

COTTON INSECTICIDE PERFORMANCE RATING, 2025

| Rating Scale 0 = No control 10 = Excellent | Chemistry | Restricted Entry Interval (hours) | Restricted Use (R) | Thrips | Western Flower Thrips | Plant Bugs | Bollworm | Tobacco Budworm | Aphids** | Spider Mites** | Cutworm | Beet Armyworm | Fall Armyworm | Cabbage Looper | Soybean Looper | Saltmarsh Caterpillar | Green and Southern Green Stink Bug | Brown Stink Bug | Whitefly | Grasshopper | |
|--|-----------|-----------------------------------|--------------------|--------|-----------------------|------------|----------|-----------------|----------|----------------|---------|---------------|---------------|----------------|----------------|-----------------------|------------------------------------|-----------------|----------|-------------|---|
| Aeris | | | X | 8 | 6 | | | | | | 5 | | | | | | | | | | |
| Gaicho | NEO | 12 | | 6 | 4 | | | | | | 0 | | | | | | | | | | 0 |
| Admire/Alias/Imidacloprid | NEO | 12 | | 7 | 1 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 2 | 2 | 0 | 2 |
| AgLogic | Car | 48 | X | 9 | 9 | | | | | | | | | | | | | | | | |
| Asana XL/Adjourn | SyP | 12 | X | 4 | 3 | 2 | 4 | 2 | 0 | 0 | 8 | 2 | 5 | 7 | 2 | 5 | 8 | 4 | 4 | 2 | 6 |
| Bacillus thuringiensis | B | 4 | | 0 | 0 | 0 | 4 | 5 | 0 | 0 | 0 | 1 | 1 | 6 | 6 | 2 | 0 | 0 | 0 | 0 | 0 |
| Baythroid XL | SyP | 12 | X | 4 | 2 | 2 | 5 | 2 | | 0 | 8 | 2 | 5 | 7 | 2 | 5 | 8 | 4 | 4 | 4 | 7 |
| Belay | NEO | | | | | 4 | | | | | | | | | | | | | | | |
| Besiege | DM+SyP | 24 | X | 4 | 2 | 2 | 8 | 9 | 0 | 0 | 9 | | 9 | 9 | 5 | | 8 | 4 | 2 | 7 | 7 |
| Bidrin/Dicromax | OP | 144 | X | 7 | 5 | 7 | 0 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 9 | 3 | 7 | 7 |
| Bidrin XP II | OP+SyP | 144 | X | 6 | 5 | 8 | 5 | 2 | 6 | 7 | 8 | 2 | 5 | 7 | 2 | 5 | 9 | 9 | 3 | 7 | 7 |
| Blackhawk | SP | 4 | | 1 | 1 | 0 | 7 | 9 | 0 | 0 | 7 | 9 | 7 | 9 | 9 | 3 | 0 | 0 | 0 | 0 | 2 |
| Brigadier | NEO+SyP | 12 | X | 6 | 5 | 7 | 5 | 2 | 6 | 7 | 8 | 2 | 5 | 7 | 2 | 5 | 8 | 7 | 6 | 7 | 7 |
| Brigade/Discipline/Fanfare | SyP | 12 | X | 4 | 2 | 3 | 5 | 2 | | 7 | 6 | 2 | 5 | 7 | 2 | 5 | 8 | 7 | 6 | 8 | 8 |
| Carbine | FL | 12 | | 5 | 1 | 4 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 2 |
| Centric | NEO | 12 | | 4 | 4 | 4 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 6 | 8 | 2 | 2 |
| Comite | PRO | 144 | | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Confirm | IGR | 4 | | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 2 | 8 | 8 | 7 | 7 | 8 | 0 | 0 | 0 | 0 | 0 |
