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Genetic Study Of Resistance To *Wheat Streak Mosaic Virus* In Winter Wheat Line CO960293-2

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Wheat streak mosaic (WSM) is an economically important disease in wheat (*Triticum aestivum* L.) in the Great Plains of North America. This disease is caused by *Wheat streak mosaic virus* (WSMV), which is vectored by the wheat curl mite (*Aceria tosichella* Keifer). The winter wheat line CO960293-2 is resistant to WSMV, but inheritance of the resistance has not been determined. In this study, a population consisting of 188 F_{2:3} families was developed from the cross CO960293-2 X TAM 111 for determination of inheritance of the resistance. Segregation among F_{2:3} families of host reactions to infection of WSMV isolate Sidney-81 indicated that the resistance in CO960293-2 is conferred by a single dominant gene. Gene introgression toward the susceptibility occurred in the population suggesting a minor gene in the moderately susceptible parent TAM 111. SSR markers are being used for molecular mapping of the gene. Due to a single dominant gene inheritance, the resistance in CO960293-2 can be easily transferred to adapted cultivars to protect wheat from WSM damage.