

OPTIMIZE STEWARD[®] EC INSECTICIDE FOR ALFALFA WEEVIL LARVAE CONTROL

Realize optimum alfalfa quality and yields through consistent insect control.

It doesn't take long for alfalfa weevils to cause costly damage to your first alfalfa cutting. Count on Steward[®] EC insecticide from FMC to keep alfalfa weevils from taking a bite out of your profits. Below are a number of factors to consider when using Steward EC insecticide to control alfalfa weevil larvae.

PROPER AMOUNT OF ALFALFA GROWTH PRESENT

When applying Steward EC insecticide, ensure that at least 6-8 inches of new growth is present at application. For optimal control, larvae must consume the treated foliage.

EARLY-SEASON WEEVIL LARVAL PRESSURE

If an abundance of larvae are present early in the season with minimal alfalfa growth (<6 inches) and several weeks left before harvest, one recommended approach is to knock down larval populations with a pyrethroid or an organophosphate and follow with Steward EC insecticide. University studies in KS, OK and CO have shown the efficacy of one such pyrethroid, lambda-cyhalothrin, to be declining. It is not recommended for use in weevil larvae control.

SIGNIFICANT COLD SNAP

Do not make Steward EC insecticide applications two days before or after significant cold temperature drop. Newly hatched larvae will go deep in the new terminal growth and larger larvae will drop to the ground because of a cold snap and not feed, thus reducing the effectiveness of the insecticide application.



Cold snaps can cause young alfalfa weevil larvae to go deep in the terminal and large larvae drop to the ground and not feed.



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Contact your local FMC retail market managers:

Cori Woelk
Western KS
405-370-7469

Gary Vaupel
Central KS
785-826-0098

Matt Ehrhart
East Central KS
785-826-0493

Kevin Lee
SE KS, SW MO
785-424-5564

Greg Justice
OK, NE TX
405-747-0475

Cameron McAnally
OK Panhandle, NW TX
806-662-2065

Garrett Taylor
NM, SW TX
281-682-7494

Technical Service Manager
V. Bruce Steward, Ph.D.
Choctaw, OK
913-339-8586

Sam Rustom, Ph.D.
Katy, TX
662-299-5434

PROPER SPRAY COVERAGE

Spray coverage is essential for Steward[®] EC insecticide to work effectively. Higher spray volumes of 3-5 GPA by air or 15-20 GPA by ground will provide better coverage and performance. As the alfalfa grows, the amount of surface area to be covered increases. For effective control, good penetration of the new terminal growth to get the young larvae and the canopy to get the older larvae is needed.

USE OF SURFACTANTS

Improve coverage and control by adding surfactants such as NIS, COC/MSO or organo-silicone at 1/4-1/2% by volume. Surfactants will help get down in the tight terminal tissue to where young larvae are located and spread and stick evenly throughout the canopy where the older larvae feed.

MONITORING OF RESISTANCE

If the above factors are achieved, effective control can be accomplished with Steward EC insecticide. If one of these factors is overlooked, then control may be reduced. Oftentimes when effective control is not achieved, there is concern of resistance. At FMC, we are monitoring the susceptibility of alfalfa weevil larvae to Steward EC insecticide through a three-pronged approach. The susceptibility of weevil larvae to Steward EC insecticide is evaluated by vial bioassays, leaf dip bioassay and small-plot research trials. To date, no known resistance or decreased susceptibility has been detected with Steward EC insecticide and alfalfa weevils.

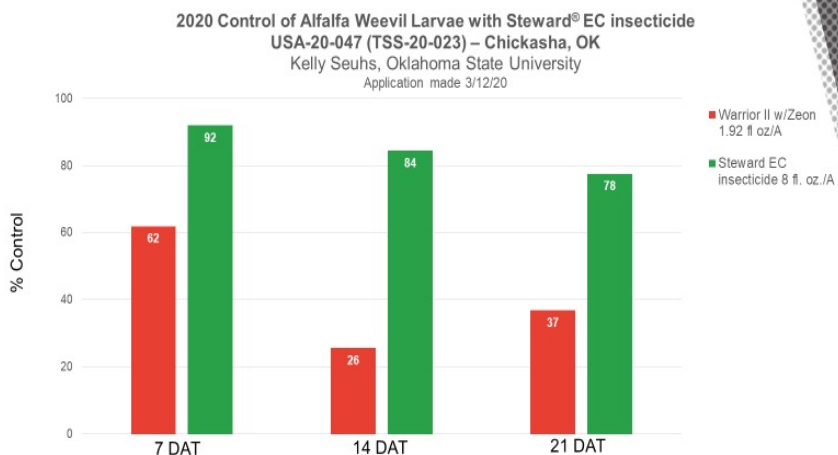
VIAL BIOASSAY



Alfalfa leaves treated with labeled rate of Steward EC insecticide, larvae placed in dish and mortality assessed.

LEAF DIP BIOASSAY

FIELD TRIALS



Small plot replicated field research trials are conducted yearly to show performance of Steward EC insecticide on alfalfa weevil larvae.

Please see the Steward EC insecticide FIFRA SECTION 2(ee) recommendation for reduced rates of Steward EC insecticide for the control of alfalfa weevil larvae and Egyptian alfalfa weevil larvae and for tank mixtures with organophosphate or pyrethroid insecticides when weevil larvae and aphids are simultaneous pests in alfalfa.