| Denim | AV | 12 | X | 1 | 1 | 0 | 7 | 9 | 0 | 5 | 7 | 9 | 8 | 9 | 9 | 3 | 0 | 0 | 0 | 0 | 2 |
| Diamond | IGR | 12 | | 1 | 1 | 8 | 4 | 4 | | | 1 | | 8 | | | | 4* | 4* | | | |
| Dimethoate/Dimate | OP | 48 | | 3 | 2 | 5 | 0 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 4 | 3 | 6 | 6 |
| Elevest | SyP + DM | 12 | X | 4 | 2 | 3 | 8 | 9 | 0 | 7 | 9 | | 9 | 9 | 5 | | 8 | 7 | 6 | 7 | 7 |
| Endigo | NEO+SyP | 24 | X | 5 | 4 | 6 | 5 | 2 | 8 | 0 | 8 | 2 | 5 | 7 | 2 | 5 | 8 | 7 | 8 | 7 | 7 |
| Holster | SyP | 12 | X | 6 | 3 | 2 | 4 | 1 | 0 | 0 | 8 | 1 | 5 | 6 | 1 | 5 | 8 | 4 | 1 | 6 | 6 |
| Intrepid | IGR | 4 | | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 5 | 9 | 7 | 9 | 4 | 9 | 0 | 0 | 0 | 0 | 0 |
| Intrepid Edge | IGR+SP | 4 | | 8 | 7 | | 7 | 7 | | | | | 8 | 9 | 9 | | | | | | |
| Intruder/Strafer | NEO | 12 | | 6 | | 5 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 9 | 0 | 0 |
| Karate/Silencer/Lambda-Cy | SyP | 24 | X | 4 | 2 | 2 | 5 | 2 | 0 | 0 | 8 | 2 | 5 | 7 | 2 | 5 | 8 | 4 | 2 | 7 | 7 |
| Lannate | Car | 72 | X | 1 | 0 | 3 | 4 | 4 | 5 | 0 | 5 | 4 | 7 | 7 | 7 | 4 | 5 | 3 | 0 | 6 | 6 |
| Leverage 360 | NEO+SyP | 12 | X | 6 | 2 | 6 | 5 | 2 | 5 | 0 | 8 | 2 | 5 | 7 | 2 | 5 | 8 | 6 | 5 | 7 | 7 |
| Mustang Maxx | SyP | 12 | X | 4 | 3 | 2 | 5 | 2 | 0 | 0 | 8 | 3 | 5 | 7 | 2 | 5 | 8 | 7 | 2 | 7 | 7 |
| Oberon | TET | 12 | | | | | | | | 9 | | | | | | | | | | | |
| Orthene/Acephate | OP | 24 | | 5 | 5 | 8 | 5 | 5 | 4 | 0 | 6 | 3 | 4 | 7 | 4 | 3 | 9 | 7 | 5 | 8 | 8 |
| Portal | METI | 12 | | | | | | | | 9 | | | | | | | | | | | |
| PQZ | PAD | 12 | | | | | | | 7 | | | | | | | | | | | | |
| Prevathon/Vantacor/Shenzi | DM | 4 | | | | 2 | 8 | 9 | | | | | 9 | 9 | 5 | | 9 | 9 | 5 | | |
| Prolex/Declare | SyP | 24 | X | 4 | 2 | 2 | 3 | 2 | 0 | 0 | 8 | 2 | 5 | 7 | 2 | 5 | 8 | 4 | 2 | 7 | 7 |
| Radiant | SP | 4 | | 8 | 7 | | | | | | | | | | | | | | | | |
| Sefina | Pyr | 12 | | | | | | | 6 | | | | | | | | | | | | |
| Sivanto | BU | 4 | | | | | | | 6 | | | | | | | | | | | | |
| Steward | OX | 12 | | 0 | 0 | 4 | 7 | 9 | 0 | 0 | 5 | 9 | 8 | 9 | 8 | 5 | 3 | 3 | | | 0 |
| Transform | sx | | | | | 9 | | | 8 | | | | | | | | | | | | |
| Vydate C-LV | Car | 48 | X | 3 | 1 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 7 | 0 | 6 | 6 |
| Zeal, Stifle | ET | 12 | | | | | | | | 9 | | | | | | | | | | | |
| Zoro/Abba/Agri-Mek/Epi-Mek | AV | 12 | X | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

