

EFFECT OF PLANTING GEOMETRY AND INTERCROPPING BASED STRATEGY ON PRODUCTIVITY AND FALL ARMYWORM MANAGEMENT IN WINTER MAIZE (*ZEA MAYS* L.)

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Received-04.10.2021, Revised-21.10.2021, Accepted-28.10.2021

Abstract: A field experiment to explore the potential of maize and legume based intercropping systems under different treatments conducted during *Rabi* season of 2020-21 to evaluate the effect of eight treatments via. maize sole (70 x20 cm), maize + fenugreek (1:1), maize + coriander (1:1), maize + garlic (1:1), maize sole (50/90 cm), paired row maize + fenugreek (2:2) (50/90 cm), paired row maize + coriander (2:2) (50/90 cm) and paired row maize + garlic (2:2) (50/90 cm) on productivity and fall army worm management which were laid out in factorial block design with 3 replications. Row arrangement system significantly influenced the growth and yield of maize and paired row system was found superior over regular row. All the intercropping systems significantly influenced growth and yield attributing features of maize and where maize + coriander intercropping was superior over maize + fenugreek, maize + garlic and sole maize for yield attributes and cob and grain yield of maize. While, maximum system productivity was obtained in paired row which was found significantly superior over regular row and maize + garlic intercropping was significantly superior over maize + fenugreek, maize + coriander and sole maize. The lowest FAW damage was also recorded with the paired row over the regular row. The maize + coriander intercropping system recorded minimum FAW damage over the rest of the intercropping system. Paired row + garlic had higher net return and B: C ratio found statistically comparable with paired row + fenugreek.

Keywords: Maize, Intercropping, System productivity, B:C ratio, Fall army worm

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