

Cole Crops XXIII-8

Harlequin bugs

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Harlequin bugs can be a problem after mild winters, but low densities are unlikely to cause damage which will be regained economically by insecticides.

Identification (and life cycle/seasonal history)

Harlequin bugs are shield-shaped flat bugs, easily identified because of their bright, shiny black and red coloration. The triangular plate on the top of the thorax is black with a cross shaped mark of red in the center. Harlequin bugs smell bad at all life stages. Harlequin bugs overwinter mostly as adults in our area, hiding under crop residue and in other protected sites. They become active in mid-spring and begin to feed on wild crucifers. They move into crop stands by early summer, and begin to lay eggs on leaves. After hatching, harlequin bug nymphs usually remain on the same plant, feeding for about two months before becoming adults. Unless the weather remains unseasonably warm, only one generation occurs per growing season.

Plant response and Damage

Harlequin bugs feed by sucking sap from crucifers. If young plants are fed on, the growth is distorted and slowed, and the growing point may die. Plant tissue around the feeding sites often turn cloudy. Harlequin damage is more likely after mild winters.

Management Approaches

Cultural Control

Crop residue should be destroyed immediately after harvest to reduce local populations. Other cover, such as vegetation near field edges should be reduced to minimize overwintering success.

Host Plant Resistance

The cabbage varieties Copenhagen Market 86, Headstart, Savoy Perfection Drumhead and Early Jersey Wakefield; the cauliflower varieties Early Snowball X and Early Snowball Y, and radish varieties White Icicle, Globemaster, Cherry Belle Champion, Red Devil and Red Prince have all been recognized as resistant to harlequin bugs.

Biological Control

Harlequin bugs are subject to attack by some predators, but have developed effective chemical defenses of their own. If harlequin bugs are controlled with insecticides,

however, natural enemy populations of other more important pests, such as aphids and caterpillars, will be disrupted.

Product List for Harlequin bugs:

Insecticide	Product per Acre	Preharvest Interval , remarks
Thiodan 3E, Endocide 3E Thiodan 5OW	1-1.3 qt 1.5-3 lb	(7 days) Some rotational restrictions with root crops. Proposed 48 hour reentry interval. Chlorinated hydrocarbon insecticide (endosulfan).
Sevin XLR+, 4F Sevin 80S Sevin 5OW	1-2 qt 1.25-2.5 lb 2-4 lb	(3 days) A carbamate insecticide (carbaryl). The 80S, 4F, and 5OW formulations are highly hazardous to bees . Some rotational restrictions. May be used with sprinkler irrigation. 12 to 24 hour reentry proposed.
Sabadilla dust	as labelled	A botanical insecticide that is allowed for use in Colorado Certified Organic production.

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Categories: Cole crops, Insects, Harlequin bugs

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