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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

TECHNICAL WORKING PARTY FOR AGRICULTURAL CROPS

Fortieth Session
Brasilia, May 16 to 20, 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, South Africa, United Kingdom

[Annexes follow]

ANNEX I

CZECH REPUBLIC

I. PLANT VARIETY PROTECTION

NL and PVP:

In 2010 we received 530 applications for NL 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 is 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]

ANNEX II

EUROPEAN UNION

I. PLANT VARIETY PROTECTION

Report on activities of the CPVO

The expert from the Community Plant Variety Office (CPVO) of the European Union reported that, in 2010, the Office had received 2886 applications for Community plant variety rights (CPVR), this represents an increase of 4.1% compared with the previous year. There were 723 applications in the agricultural sector, which represents a share of 25% of all applications, the most important species were maize, wheat, potato and oilseed rape. At the end of 2010, in total 17610 Community titles were in force.

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, however recently the President of the CPVO has decided to make it available on its public website, 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 turns out that 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: some big companies in the agricultural sector performed more than 1000 tests in 2010.

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 advise to the acceptability of their new denominations. In 2010, more than 2300 advices were issued, 54 % for varieties from the agricultural sector.

Since 2010, the granting decision and the official variety description of the CPVO files are published on the CPVO public website. These documents are made available after the grant of the variety in the CPVO Official Gazette.
Since end of March 2010 the CPVO is able to offer to applicants the possibility of e-filing which enables to file an application for Community rights on-line via a secured site. The number of e-TQs made available so far for online applications reaches 48, representing a potential coverage of 80% of the total applications received every year.

With respect to research and development (R&D) projects in the agricultural sector, follow up discussions are taking place between the project partners and ESA of the project “Construction of an integrated microsatellite and key morphological characteristic database of potato varieties in the EU Common Catalogue”.
A new grant assignment has been signed for the project “A potential UPOV option 2 approach for barley high density SNP genotyping, it is carried out by NIAB/UK during 2011. The project considers three possible approaches, the calculation of correlation between molecular and morphological distances, quantification of morphological and molecular distances against pedigree and genomic selections for phenotypic predictions. If such

correlation exists, and calibration thresholds for the phenotype could be established, this could be used as a powerful tool for the grouping of varieties in the growing trial.

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 2010. A meeting with experts from several EU national authorities took place in order to work on the revision of the entrustment requirements. The Office 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 is taken into account, if possible, by the Office.

The Community Plant Variety Office will organise at the occasion of the end of the mandate of its first President, Mr. Bart KIEWIET, a Seminar on the impact of 15 years of the EU plant variety protection system, this event will take place on the 23rd of June. Mr. Kiewiet will go on retirement by the end of July and it is expected that the new President will be appointed by the EU Council in May/June.
The EU Commission is planning to organize a Conference in October to present the conclusions of the evaluation of the CPVR system carried out by an external evaluator.

Overview on new types and species

The following table shows species which were attributed to the agricultural sector for which applications have been received for the first time in 2010:

Species	**DUS test in**	**Purpose, indicated by applicant**
Avena strigosa Schreb.	DE	Grain
Carthamus tinctorius L.	DE / ES	Oil
Lemna minor L.	NL	Water plants, biomass
Hordeum chilense x Triticum turgidum.	AT	Grain
Jatropha curcas L.	Tendering	Oil for bio fuel
Ipomoea batatas (L.) Lam.	Tendering	Tubers
Spirodela polyrhiza (L.) Schleid	NL	Water plants, biomass
Panicum virgatum L.	Tendering	Grain

[Annex III follows]

ANNEX III

JAPAN

I. PLANT VARIETY PROTECTION

1. Number of application and granted in 2010

Number of applications

year	total	2010/2009	agricultural crops	2010/2009
1978 to 2010	25,522	-	1,856	-
2010 (2009)	1,038 (1,138)	91%	83 (87)	95%

Number of granted

year	total	2010/2009	agricultural crops	2010/2009
1978 to 2010	19,990	-	1,553	-
2010 (2009)	1404 (1,501)	94%	110 (75)	147%

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. 19 Japanese national test guidelines have been harmonized with UPOV Test Guidelines in 2010.

genera and species
TWA: Red Clover, Rice, Orchard grass, Wheat, Soy Bean, Hop Others: Oranges, Turnip, Cabbage, Portulaca, African Violet, Cathranthus, Chinese chives, Carrot, Welsh Onion, Chinese Cabbage, Freesia, Phlox paniculata, Yam

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.

