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# Effect of weed control methods on growth and yield of groundnut

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**ABSTRACT** : A field experiment was conducted during *Kharif* 2011 to study the effect of weed control methods on growth and yield of groundnut (*Arachis hypogaea* L.) at Agronomy Section, SHIATS, Allahabad (U. P.). The experiment was laid out in Randomized Block Design (RBD). Ten treatment combinations were tested in three replications. The experiment comprised as T<sub>1</sub> - control, T<sub>2</sub> -weed free, T<sub>3</sub> -one hoeing at 21 DAS, T<sub>4</sub> -two hoeing at 21 and 45 DAS, T<sub>5</sub> -oxyfluorfen 23.5 EC @ 0.2kg ha<sup>-1</sup> at 2 DAS, T<sub>6</sub> -oxyfluorfen 23.5 EC @ 0.2 kg ha<sup>-1</sup> at 2 DAS + one hoeing at 45 DAS, T<sub>7</sub> -pendimethalin 30 EC @ 1 kg ha<sup>-1</sup> at 2 DAS, T<sub>8</sub> -pendimethalin 30 EC @ 1 kg ha<sup>-1</sup> at 2 DAS + one hoeing at 45 DAS, T<sub>9</sub> -imazethapyr 10 per cent SL @ 100 g ha<sup>-1</sup> at 14 DAS and T<sub>10</sub> -imazethapyr 10 per cent SL @ 100 g ha<sup>-1</sup> at 14 DAS + one hoeing at 45 DAS. It is evident from the results that, the treatment T<sub>8</sub> -pendimethalin @ 1 kg ha<sup>-1</sup> at 2 DAS + 1 hoeing at 45DAS was proved to be significantly superior than other treatments and control in respect of plant height, plant dry weight accumulation, number of branches per plant<sup>-1</sup>, number of pods per plant, pod yield (t ha<sup>-1</sup>), number of kernels per pod, kernel yield (t ha<sup>-1</sup>), weed index, weed control efficiency as well as lowest weed population (No./0.25m<sup>2</sup>) and weed dry weight (g/0.25m<sup>2</sup>). Although the values obtained in the treatment T<sub>4</sub> -two control hoeing at 21 and 45 DAS, T<sub>6</sub> -oxyfluorfen 23.5 EC at 2 DAS + 1 hoeing at 45 DAS and T<sub>10</sub> -imazethapyr 10 per cent SL @ 100 g ha<sup>-1</sup> at 14 DAS + 45 DAS were found to be statistically at par to that obtained in the treatment T<sub>8</sub> and the values were found to be significantly higher than all other weed management treatments.

**KEY WORDS** : Groundnut, Weed control methods, Chemical, Mechanical, Growth

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