



## A new strategy for identification of currant (*Ribes nigrum* L.) cultivars using RAPD markers

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**ABSTRACT.** We developed a new approach using RAPD fingerprints to distinguish 37 currant cultivars from northeastern China based on optimization of RAPD by choosing 11 nucleotide primers and strict screening PCR annealing temperature. We found that the manual cultivar identification diagram (MCID) approach clearly developed fingerprints from 8 different primers that were useful for cultivar identification; a cultivar identification diagram (CID) was readily constructed. This CID allows efficient currant cultivar identification, providing information to separate all the currant cultivars from each other, based on the detail polymorphic bands from the corresponding primers, which were marked in the correct positions on the currant CID. According to the CID, 10 currant cultivars in 5 groups were randomly selected for the referable and workable identification of this strategy. The results proved the workability and efficiency of the MCID method, facilitating the identification of fruit cultivars with DNA markers. This MCID approach will be useful for early identification of seedlings in the nursery industry and protection of cultivar rights.

**Key words:** Currant cultivars; New approach; MCID; RAPD; Fingerprint