



Confusion about False Chinch Bug Thresholds!

Tom A. Royer and Kris Giles

- False chinch bug thresholds in canola are 5-10 per head (20-30 per plant) at flowering, and 10-20 per head (40-50 per plant) at early seed pod stage.
- If a field requires treatment, use as much water carrier as possible and apply the insecticide in the evening to avoid honeybee loss.

We have observed, and received reports of adult false chinch bugs attacking canola. The term “clouds” of adults is being used to describe the infestations. This insect can be a problem during dry springs like we are currently experiencing. They are likely migrating into canola from wild mustards and other cruciferous weeds that are drying up at this time. They love canola, and they also love dry weather.

After talking to Josh Bushong, Area Extension canola specialist, we realized there is a discrepancy in the thresholds listed in CR-7667, Management of Insect and Mite pests in Canola, and the Great Plains Canola Handbook. According to the GP Canola Handbook the suggested threshold for false chinch bug in canola is 5-10 per head when plants start to bloom and 10-20 per head during early pod set. In CR-7667, we listed the threshold of 20-30 per head at flowering, and 40-50 per head during pod set.

Why the difference? The answer involves the research that has been conducted on the effects of false chinch bugs on canola and the ability of a person to accurately sample canola for false chinch bug adults.

The thresholds we list in CR-7667 and in the Great Plains Canola Handbook are both based on an artificial infestation study conducted in 2001-2002 by Dr. Whitney Cranshaw and his graduate student at Colorado State: *Demirel, N and W. Cranshaw 2006. Plant yield response to artificial infestation of the false chinch bug, Nysius raphanus, confined on spring canola. Phytoparasitica 34: 477-485.*

In that study, the authors confined the false chinch bugs ONLY on the head and concluded that the action (treatment) thresholds should be 5-10 per head (or 25 per plant) at flowering, and 10-20 per head (40-80 per plant) during early pod fill.

The discrepancy has to do with the ability to count numbers “per head”. If false chinch bugs only fed on the head and were not able to fly, it would be easy to count numbers per head. However; they don’t all feed on the head AND they often fly when disturbed, making it difficult to get an accurate count of numbers per head.

In CR-7667, we simply use the threshold that was suggested per plant, but list it as per head because many will fly before you have a chance to actually count them on a head. In addition, false chinch bugs typically occur in “hot spots” within a field, so if a field is not thoroughly scouted, the numbers that are actually present would be skewed, making it seem as if higher numbers were actually present.

SO: If you thoroughly scout the field and can count actual numbers feeding on a head only, the threshold is 5-10 per head at flowering, and 10-20 per head at pod fill. If you can't thoroughly scout the field to get an accurate count of numbers feeding only on the head, a count of 20-30 per head (plant) at flowering and 40-50 per head (plant) at early pod fill will work. Both recommendations are based on the same research.

The bottom line is that at present, if you see “clouds” of false chinch bugs IT IS TIME TO SPRAY!

One additional caution: Because of the dry weather, false chinch bugs are difficult to control. We have seen control problems in alfalfa due to inadequate carrier volume. It is critical that fields be sprayed with as much water carrier as possible to obtain full coverage. For aerial applications, we recommend 5 gallons per acre to achieve the best control (I know, it is difficult to get a good profit margin at that gallonage, but if it saves a second trip onto the field it should be worth it). Please consider applying an insecticide in the evening when honey bees are not actively foraging to avoid killing them and notify any bee keepers before the application if they have hives nearby. Current recommendations for control of false chinch bugs in canola are listed in CR-7667, *Management of Insect and Mite Pests in Canola* which can be obtained online at <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-3045/CR-7667web2009.pdf>

Figure 1. False chinch bug (photo courtesy of the University of California Statewide IPM project).



