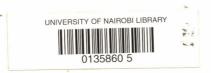
HALO BLIGHT OF BEANS (PHASEOLUS VULGARIS L.): DISEASE SYMPTOMATOLOGY AND RESISTANCE TO PSEUDOMONAS PHASEOLICOLA (BURK) DOWS

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SUMMARY

Halo blight of beans caused by <u>Pseudomonas</u>

phaseolicola has been found to be one of the most important

diseases of beans (19). It was found to be widely

distributed in Kenya and its attack on beans in the

early stages resulted in very low yields.

Identification of halo blight was very clear at its

initial stages of attack when it formed characteristic

halos on leaves of susceptible bean varieties.

Isolates of \underline{P} . phaseolicola were obtained from diseased specimens collected from 12 bean growing districts. It was found that pure cultures of this bacterium could be obtained from fresh leaf lesions after 48 hours at 20°C on nutrient agar.

Resistant bean varieties reacted mainly with necrotic spots and partial chlorosis to

P. phaseolicolarace 2. Large water-soaked lesions and entire chlorosis formed the main symptoms on leaves of susceptible varieties.

Dipping peeled bean seeds in a suspension of $\underline{P} \cdot \underline{phaseolicola}$ has been found to be the most convenient method of inoculating beans in this study.

Races 1 and 2 were both found to exist in Kenya.

Out of 30 isolates 7 belonged to race 1 while 23 were of race 2. The latter was more frequent and caused severe drooping of primary leaves in Red Mexican Ul 3 seedlings-

Resistance to \underline{P} . phaseolicola race 2 in GLP 16 and GLP x92 could be governed by one recessive gene. A ratio of l(Resistant) to 3(Susceptible) was obtained in the F_2 seedlings from crosses between three susceptible varieties and the two resistant ones mentioned above.