

The Response of Single Crosses to Inoculation with Maize Lethal Necrosis

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Abstract

Small scale farmers in Kenya live largely subsistence lives in which maize is by far the most important staple food commodity. A survey was carried out in Naivasha and Bomet to identify MLN resistant single cross varieties grown under high disease pressure. Data was collected on plant stand count and yield. MLN disease severity and MLN disease incidence was based on symptoms and diagnostic tests. Data on disease frequency and intensity was recorded at 3 weeks intervals after planting until the end of the grain filling period. Disease rate showed significant differences between Naivasha and Bomet. Naivasha had the highest disease incidence averaging over 40% while Bomet had the least incidence. Disease severity was also significantly different at $\alpha=0.05$ between Naivasha and Bomet. It is concluded that MLN is still a persistent problem with high incidence associated with growing susceptible varieties, recycling hybrid seed and presence of alternative hosts for insect vectors. Breeding for disease resistance hybrids should incorporate farmer desired characteristics including high yield and high maturity. Development of resistant varieties is a crucial strategy to ensure safe production of maize in the region.

Key Words: Maize Lethal Necrosis, Susceptible, Resistant, Varieties.