005. However, from November 2004 contributors to the UPOV-ROM should be able to receive an electronic copy of the prototype GENIE database to generate codes for submitting with their UPOV-ROM data.

56. *The TWC is invited to:*

- (a) *note developments concerning the UPOV code system and comment on the proposals concerning UPOV codes for inter-generic and inter-specific hybrids (see paragraphs 9 to 11);*
- (b) *note developments concerning the Plant Variety Database and GENIE database.*

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Line no.	UPOV Code (Current & Option 1)	Botanical name	New classification	UPOV Code (Option 2)	Common Name	Source Document
22	BETAA_VUL_V3	Beta vulgaris L. ssp. vulgaris var. vulgaris* [var. cicla (L.) Ulrich]	Beta (Chard Group)	BETAA_03	Mangel, Leaf Beet, Spinach Beet	C_36_6
23	BETAA_VUL_V4	Beta vulgaris L. ssp. vulgaris var. altissima Doell	Beta (Sugar Beet Group)	BETAA_04	Sugar Beet	TC/35/16(1)
24	BETAA_VUL_V4	Beta vulgaris L. ssp. vulgaris var. altissima Doell [var. saccharifera Alef.]	Beta (Sugar Beet Group)	BETAA_04	Sugar Beet	C_36_5
25	BETAA_VUL_V4	Beta vulgaris L. ssp. vulgaris var. altissima Doell [var. saccharifera Alef.]	Beta (Sugar Beet Group)	BETAA_04	Sugar Beet	C_36_6
26	BETAA_VUL_V4	Beta vulgaris L. ssp. vulgaris var. altissima Doell [var. saccharifera Alef.]	Beta (Sugar Beet Group)	BETAA_04		TC_39_4x
27	BETAA_VUL_V4	Beta vulgaris L. ssp. vulgaris var. saccharifera Alef.	Beta (Sugar Beet Group)	BETAA_04	Sugar Beet	TC/35/16(1)

[Annex II follows]

