



TWV/45/20

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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

TECHNICAL WORKING PARTY FOR VEGETABLES

Forty-Fifth Session
Monterey, United States of America
July 25 to 29, 2011

**REPORTS ON DEVELOPMENT IN PLANT VARIETY PROTECTION FROM
MEMBERS AND OBSERVERS**

Document prepared by the Office of the Union

1. The Technical Committee (TC), at its forty-seventh session held in Geneva, from April 4 to 6, 2011, agreed to request the Office of the Union to invite experts to submit written reports to the Office of the Union in advance of the Technical Working Party (TWP) sessions in order that a document containing those reports could be prepared by the Office of the Union. The TC noted that TWP experts would be invited to make a brief oral summary of their written report at the session and would also be encouraged to make reports under the agenda item “Experiences with new types and species”, as appropriate. The TC also noted that TWP experts would have an opportunity to raise questions concerning matters of interest (see document TC/47/26 “Report on the Conclusions”, paragraphs 9 and 10).
2. Written reports were requested by the Office of the Union in the circular relating to his session. The following reports were submitted (in alphabetical order):

Members: Annexes I to VI: Czech Republic, European Union, Japan, Netherlands, Republic of Korea, United Kingdom

Organizations: Annex VII: International Seed Federation

[Annexes follow]

ANNEX I

CZECH REPUBLIC

National List and PVP:

In 2010 we received 530 applications for National List and 59 applications for PBR. Presently 2960 varieties are listed and 658 varieties are granted at the national level.

Co-operation

We continue actively in the co-operation in DUS testing with Austria, Hungary, Poland, Rumania, Slovakia, Slovenia and the Netherlands on the basis of administrative agreement and conduct DUS test or provide DUS reports upon the request for Serbia, Croatia, Ukraine, Latvia, Lithuania, and Russia

Legislation

Since 2007 European Union has started the process of evaluation of seed market sector, so called "Better regulation". The main aim is to simplify and harmonize legislation in the EU Member States and to reduce administrative burden and costs. The Czech Republic works actively in the Working group on legislation on Seeds and Plant Propagating Material which is dealing with the evaluation.

Others

Central Institute for Supervision and Testing in Agriculture has been entrusted by the Administrative Council of Community Plant Variety Office in accordance with Council regulation (EC) No 2100/94 for examination work for applied species. In 2011 Central Institute for Supervision and Testing in Agriculture commemorate the sixtieth anniversary of the legal act which gave our institute its existing name and the basic scope of its activities within the field of supervision and testing.

[Annex II follows]

EUROPEAN UNION

Report on activities of the CPVO

In 2010, the Office received 2886 applications for Community plant variety rights (CPVR), which represented an increase of 4% compared with the previous year. Since the Community plant variety rights system became operational in 1995, the CPVO has surpassed the figure of 40,000 applied varieties and 30,000 grants of protection, of which over 18,500 are still in force. There had been 404 applications in the vegetable sector, a slight drop in relation to the 2009 figures, the most important species being lettuce, tomato and pepper; as a whole, there has been a sharp increase in applications for hybrid varieties over recent years. In the first six months of 2011, there were 250 applications for vegetable varieties, which is a huge 56% increase on the same period last year.

The centralized database of variety denominations received a new name, the CPVO Variety Finder, and contains more than 600,000 denominations from national listing and plant variety rights registers. The database was so far available on the basis of a restricted access to national authorities of EU Member States, the European Commission, UPOV and all EU breeders; recently the President of the CPVO has decided to make it available on its public website with a registration system, and this will be implemented in the near future. The aim of the database is the verification of the suitability of a proposed variety denomination with regard to similarity, but it is also a useful tool in order to search for varieties of common knowledge. EU based applicants use this database also to pre-check their denomination proposals for similarity.

In the beginning of 2010 the Office released a project on cooperation in denomination testing with national EU authorities with the aim to reach a greater harmonization of decisions as to the suitability of variety denomination proposals in national plant variety rights, national listing procedures and decisions taken at the level of the CPVO. EU national authorities have the possibility to ask online for CPVO advice to the acceptability of their new denominations. Since the beginning of the project in March 2010, more than 4500 advices were issued, of which a large part were made for vegetable varieties. For about a third of these requests, the CPVO made an observation on the proposed denomination.

