

Field Pea Response to Sequential Herbicides

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Summary

Field observations have led some producers to believe that field pea is more susceptible to injury from post-emergence application of *imazamox/imazethapyr* (Odyssey®) when the crop is seeded in fields treated in the previous season with *flucarbazone sodium* (Everest®). The objective of the trial was to determine if field pea planted into soil containing Everest residue is more susceptible to post-emergent herbicide injury. The trial was conducted in 2005 at the University of Saskatchewan Kernen Crop Research Farm and the Agriculture and Agri-Food Canada Scott Research Farm. In the fall of 2004 Everest was applied to the soil at 5 rates ranging from 33% to 200% of recommended rate. Peas were planted May 6 at Scott and May 16 at Saskatoon. Post-emergent applications of *metribuzin* (Sencor®), *sethoxydim* (Poast Ultra®) and Odyssey were applied to each of the Everest treated areas. Peas showed no chlorosis or growth reduction from the Everest residue prior to the post-emergent applications. 4-5 DAA visual injury >10 was observed when all post-emergent herbicides were applied to peas grown on Everest residue of 2X rate but not at lower Everest rates. 12-22 DAA there was no visual difference in injury to peas with any treatment applied over 0, 0.33X or 0.66X rates of Everest residue. Visual injury >10 was observed when all post-emergent herbicides were applied to peas grown on Everest residue of 1.33X or 2.0X rates. Injury from Odyssey was always slightly higher than the injury from other post-emergent herbicides. Pea yields were reduced only when Sencor, Poast Ultra or Odyssey was applied to peas that were grown on 2.0X rate of Everest residue. Since Everest soil residue levels in a field would normally be much less than the 30 gai/ha (1X rate), normal levels of Everest residues in soil should not affect a pea crop's response to these post-emergent herbicides.