

BMT/12/19 Add.
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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS GENEVA

WORKING GROUP ON BIOCHEMICAL AND MOLECULAR TECHNIQUES AND DNA PROFILING IN PARTICULAR

Twelfth Session Ottawa, Canada, May 11 to 13, 2010

ADDENDUM

COMBINING PHENOTYPIC AND MOLECULAR DISTANCES IN THE MANAGEMENT OF REFERENCE COLLECTIONS: APPLICATION TO SPRING BARLEY

Document prepared by an expert from France



Combining Phenotypic and Molecular Distances in the Management of Reference Collection Application to Spring Barley

- > Model as developed on Maize
- Spring Barley : large reference collection many new applications, lot of pair comparisons in DUS tests

Improvment of selection of comparable varieties

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Combining Phenotypic and Molecular Distances in the Management of Reference Collection Application to Spring Barley

- 500 spring barley varieties
- > 30 SSR markers: 234 alleles

high polymorphism good level of uniformity

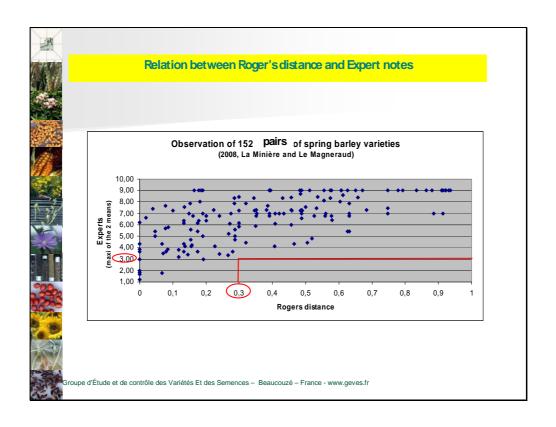
assessment of phenotypic similarity on 250 pairs of varieties by experts:

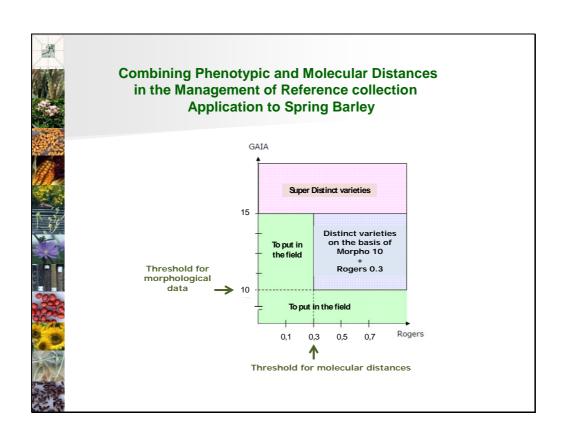
note 1: identical or very similar, note 9: totally distinct

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New assessment on phenotypic similarity on 900 pairs in 2009

Confirmation of the molecular threshold 0.3

Specific test to define precisely the GAÏA threshold
 10 is the minimum to get enough security

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