Since autumn 2010, the official variety description of the CPVO grants of protection from December 2008 onwards are published on the CPVO public website. These documents are made available after the publishing grant of the variety in the CPVO Official Gazette. The possibility to file applications electronically to the CPVO has become increasingly popular in the 16 months from its onset with almost roughly of all applications filed this way - the present TWV45 session will have the opportunity to learn more about this possibility via a separate document and presentation on 'Electronic application systems'.

Following the implementation of the so-called "one key, several doors" principle, whereby DUS test reports produced by any "CPVO-entrusted" authority in the EU are accepted for listing or protection purposes throughout the Community, an independent technical audit of the CPVO

continued audits during 2010, the first entrustment certificate was issued by the Administrative Council of the Office in March 2011. A meeting with experts from several EU national authorities took place in order to work on the revision of the entrustment requirements. The CPVO has also developed a new procedure for the attribution of varieties to examination offices where the applicant is given the possibility to express a preference, which the Office takes into account wherever possible.

During the course of June, the European Commission published the outcome of an evaluation on the impact and effectiveness of the Community plant variety rights system and the CPVO. The evaluation concluded on a positive manner, although improvements could be made to the implementation of the farm saved seeds principle and the enforcement of rights. It is not ruled out that the CPVO could gain new responsibilities in the future.

Coinciding with the publishing of the evaluation, the CPVO marked the occasion of the imminent retirement at the end of July of its President, Mr. Bart Kiewiet, by organizing a Seminar on the 23rd June entitled "Impact of 15 years of the EU plant variety protection system". The stakeholders of the Community plant variety rights system thanked Mr. Kiewiet for all the efficient work he did in the name of the CPVO over the past fifteen years.

More specifically within the vegetable sector at the CPVO, there have been recent discussions between the Office, its entrusted examination offices, the European Seed Association (ESA) and the national seed associations of some of the recent adhering countries to the EU, on the obligation to observe asterisked disease resistance characteristics, particularly for those varieties which were not bred to be resistant for a particular disease. The discussion has ramifications for plant breeders rights and for national listing, since the same CPVO testing protocols are used for both procedures. The actors to the discussion have all expressed their opinion on the matter although the CPVO has yet to establish a policy viewpoint on the matter; notwithstanding, the Office has reiterated that it wants to adhere to the UPOV principles on this issue.

The CPVO is also encountering more frequently from some of its entrusted vegetable examination offices, that candidate varieties are being DUS tested in two separate but parallel growing periods (i.e. mostly at the same time but in different locations). The CPVO acknowledges the advantages in the gain in time which such practices bring, but it will look more closely into its technical specificities in the coming months to see whether it would be opportune to extend or maintain such a principle.

There are currently no R&D projects ongoing at the CPVO in the vegetable sector although a proposal for a collaborative project has been made by several entrusted examination offices (FR, NL, ES, DE, GB, CZ) to have further harmonisation of methodologies in disease resistance testing for numerous diseases in lettuce, pea and pepper.

Finally, the CPVO co-hosted together with GEVES, its second Vegetable Open Day, held in Brion (FR) on 6 October 2010. This gathering was attended by more than 50 participants from examination offices and seed companies, and discussed topical issues related to plants breeders rights and DUS testing in vegetables, as well as giving an opportunity to visit the field trials at the testing station.

[Annex III follows]

JAPAN

1. Number of application and granted in 2010

Number of application

Year	Total	2010/2009	Vegetables and Mushrooms	2010/2009
1978 to 2010	25,522	-	V: 1,644, M: 484	-
2010 (2009)	1,038 (1,138)	91%	V: 53, (V: 85), M: 16 (M: 21)	V: 62% M: 76%

V: Vegetables, M: Mushrooms

Number of granted

Year	Total	2010/2009	Vegetables and Mushrooms	2010/2009
1978 to 2010	19,990	-	V: 1,329, M: 420	-
2010 (2009)	1404 (1,501)	94%	V: 51, (V: 95), M: 31 (M: 18)	V: 53% M: 172%

V: Vegetables, M: Mushrooms

2. Average duration of the examination procedure (from application to registration)

2009	2010	2014 (target)
2.7 year	2.5 year	2.3 year

3. The following 19 kinds of National Test Guidelines have been harmonized with UPOV Test Guidelines in 2010. The vegetable was seven among these.