TWO: from November 6 to 11 at Fukuyama City.
TWF: from November 13 to 18 at Kure City located near Hiroshima City.

[Annex IV follows]

ANNEX IV

NETHERLANDS

I. PLANT VARIETY PROTECTION

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 cereals

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 cereals 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 place to be followed with more activities and recently first discussions took place with the Indian authorities to see how the well developed 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. Arguments 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 colour 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 Amylose-free varieties for starch 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 that 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 on. In order to have a reliable outcome the test had to be further developed for this.

- Conservation varieties. In an attempt to rescue 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.

[Annex V follows]

ANNEX V

SOUTH AFRICA

I. PLANT VARIETY PROTECTION

A national consultation workshop on the draft of the Plant Breeders Rights Policy was held in Pretoria and Stellenbosch during February of this year. The aim of this workshop was to communicate to all interested parties in the public and private sectors the draft PBR Policy. The Plant Breeders' Rights Act, 1976 is currently also under review.

With regards to applications and valid Plant Breeders' Rights for 2010 the following is reported: 364 taxa have been declared in terms of the Plant Breeder's Right Act, of which agricultural crops constituted 27%. As of December 2010, a total of 2 318 varieties had valid plant breeder's rights in South Africa, of which 33% were for agricultural varieties. Foreign nationals own around 60% of the total number of protected varieties, while local companies own 25% and local, public institutions 15%.

A total number of 111 agricultural varieties were granted PBR in 2010. This total includes applications for genetically modified varieties in maize, soybean and cotton. Maize is still the agricultural crop with the highest number of varieties with PBR's, namely 231, followed by Potato with 73 protected varieties and Wheat with 62 protected varieties.

[Annex VI follows]

ANNEX VI

UNITED KINGDOM

I. PLANT VARIETY PROTECTION

PBR and DUS Testing Activities in the United Kingdom 2010-11

Experts from the United Kingdom reported on the work activity of the Fera Plant Varieties and Seeds Office in Cambridge and the regional examination centres.

In 2010/11, United Kingdom PBR applications remained at a modest level, with the bulk of applications continuing to relate to smaller companies that market varieties largely within the UK or those that prefer to obtain UK Rights before submitting applications to the CPVO. Across all species, UK national list applications rose slightly and remained at about 10 times that for PBR. Around a third of applications were for winter oilseed rape of which approximately half were hybrid varieties. Cereal breeding activity remained robust and also accounted for around a third of all UK applications. Herbage and forage variety applications, although slightly reduced, still accounted for around 20% of the UK total, with sugar beet at 10% and the remaining 5% being made up of applications for potatoes and various pulses.

Fera UK was granted CPVO Entrustment on 16th February 2011. The entrustment by the CPVO Administrative Council was in accordance with Council Regulation (EC) No 2100/94 for DUS examination work as specified in the current annex 1 to the designation agreement. This comprised all the major crops for which the UK maintains DUS expertise at their three Technically Qualified Bodies: Cambridge (NIAB), Crossnacreevy (AFBI) and Edinburgh (SASA). This entrustment is subject to continuing conformity with the entrustment requirements for CPVO examination offices and is granted until 22nd June 2013, when a renewal audit will be required.

A number of research and development projects were pursued at UK examination centres during 2010-11. These included the following examples:

- The CPVO has co-funded a research project on the use of molecular markers in barley at NIAB. The one year project entitled “A Potential UPOV Option 2 approach for barley using high density SNP genotyping” uses existing data from a large set of markers with close associations with traits (DUS and VCU) to determine whether a correlation exists between genetic and phenotypic distances.

- NIAB also completed a Fera-funded project in November 2010 examining a set of markers associated with eight barley DUS characteristics.

- An assay using SSR markers has been developed for verification of seed stocks in winter oilseed rape. The assay will be implemented in autumn 2011 and will be used to replace additional field plots grown for authentication purposes only.

- AFBI-Crossnacreevy has finished a three-year examination of Genotype x Environment effects on the uniformity of varieties initially examined under different environments and found variances to be similar to the control set that were examined and registered at AFBI-Crossnacreevy. The result confirmed that there were no implications for reference collection uniformity standards.

[End of Annex VI and of document]