



## Effect of weed management on yield, quality and weed parameters in dill seed (*Anethum graveolens* L.)

S.K. MEENA, L.J. DESAI<sup>1</sup>, SHAUKAT ALI\* AND SHIVPRAKASH NAGAR

Department of Agronomy, C.P. College of Agriculture, S.D. Agricultural University, SARDARKRUSHINAGAR (GUJARAT) INDIA (Email : shaukatagri@gmail.com)

**Abstract :** An experiment was conducted on loamy sand soil of Instructional Farm, Department of Agronomy, C.P. College of Agriculture, S.D. Agricultural University, Sardarkrushinagar (Gujarat) during the *Rabi* season of 2011-12 on weed control study in dill seed (*Anethum graveolens* L.) in Randomized Block Design (RBD) with four replications and 10 weed control treatments comprised *viz.*, T<sub>1</sub> : Pendimethalin @ 0.5 kg ha<sup>-1</sup> PE, T<sub>2</sub> : Pendimethalin @ 1.0 kg ha<sup>-1</sup> PE, T<sub>3</sub> : Pendimethalin @ 0.5 kg ha<sup>-1</sup> PE + one hand weeding after 30 DAS, T<sub>4</sub> : oxadiargyl @ 50 g ha<sup>-1</sup> PoE at 20 DAS, T<sub>5</sub> : oxadiargyl @ 75 g ha<sup>-1</sup> PoE at 20 DAS, T<sub>6</sub> : Pendimethalin @ 0.5 kg ha<sup>-1</sup> PE + oxadiargyl @ 50 g ha<sup>-1</sup> PoE at 20 DAS, T<sub>7</sub> : Pendimethalin @ 0.5 kg ha<sup>-1</sup> PE + oxadiargyl @ 75 g ha<sup>-1</sup> PoE at 20 DAS, T<sub>8</sub> : Weed free, T<sub>9</sub> : Weedy check and T<sub>10</sub> : Farmers practice (One hand weeding + one interculturing at 30 DAS). Results indicated that significantly maximum grain yield of 1294 kg ha<sup>-1</sup> and stover yield of 2255 kg ha<sup>-1</sup> were recorded in the treatment weed free. The treatment involving weed free resulted in significantly highest oil content of (3.95 per cent) and oil yield (51.12 kg ha<sup>-1</sup>). Besides weed free condition, application of pendimethalin @ 0.5 kg ha<sup>-1</sup> (PE) + oxadiargyl @ 75 g ha<sup>-1</sup> PoE at 20 DAS was found more effective in reducing the weed population at periodically (*viz.*, grassy, broad leaved and sedges) and resulted in to lowest dry weight of weeds (18.86 g m<sup>-2</sup>), highest weed control efficiency (81.71 %) as well as lowest weed index (6.13 %). Treatment pendimethalin @ 0.5 kg ha<sup>-1</sup> (PE) + oxadiargyl @ 50 g ha<sup>-1</sup> PoE at 20 DAS was found equally effective with this respect.

**Key Words :** Dill seed, Grassy weeds, Broad leaved weeds, Sedge, Oil content, Oil yield, Protein content, Pre-emergence, Post-emergence, Pendimethalin, Oxadiargyl

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\* **Author for correspondence (Present Address)** : Department of Agronomy, AICRP-Integrated Farming Systems, S.D. Agricultural University, SARDARKRUSHINAGAR (GUJARAT) INDIA

<sup>1</sup>Department of Agronomy, N.M. College of Agriculture, Navsari Agricultural University, NAVSARI (GUJARAT) INDIA