

**Technical Working Party on Testing Methods and Techniques**

TWM/2/2

**Second Session****Virtual meeting, April 8 to 11, 2024****Original:** English**Date:** April 10, 2024

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**REPORTS FROM MEMBERS AND OBSERVERS***Document prepared by the Office of the Union**Disclaimer: this document does not represent UPOV policies or guidance*

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 invited by the Office of the Union in Circular E-24/035 of March 27, 2024. The following reports were received (in alphabetical order):

- Members of the Union: Annexes I to II: South Africa, United Kingdom

[Annexes follow]

## SOUTH AFRICA

The South African PBR Office, residing under the Ministry of Agriculture, Land Reform and Rural Development (DALRRD), is the national authority receiving and examining Plant Breeders' Rights applications, and the granting of Plant Breeders' Rights.

Statistics

With reference to Applications and valid Plant Breeders' Rights for 2023 the following is reported:

- No additional taxon protected has been declared in terms of the Plant Breeders' Rights Act during **2023**.
- **323** PBR applications were received of which **57% [185] were for Agricultural crops, 9% [28] for Ornamental crops, 25% [82] for Fruit crops and 9% [28] for Vegetable crops**.
- As of December **2023**, a **TOTAL of 3809** varieties had valid plant breeder's rights in South Africa, of which **20% [804] were for Ornamental crops, 40% [1500] for Agricultural crops, 32% [1205] for Fruit crops and 8% [300] for Vegetable crops**. The top three crops for agricultural crops are:

<b>AGRIC CROPS</b>	
1. <i>Zea mays</i> L.	<b>[727]</b>
2. <i>Glycine max.</i> (L.) Merrill.	<b>[175 GMO + 14 CONV]</b>
3. <i>Triticum</i> L.	<b>[118]</b>

White CONV	<b>102</b>
White open pollinated	<b>4</b>
White GMO	<b>232</b>
Yellow CONV	<b>122</b>
Yellow GMO	<b>254</b>
Sweetcorn	<b>13</b>

Applications for Agricultural crops as well as the grants were for the US, Brazil, Argentina and South Africa.

<b>The top three Vegetable crops were:</b>	
1. <i>Solanum lycopersicum</i> L.	<b>[69]</b>
2. <i>Phaseolus vulgaris</i> L.	<b>[34]</b>
3. <i>Ipomoea batatas</i> (L.) Lam.	<b>[31]</b>

[Annex II follows]

UNITED KINGDOM

Report on the activity of the United Kingdom (UK) Plant Varieties and Seeds Office and the DUS examination centres of NIAB, SASA and AFBI.

The Plant Variety Rights Office for the United Kingdom is part of the Animal and Plant Health Agency (APHA), an executive agency of the Department for Environment, Food and Rural Affairs (Defra) and its remit is to coordinate the delivery of variety registration and Plant Breeders Rights (PBR) in the United Kingdom. Contact details are available on the Gov.UK website: [UK Variety Listing and PBR](#).

In 2023 the United Kingdom received 1248 applications covering Plant Breeders Rights and National Listing. The applications were made up of 581 vegetables, 532 agricultural, 94 ornamentals, and 41 fruit. Of these, 443 tests were not conducted in the United Kingdom, but carried out by UPOV members.

The United Kingdom continues to process all applications for PBR or National Listing through UPOV PRISMA. The system was quickly accepted by applicants and is now considered the norm.

DUS testing in the United Kingdom is conducted at NIAB ([www.niab.com](http://www.niab.com)), AFBI ([www.afbini.gov.uk](http://www.afbini.gov.uk)), and SASA ([www.sasa.gov.uk](http://www.sasa.gov.uk)). NIAB carry out the testing of wheat (winter and spring), Barley (winter and spring), Oats (winter and spring), Oilseed Rape (winter), Sugar Beet, Field Beans (winter and spring), Fodder Kale, and ornamental species. AFBI perform DUS testing of perennial ryegrass, Italian ryegrass, hybrid ryegrass and white clover. SASA conduct the DUS testing for potatoes, field pea, swede, turnip rape and vegetable peas.

