A modified protocol for haploid production in bread wheat. (C01-mujeebkazi112816-Poster)

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Abstract:

Haploid production in bread wheat via sexual crosses with Zea mays has developed into an efficient tool in addressing several research areas. The most significant and practical use is in wheat breeding. The wheat/maize haploid induction protocol has several crucial stages leading to significant variability in outputs for various working groups. This doubled haploid (DH) output variation is reflected in a global cost production range from dollars 5 to 60 (US currency) per DH with a majority cost being between 25 to 40. We have made several protocol changes to reduce the DH production costs and anticipate spring wheat DH costs to be about 5 per DH and 7.50 per DH for winter or facultative wheats very shortly. The subtle but critical protocol changes are elucidated and currently are yielding haploid embryo frequencies of 25 to 35%, regeneration levels of 90 to 100%, induced doubling from 90 to 100% across all bread wheat genotypes.

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