A team of researchers at DBT-Centre for DNA Fingerprinting and Diagnostics (DBT-CDFD) have now developed an alternative method, where the analysis is based on bulked-seed using mitochondrial markers. Maintainer line seed powder, which is usual admixture in the CMS line, is mixed in various proportion with CMS line seed powder and genotyped using capillary electrophoresis. Statistical analysis of the results obtained suggest that this method is accurate and cost-effective and thus better than the two conventional testing techniques.

The scientists have found that as many as 20 samples can be analysed at a time in 3 days using this method while analysing even one sample takes more than 3 days in the conventional method using molecular markers.
The new method will help the seed industry and farmers by enabling faster, accurate, and cost-effective assessment of genetic purity of CMS lines. It can be extended to other crops also where the mitochondrial sequence information is available.


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