



# False Chinch Bug

## False Chinch Bugs

False chinch bugs, *Nysius raphanus* Howard, occur throughout Kansas. However, they rarely attack crop plants except soon after an herbicide application, which kills the weeds upon which they normally feed. This usually occurs in soybeans or sorghum, although these insects also attack cotton, canola, and corn plants. False chinch bugs are normally found in weedy pastures, fields, or other noncrop areas where they prefer to feed on plants in the mustard family, or on other winter annual weeds, if these cruciferous weeds are lacking. In canola production fields, nymphs can be found under decomposing wheat stubble during the day. As weeds begin to die and are no longer a viable food source, false chinch bugs migrate en masse to nearby succulent plants. If large numbers are present in or adjacent to agricultural crops, this mass migration can be cause for concern and is occasionally problematic.



Figure 1. False chinch bug adults



Figure 2. False chinch bug nymphs

False chinch bugs are often mistaken for chinch bugs, bigeyed bugs, and other similar-looking bugs in the Lygaeidae family of seed bugs. Adult false chinch bugs are gray or brownish, rather slender, and  $\frac{1}{8}$  to  $\frac{1}{6}$  inch in length (Figure 1). Like other Hemiptera, their forewings are partially thickened and partially membranous and when folded over the body, form a fairly well-defined 'X' at the back of the body. False chinch bug eggs have a somewhat pinkish hue and are deposited in cracks in the ground or around the base of host plants. The immatures (nymphs) are very small at first, but as they grow, they are a mottled brownish color with a darker head and thorax and sometimes orangeish spots on the abdomen (Figure 2). In contrast, adult chinch bugs are darker with white wings which are folded over their back, giving them the characteristic white 'X' marking. Chinch bug nymphs are orange or reddish in the early instars but gray during the

last instar, and nymphs have the distinct transverse white line in the middle of the body which is less distinct in later instars. The bigeyed bugs are wider bodied with a broad head and bulging eyes and do not occur in large masses because they are predators of other insects and mites.

## Biology

False chinch bugs overwinter around the base of host weeds or under plant residue. They can apparently overwinter as eggs, nymphs, or adults, but nymphs and adults are the most commonly observed stages, probably because they are much easier to find. These bugs become active with warming temperatures in late winter or early spring. Nymphs then develop into adults, mate and deposit eggs around the base of their weed hosts. Large populations can develop in these weedy areas and, as these weeds dry up or are sprayed with herbicides, the bugs migrate in large numbers to nearby more succulent hosts. In Kansas, false chinch bugs produce three or more generations per year.

## Damage: Crops

False chinch bugs, as all Lygaeidae, have piercing-sucking mouthparts. They feed by sucking juice from their host plant. Feeding activity often has little apparent effect on the plant or may result in a somewhat wilted appearance with no lasting damage (Figures 3 and 4). In some instances there have been large aggregations of bugs with no apparent feeding activity, or at least no noticeable effect on the plants. When false chinch bugs occur in aggregations of hundreds or thousands on a single plant or a few



Figure 3. Bugs gather on host plant.



Figure 4. Large numbers on a single plant can kill leaves or the entire plant.

plants (Figure 4), it can result in leaf death, wilting, and even plant death, especially if plants are already under heat or drought stress (Figure 5). This usually occurs only along fields that border weedy areas or in spots in crop fields where weedy areas existed.



Figure 5. Leaf wilting caused by chinch bug damage

### Damage: Gardens and Landscapes

As is the case with crop plants, when the natural host weeds dry up, false chinch bugs may migrate into homeowner's gardens and/or landscapes, where they can be a problem, or at the very least, a nuisance. Larger, healthier plants are normally able to withstand false chinch bug feeding. Generally more problematic than the actual feeding of these bugs on garden or landscape plants, is the actual numbers of bugs during a migration. These bugs can aggregate by the thousands on porches, sides of buildings, in swimming pools, etc. Because of their small size they are often able to enter homes and other buildings where they can be quite alarming to the residents.

### Management: Field Crops

False chinch bugs rarely occur uniformly throughout a crop field. Thus, the need for a field-wide insecticide application is rarely justified. Spot treatments in those areas where weeds are dead or dying and the bugs are moving to the crops, may be warranted. These mass migrations usually only last a few days, until the nymphs become adults. They then disperse to find new host plants and deposit eggs. If crops can withstand this compressed feeding period the problem will resolve itself and there will be no need for an insecticide. False chinch bugs are easily washed off crop plants and drowned. Often a timely thunderstorm will take care of the problem naturally. When insecticide application

is warranted, several are registered and effective. Used with proper volume of carrier to get the insecticide to where the bugs are feeding, they usually provide acceptable control.

### Management: Gardens and Landscapes

Few management options are available for false chinch bugs in gardens or landscapes, but most years none are needed. Keeping plants well watered will allow most to tolerate bug feeding. Mass migrations usually last a week or less, but if insecticide applications are deemed necessary, sprays applied in early morning when bugs are most active seem to provide best control. To prevent false chinch bugs from entering buildings, ensure all doors and windows have adequate seals. Bugs that do get indoors can be vacuumed or swept up and discarded.

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