

3rd International Conference on **Agriculture & Horticulture** October 27-29, 2014 Hyderabad International Convention Centre, India

Studies on correlation among the quantitative traits associated with shoot fly resistance in sorghum

R B Ghorade, V V Kalpande, C V Sonone, V U Sonalkar, S N Kale and S A Bhongle Dr. Panjabrao Deshmukh Krishi Vidyapeeth, India

Shoot fly is the major pest of kharif sorghum. Present study consisted of thirty derived lines of sorghum and these lines have been derived from involvement of at least one shoot fly resistant parent in their crossing programme. The study was undertaken at Sorghum Research Unit, Dr. PDKV, Akola. Dead heart count (%) exhibited positive significant association with number of eggs/ plant (0.660**) and chlorophyll content (mg/g) (0.443**), this indicated that less number of eggs/plant and low chlorophyll content will be helpful in reducing the dead heart count. Negative association was observed between the characters dead heart count and the recovery of the infested plant (%) (-0.693**) indicating that more recovery of the infested plant (%) will reduce the dead heart count (%).Number of eggs per plant has shown positive and significant correlation with chlorophyll content (mg/g) (0.454**) and total sugar % (0.324*) indicating more number of egg of shoot fly on the plants with more chlorophyll content and more total sugar %. Another character trichome density/mm2 has exhibited positive correlation with % recovery of infested plant (0.471**) which underlined the significant association with % recovery of infested plant (0.647**). It is clear that plants with more chlorophyll content have more number of eggs of shoot fly which ultimately reduces the % recovery of infested plant. Percent reducing sugar and percent total sugar have recorded negative and significant correlation with % recovery of infested plant, Percent reducing sugar and percent total sugar have recorded negative and significant correlation with % recovery of infested plant which indicated that more sugar content is favourable for the increased shoot fly infestation in sorghum.

akola@sorghum.res.in