

Field Corn

Grasshoppers

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Grasshopper

Identification (and life cycle/seasonal history)

There are many different species of grasshoppers, with some having a greater pest potential than others. Correctly identifying a species is important because (1) species vary in their biotic potential and in their capacity for causing damage; (2) depending on their food habits, species may be either pests or beneficials; (3) certain species of pest grasshoppers are highly migratory and often pose a serious threat to distant crops; (4) species vary in their seasonal cycle (period of hatching, development, and reproduction) which in turn affects the timing of control treatments; (5) because current chemical and biological methods of controlling grasshoppers are more sophisticated, their effective use requires greater knowledge of the pests' life histories and habits; (6) as environmental impacts of control are more finely evaluated, identification of species is important in the selection of management strategies. Common pest species include: clearwinged grasshopper, *Camnula pellucida*; differential grasshopper, *Melanoplus differentialis*; migratory grasshopper, *Melanoplus sanguinipes*; two-striped grasshopper, *Melanoplus bivittatus*; and redlegged grasshopper, *Melanoplus femurrubrum*.

Most grasshoppers overwinter as eggs in the form of a pod laid in the soil. These elongate-shaped pods may contain from 20 to 120 eggs each. Eggs hatch into nymphs in late May and June, maturing in two to three months. By August most nymphs have matured to the adult stage. Grasshoppers feed during the day and rest during the afternoon and night on vegetation.

Plant Response and Damage

Grasshoppers can be a pest to many crops. There are many species of grasshoppers, but only a few actually have pest potential. Populations may vary greatly from year to year and season to season. Often grasshopper populations develop in uncultivated areas and move into cultivated fields. Mostly grasshoppers feed on leaves.

Management Approaches

Chemical Control

Grasshoppers build up in the field margins, which should be scouted during the season. If the small hoppers (nymphs) reach 20 per square yard in margins, a chemical treatment may be justified. Once they disperse through the field, eight per square yard is considered to be economic. Use the higher rates when adults are present. Products for control of grasshoppers in noncrop areas adjacent to corn fields include acephate2 and Dimilin 2L.

Product list for Grasshoppers:

Pesticide	Product/Acre (Fl oz. or oz. product)	Preharvest Interval, remarks
Asana 0.66 XLR,1	5.8 - 9.6	21 days. Apply as necessary to maintain control. Extremely Hazardous to Bees!
Baythroid XLR,1	2.1 - 2.8	21 days. See labels. Extremely Hazardous to Bees!
bifenthrin 2ER,1,2	2.1- 6.4	30 days. Use rates below 5.12 fl. oz. only if spider mites are NOT a concern. Extremely Hazardous to Bees!
carbaryl1,2	See labels	48 days grain and fodder, 14 days silage. Extremely Hazardous to Bees!
chlorpyrifos 4ER1,2	16 - 32	35 days. 14 days grazing. Not for use on popcorn. Extremely Hazardous to Bees!
CobaltR1	7-13	21 days. 14 days graze. Not for use on popcorn. Extremely Hazardous to Bees
Delta Gold R,1	1.0 - 1.5	21 days to harvest grain or fodder. 12 days to forage. Do not apply more than 0.095 lb ai/acre/crop. Extremely Hazardous to Bees!
dimethoate1,2	See labels	14 days. No more than 3 applications per season. Extremely Hazardous to Bees! ? Do not apply during pollen shed. Buffer application solution to pH 5.0.
Furadan 4FR	8 - 16	30 days. Not more than two applications at the high rate. Do not apply to seed corn. Extremely Hazardous to Bees!
HeroR,1	2.6 - 6.1	30 days to harvest grain or fodder. 60 days to forage. Do not apply more than 0.4 lb ai/acre/crop. Extremely Hazardous to Bees!
lambda cyhalothrinR,1,2	2.56 - 3.84	21 days. Apply as required by scouting or locally prescribed corn growth stages. Do not apply more than 0.12 lb (AI)/acre/season. Extremely Hazardous to Bees!
Methyl parathion 4ER,1	16	12 days. Do not apply during pollen shed if bees are foraging in the area. Extremely Hazardous to Bees!
Mustang MAXR,1	2.72 - 4.0	30 days grain and stover, 60 days silage. Extremely Hazardous to Bees!

Pennacap-MR,1	32 - 48	12 days. Do not apply during pollen shed if bees are foraging in the area. Extremely Hazardous to Bees!
permethrinR,1,2	See labels	30 days. Liquids are Extremely Hazardous to Bees!
ProaxisR,1,2	2.56 - 3.84	21 days. Apply as required by scouting or locally prescribed corn growth stages. Do not apply more than 0.06 lb (AI)/acre/season. Extremely Hazardous to Bees!

RRestricted use pesticide. 1Labeled for chemigation. 2Generic active ingredient, may be additional formulations.

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Categories: Field corn, Insects, Grasshoppers

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