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“DRAFT SECTION FOR: TGP/9 EXAMINING DISTINCTNESS”

*Document prepared by experts from Germany*

### **9.3 Examining Distinctness in Different Types of Variety**

The appropriate method for examining distinctness depends on the possibilities for recording the expression of a characteristic in a specific crop. If the plant to plant variation within varieties is very small, in relation to the variation between varieties, the characteristic can be recorded using a single observation for a variety. In the case of greater plant to plant variation, due to considerable genotypic and/or environmental variation, it is necessary to take records from individual plants and to calculate the mean expression of the variety.

The variation within varieties has both genotypic and environmental components. The level of genotypical variation is determined by the features of propagation. The appropriate method of observation is recommended in the Technical Guidelines for each characteristic considering this variation.

Vegetatively propagated, self-pollinated and mainly self-pollinated varieties normally have very little variation within varieties. The same situation exists for qualitative characteristics in cross-pollinated varieties (including synthetic varieties). A lack of significant variation within varieties allows examination of distinctness based on a single observation per variety, year and location. A minimum distance of one or more than one states is recommended to consider a variety to be distinct.

Variation is normally greater for quantitative characteristics in cross-pollinated varieties (including synthetic varieties). In this case, the expression of a variety should be recorded using more than one observation. Usually, records are taken for a number of single plants. The distinctness criteria can then be calculated on the basis of variances within varieties (COYD, see chapter 9.6.1 or LSD, see chapter 9.3.2). If a characteristic in a vegetatively propagated, self-pollinated or mainly self-pollinated variety is recorded by single plant observations, the same methods can be applied.

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