*Effective on nymphs only.

**Cotton aphids and spider mites can be flared by use of broad spectrum insecticides such as synthetic pyrethroids.

QUICK VIEW THRESHOLD GUIDE

| Insect | Threshold | Scouting Procedure |
|---|--|--|
| Tarnished plant bug (TPB) | 3 TPB per 5 row feet or 2 TPB per 5 row feet (problem fields) or 8-12 per 100 sweeps from early squaring through cutout. After cutout (NAWF = 5), treat for 6 plant bugs per 5 row feet. | At least 2 drop cloth samples per area. |
| Tarnished plant bug (TPB) on ThryvOn cotton | 6 TPB nymphs per 5 row feet or treat for 3 nymphs if small square set is below 85%. Treat for 8-12 TPB adults per 100 sweeps. | At least 2 drop cloth samples per area. |
| Bollworm (BW) and Tobacco budworm (TBW) | Non-Bt cotton: 1 BW or 1 TBW (< 0.25 inch) per 2 row feet Bollgard II/WideStrike/Twinlink: 25% eggs or 5% damaged fruit or 2-3 large (>0.25 inch) larva per 14 row feet. WideStrike III/Bollgard III/TwinLink Plus: 5% damaged fruit or 2-3 large (>0.25 inch) per larva 14 row feet. | At least 3.5 row feet whole-plant samples per area. |
| Thrips | 2-5 thrips per plant and damage present. Thrips may be found on ThryvOn cotton, but do not cause economic damage. | At least 5 plants per area sampled with a cup or box. |
| Aphids | 50% of plants infested with actively growing colonies present, if no predators are present | General visual observation, noting predator populations. See comments in aphid section. |
| Fall armyworm (FAW) | 10-20 FAW per 100 plants | Examine as with BW and TBW, supplementing with drop cloth observations and counts in blooms. |
| Spider mites | 50% of plants infested with actively growing colonies present | General visual observation, noting symptoms of feeding injury to leaves. |
| Stink bugs | 1 stink bug per 6 row feet or 20% boll damage | At least 2 drop cloth samples per area or sample at least 25 quarter-sized bolls per area. |

CAUTION: Do not allow acephate applications to drift onto adjacent rice fields. Acephate/Orthene is not labelled on rice.

INSECTICIDE TERMINATION GUIDE

Determine Date of Cutout using the earlier of Date of NAWF = 5 or Weather-restricted date (North AR: Aug. 8, Central AR: Aug. 14, South AR: Aug. 21)

Record daily heat units (DD60s) from Date of Cutout. (DD60s are calculated by subtracting 60 from the average daily temperature.)

| Insect | Termination Rules | |
|------------------------------|--------------------|---|
| Tarnished plant bug | Cutout + 250 DD60s | Crop termination recommendations are based on long-standing and ongoing COTMAN research conducted by University of Arkansas System Division of Agriculture scientists. Date of Cutout is the flowering date of the last economically significant boll population. If a field reaches physiological cutout [average number of nodes above white flower = 5 (NAWF = 5)] in late July or early August in Arkansas, then heat units are accumulated from the NAWF = 5 date. Otherwise, heat units are accumulated from a seasonal cutout date based on historical weather for that production region. Typically, a boll needs 850 DD60s to mature with acceptable size and quality. The weather-restricted, seasonal cutout date is the calendar date on which there is a 50% probability that the crop will have the benefit of late season temperatures sufficient to develop a mature boll. Seasonal cutout dates range across the state from Aug. 8 in northernmost parts of Arkansas (Clay County) to Aug. 21 in the most southern portions of the state (Ashley County). |
| Bollworm and Tobacco budworm | Cutout + 350 DD60s | |
| Stink bugs | Cutout + 450 DD60s | |
| Fall armyworm | Cutout + 500 DD60s | |

