

NUTRIENT UPTAKE BY WEEDS AND PEA (*PISUM SATIVUM* L.) AS INFLUENCED BY DIFFERENT HERBICIDE COMBINATIONS

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Abstract: A field experiment was carried out during the winter season of 2012-13 and 2013-14 at Palampur to evolve an effective herbicide combination on nutrient depletion by weeds in pea (*Pisum sativum* L.). In the present study, pendimethalin 1000 g/ha fb HW (45 DAS) and pendimethalin 1000 g/ha (Pre)fb imazethapyr + imazamox 60 g/ha (45 DAS) resulted in significantly lower total weed dry weight over other herbicidal treatments. All the herbicide combinations were comparable to weed free in reducing the GR_w between 90-120 DAS. Pendimethalin 1000 g/ha fb HW (45 DAS), pendimethalin 1000 g/ha fb imazethapyr + imazamox 60 g/ha (45 DAS) were as effective as weed free in reducing NPK uptake by weeds. Weeds in weedy check removed 49.3 kg/ha N, 19.7 kg/ha P and 44.7 kg/ha K depriving thereby the crop for that much amount of nutrients. Most of the treatments were results in significantly higher crop dry matter accumulation. Significantly higher green pod yield and NPK uptake by crop were obtained in weed free, pendimethalin 1000 g/ha fb HW (45 DAS) and pendimethalin 1000 g/ha fb imazethapyr + imazamox 60 g/ha (45 DAS) treatments. Herbicide combinations in general were better than sole application of herbicides in effectively reducing the NPK uptake by weeds and increasing NPK uptake by crop.

Keywords: Hand weeding, Imazethapyr, Nutrient uptake, Peas, Pendimethalin

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