The United Kingdom authorities are working together to develop a United Kingdom Plant Variety and Seeds (PVS) Strategy spanning Plant Variety Rights, plant variety registration, and setting standards for marketing and certification of seed and other plant propagating material. This will be the first PVS strategy building in the United Kingdom in recent times and its development is an opportunity to engage with industry and other stakeholders to set out a shared vision, priorities, and actions to achieve these.

The strategy will aim:

- to enable a thriving and dynamic plant breeding sector capable of meeting the challenges and opportunities of a changing world,
- to uphold proportionate quality and marketing standards for seed and other propagating material to ensure a well-functioning internal market,
- to maintain and enhance the United Kingdom's global reputation in plant breeding and marketing standards.

The United Kingdom continues to support the UPOV distance learning courses by providing tutors. Technical and administrative staff at our test centres take advantage of the distance learning opportunities through DL205 and DL305.

Colleagues across the United Kingdom have also benefitted from attending the two recent UPOV seminars and the UPOV Technical Working Parties Preparatory Webinars. The United Kingdom were represented on both panel sessions: Alex Talibudeen on the Image analysis in DUS examination and Hilary Papworth on the Developing individual Test Guidelines in the absence of UPOV Test Guidelines.

NIAB's Hilary Papworth is the new Chair of the UPOV Technical Working Party for Ornamental Plants and Forest Trees (TWO). Margaret Wallace is co-ordinating a sub-group of the Technical Committee focussing on issues relating to Test Guidelines and the TG-Template.

To meet the challenges of climate change, the rapid development of new plant varieties for our farmers and growers should be encouraged and facilitated. The United Kingdom are actively driving the implementation of new techniques to DUS testing through several collaborative or internal projects:

- AFBI are coordinators of the 4.5-year Horizon 2020 (SFS-29-2018) InnoVar project ([www.h2020innovar.eu](http://www.h2020innovar.eu)). InnoVar aims to augment and improve the efficacy and accuracy of European crop variety testing and decision-making, using an integrated approach incorporating genomics, phenomics and machine learning. Data from our European-wide trial series will form the basis of a new, purpose built, variety recommendation tools. The project focuses on bread and durum

wheat initially before applying the InnoVar approach to other crops. The project's consortium includes 21 partners across Europe, including United Kingdom partners ADAS, AHDB and APHA.

- NIAB, SASA and BioSS (Biomathematics and Statistics Scotland) are active partners in the 5-year H2020 INVITE (Innovations in plant Variety Testing in Europe – [www.h2020-invite.eu](http://www.h2020-invite.eu)). INVITE aims to improve both efficiency of variety testing and the information available to stakeholders on variety performance under a range of production conditions and biotic and abiotic stresses. This will be exemplified on ten selected species (apple, fodder grass, sunflower, soybean, wheat, maize, potato, tomato, oilseed rape, and lucerne) representing the main features of propagation, food and feed uses, and having an important breeding activity at EU level. There are 28 partners across Europe involved. Within this project, new approaches to assessing genetic uniformity (document [TWM/2/5](#)) and to reference collection management using molecular markers based on genomic prediction (document [TWM/2/4](#)) have been developed by BioSS.
- There is collaboration between InnoVar and INVITE, which will both conclude in 2024. There is also liaison between INVITE and the Australian INVITA project.
- Two projects have been funded by Defra developing molecular methods in DUS work (document [TWM/2/6](#)). The first is the use of marker information to inform the selection of similar varieties to be included in a barley (*Hordeum vulgare*) test program. The second, is developing a machine learning program to identify genomic markers with the potential to distinguish between varieties of raspberry (*Rubus idaeus* L.). Both projects are in their infancy and will complete in January 2025.
- The United Kingdom continues to work on the development of the new version of COYU, for assessing uniformity (document [TWM/2/3](#)). There have been two workshops to progress the development of guidance. Associated with this, a new improved version of the widely used software DUST9NT has been produced by BioSS and AFBI.
- NIAB has continued their investigation into the use of UAV (Unmanned Aerial Vehicles) within a DUS testing situation (document [TWM/2/8](#)).

[End of Annex II and of document]