HYBRIDIZATION BETWEEN A HERBICIDE TOLERANT WHEAT VARIETY AND JOINTED GOATRGRASS IN THE CENTRAL GREAT PLAINS.

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Jointed goatgrass (JGG, *Aegilops cylindrica*) is a troublesome weed in wheat fields of the Central Great Plains. Wheat and JGG share the D genome, thus providing a basis for genetic exchange between the two species. Although wheat-JGG hybrids are known to occur in the Central Great Plains, the frequency of cross-pollination and the distance over which such crosses occur has not been reported for this region. We took advantage of a newly released wheat variety tolerant to the herbicide imazamox to estimate wheat-JGG cross-pollination between adjacent plants and between plants up to 6 m apart. JGG seed was collected, planted in flats, grown to the 2-leaf stage and sprayed with the recommended rate of imazamox. Survivors were sprayed a second time to confirm their herbicide tolerance, and the percent surviving plants was used as an estimate of cross-pollination. Results and implications of the study will be presented.

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