



BMT-TWA/Oilseed Rape/1/4

ORIGINAL: English

DATE: March 6, 2001

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

**AD HOC CROP SUBGROUP ON MOLECULAR TECHNIQUES
FOR OILSEED RAPE**

First Session

Le Magneraud, France, March 19 to 21, 2001

DEVELOPMENT OF MOLECULAR MARKERS FOR DUS TESTING
IN OILSEED RAPE

document prepared by experts from the United Kingdom

Development of Molecular Markers for DUS Testing in Oilseed Rape

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Abstract: The objective of this MAFF-funded project is develop a test set of DNA microsatellite (simple sequence repeat, SSR) primer pairs for oilseed rape, to evaluate its application in DUS testing and to devise an operational system for its use. More than 50 SSRs from the BBSRC Brassica microsatellite project have been selected and evaluated in two laboratories using different detection platforms. From these, a set of 15 have been chosen that demonstrate high quality and easily scored amplifications, can be multiplexed for more efficient analysis and have good levels of polymorphism between varieties of oilseed rape. This set is being tested on a common collection of 10 varieties in two laboratories, and will also be mapped. So far, it has been shown that the set will readily discriminate between the 10 varieties. Preliminary data from the analysis of 48 individuals from each of the 10 varieties have shown that some varieties are apparently more 'uniform' than others, and that some SSR loci also seem to be more variable than others. These data will be presented and discussed.

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