

## Effect of root knot nematode on growth and agronomic traits of *Hibiscus cannabinus* L. varieties

### ABSTRACT

The purpose of the current study was to determine the effect of root-knot nematode infection on the growth of kenaf. Seeds of sixteen (16) varieties of kenaf, comprising of eight from Australia, three local and five accessions from Bangladesh were planted under controlled condition and inoculated with four level of 0, 1000, 5000 and 10000 RKN eggs per plant. The growth parameters of height, stalk diameter and number of node of plants were measured at interval of 30, 60, 90 and 120 days after planting. The results of this investigation showed that all kenaf plant cultivars studied here, differed in growth parameters ( $P= 0.05$ ) both in the absence and presence of nematode infection. *M. incognita* race 1 was found that can infect all of these cultivars. The damage due to nematode; however; differed based on cultivar, level of inoculation and month of growth. Reduction of plant height and stalk diameter was observed in all inoculated varieties. Number of internode, however; was increased instead. In different growing time, the values for these parameters were shown to be different as a function of growing age and nematode infection. When infected with RKN, a superiority of varieties KK60 (M), G4 (AUST) and entry 3740 concerning to others were observed for height, stalk diameter and internode respectively. The growth parameters of resistant varieties treated with RKN was significantly better over the time as compared to the susceptible one.

**Keyword:** Kenaf; Root knot nematode; Growth