

CROSS-INCOMPATIBILITY : PREVENTING FERTILIZATION IN EINKORN WHEAT (*TRITICUM MONOCOCCUM*)

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ABSTRACT : Genetic variation in crop species and their wild relatives holds the key for successful breeding of improved cultivars. Gene pool of wild species is usually more difficult to manipulate than the one found within the cultivated species. However, the ease of manipulation and success in using genes from wild species will vary with the crosses attempted, species used and can be affected by both genotypes and ploidy level of the species used. *T. monococcum*, 'A' genome contributor to the present day bread wheat with basic number $x=7$ was crossed with cultivated species of *T. dicoccum* (NP200, $2n=28$), *T. durum* (MACS2846, $2n=28$) and *T. aestivum* (Agra Local, $2n=42$) to develop progenies with the characters of both the parents. The wild species was used as female parents and cultivated plants as male parents. Crossing *T. monococcum* as female with *T. dicoccum*, *T. durum* and *T. aestivum* did not result in seed set. The analysis done on these crosses to investigate the cause for failure revealed that it could be due to post-fertilization problems.

Key words : *T. monococcum*, interspecific hybridization, NP200, MACS2846, Agra local, post-fertilization barrier.