

FRUIT, NUT AND VINE CROPS - COTTON (EXCEPT ARIZONA AND CALIFORNIA) - HELICOVERPA ZEA AND HELIOTHIS VIRESCENS - EARLY SEASON

General Information

GENERAL USE INSTRUCTIONS

For most consistent control, apply at first sign of newly hatched worms (1st and 2nd instar larvae). Instructions for specific crops are located in ADDITIONAL INSTRUCTION sections under APPLICATION RATES.

Reapply as necessary under a pest management program that includes close scouting.

For heavy worm infestations, use the higher CoSTAR rate. During situations of dense foliage and/or rapid growth, shorter application intervals and increased water carrier volumes will provide better crop coverage and improve CoSTAR performance.

If rapid knockdown of heavy worm or non-lepidopterous populations is necessary, include an effective contact insecticide in combination with CoSTAR. Use tank mixes only in states where the tank mix product and application site are registered.

Read and follow all label directions for use for other pesticides used as tank mix partners with CoSTAR for specific application rates, application timing, and precautions.

APPLICATION VOLUMES

CoSTAR can be applied by ground or air in water sufficient to insure thorough and even coverage. Thorough and uniform crop coverage is required for adequate insect control. Applications at higher water volumes have demonstrated improved control of targeted pests. Early morning or evening applications, when air is calm, are generally best for aerial applications.

RATE SELECTION CONSIDERATIONS

Application rates are typically given as a range:

Use Lower rate ranges when tank mixing with contact insecticides labeled for worm control or under conditions of light worm infestations or when uniformly small worms are present.

Use Medium rate ranges when multiple worm life stages are present, continuous egg hatches are occurring or young or light armyworm infestations exist.

Use Upper rate ranges for heavy worm infestations, mature (larger) worms or for moderate to heavy infestations of armyworm, bollworm or other difficult to control worm species.

Use application rate amount of CoSTAR in water sufficient to insure thorough coverage depending on type of crop, application equipment and requirements of state regulations. Low volume applications may be used, but proper application equipment must be used to insure adequate coverage. Thorough and uniform crop coverage is required for adequate insect control.

Limitations, Restrictions, and Exceptions

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- Begin applications when at least 50% of plants are at pinhead square stage and *Helicoverpa zea* or *Heliothis virescens* are present at damaging levels. If *Helicoverpa zea* is the predominant species or if worm populations are high, use a higher rate or tank mix with a labeled ovicide.
- To be effective, CoSTAR spray must be deposited at the larval feeding site. When plant cover is dense and worms are feeding in the lower 2/3 portion of the plant, aerial application of CoSTAR may not provide adequate control.
- For added control of *Helicoverpa zea* and *Heliothis virescens*, tank mix CoSTAR with a labeled ovicide, such as amitraz (0.125-0.25 lb a.i./acre), methomyl (0.125 lb a.i./acre), profenofos (0.25 lb a.i./acre), or thiodicarb (NOT FOR CALIFORNIA) (0.125 lb a.i./acre). For added control of pyrethroid resistant *Heliothis virescens*, include CoSTAR as a tank mix partner with pyrethriod applications.

Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

Rates

[field rates 0](#)

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Restricted Entry Interval

4 hours

Timings

[When at least 50% of plants are at pinhead square stage and *Helicoverpa zea* or *Heliothis virescens* are present at damaging levels.](#)