Genera and Species
<p><u>TWV</u>: 1. Cabbage, 2. Carrot, 3. Chinese cabbage, 4. Chinese chives, 5. Turnip, 6. Welsh onion, 7. Yam</p> <p><u>Others</u>: 8. Hop, 9. Oranges, 10. Orchard grass, 11. Red clover, 12. Rice, 13. Soy Bean, 14. Wheat, 15. African violet, 16. Cathranthus, 17. Freesia, 18. Phlox paniculata, 19. Portulaca</p>

Web-site: http://www.hinsyu.maff.go.jp/en/en_top.html

4. This year's TWO and TWF session will be held in Hiroshima Prefecture, Japan.

The 44th TWO session: from November 6 to 11 at Fukuyama city.

The 42nd TWF session: from November 13 to 18 at Kure city located near Hiroshima city.

NETHERLANDS

Short report on developments in Plant Variety Protection in the Netherlands 2011

- **Number of applications received** for testing for the first year in 2010 for national listing and national and European Plant breeders right:

Ornamentals	850 (+ 10%)
Agriculture	181 (+ 40%)
Vegetables	842 (- 9%)
Total	1873 (+ 3%)

2009 showed a decrease of 9% in relation to 2008.

- **Introduction of new Administrative software system**

In the beginning of 2010 a complete new IT system was introduced replacing the existing 3 different systems. The start-up problems were considerable and caused the work to be ready later than expected. In the meantime the advantages of one uniform system become visible. Through this new system it will be possible for applicants to follow the progress of their applications on-line.

In general we notice a strong desire by the users of the system (staff and applicants alike) to ask more and on shorter notice than in the past. The investments in IT to keep up with the society around us are considerable.

- **Naktuinbouw entrusted for all species in test in the Netherlands by CPVO**

In February the CPVO Administrative Council entrusted Naktuinbouw for all (more than 800) species in test. It does not only concern species in which there are applications on behalf of the CPVO, but also all species that are tested for national Listing and National Plant Breeders Rights.

- **Termination of DUS testing for wheat**

As a consequence of the principle that only applications can be accepted in species for which Naktuinbouw is entrusted, it was decided to stop the testing of wheat and barley in the Netherlands. The costs of maintaining the reference collection in relation to the small number of applications were simply too high.

- **Training in DUS related measures**

The sharing of knowledge is important in order to work on a global, harmonized and strong Plant Breeders right system for the benefit of society. Naktuinbouw contributes to this principle on different levels

 - two colleagues are tutors in the **UPOV distance learning course**
 - annually Naktuinbouw, with the help of UPOV and CPVO is organising the **PVP course in Wageningen**. In 2010 23 participants from 17 countries participated in this two weeks training course.
 - Naktuinbouw is involved in **bilateral projects to exchange knowledge** and to train staff of countries that are working in or on Plant Breeders Rights systems. In 2011 a 10 year cooperation with China will be concluded with a closing seminar in Beijing, training will be provided together with the colleagues from the Japanese Plant variety Right Office in Vietnam. In Indonesia audits are carried out on the quality of the DUS

system. In Ethiopia the first training took to be followed with more activities and recently first discussions took place with the Indian authorities to see how the existing Indian system suits the needs of the international breeding community.

- There is a possibility to be an intern in Naktuinbouw for a period of 2-4 weeks.

During this period the intern can work together with Naktuinbouw colleagues and thus learn the details of the DUS test work. Naktuinbouw charges no costs for such **internship** and has accommodation available. In 2010 4 interns spend time at Naktuinbouw; two Polish colleagues, one Canadian colleague and a Chinese colleague. For 2011 again 4 colleagues have applied.

- Finally there is the **Naktuinbouw DUS helpdesk** where colleagues from all over the world can ask questions related to the practice of DUS testing.

