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RESEARCH ARTICLE

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## Response of chemical weed management in maize and cowpea intercropping system grown for quality fodder in Eastern Uttar Pradesh

SAURABH VERMA, D.K. VERMA, S.P. GIRI, KUMUD SINGH, R.B. SINGH AND ALOK PANDEY

**ABSTRACT :** Field experiment was carried out during *Kharif* 2005 and 2006 using different herbicides to study the response of weed control treatments in maize and cowpea intercropping system for quality fodder. Pre-emergence application of alachlor, metolachlor and pendimethalin @ 1.00 and 1.50 kg a.i./ha each and post emergence application of imazethapyr @ 0.10 and 0.15 kg a.i./ha at 20 days of crop sown combined with weedy and weed-free conditions. All the herbicides at each dose effectively controlled the weeds and reduced its dry weight as compared to weedy condition. Alachlor, metolachlor and pendimethalin at 1.5 kg a.i./ha and pendimethalin at 1.0 kg a.i./ha significantly reduced the population and dry weight of total weeds over the other rates of herbicides. Pendimethalin @ 1.5 kg/ha gave maximum green forage and dry matter yield (448 and 102 q/ha) among herbicide treated plots which were at par with that of weed free condition (466 and 109 q/ha). All the herbicides at higher doses followed the same trend in reduction of dry matter accumulation of weeds and increased in green forage and dry matter yield of maize and cowpea mixed fodder over control. Similarly, with increase in the dose of herbicide the crude protein, nitrogen uptake and DM (dry matter) per cent increased significantly.

**KEY WORDS :** Herbicides, Intercropping, Maize, Cowpea, Weed control efficiency, Weed index

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MEMBERS OF RESEARCH FORUM

**Address of the Correspondence :** SAURABH VERMA, Krishi Vigyan Kendra (N.D.U.A.&T.) FAIZABAD (U.P.) INDIA

**Address of the Coopted Authors :** D.K. VERMA, S.P. GIRI, KUMUD SINGH, R.B. SINGH AND ALOK PANDEY, Crop Research Station (N.D.U.A.&T.) Masodha, FAIZABAD (U.P.) INDIA