COTTON INSECT CONTROL

| Insect | Insecticide | Formulation/ Acre | Lb ai/Acre | Acres/ Gallon | Application/Comments | Minimum Days From Last Application to Harvest | Restricted Entry Interval (REI) Hours |
|---|-------------------------------|----------------------|------------|------------------|---|--|---|
| Thrips Treat with foliar sprays when 1st or 2nd true leaf emerges with noticeable damage from thrips. On larger seedlings, treat for an average of 5 thrips per plant and damage that may cause delayed growth or stunting of plants. | ThryvOn Cotton | | | | Cotton varieties with the ThryvOn trait are very effective at controlling thrips. | | |
| | In Furrow acephate | | 0.75-1.0 | | Orthene-treated seed may require one or more foliar treatments for thrips control. Resistance to acephate has been detected in Arkansas. Consider rotating chemistry. | 21 | 24 |
| | Acephate 90S IFS | 0.83-1.1 lb | | | | 21 | 24 |
| | Orthene 97 IFS | 0.77-1.03 lb | | | | 21 | 24 |
| | Orthene 90S IFS | 0.83-1.1 lb | | | | | |
| | aldicarb | | | 0.5-0.75 | | DO NOT feed forage to livestock. | 90 |
| | AgLogic 15G | 3.5-5 lb | | | | | |
| | imidacloprid | | | | Seed treatment. | | |
| | Gaucho 600 | 0.375 mg ai/seed | | | | | |
| | imidacloprid + thiodicarb (R) | | | | Seed treatment. | | |
| | Aeris | 0.75 mg ai/seed | | | | | |

COTTON INSECT CONTROL

| Insect | Insecticide | Formulation/ Acre | Lb ai/Acre | Acres/ Gallon | Application/Comments | Minimum Days From Last Application to Harvest | Restricted Entry Interval (REI) Hours |
|--|--|------------------------------|-------------------|--------------------------|--|--|--|
| Thrips (cont.) | Avicta Elite Cotton | See label. | | | Seed treatment. | | |
| Treat with foliar sprays when 1st or 2nd true leaf emerges with noticeable damage from thrips. On larger seedlings, treat for an average of 5 thrips per plant and damage that may cause delayed growth or stunting of plants. | Foliar Sprays acephate | | 0.5 | | Avoid tank-mixing organophosphate insecticides (acephate, Bidrin, dimethoate) with certain herbicides (Staple, Warrant, Dual, Liberty) as foliar burn may occur. Reduced control with acephate has been observed in recent years. | 21 | 24 |
| | Acephate 90 S | 0.56 lb | | | | 21 | 24 |
| | Orthene 97 (See Generic Insecticides) | 0.52 lb | | | | | |
| | dicrotophos (R) Bidrin/Dicromax 8 EC | 3.2 oz | 0.2 | 40 | DO NOT apply more than 3.2 oz pre-bloom. | 30 | 144 |
| | methoxyfenozide + spinetoram Intrepid Edge 3F | 3-6 oz | 0.07-0.14 | 21.3-42.7 | Intrepid Edge will also control cutworm. DO NOT use without an adjuvant. | 28 | 4 |
| | spinetoram Radiant 1 SC | 1.5-3.0 oz | 0.0117-0.0234 | 42.7-85.3 | DO NOT use without an adjuvant. | 28 | 4 |
| Western Flower Thrips | acephate | | 0.5 | | Avoid tank-mixing organophosphate insecticides with certain herbicides (Staple, Warrant, Dual, Liberty) as foliar burn may occur. | 21 | 24 |
| Treat with foliar sprays when 1st or 2nd true leaf emerges with noticeable damage from thrips. On larger seedlings, treat for an average of 5 thrips per plant and damage that may cause delayed growth or stunting of plants. | Acephate 90 S | 0.56 lb | | | | 21 | 24 |
| | Orthene 97 (See Generic Insecticides) | 0.52 lb | | | | | |
| | methoxyfenozide + spinetoram Intrepid Edge 3F | 3-6 oz | 0.07-0.14 | 21.3-42.7 | Intrepid Edge will also control cutworm. DO NOT use without an adjuvant. | 28 | 4 |
| | spinetoram Radiant 1 SC | 1.5-3.0 oz | 0.012-0.023 | 42.7-85.3 | DO NOT use without an adjuvant. | 28 | 4 |
| Tarnished Plant Bug/Fleahopper | ThryvOn Cotton | | | | Cotton varieties with the ThryvOn trait are effective at reducing damage from tarnished plant bug. | | |
| Treat for 3 plant bugs per 5 row feet on normal fruiting fields. If small square set is less than 75%, treat for 2 plant bugs per 5 row feet. After last week of June in north Arkansas and the first week of July in south Arkansas, if small square set is less than 85%, treat for 2 plant bugs on 5 row feet. Treat for 8-12 per 100 sweeps when sampling with a sweep net. After cutout (NAWF=5), treat when 6 plant bugs per 5 row feet are found. | acephate | | 0.5-0.75 | | First two weeks of squaring, treat for plant bugs if square set is 75% or less and plant bugs are present. | 21 | 24 |
| | Acephate 90 S | 0.56-0.83 lb | | | | | |
| | Orthene 97 (See Generic Insecticides) | 0.57-0.77 lb | | | | | |
| | acetamiprid Strafer 70 WSP | 3.0-3.5 oz | 0.13-0.15 | | DO NOT make more than 2 applications/season. | 28 | 12 |
| | dicrotophos (R) Bidrin/Dicromax 8 EC | 8.0 oz | 0.5 | 16 | DO NOT apply more than 3.2 oz pre-bloom. | 30 | 144 |
| | dimethoate Dimethoate 4 E | 8 oz | 0.25 | 16 | | 14 | 48 |
| | imidacloprid (See Generic Insecticides) | | | | | | |
| | Admire Pro 4.6 SC | 1.7 oz | 0.062 | 75 | | 14 | 12 |
| | Imidacloprid 4 F | 2 oz | 0.062 | 64 | | 14 | 12 |
| | Alias/Couraze 4 F | 2 oz | 0.062 | 64 | | 14 | 12 |
| Couraze 2 F | 4 oz | 0.0625 | 32 | | 14 | 12 | |
| Couraze 1.6 F | 5 oz | 0.0625 | 25.6 | | 14 | 12 | |

