

Technical Working Party for Agricultural Crops

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ADDITIONAL INFORMATION ON DATA PROCESSING FOR THE ASSESSMENT OF DISTINCTNESS AND FOR PRODUCING VARIETY DESCRIPTIONS

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1. The purpose of this document is to provide additional information to document TWP/3/10 "Data processing for the assessment of distinctness and for producing variety descriptions".

BACKGROUND

2. The TC, at its fifty-fourth session, held in Geneva on October 29 and 30, 2018, considered document TC/54/18 Corr. "Data Processing for the Assessment of Distinctness and for Producing Variety Descriptions" (see document TC/54/31 "Report", paragraphs 225 and 229).

3. The TC agreed to request the experts from France, Germany, Japan and the United Kingdom to provide information on the circumstances in which their methods would be suitable, including the method of propagation of the variety and other factors that had been used in deciding to use the method (see document TC/54/31 "Report", paragraphs 225 and 229).

4. The following information was received in relation to the "Fundamental Assessment Table System for Quantitative Characteristics" method used in Japan:

"Sufficient data of example varieties in the DUS growing tests, carried out at the same site, in the same method, needs to be accumulated; preferably for more than 9 years.

"The method is suitable for all vegetatively propagated and seed-propagated varieties. It is preferable to include example varieties with the same method of propagation as the candidate varieties in the trial. The method is mainly used to evaluate QN characteristics in the DUS testing of ornamental plants or vegetables.

"If the type of variety is different (i.e. cut flower, garden or pot, etc.), it is necessary to prepare the fundamental assessment table (FAT) for each type separately even if the varieties are covered by the same Test Guidelines."

5. The following information was provided on the methods used in the United Kingdom for herbage crops using delineating varieties and for peas using division of the range of expression into equal-spaced states:

"These two methods are only for characteristics which are measured and quantitative. They are used with crops where the method of propagation is such that characteristics are quantitative in expression and vary within varieties, and so distinctness is determined in general by comparison of variety means through statistical analysis. Such characteristics often arise in cross-pollinated crops and in some self-pollinated crops.

"The delineating varieties method using herbage as an example:

"Over-year variety means are calculated from the yearly trial means. Trial means from the past 10 years' trials are used for herbage crops. The over-year means are calculated using a fitted constants analysis; this allows for varieties not being present in every year. Finally, the over-year

means are converted to notes. For herbage crops this is done by use of delineating varieties chosen by crop expert judgement and are based on the notes for example varieties. Delineating varieties differ from example varieties. A delineating variety defines each upper (or lower) intervening limit of the states within the range of expression. By contrast, an example variety usually represents the typical or mid-interval expression of each state within the range of expression.

“The equal spaced notes method using grain peas as an example:

“Over-year variety means are calculated from the yearly trial means. Trial means from all years where the reference collection varieties have been tested are used for peas. The over-year means are calculated using a fitted constants analysis; this allows for varieties not being present in every year. Finally, the over-year means are converted to notes. For peas this is done so that the states are equally spaced.

“Both methods use over-year means to minimise any observed variation in varieties due to differences in years. In effect, reference varieties (including example varieties) remain the same note year on year.

“For greater detail of these two methods and worked examples, see document TWC/30/32 “Handling Measured, Quantitative Characteristics for Vegetable and Herbage Crops Tested in the United Kingdom”. Please note that the worked examples are based on an artificial data set in order to illustrate the method.”

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