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COMPUTER PROGRAMS**

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ADDENDUM

**AN ADJUSTMENT TO THE COYD METHOD
WHEN VARIETIES ARE GROUPED WITHIN THE DUS TRIAL; PROPOSAL FOR
TEXT TO BE ADDED TO TGP/8**

Document prepared by experts from the United Kingdom

The Annex to this document contains a presentation on the COYDG method for grouped varieties given by Mr. Adrian Roberts, United Kingdom, at the twenty-ninth session of the Technical Working Party on Automation and Computer Programs.

[Annex follows]

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COYDG method for grouped varieties

Adrian Roberts, BioSS



Background

- Method for adjusting COYD for grouping of varieties has been previously proposed
- Has been shown to have advantage over COYD in two example data sets (field pea and tall fescue)
- It is currently being used routinely for field pea in the UK & there is a DUST module available

We propose that a description of method be included in TGP/8

History

- Method proposed in 2005 (Ottawa)
 - TWC/23/8
- Field pea example in 2008 (Jeju)
 - TWC/26/14
- Tall fescue example in 2009 (Alexandria)
 - TWC/27/18

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Outline of the method

- In some crops, varieties are separated into distinct groups using grouping characteristics
- No need for further comparison of varieties in different groups
 - Often the grouping is reflected in the field layout
 - In some characteristics, group-by-cycle variance can be substantially greater than variety-by-cycle variance (within group)
 - If we take this into account, we can reduce the LSD used to compare varieties for distinctness

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Outline of the method

COYD

Block structure: Year
Treatment structure: Variety

COYDG

Block structure: Year + Year.Group
Treatment structure: Group/Variety

If Year.Group is large, then the COYDG LSD is smaller than the COYD LSD

But it can only be used within groups

Note this analysis does not affect the variety means

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See TWC/29/25 for proposed text

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