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Project Title: Mapping QTL for Type I and II FHB Resistance from CIMMYT Germplasm derived from a Synthetic Hexaploid.

PROJECT 2 ABSTRACT

Fusarium Head Blight (FHB) of wheat caused by the fungus *Fusarium graminearum* causes extensive yield and quality losses. The fungus produces a toxin called DON. Producing grain with low DON is the ultimate goal for of controlling FHB. Host resistance is the foundation of an effective control program. There are multiple mechanisms of resistance. Resistance to FHB infection (Type I) and spread (Type II) have been identified and are controlled by multiple genes. Resistance to accumulation of DON (RDA) has been postulated but have yet to be confirmed to exist independently of Type I and II mechanisms. A combination of mechanism and unique genes is required to develop cultivars that will have low DON. Our Objective is to identify unique genes for Type I and II FHB resistance from CIMMYT germplasm derived from a synthetic hexaploid. This will be done by QTL mapping.