COTTON INSECT CONTROL

| Insect | Insecticide | Formulation/ Acre | Lb ai/Acre | Acres/Gallon | Application/Comments | Minimum Days From Last Application to Harvest | Restricted Entry Interval (REI) Hours |
|---|------------------------------------|----------------------|--------------|--------------|--|--|--|
| Tarnished Plant Bug/Flea hopper (cont.) Treat for 3 plant bugs per 5 row feet on normal fruiting fields. If small square set is less than 75%, treat for 2 plant bugs per 5 row feet. After last week of June in north Arkansas and the first week of July in south Arkansas, if small square set is less than 85%, treat for 2 plant bugs on 5 row feet. Treat for 8-12 per 100 sweeps when sampling with a sweep net. After cutout (NAWF=5), treat when 6 plant bugs per 5 row feet are found. | oxamyl (R) | | 0.31-0.5 | | DO NOT graze or feed plants to livestock. | | |
| | Vydate 3.77 CLV | 10.5-17 oz | | 7.5-12.2 | | 14 | 48 |
| | thiamethoxam | | 0.044-0.0625 | | | | |
| | Centric 40 WG | 1.75-2.5 oz | | | | 21 | 12 |
| | sulfoxaflor | | 0.047-0.071 | | Follow pollinator warnings on label. | | |
| | Transform 50 WG | 1.5-2.25 oz | | | | 14 | 24 |
| | Tank Mix Insecticide | | | | | | |
| | novaluron | | 0.039-0.058 | | | | |
| | Diamond 0.83 EC | 6-9 oz | | 14.2-21.3 | | 30 | 12 |
| Bollworm Non-Bt cotton: 1 BW or 1 TBW (< 0.25 inch) per 2 row feet. Bollgard II/WideStrike/Twinlink: 25% eggs or 5% damaged fruit or 2-3 large (>0.25 inch) larva per 14 row feet. WideStrike III/Bollgard III/TwinLink Plus: 5% damaged fruit or 2-3 large (>0.25 inch) larvae per 14 row feet. | Pyrethroids (tank mix only) | | 0.012-0.013 | | In recent years, pyrethroids have shown reduced efficacy and can be expected to provide poor control. Pyrethroids should be tank-mixed with another chemistry. | 0 | 12 |
| | beta-cyfluthrin (R) | 1.6-2.6 oz | | 49-80 | | | |
| | Baythroid XL 1 EC | | | | | | |
| | bifenthrin (R) | | 0.04-0.1 | | | | |
| | Brigade 2 EC | 2.56-6.4 oz | | 20-50 | | 14 | 12 |
| | (See Generic Insecticides) | | | | | | |
| | cyfluthrin (R) | | 0.025-0.041 | | | | |
| | Tombstone 2 EC | 1.6-2.6 oz | | 49-80 | | 0 | 12 |
| | (See Generic Insecticides) | | | | | | |
| | cypermethrin (R) | | 0.04-0.1 | | | | |
| | Holster 2.5 EC | 2-5 fl oz | | 25-62.5 | | 14 | 12 |
| esfenvalerate (R) | | 0.03-0.05 | | | | | |
| Asana XL 0.66 EC | 5.8-9.6 oz | | 13-22 | | 21 | 12 | |
| (See Generic Insecticides) | | | | | | | |
| gamma-cyhalothrin (R) | | 0.0125-0.02 | | | | | |
| Proaxis 0.5 CS | 3.2-5.12 oz | | 25-40 | | 21 | 24 | |
| Declare 1.25 CS | 1.28-2.05 oz | | 62.5-100 | | | | |
| lambda-cyhalothrin (R) | | 0.025-0.04 | | | | | |
| Warrior II 2.08 CS | 1.6-2.56 oz | | 50-80 | | 21 | 24 | |
| (See Generic Insecticides) | | | | | | | |
| zeta-cypermethrin (R) | | 0.0165-0.025 | | | | | |
| Mustang Maxx 0.8 EC | 2.64-4.0 oz | | 32-48 | | 14 | 12 | |
| (See Generic Insecticides) | | | | | | | |

