



BMT-TWA/Sugarcane/2/3

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GENEVA

**AD HOC CROP SUBGROUP ON MOLECULAR TECHNIQUES
FOR SUGARCANE**

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PROGRESS REPORT ON THE SUGARCANE SUBGROUP

Document prepared by an expert from Australia

The first set of eight DNA samples and 17 primer pairs sent in 2002 had to be resent because of problems with evaporation during transit. Therefore, by the end of July 2003, a second set of DNA samples and primer pairs were sent to five laboratories in South Africa, Brazil, Colombia, Mauritius and France. The primer pairs were used in each laboratory to generate microsatellite (SSR) marker profiles of the eight DNA samples. The results from six participating laboratories were analysed by the co-ordinator (Dr. G. Piperidis, Australia) and the best eight primers were chosen for further testing. These eight primers were chosen on the basis of their consistency across the laboratories, ease of data interpretation and the capacity to detect DNA polymorphism. Additionally, “example varieties” were selected for each of the eight primer pairs. In the next phase of experiments, a “blind ring test” will be done where the varieties will be labelled with numbers and their identity will be withheld from the participating laboratories until the results are analysed and distributed. Instead of DNA samples, leaf samples will be sent to the laboratories and each laboratory will use their own DNA extraction methods.

So far, the feedback for the proposed test is very promising. All countries (except South Africa) that participated in the original ring test will participate in the proposed blind ring test. The results from all these tests will be presented in the subgroup meeting in 2005. For the subgroup meeting in 2004 a paper on “Draft Guidelines for Harmonizing Protocols on the development of Molecular Markers for use in DUS testing with a specific emphasis on sugarcane” is submitted.

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