

Studies on the allelopathic potential of various crop biomass for controlling weeds in wheat crop

V.K. VERMA, SANJAI CHAUDHRY, VISHRAM SINGH, A.K. SRIVASTAVA, MOHD. ASLAM AND SOHANVEER SINGH

Department of Agronomy, Chandra Shekhar Azad University of Agriculture and Technology, KANPUR (U.P.) INDIA

A field experiment was conducted during *Rabi* season of 2010-11 at Students' Instructional Farm of C.S Azad University of Agriculture and Technology, Kanpur. six crop biomass *viz.*, mustard, field pea, sorghum, maize, rice and wheat straws were incorporated in soil before sowing and their allelopathic potential was compared with weed free and unweeded treatments and analysed on germination and growth of weeds in wheat crop. The crop growth parameters, yield attributes, yield and economics of wheat were also computed. The results obtained shown that mustard straw, sorghum straw and maize straw were more effective to suppress weed germination and growth. The application of mustard straw before sowing registered maximum grain yield of wheat (42.0 q/ha) followed by sorghum straw (41.33 q/ha), maize straw (40.66 q/ha), field pea straw (38.75 q/ha), wheat straw (35.83 q/ha), paddy straw (35.66 q/ha) and minimum grain yield (33.58 q/ha) was noticed in unweeded control treatment. The incorporation of mustard straw, sorghum straw and maize straw registered 25.07 per cent, 23.03 per cent and 21.08 per cent, respectively more grain yield than unweeded control treatment. Allowing weed growth though out crop growth period in unweeded control treatment caused on an average 31.26 per cent reduction in grain yield of wheat *i.e.* 44.08 q/ha of wheat variety UP 2338 in control in plain zone of Uttar Pradesh.

Key words : Allelopathic, Crop biomass, Weeds, Wheat

How to cite this paper : Verma, V.K., Chaudhry, Sanjai, Singh, Vishram, Srivastava, A.K., Aslam, Mohd. and Singh, Sohanveer (2014). Studies on the allelopathic potential of various crop biomass for controlling weeds in wheat crop . *Asian J. Bio. Sci.*, 9 (1) : 80-83.