1. RESPONSE OF SPRING AND WINTER BARLEY TO PYRENOPHORA TERES UNDER HIGH AND MEDIUM ALTITUDE ZONES OF KENYA

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ABSTRACT

Net blotch caused by Pyrenophora teres is one of the most destructive foliar diseases of barley (Hordeum vulgare) in the world, Kenya included. Frequent evolution of net blotch pathotypes, continuous overcoming of resistance and changes in environmental factors require screening of advanced barley genotypes to identify more sources of resistance. Sixteen advanced barley genotypes, two susceptible, and two resistant checks were screened to evaluate their reaction to net blotch at high altitude (Mau-Narok) and medium altitude (University of Eldoret) zones. Disease assessment was done on a 0-9 severity scale. Foliar and ear infection data were subjected to analysis of variance on Genstat version 12. Seedling and adult plant resistance data was presented on graphs. Varied tolerant and susceptible responses based on sites, altitudes and growth stages were observed. Genotype Cerise Laurel recorded low disease severity while Sabini and Karne had highest disease severity across all sites. Other groups of genotypes exhibited moderate resistant trait. Six row barley types had the highest ear infection. Expression of severity to foliar infection varied based on growth stages, genetic makeup and prevailing environmental conditions.

Key words: Pyrenophora teres, foliar infection, ear infection, severity, growth stages