

Inheritance of allyl glucosinolate in the development of canola quality *Brassica juncea* for Australia

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The search for profitable alternatives to cereal crops lead to the testing of accessions of *Brassica juncea* (Oriental, Indian or brown mustard) in southern Australia and western Canada at several localities in the 1970's and 1980's. Canola (*B. napus*) is the main winter-growing oilseed in Australia, grown over a wide range of latitudes. *Brassica juncea* has a number of potential advantages over *B. napus* when tested under Australian conditions that will complement traditional canola *B. napus* production. The Saskatchewan Wheat Pool released the first canola quality *B. juncea* in Canada in 2002. A requirement for the release in Canada was that lines released have to have <1 µmol/g allyl glucosinolate in breeder seed and <3 µmol/g for commercial production. It is likely that this will be also the case in Australia. The inheritance of the low allyl glucosinolate trait has been studied in F₁-derived doubled haploid populations (using selfed DH₂ seed) between two mid-high allyl glucosinolate canola quality Australian lines and a low allyl canola quality Canadian line. The low allyl glucosinolate trait appears to be simply inherited. Low allyl canola quality *B. juncea* lines are expected to be released in Australia within 2 years.