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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

Associated Document
to the
General Introduction to the Examination
of Distinctness, Uniformity and Stability and the
Development of Harmonized Descriptions of New Varieties of Plants (document TG/1/3)

DOCUMENT TGP/9
“EXAMINING DISTINCTNESS”

Section TGP/9.4.2: Examining Distinctness in Different
Types of Variety: Rootstocks

Document prepared by experts from Germany

to be considered by the

Technical Working Party for Fruit Crops (TWF), at its thirty-third session to be held in
San Carlos de Bariloche, Argentina, from November 25 to 29, 2002

SECTION 9.4.2

EXAMINING DISTINCTNESS IN DIFFERENT TYPES OF VARIETY: ROOTSTOCKS

1. Under specific circumstances, for the examination of distinctness, uniformity and stability, it may be appropriate to define a number of characteristics which are observed routinely and to set up an additional list of characteristics which is only used if a new variety cannot be distinguished by the routine characteristics. This may be appropriate, for example, when different growing trials are necessary for the observation of different groups of characteristics, but normally one group of characteristics is sufficient for the examination of DUS for new varieties. The general procedure for the examination of distinctness with two tables of characteristics will be illustrated with the example of rootstocks.
2. Rootstock varieties are propagated vegetatively or by seed and grow on their own roots. This is in contrast to fruit varieties which are normally grafted on to a rootstock, that is, they are propagated xeno-vegetatively.
3. Rootstocks used for pome fruit varieties are preferably cultivated in stoolbeds, whether they are vegetatively propagated by layers, or by softwood or hardwood cuttings. The DUS trial management follows the cultivation method used for plant production in nurseries: the plants are cut back annually, and the rooted stool-layers are harvested in late autumn. To enable comparison, the whole trial should be designed as stoolbed plots. The plants under test are artificially held in a vegetative state and any visible organ of the plant is definitely not older than one year. Usually neither flowers nor fruits can be observed on these plants. Distinctness is assessed on the basis of characteristics which refer only to vegetative organs.
4. Breeding activities in rootstocks are aimed on the impact of a new variety on the varieties for fruit production which are grafted on them (e.g. ease of tree management, earliness of fruit bearing, yield, fruit quality, reduced susceptibility to soil, weather or pathogens). As a consequence, morphological variation between rootstock varieties may be rather limited and it may be that a new variety cannot be distinguished only on the basis of the characteristics of the vegetative organs.
5. For such situations, it is recommended that flower and fruit characteristics are examined. Therefore, as a precaution, in addition to the stoolbeds, another five plants should be planted and managed as trees or bushes.
6. If the plants of rootstock varieties are normally grown as normal trees in the DUS trial (e.g. seed propagated varieties, vegetatively propagated stone fruit varieties), vegetative as well as generative characteristics can be observed on the same plants.
7. The UPOV Test Guidelines for apple rootstocks, Pyrus rootstocks and Prunus rootstocks (TG/163/3, TG/169/3, TG/187/1) do not include flower or fruit characteristics. For many varieties the presented table of characteristics is sufficient for the examination of DUS.

If flower, fruit or seed characteristics are necessary for the examination of distinctness, the Test Guidelines refer to the Test Guidelines for the respective fruit varieties.

8. If the vegetative characteristics included in the rootstock Test Guidelines are sufficient for the assessment of distinctness, only these characteristics will be examined for uniformity and stability and will be included in the variety description. Generative characteristics which are part of the fruit Test Guidelines are only observed if they are necessary for the assessment of distinctness. In such a situation, these characteristics must also be uniform and stable and included in the variety description.

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