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TWV/42/13
ORIGINAL: English
DATE: June 18, 2008

UPOV

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

TECHNICAL WORKING PARTY FOR VEGETABLES

Forty-Second Session
Cracow, Poland, June 23 to 27, 2008

APPLICATIONS FOR VARIETIES WITH LOW GERMINATION

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1. In document TGP/7/1: Annex 2: Additional Standard Wording for the TG Template, it states that the standard wording in the relevant UPOV Test Guidelines is as follows: (ASW I)

> "The seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority. [In cases where the seed is to be stored, the germination capacity should be as high as possible and should be stated by the applicant.]"

2. In the General Introduction, document TG/1/3 nothing in particular is said about this subject. The text about the material to be submitted is as follows:

> "2.5.1 Representative Plant Material
>
> The material to be submitted for the examination of DUS should be representative of the candidate variety. In the case of varieties with a particular cycle of propagation, such as hybrid and synthetic varieties, this means that the material tested should include the final stage in the cycle of propagation.
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> 2.5.2 General Health of Submitted Material
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> The plant material submitted for examination should be visibly healthy, not lacking in vigor or affected by any important pests or diseases and, in the case of seed, should have sufficient germination capacity for the conduct of a satisfactory examination.

2.5.3 Factors That May Affect the Expression of the Characteristics of a Variety

The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc. In some cases (e.g. disease resistance), reaction to certain factors is intentionally used (see Chapter 4, section 4.6.1) as a characteristic in the DUS examination. However, where the factor is not intended for DUS examination, it is important that its influence does not distort the DUS examination. Accordingly, depending on the circumstances, the testing authority should ensure either that:

(a) the varieties under test are all free of such factors or,
(b) that all varieties included in the DUS test, including varieties of common knowledge, are subject to the same factor and that it has an equal effect on all varieties or,
(c) in cases where a satisfactory examination could still be undertaken, the affected characteristics are excluded from the DUS examination unless the true expression of the characteristic of the plant genotype can be determined, notwithstanding the presence of the factor."

Conclusion:

3. There is no paragraph in TG/1/3 that deals with germination of the submitted seed.

Germination standards for inbred lines

4. In general the competent authorities specify the requirements as those they apply for certification or marketing. e.g. CPVO refers in its protocols to the EU marketing directive for the seed requirements: In directive 2002/55/EC Annex II, conditions to be satisfied by the seed are given and minimum germination requirements are given. Compared to germination standards for professional growers, these requirements are quite low.

5. Low germination is usually appearing for inbred lines, and is usually a consequence of inbreeding. Technically it is not always possible to obtain the prescribed minimal germination percentage. As these lines will not be brought into commercialization this is no problem for the applicant. The question should be asked whether requirements for germination for these applications should be the same as for varieties which will be marketed. Germination requirements could be lower. It should be kept in mind that the applicant states on the technical questionnaire that it concerns a parent line.

6. If the germination is lower, vitality will usually be lower. This could influence the plant development so that some of the characteristics may be influenced and a proper and reliable comparison with regard to those may not be possible. Also the storage of the seed will affect the germination and the seed does not meet conditions for reference purposes in a reliable DUS-test. On the other hand other characteristics will not be influenced and observations still can be done on those.

7. An example in melon: these lines usually have a lower germination, around 20% less than hybrid standard seed. The germination of many of the seeds will be later, some will not emerge and many will emerge slower. This will affect the plant characteristics, but not the fruit characteristics.

8. In view of the above, it is advisable only to allow lower germination requirements in special cases when during the trial this does not pose problems with regard to a reliable comparison, a reliable observation of characteristics and a reliable assessment of uniformity. In practice this will mean that after sowing, a certain percentage of viable plants must be obtained, or, if the germination is slower, this should not affect important characteristics. The applicant should be made aware that he runs the risk that the application could be rejected due to the described problems.

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