## Abstract:

The causal agent of Turcicum leaf blight Exserohilum turcicum was isolated from infected maize samples collected during a survey in seven districts representing the main maize growing areas of Kenya. The cultural variability of the isolates was assessed in different types of media, temperatures and light conditions. Growth rates were measured at two-day intervals from the second day up to the sixteenth day. Potato Dextrose Agar, Leaf Decoction Agar, Malt Extract Agar and V8 juice Agar were the four types of media used at continuous light, continuous darkness and alternating 12 hours of light and darkness. Temperatures ranged from 5oC, 10oC, 15oC, 20oC, 25oC, 30oC, and 35oC up to 40oC. Disease prevalence in six out of the seven districts was 100% while it was 90% in Nakuru district. All the cultivars grown by farmers were susceptible with disease incidence and severity ranging from 10% to 90% and 0.11 to 1.54 respectively. Agro-ecological zones with moderate temperatures accompanied by reliable rainfall recorded higher disease incidence and severity than those zones characterized by dry conditions with low rainfall levels. Isolates from different agro-ecological zones showed variation in morphology, pigmentation, growth rate and sporulation rate in different media. The different light regimes had significant effect on the growth rate and sporulation of E. turcicum isolates. The type of media and incubation temperatures had a significant effect on the growth rate of different isolates. The optimum temperature was 25oC and only one isolate had minimal growth below 100C and no growth was observed in all the isolates at 400C. This study shows that E. turcicum has a wide distribution and isolates from different areas vary in cultural characteristics and parasitic fitness with isolates from the same locality showing less variation.