COTTON INSECT CONTROL

| Insect | Insecticide | Formulation/ Acre | Lb ai/Acre | Acres/Gallon | Application/Comments | Minimum Days From Last Application to Harvest | Restricted Entry Interval (REI) Hours | |
|---|--|--|----------------------------|--------------------------------|---|---|--|----|
| Bollworm (cont.) Non-Bt cotton: 1 BW or 1 TBW (< 0.25 inch) per 2 row feet. Bollgard II/ WideStrike/Twinlink: 25% eggs or 5% damaged fruit or 2-3 large (>0.25 inch) larva per 14 row feet. WideStrike III/Bollgard III/TwinLink Plus: 5% damaged fruit or 2-3 large (>0.25 inch) larvae per 14 row feet. | Carbamates methomyl (R) Lannate 2.4 LV Lannate 90 SP | 1.5-2.25 pt 0.5-0.75 lb | 0.45-0.675 | 3.6-5.3 | Lannate may redden cotton. If excessive, stop use or alternate with other insecticides. Use Lannate as an occasional spray in regular schedule but not more than every 10 days. | 15 | 48 | |
| | Other Classes of Insecticides chlorantraniliprole Prevathon 0.43 SC Vantacor 5 SC Shenzi 400 SC | 14-27 oz 1.2-2.5 oz 1.7-3.8 oz | 0.045-0.098 | 4.1-9.7 107-51 75.3-33.7 | Use higher rates with heavy infestations. | 21 | 4 | |
| | chlorantraniliprole + bifenthrin (R) Elevest 2.22 SC | 5.6-9.6 oz | 0.084-0.167 | 13.3-23 | | 21 | 12 | |
| | chlorantraniliprole + lambda-cyhalothrin (R) Besiege 1.25 SC | 6.5-12.5 oz | 0.417-0.835 | 10-20 | Use higher rates with heavy infestations. | 21 | 24 | |
| | emamectin benzoate Denim 0.16 EC | 8-12 oz | 0.01-0.015 | 10.7-16 | | 21 | 12 | |
| | indoxacarb Steward 1.25 SC | 9.2-11.3 fl oz | 0.09-0.11 | 11-14 | | 14 | 12 | |
| | methoxyfenozide + spinetoram Intrepid Edge 3 F | 6-8 oz | 0.14-0.188 | 16-21.3 | DO NOT apply at closer than 4-day intervals. | 28 | 4 | |
| | spinosad Blackhawk | 2.4-3.2 oz | 0.054-0.07 | | DO NOT apply more than 20 oz per year. | 28 | 4 | |
| | Tobacco Budworm Time insecticide application to egg hatch. Under heavy pressure, do not reduce rates. Treat for 7,000 (1 per 2 row ft) small larvae (less than 1/4-inch) per acre. If larger larvae begin to develop in fields, treat for 3,500 (1 per 4 row ft) larvae per acre. Terminate sprays after NAWF=5 + 350 heat units or 350 heat units past the last effective boll date for your area. | Bt Cotton Bollgard II, WideStrike, WideStrike III, TwinLink, Bollgard III, TwinLink Plus | | | | Cotton varieties expressing the <i>Bt (Bacillus thuringiensis)</i> protein are very effective against the tobacco budworm. | | |
| | | Carbamates methomyl (R) Lannate 2.4 LV Lannate 90 SP | 1.5-2.25 pt 0.5-0.75 lb | 0.45-0.675 | 3.6-5.3 | Lannate may redden cotton. If excessive, stop use or alternate with other insecticides. Use Lannate as an occasional spray in regular schedule but not more than every 10 days. | 15 | 48 |
| Other Classes of Insecticides bifenthrin + chlorantraniliprole (R) Elevest 2.22 SC | | 5.6-9.6 oz | 0.084-0.167 | 13.3-23 | | 21 | 12 | |
| chlorantraniliprole Prevathon 0.43 SC Vantacor 5 SC Shenzi 400 SC | | 14-27 oz 1.2-2.5 oz 1.7-3.8 oz | 0.045-0.098 | 4.7-9.1 107-51 75.3-33.7 | Use higher rates with heavy infestations. | 21 | 4 | |
| emamectin benzoate Denim 0.16 EC | | 8-12 oz | 0.01-0.015 | 10.7-16 | | 21 | 12 | |

