3. <u>Reaction of cytoplasmic male sterile plants to Gibberella zeae and</u> <u>Ustilago zeae</u>

Employing a split plot design, a highly significant difference of stalk rot incidence was obtained between M-4 plants inoculated with a gravity-flow barrel inoculator as compared to uninoculated plants. No significant difference was obtained between male-sterile and fertile plants.

In a comparison involving limited data, no significant difference was obtained between sterile and fertile plants of Oh 51A for reaction of the stalk proper to Ustilago zeae. However, a highly significant difference was obtained for the tassel region alone, fertile plants being considerably more smut susceptible than steriles. It is suggested that the greater resistance in the tassel region of sterile plants is due to the morphology inherently associated with the sterile condition.

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