



## Management of weeds in fodder maize by tank-mix application of pre and post emergence herbicides

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### Abstract

A field experiment was conducted at Indira Gandhi Krishi Vishwavidyalaya, Raipur during *kharif* 2017-2019 to record the effect of tank-mix herbicides on weed control in fodder maize. Results showed that the lowest weed density and dry weight was recorded in hand weeding twice at 20 and 40 days after sowing (DAS) which was at par with tank-mix combination of topramezone 0.035 kg a.i. ha<sup>-1</sup> + atrazine 0.25 kg a.i. ha<sup>-1</sup> at 20 DAS and pre-emergence application of atrazine 0.75 kg a.i. ha<sup>-1</sup> + pendimethalin 0.75 kg a.i. ha<sup>-1</sup>. These herbicides also recorded higher weed control efficiency (80-90%) and the lowest weed index (3-5%). Highest green and dry fodder yields were also obtained with hand weeding which was at par with tank-mixed combination of topramezone + atrazine and pre-emergence atrazine + pendimethalin. Similarly, crude protein yield was also highest under these combinations. Among herbicides, the highest net returns (Rs 46094 ha<sup>-1</sup>) and benefit: cost ratio (2.91) were obtained with pre-emergence application of atrazine 0.75 kg a.i. ha<sup>-1</sup>+ pendimethalin 0.75 kg a.i. ha<sup>-1</sup> and it was at par with topramezone 0.035 kg a.i. ha<sup>-1</sup> + atrazine 0.25 kg a.i. ha<sup>-1</sup>. Overall, this study indicated that tank-mixed herbicide application could be an alternate method to costly hand weeding and sole application of herbicides in fodder maize.

**Keywords:** Economic return, Fodder maize, Fodder yield, Herbicides, Weed control efficiency