- **Research projects**

DUS testing is constantly in development. New techniques become available and national research projects funded by the Dutch Ministry for Economic affairs, Agriculture and Innovation, help to incorporate these in the DUS test system.

This year projects are assigned to the replacement of ordinary light bulbs by LED techniques to see what effect this has on various characteristics and the observation of these characteristics. The existing image analysis is improved, a number of DNA related projects are defined to see how these techniques can help and field computers are introduced in the tests of vegetables and ornamentals. Also the development, improvement and harmonization of disease resistance characteristics is an important subject not only on National level but also partly funded by the CPVO R&D system.

- **Use of DNA techniques**

SSR DNA databases are developed for Phalaenopsis and Potato with the aim to have a fast identification tool and to see if such databases can be used in the framework of the management of reference collections. Also, in cooperation with GEVES (France) a similar database for Lettuce is under construction and it has been decided to build on the results of a 2004 CPVO project and revitalize the than developed Rose database.

- **Cooperation with the Czech Republic**

In order to be able to carry out two independent growing cycles in one calendar year for vegetable applications a cooperation with the Czech republic was established.

- **Discussions on the use of disease resistance characteristics in DUS tests**

Fired by a complaint of Slovakian breeders, a lively discussion took place on the use of disease resistance characteristics in the DUS tests. Mainly the asterisk disease characteristics that figure in the CPVO protocol and is also basis for DUS testing for National list purposes, created problems. Views were exchanged without a definitive result yet.

- **First series of Calibration books available**

For internal use, Naktuinbouw has so-called calibration books. With a detailed description on the method to score characteristics. The existing explications in the UPOV guidelines are further explained by color photographs. Upon request by the breeders in 2010 the first series of 27 of such calibration books were made available through the Naktuinbouw website.

- **Variety descriptions on the Naktuinbouw website**
Naktuinbouw now publishes all variety descriptions on its website.

- **90 national protocols on website**
If in DUS tests no CPVO protocol or UPOV guidelines are available, national protocols are developed. Naktuinbouw now has published a series of 90 national protocols on its website

- **Special cases encountered:**
 - In Zantedeschia we encountered a problem that two varieties were very close in the Netherlands, while in New Zealand they were scored in different colour groups. The different light conditions between these distant parts of the world are expected to cause this. For this species we will have to treat each others variety descriptions with care.
 - Potato GMO applications
In potato GM potato varieties were tested. It concerns varieties for starch grain production. The GM part does not pose problems in the DUS test, but as for trials with such material permits are needed, trials at the breeders premises are used.
 - New form of resistance on Bremia in lettuce
With the progressing breeding techniques it is possible to use other resistance sources than the classical ones. In the test this can create problems as tests are usually validated against the classical resistance forms only. In Bremia in lettuce now a resistance form was used that brings the resistance later in expression than the classic one. In order to have a reliable outcome the test had to be further developed for this.
 - Conservation varieties. In an attempt to conserve the genetic diversity in the European Union, new legislation has been developed in the EU in order to make it possible to include landraces and amateur vegetable varieties in the national lists of the Member states and thus in the Common Catalogue through a simplified DUS procedure. In the Netherlands some 120 varieties were applied and, as also these varieties are part of common knowledge, it was decided to carry out a normal DUS trial to see if indeed it is possible to declare DUS on administrative data only. Results so far show that for the applicants of such material it is very difficult to supply sufficient reliable data in order to list varieties without trials at all.

- Novelty problems in flower bulbs; we were confronted with cases where the applicant of flower bulb (tulip) varieties had already sold flowers produced from these applications more than 1 year prior to application. He did not realise that also the marketing of end products could cause novelty problems.

[Annex V follows]

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ANNEX V

REPUBLIC OF KOREA

According to the Seed and Industrial Act in Republic of Korea, the KFSV is responsible for PVP system in the forestry part including woody trees, herbal plants and edible mushrooms. Korea Forest Seed & Variety(KFSV) was newly organized in the Korea Forest Service(KFS) in Aug. 12, 2008.

