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REVISION OF DOCUMENT TGP/8:
PART II: TECHNIQUES USED IN DUS EXAMINATION
New Section – Guidance for Development of Variety Descriptions

Document prepared by experts from the Netherlands

BACKGROUND

1. The Technical Committee (TC), at its forty-eighth session, held in Geneva from March 26 to 28, 2012, recalled that, at its forty-sixth session, it had requested that consideration be given to guidance on the development of variety descriptions with information from:

(i) more than one growing cycle in one location, and
(ii) more than one location

2. The TC agreed that the experts from the Netherlands should be invited to draft guidance on the development of variety descriptions with information from more than one growing cycle in one location and more than one location (see document TC/48/22 “Report on conclusions” paragraph 62).

3. The draft of Guidance on the Development of Variety Descriptions prepared by the experts from the Netherlands is contained in the Annex to this document.

[Annex follows]

ANNEX

TGP/8/1: PART II: NEW SECTION: GUIDANCE FOR DEVELOPMENT OF VARIETY DESCRIPTIONS

1. Variety descriptions are produced as a result of the DUS test(s) carried out in order to establish if a variety is Distinct, Uniform and Stable according to the UPOV definitions. Variety descriptions carry valuable information on the identity of the variety. Variety descriptions are the most frequently used means to exchange information on the identity of the variety.

2. The quality or value of the variety description depends on a number of factors such as the location of the trials, the quality of the trial(s), climatic conditions during the trial(s) and the expertise of the DUS examiner. The interpretation of a variety description by another party also depends on the experience with the crop and the expertise of the receiving person (e.g. another DUS- examiner, an official or an applicant or breeders.

3. The General Introduction as well as TGP/7 gives clear definitions on characteristics, states of expression and the way observations are to be translated into states of expression in the variety description.

4. In cases where the variety is observed in more than one trial, the results of the trials should lead to a single variety description. Such cases arise when the number of independent growing cycles is more than one and if a trial that normally has one growing cycle has to be repeated in a second growing cycle. Normally the trials should be carried out at one place, but also cases where trials are carried out on different places have to be taken into account. In this document guidance is given how to decide on the final note of a characteristic, if observations from more than one DUS trial are available.

5. When diverging notes are made in different trials the question arises how to come to the final note in the variety description. The UPOV system itself gives some valuable indications how to treat such diverging notes, but an important element in the decision is the expertise of the DUS examiner involved. Especially in measured characteristics the COYD approach can be of help to align results.

6. Measured characteristics using COYD.
In COYD the variety means in different trial results are corrected for the year or location effect. It goes on the assumption that the measurements were correct so the DUS examiner who carried out such measurements was experienced and made no obvious mistake. Experience shows that two trials in one place (in two seasons) show less variation than two trials in two places in the same season. The value (mean) obtained by COYD can be transformed to a note for the variety description as described in section 6 of TGP/8.

7. Measured characteristics without using COYD
In some cases the use of COYD is not possible e.g. due to the limited number of samples in the trial, lack of sufficient repetitions etc. This applies mostly in measured characteristics in fruit, ornamentals and vegetables. In these cases after each trial the translation of a calculated mean is established using the mean value of all observations and taking into account the mean value of the observations on well known varieties that are present in both (or more) trials (also known as standard varieties) or varieties with known notes.
If after two (or more) trials where the note has been established, these notes are not the same; a decision has to be made on the final note to be included in the variety description. The following three options can be envisaged:

7.1. To recalculate a mean value for measured characteristics without using COYD
It is not advisable to recalculate a mean value without correction for the year and or location effect. Such approach may lead to a note in the variety description that is not correct as certain year/location effects play a role.

7.2 To choose one of the established values for measured characteristics without using COYD
If the values from the different trials show a clear effect of one of the trials due to explainable circumstances, it may be considered to base the description on the remaining trial that, in the experience of the DUS examiner showed normal results. The values of measurements of known (standard) varieties that are included in the trials may be used to reach such a decision.

7.3 To re-test the application an extra year for measured characteristics without using COYD

If the values from the different trials show a clear effect of one of the trials due to not explainable circumstances and the values of measurements of known (standard) varieties that are included in the trials do not give a clear explanation on the different results between the trials, in exceptional cases it can be decided to carry out an extra trial. This can happen when a mistake was made or there is a large genotype x conditions effect for that variety and that characteristic or when it was concluded that a mistake must have been made at observing/recording.

8. Visually observed characteristics

With visually observed characteristics, an important difference has to be made between visual assessment by a single observation of a group of plants or parts of plants (VG) or visual assessment by observation of individual plants or parts of plants (VS). In case of VS characteristics the same approach as described in paragraphs 7 is possible as a number of observations per plot is available (see TWC/28/29). The use of VS characteristics is however rare. Most visually observed characteristics are VG characteristics. In case of VG characteristics it is not possible to calculate a measured mean between two or more trials. Depending on the type of visually observed characteristics the following applies.

8.1 Visually observed qualitative characteristics (VG/QL)

In general VG/QL characteristics are discrete, easy to describe, discontinuous and generally drawings or photographs are available to help the DUS examiner to correctly observe such characteristics. It is rare that observation of the same VG/QL characteristic in different trials leads to different notes in the description. It cannot be excluded however that environment also influences such characteristics. In such a case the DUS examiner has to decide which note to take; or which trial was likely to give the most ‘normal’ results. It is therefore recommended to compare the results of a second (or additional) trial immediately with the result(s) obtained in earlier trials. If divergence is found, one can re-visit the trial to check that no mistakes were made. When the note is confirmed, using e.g. the notes from both trials comparing the variety with other varieties, one could still reach a conclusion which note to use. When such a choice cannot be made, in exceptional cases an extra trial may be necessary. A thorough calibration procedure of the DUS examiner diminishes this kind of deviation caused by the examiner effect. If for a given reason the result from one trial is preferred, also for other characteristics the results from that trial should be considered a ‘leading’.

8.2 Visually observed quantitative characteristics (VG/QN)

VG/QN characteristics are more easily influenced by environment. Also it is not easy to calibrate a person’s observations between trials. In case two DUS examiners make an observation in different trials (in different places) it may be expected that the notes deviate. In general a choice has to be made on the most stable results. For such decision it is important to notice a deviation during the trial so that it is possible to re-check, discuss with other experts and decide which result to follow. In general it is not advised to just take the mean of both results (e.g. if in the first trial leaf: green color is scored as 5 (medium) and in the second trial as 7 (dark) it is not advised to decide on the final note to be 6 (medium to dark)). The comparison with standard or comparing varieties in both trials could help (if in both trials the application is recorded as darker than comparing variety ‘B’ and the note for leaf: green color of variety ‘B’ is 5 (medium) the final note for the application in the example case is more likely to be 7 than 5 [however 6 is also possible]. Also in this case: if the difference between the notes is felt to be too large and cannot be explained sufficiently, the note could in some cases (for non asterisk characteristics) be left blank or an additional trial could be carried out.

8.3 Visually observed pseudo-qualitative PQ characteristics (VG/PQ)

As PQ characteristics often show a combination of QN and QL aspects, it is up to the DUS examiner to decide how to approach a possible divergence between notes according to one of the above paragraphs.

[End of Annex and of document]