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RESEARCH PAPER

Comparative study of new molecules of herbicides on growth and weed control in soybean

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Abstract : The present investigation was carried out during *Kharif* season of 2012 at the Research cum Instructional Farm, Indira Gandhi Krishi Vishwavidyalaya, Raipur (C.G.). The experiment comprised of eight weed management practices *viz.*, W_1- Sulfentrazone @ 300 g a.i. ha^{-1} as PE, W_2- Sulfentrazone @ 360 g a.i. ha^{-1} as PE, W_3- Pendimethalin @ 1 kg a.i. ha^{-1} as PE, W_4- Metribuzin @ 750 g a.i. ha^{-1} as PE, W_5- Imazethapyr @ 100 g a.i. ha^{-1} as PoE, W_6- Odyssy 70 WG (imazethapyr 35% + imazamox 35%) @ 100 g a.i. ha^{-1} as PoE, W_7- Hand weeding twice at 20 and 40 DAS and W_8- Untreated control. Experiment was laid out in Randomized Block Design with four replications. The soybean variety JS 97-52 was grown as test crop. The result of the experiment indicated that the growth characters like plant height, number of branches and dry matter production was maximum under hand weeding twice at 20 and 40 DAS which was found comparable with sulfentrazone @ 360 g a.i. ha^{-1} as PE, sulfentrazone @ 300 g a.i. ha^{-1} as PE and imazethapyr @ 100 g a.i. ha^{-1} as PoE. These treatments also showed minimum weed index. Hand weeding twice at 20 and 40 DAS, sulfentrazone @ 360 g a.i. ha^{-1} as PE and imazethapyr @ 100 g a.i. ha^{-1} as PoE were also gave highest weed control efficiency.

Key Words : Soybean, Growth, Weed control efficiency, Weed index

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