



## Analysis of Herbicide Residues in Celery Seeds

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**Abstract:** The field experiment was conducted at the Research Farm, Department of Agronomy, PAU, Ludhiana, during *rabi* season 2008-09 to evaluate residues of different herbicides in celery crop at harvest. Three herbicides i.e. Pendimethalin 30 EC (Stomp) 0.5 kg, 0.75 kg and 1.0 kg ha<sup>-1</sup>, trifluralin 48 EC (Treflan) 0.75 kg, 1.0 kg and 1.25 kg ha<sup>-1</sup> and oxyfluorfen 23.5 EC (Goal) 0.15 kg, 0.17 kg and 0.20 kg ha<sup>-1</sup> were applied after transplanting. At harvest, the celery seeds were analyzed for herbicide residues by gas chromatography/mass spectrometry (GC/MS) and High Pressure Liquid Chromatography (HPLC). Calibration curve for pendimethalin, oxyfluorfen and trifluralin was linear in the range between 0.02 – 5 ppm. The average recovery percentage for standard solutions was found to be 75 %. Herbicides residue in celery seeds was below detectable limit (0.02 ppm). It is concluded that the use of pendimethalin, oxyfluorfen and trifluralin as weedicides in celery crop did not pose any health hazard.

**Key Words:** Celery, Oxyfluorfen, Pendimethalin, Residue, Trifluralin.

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