MANAGEMENT PRACTICES TO CONTROL PREMATURE SENESCENCE IN BT COTTON

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Abstract

Field trail was conducted to investigate the effect of squares and fruiting branches removal under different levels of potassium fertilizer to measure premature senescence of Bt cotton ant students' Farm, University of Agriculture Faisalabad, during 2011 and 2012. Experiment was laid out in a randomized complete block design (RCBD) with factorial arrangement using three replications. Experiment comprised of Factor A: (square and fruiting branch removal) F_1: no fruiting branch removal, F_2: removal of first fruiting branch, F_3: removal of first and second fruiting branch, F_4: removal of al squares from first fruiting branch, F_5: removal of all squares from first and second fruiting branch; and Factor B: (potassium rates) K_1: 50 kg ha^{-1}, K_2: 100 kg ha^{-1} and K_3: 150 kg ha^{-1}. Standard procedures were adopted for recording data for number of node above white flower, node above crack boll, plant height (at squaring, physiological cut-out and at maturity stage) and nitrogen percentage in leaves (at physiologically cutout stage). More node above white flower were recorded in F_5, followed by F_3, while minimum was recorded in F_1. Among potassium level maximum node above white flower were recorded in K_3 followed by K_2 and K_1 during both year of study. Plant height recorded at physiologically cut-out stage showed that plants gained more height with removal of all squares from first and second fruiting branches with maximum level of potassium application and less plant height was recorded with no fruiting branch removal with minimum potassium application, similar trend was recorded when plant height was measured at full maturity stage during both years of study. Lower leaf N percentage was recorded in K_1 as compared to K_2 and K_3. In conclusion early removal of squares/ fruiting branches along with higher potassium dose will help in delaying canopy senescence in Bt cotton.