

Ownership and use of DUS samples and of DNA and DNA data during and after the DUS tests

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The DUS sample



- **UPOV 91; art 12: Examination of the application.**
“For the purposes of examination, the authority may require the breeder to furnish all the necessary information, documents or **material**.”
- TGP 5: Experience and cooperation in DUS testing.
- Section 11
Examples of policies and contracts for material submitted by the breeder.
Annex 1 Example from Australia
Annex 2 **CPVO Policy on the status of plant material used for DUS testing purposes.**

The DUS sample

- Community Plant Variety Office of the European Union (CPVO) **Policy on the status of plant material used for DUS testing purposes**
(http://www.cpvo.europa.eu/documents/announcement/2012/CPVO_Policy_on_the_Status_of_Plant_Material_Used_for_DUS_Testing_Purposes.pdf)
- **Netherlands;**
Desire to create clarity for the breeders and testing authority on the do's and don't's around the use of DUS samples and its derivatives such as variety description, photographs, DNA and DNA data.

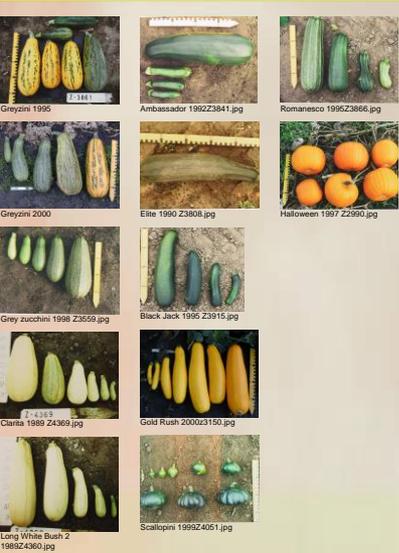
General statement



Principles in the Netherlands on DUS samples:

- Applicant/breeder is owner of the sample (also during the DUS procedure)
- Board for Plant Variety Rights may use the sample for DUS Purposes
- Naktuinbouw as Examination Office keeps the sample.

CPVO policy



- **1. What should an Examination Office entrusted by CPVO do with plant material if the application is withdrawn or if it is rejected?**
 - 1.1 Destroy or send back, or
 - 1.2 In its reference collection
- **2. May a CPVO entrusted Office send material to another CPVO entrusted Office?;**
 - yes to another entrusted office in the same species.
 - If parent lines: inform the person entitled.
 - Only to be used for DUS tests.

CPVO policy



**2. May a CPVO entrusted Office send material to an other (non entrusted) Examination Office?
Only with consent from the person entitled.**

- **3. What may the Examination Office do after the variety has been granted EU pvr?**
- 3.1 Destroy or sent back to the applicant, or
- 3.2 Keep in a living reference collection.
- 3.3 If material is kept, material may be transferred as in Section 2 above.

- **4. After the Community Plant Variety Expires**
- 4.1 Material kept in a reference collection should be kept also after expiry of EU pvr.

The Netherlands took over CPVO policy for National applications



- PBR and Listing
- DUS sample exchanged under the same provisions also exchanged with certifying agencies in EU
- After test or expiry material as a standard is destroyed unless breeder asked it back.
- Additional in the Netherlands:
 - Always inform the title holder/maintainer when material is exchanged.
 - Material may only be used for DUS (or certification) purposes.
 - Principles to be communicated with applicants and all receiving agencies.

DNA from DUS samples



- In the process of DUS DNA is taken from all DUS samples to use for
 - character based DNA tests (resistances) and/or
 - management of the reference collection and/or
 - inclusion in a possible database and/or
 - used in (suspected) infringement cases
 - future reference.
- DNA is stored by Naktuinbouw

DNA from DUS samples



- General principle same as the DUS sample; the applicant/breeder is considered the owner, the Board for Plant Varieties gets custody of the sample for DUS purposes and Naktuinbouw keeps the sample.
- DNA is important as an additional tool in the DUS test that can help to strengthen the DUS test system and eventually reduce the costs.

DNA from DUS samples



- As DNA can easily be extracted from samples, the same approach is proposed for DNA as for the DUS sample itself.

For use of DNA outside DUS procedure it is necessary for the breeder/applicant to give separate consent.

DNA is also important in the fight against infringement of plant breeders' rights where the legal system is reluctant to judge on morphological comparison only.

- For the use of DNA in infringement cases (outside the DUS procedure) in principle consent is needed, or a Court order.

Data derived from the DNA samples



- When DNA is not only stored for possible future use, but processed as finger prints for e.g. disease resistance, management of a reference collection, used in database etc., data are generated.
- These data are stored by the Examination Office
- Confidentiality of DNA data on the same level as breeding history and pedigree information.

Data derived from the DNA samples



- The stored data can be used for other analysis in the framework of management of reference collections, comparison in the framework of stability testing, research to establish possible genetic (EDV) thresholds or in suspected infringement cases and on request of parties e.g. identity confirmation.
- The management of reference collections and stability testing fall within the scope of DUS tests.
- Other research e.g. for EDV thresholds or the use as background samples in infringement cases may only be done with anonymized data

Data derived from the DNA samples



- Infringement cases can be done on Court order; in such cases Naktuinbouw is obliged to cooperate and use available samples, DNA and DNA data.
- In other cases the work is done on behalf of the parties involved who have to give consent or DNA is used in anonymized form as background .

Closing remarks

Need for clear policy rules that are communicated with the industry.

Proposal to improve the existing CPVO policy:

- Including the obligation to always inform the applicant when material is exchanged
- To modify the CPVO policy on the status of plant material by including DNA and products derived from DNA.
- To clearly state that DNA information is considered as confidential

After this UPOV can be asked to replace the present example in TGP 5 section 11 Annex 2



Quality in Horticulture