COTTON INSECT CONTROL

| Insect | Insecticide | Formulation/ Acre | Lb ai/Acre | Acres/ Gallon | Application/Comments | Minimum Days From Last Application to Harvest | Restricted Entry Interval (REI) Hours |
|-----------------------------------|---|----------------------|--------------|------------------|--|--|--|
| Tobacco Budworm (cont.) | indoxacarb Steward 1.25 SC | 9.2-11.3 oz | 0.09-0.11 | 11-14 | Use higher rates with heavy infestations. | 14 | 12 |
| | lambda-cyhalothrin + chlorantraniliprole (R) Besiege 1.25 SC | 6.5-12.5 oz | 0.417-0.835 | 10-20 | | 21 | 24 |
| | methoxyfenozide + spinetoram Intrepid Edge 3 F | 6-8 oz | 0.14-0.188 | 16-21.3 | DO NOT apply at closer than 4-day intervals. | 28 | 4 |
| | spinosad Blackhawk | 2.4-3.2 oz | 0.054-0.07 | | DO NOT apply more than 20 oz per year. | 28 | 4 |
| Aphid | Aphid Management and Control | | | | | | |
| | Treatment for aphids alone seldom results in a yield increase. | | | | | | |
| | 1. Resistance to neonicotinoid insecticides (imidacloprid, Intruder, Centric) has developed. Avoid unnecessary/automatic applications of these insecticides when aphids are present. | | | | | | |
| | 2. Threshold: When populations are building and aphid colonies are present on approximately 50% of the plants: | | | | | | |
| | a. If there are less than 0.3 lady beetle adults AND less than 0.2 lady beetle larvae (per row-ft), <u>treat</u> . | | | | | | |
| | b. If there are at least 0.3 lady beetle adults OR 0.2 lady beetle larvae (per row-ft), <u>do not treat, but resample within 7 days</u> . | | | | | | |
| | i. If aphid population is still increasing after 7 days, <u>treat</u> , otherwise continue normal sampling interval. | | | | | | |
| | 3. The aphid fungus is very effective in reducing aphid populations in early to mid-July. Fields should be checked for fungus before treatments are applied. If confident the fungus is present in 15% of the aphid population, do not treat. | | | | | | |
| | acetamiprid Intruder/Strafer 70 WP | 0.8-1.1 oz | 0.035-0.05 | | | 28 | 12 |
| | afidopyropen Sefina 0.42 DC | 3 oz | 0.01 | 42.7 | Do not make more than 2 consecutive applications. | 7 | 12 |
| | flonicamid Carbine 50 WG | 1.41-2.02 oz | 0.044-0.063 | | | 30 | 12 |
| | pyrifluquinazon PQZ 1.87 SC | 2.4-3.2 oz | 0.035-0.047 | 53-40 | Do not make more than 2 applications per year. | 7 | 12 |
| | sulfoxaflor Transform 50 WG | 0.75-1.0 oz | 0.023-0.041 | | Follow pollinator warning on label. Do not make more than 4 applications of Transform per year. | 14 | 24 |
| Spider Mites | abamectin (R) Agri-Mek 0.7 SC (See Generic Insecticides) | 1.75 - 3.5 fl oz | 0.0096-0.019 | 49-98 | If populations are not reduced by initial application, switch to another chemistry. Use lower rates early season when cotton is small. DO NOT apply more than 7 oz per season. Must be applied with a non-ionic surfactant in minimum of 5 gallons per acre. DO NOT graze. | 20 | 12 |
| | Treat when 50% of plants are infested. Early-season spot treatments may be beneficial in preventing spread of mites across the field. | | | | | | |

