

accessions increased. These results indicated that the genetic diversity of the introduction lines was higher than those of the other groups.

This result indicated that microsatellite markers permit the fast and throughput fingerprinting of a large number of rice germplasm collections in order to assess genetic diversity. The assessment of genetic diversity of Korean rice collection by the present microsatellite analysis will be helpful in developing efficient strategy for the conservation of rice germplasm and the subsequent utilization of them for future rice breeding programs in Korea.

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Molecular Markers Linked To Downy Mildew Resistance Locus in Chinese Cabbage

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Downy mildew, caused by *Peronospora parasitica*, is one of the most damaging diseases of vegetable *Brassicacrops* in the world. To determine the mode of inheritance of the resistance to downy mildew, a segregating F₂ population was obtained by crossing resistant inbred line "Han" with susceptible inbred line "NRB". In a field assay under natural downy mildew infection, the F₂ plants were segregated in a ratio of 3 resistant : 1 susceptible, indicating the resistance of "Han" against *Peronospora parasitica* is under the control of a single dominant gene. In order to develop downy mildew resistant cultivars using marker assisted selection (MAS), we tried to identify resistance locus and DNA markers linked to the locus. We identified three markers linked to the resistance locus using DNA fingerprinting technique combined with bulked segregant analysis. The markers showing low frequency of recombination with the locus in 254 F₂ plants were cloned and sequenced. A reliable conversion procedure allowed those RAPD markers to be successfully converted into more useful SCAR markers. These SCAR markers will be used efficiently for development of commercial downy mildew resistant cultivars in chinese cabbage (*Brassica rapa*).

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