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Prospects of herbicide usage to overcome weed menace in soybean ecosystem in India

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In India soybean is mainly cultivated under rain fed situation. The area under soybean during 1996 was 0.20 mha however, the crop covered an area of about 11.00 mha during 2014. Now, soybean is cultivated as an oilseed crop in India. One of the production constraints in soybean cultivation is weed menace. The yield loss due to weeds in soybean estimated 25-30%. Investigations were carried out to identify safe pre and post emergent herbicide usage against weeds in soybean from 2009 to 2015 at the Main Agricultural Research Station, University of Agricultural Sciences, Dharwad. The pooled data revealed that significantly higher soybean yield was recorded with the application of herbicides; Imazethapyr @ 100 g ai/ha (1761 kg/ha) as post emergent, Diclosulam 84 WDG @ 22 g ai/ha (1750 kg/ha) as pre-emergent, Propaquizofop @ 75 g ai/ha (1687 kg/ha) as post emergent, Pendimethalin 30EC @ 1 kg ai/ha (1684 kg/ha) as pre-emergent and Haloxyfop 10% SL @ 75 g ai/ha (1648 kg/ha) as post emergent and Alachlor 50 EC @ 1.5 kg ai/ha (1683 kg/ha) as pre-emergent compared to Chlorimuron @ 37.5 kg ai/ha (1373 kg/ha) and Chlorimuron @ 37.5 g ai/ha (1373 kg/ha) and Quizalofop-e-ethyl 50 g ai/ha (1078 kg/ha) and weedy check (820 kg/ha) and were on par with two hand weeding (1803 kg/ha).