



Effect of potassium application on its transformation and use efficiency under soybean – wheat cropping system

B.P. MEENA*, S.D. BILLORE¹, A.K. VYAS², H.K. SUMERIYA³ AND K.K. MEENA
Department of Agronomy, Institute of Agricultural Sciences, Bundelkhand University, JHANSI (U.P.) INDIA

Abstract : A field experiment was conducted at Instructional Farm, Directorate of Soybean Research (DSR), Indore M.P. during 2006-07 and 2007-08 to study effect of potassium application on its transformation and use efficiency under soybean – wheat cropping system. Data revealed that normal sowing date of soybean and wheat recorded significantly higher seed and straw yield (2544 and 2481 and 4908 and 7284 kg ha⁻¹, respectively). Total K uptake by soybean-wheat system and potassium harvest index also higher over late sowing date of both the crops. With respect to K levels, application of 49.80 kg K₂O the recorded maximum yield of soybean and wheat, K uptake by soybean, wheat and system and potassium harvest index. The highest agronomic and physiological K use efficiency was associated with 33.2 kg K/ha. Maximum partial factor productivity, recovery efficiency and physiological K use efficiency was recorded with JS 335. Among soybean genotypes, JS 9305 showed its superiority in case of agronomic K use efficiency, internal K use efficiency and recorded higher yield, system, total K uptake and potassium harvest index over control.

Key Words : Potassium level, Seed, Straw, Yield, Soybean, Wheat, Genotypes, Potassium transformation, K use efficiency

View Point Article : Meena, B.P., Billore, S.D., Vyas, A.K., Sumeriya, H.K. and Meena, K.K. (2013). Effect of potassium application on its transformation and use efficiency under soybean – wheat cropping system. *Internat. J. agric. Sci.*, **9**(2): 692-694.

Article History : Received : 20.10.2012; Revised : 07.04.2013; Accepted : 08.05.2013

*** Author for correspondence**

¹Directorate of Soybean Research, INDORE (M.P.) INDIA

²Division of Agronomy, I.A.R.I., NEW DELHI, INDIA

³Department of Agronomy, Rajasthan College of Agriculture, UDAIPUR (RAJASTHAN) INDIA