

FALL ARMYWORM

Spodoptera frugiperda

2021

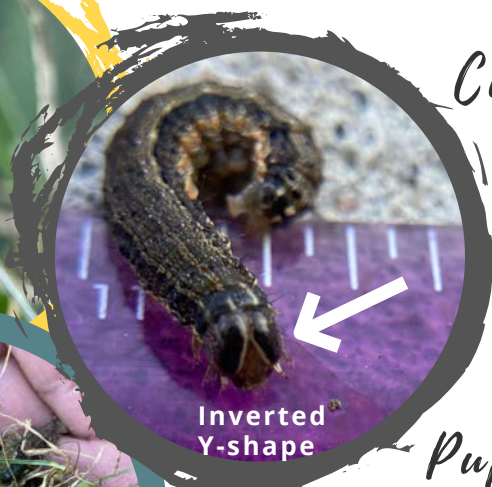


Moths - Welcome to Nebraska

- Adult moths migrate from tropical regions in the Americas where they overwinter
- Travel northward on winds to central and eastern US and Canada
- Feed on plant nectar, mate, and lay eggs

Eggs - First sign of trouble

- Eggs laid in groups of 100-200, covered in scales, giving them a fuzzy appearance
- Multiple egg masses laid on stationary outdoor surfaces
- Remain as eggs for 2-5 days



Caterpillars - Feeding frenzy

- Stay on soil surface, but are difficult to find
- Feed in high numbers in early morning or late at night
- Identified by Y-shaped mark between eyes
- Feed 3-4 weeks and undergo 6 caterpillar stages, destroying turfgrass quickly



Pupa - Damage is done

- Mature caterpillars about 1.25" long, move into soil
- Form reddish-brown pupae 1-3" deep
- Remain as pupa 10-20 days, depending on temperature

Why did this occur?

- Outbreaks are irregular due to changing climate and weather patterns
- 2021 provided favorable overwintering conditions, excessive rain, and frequent storms
- There is no indication or way to predict that 2022 will be a bad year for fall armyworm

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Management Overview

- Window for control is very small
- Damage includes brown, wilted grass similar to drought damage
- Look for caterpillars in turf adjacent to damage
- Egg masses can be removed/wiped away by hand
- Young caterpillars can be controlled with organic and synthetic insecticides
- Liquid applications provide better coverage and work more quickly than granules
- Turf treated with Chlorantraniliprole in the spring has shown to control grubs and fall armyworm
- No effective control for mature caterpillars (>3/4" long) and pupae
- Fall armyworms will not survive the winters in NE, cease activity when temperatures drop <65F
- Severe lawn damage may require renovation (reseeding or re-sodding)

Products labeled for caterpillars in turfgrass

Insecticide	Class	Insecticide	Class
Spinosad	Biorational	Carbaryl	Carbamate
<i>Bacillus thuringiensis (Bti)</i>	Biorational	Chlorantraniliprole	Diamide
<i>Steinernema carpocapsae</i>	Parasitic nematode	Cyantraniliprole	
Bifenthrin	Pyrethroid	Tetraniliprole	
Cyfluthrin		Clothianidin	Neonicotinoid
Cypermethrin		Dinotefuran	Oxadiazine
Lambda-cyhalothrin		Indoxacarb	
Permethrin		Trichlorfon	
			Organophosphate