Up to the end of 2010, the total number of applications accepted was 101 including 51 of woody plants, 21 of edible mushrooms, 29 of herbal plants. This year, a total of 16 will have been granted, including 13 of woody trees, 3 of herbal plants. Also, National test guidelines 59 have been made and still being prepared for about 300 genus of forestry plants. Area of 1.8ha has been established for cultivation test and variety preservation and we plans to set about 10ha from next year.

[Annex VI follows]

UNITED KINGDOM

Short Report on Developments in Plant Variety Protection in the United Kingdom

During 2010 in the United Kingdom the number of DUS applications was stable but low.

During 2010, United Kingdom PBR was awarded to a vegetatively-propagated watercress, completing a process that had involved expansion of the reference collection and revision of the United Kingdom DUS test protocol.

Following implementation in the United Kingdom of EU Commission Directive 2009/145/EC on Vegetable Conservation and Amateur Vegetable Varieties on 1st April 2011, applications have been received for registration on the United Kingdom National List. SASA were involved in the registration of Bere, a barley landrace, and 5 Traditional Varieties (4 Swede and 1 Forage Rape) on the United Kingdom National Lists in autumn 2010 under EU Commission Directive 2008/62/EC on Agricultural Conservation Varieties.

The Vegetable Seed Marketing Regulations in Scotland have been revised and are currently awaiting publication.

Further database development work was undertaken aimed at better documenting and characterising crop inventories and reference collections. The first of a series of online vegetable crop descriptive databases is nearing completion and should be published in 2011.

Science and Advice for Scottish Agriculture (SASA) is participating in the part-funded CPVO R&D project on the “Harmonization of resistance tests to diseases for DUS testing”. The disease tests of interest to the United Kingdom are *Fusarium oxysporum* f. sp. *pisi* (Pea Wilt Race 1) and *Ascochyta pisi* Race C.

From 1st February 2011 Dr. Jonathan Davey took over as Chairman of the United Kingdom Vegetable DUS Centre and Tom Christie took over United Kingdom representation at UPOV TWV meetings, from Niall Green.

[Annex VII follows]

INTERNATIONAL SEED FEDERATION

This report only highlights the developments within ISF which are most relevant to the TWV.

The ISF's World Seed Congress, held in Belfast, United Kingdom end of May, has been attended by around 1450 participants from 61 countries. Mr. Peter Button, Vice-Secretary General of UPOV was among the participants, and gave a short overview on UPOV during the Opening Ceremony. He also made a detailed presentation on recent developments within UPOV in the meeting of the Breeders Committee.

During the ISF congress in Belfast a new ISF movie was launched: 'Agriculture under Pressure' which is available on the ISF website and on YouTube. The video underlines the message that the plant breeding and the seed industry are an important stakeholder in meeting the challenges that we're faced with on this planet such as overpopulation, changing diet, climate change, water and fuel shortage. The video is free for all to download and place on their own websites.

The ISF Intellectual Property Committee has continued with its extensive revision of its position paper on Intellectual Property. Agreement has been reached and new text has been approved on most topics, but the matter of access to varieties which fall under the claims of a patent is still unresolved and requires more discussion. It is planned that this will be done in the coming year.

ISF has also continued with a major revision of the ISF Trade Rules, which regulate the international trade in seeds. This is expected to be finalized at the ISF World Seed Congress in Rio de Janeiro in 2012.

Further work has been done in the Tomato project which will help breeders to decide whether a proprietary tomato parent line was used 'as such' in the production of the hybrid of a competitor. More data have come in and it seems that SNP's markers are the most suitable system and the Simple Matching percentage is the best method for scoring conformity.

ISF, in close cooperation with UPOV, the CPVO and WIPO have continued their work on optimizing a system for electronic PVP application forms. It is envisaged that the relevant groups of stakeholders such as breeders and PVP experts within seed companies will be involved in the setting up of such a new system.

The 5 co-organizers of the Second World Seed Conference (FAO, ISTA, OECD, UPOV and ISF) in Sept. 2009 have continued their discussions and are working hard on a project that would strengthen the seed sector in developing countries. Pilot countries have been identified and the relevant authorities are being approached.

This is just a short report of the work within ISF. For more details we refer you to the ISF website: www.worldseed.org or contact the ISF Secretariat.

[End of Annex VII and of document]