

Abstract:

Common bean (*Phaseolus vulgaris* L.) is the most important food legume among the pulses. It is a cheap source of protein, especially in Sub-Saharan Africa. However, bean production is constrained by bacterial diseases, of which common bacterial blight (*Xanthomonas axonopodis* p.v. *phaseoli*) is prevalent in Africa. The objective of this study was to transfer resistance to common bacterial blight and determine its inheritance in yellow beans. Sources of resistance were CIAT lines, Wilk 2 and VAX 6, which were crossed with susceptible Lusaka yellow and Pembla. The parents, F1, F2 and backcross progenies were inoculated with *X. axonopodis* and the resulting blight severity determined. Quantitative traits, including days to flowering, number of pods, and seed yield were also determined. The F1 and backcrosses to the resistant parents were all resistant, while the F2 and backcrosses to the susceptible parents segregated in 3:1 and 1:1 ratios, respectively. Additive genetic effects were observed in quantitative traits like days to flowering, plant height, days to maturity and yield. Therefore, resistance to common bacterial blight is controlled by a single dominant gene. The resistant parents Wilk 2 and VAX 6 could be used to improve bean varieties that are susceptible to common bacterial blight.