

In Search of Selective Herbicides for Chickpea

F.A. Holm^{1*}, K.Sapsford^{1*}, E.Johnson², R. McVicar³, K. Kirkland⁴.

¹University of Saskatchewan, Saskatoon,SK;

²Agriculture and Agri-Food Canada, Scott, SK;

³Saskatchewan Agriculture and Food, Regina, SK; ⁴Kirkland Crop Tech, Vermilion, AB.

*51 Campus Dr. Saskatoon, SK, S7K 5A8 ph: 306-966-5857 fax: 306-966-5015,
rick.holm@usask.ca

Chickpea is a poor competitor with weeds and is more sensitive to many herbicides than other pulse crops such as field pea and lentil. This is especially true in the case of post-emergence herbicides for the control of broadleaved weeds. Therefore, herbicide choices for broadleaved weed control are limited and hard to control broadleaved species can cause significant problems for chickpea producers. To date, relatively few herbicides have been registered on chickpea.

Chickpea has good tolerance to both trifluralin (Treflan[®], Rival[®], etc.) and to ethalfluralin (Edge[®]). However at this time none of these products are registered for use on chickpea. We do not know if or when Edge[®] will be registered for use on this crop.

Chickpea has excellent tolerance to Group 1 herbicides for grassy weed control. Poast[®] and Select[®] are registered for use on both types of chickpea.

Sencor[®] is the only post-emergence product that is registered for control of broadleaved weeds in chickpea. Both types of chickpea are considerably more sensitive to this herbicide than lentil.

Early application is critical in order to minimize crop injury. Late application of Sencor[®] results in extensive leaf and stem burn, delayed maturity and often reduced yield. Tank-mixes of Sencor[®] with a post-emergence herbicide for grass control are not registered and are not recommended. The optimum timing of the two products does not coincide and a tank-mix of the two will result in significantly more crop damage than will result from Sencor[®] applied alone. Apply the Sencor[®] first and then apply the grass killer after the crop shows significant recovery from any Sencor[®] injury.

Post-emergence applications of Odyssey[®] or Pursuit[®], even at reduced rates, have resulted in severe injury to chickpeas that has delayed maturity and, in some cases, reduced yield. Some growers have used an unregistered tank-mix of glyphosate + 25% to 50% of the recommended rate of Pursuit[®] for their direct-seeding burn-off treatment. This treatment has shown mixed results in research trials. When light rain falls within a few days of application, residual weed control from the Pursuit[®] has often been quite good. However, if no rain falls for an extended period after spraying, weeds can emerge through the herbicide. At 25% of the recommended rate, weed control has not been satisfactory in the majority of cases in our trials. At 50% rate there has been excessive crop injury. Growers should be reminded that Pursuit[®] is not registered for use on chickpea and not on any other crop in the area where chickpea is grown.

We are presently looking at other products and different uses of existing herbicides in the hopes that we will find a better broadleaf weed control package for chickpea than we have registered today.