COTTON INSECT CONTROL

| Insect | Insecticide | Formulation/ Acre | Lb ai/Acre | Acres/Gallon | Application/Comments | Minimum Days From Last Application to Harvest | Restricted Entry Interval (REI) Hours |
|--|---|---|-------------------|---------------------|---|--|--|
| Spider Mites (cont.) | fenpyroximate Portal XLO 0.4EC | 0.75-2 pt | 0.0375-0.1 | 4-10.7 | DO NOT apply more than 2 pints per season. | 14 | 12 |
| | bifenthrin (R) Brigade 2 EC (See Generic Insecticides) | 3.8-6.4 oz | 0.06-0.1 | 20-33 | Avoid unnecessary use of pyrethroid insecticides as they can flare spider mite populations. | 28 | 12 |
| | etoxazole Zeal WDG Zeal 2.88 SC (See Generic Insecticides) | 0.66-1.0 oz 1.33-2 oz | 0.03-0.045 | 64-96 | | 28 28 | 12 12 |
| | propargite Comite 6.55 | 1.5-2 pt | 1.23-1.64 | 4-5.3 | | 50 | 144 |
| | spiromesifan Oberon 2 SC | 8-16 oz | 0.125-0.25 | 8-16 | | 30 | 12 |
| | Cutworm Treat when stand is reduced below 2-3 plants per row ft. Stale seedbed/no-till fields with cover crops and/or heavy spring weed pressure should be considered high-risk fields. Consider preventative pyrethroid applications for cutworm in these situations if a burn down herbicide is not applied at least 3 weeks prior to planting. | acephate Acephate 90 S Orthene 97 (See Generic Insecticides) | 1.0 lb 0.93 lb | 0.9 | | Maintain 2-3 plants per row ft. Cutworm control is most effective when ground applications are made and sprays are directed (banded) to the base and lower portion of the plant. | 21 |
| beta-cyfluthrin (R) Baythroid XL 1 EC | | 0.8-1.6 oz | 0.007-0.013 | 80-160 | Stale seedbed/no-till fields, fields with cover crops and/or heavy spring weed pressure or fields with a history of cutworm problems should be considered high-risk fields. Consider preventative pyrethroid applications for cutworm in these situations utilizing a 1/3 band applicator behind the planter. | 0 | 12 |
| bifenthrin (R) Brigade 2 EC (See Generic Insecticides) | | 2.56-6.4 oz | 0.04-0.1 | 20-50 | | 14 | 12 |
| cyantraniliprole Fortenza 5 FS | | 0.1 - 0.4 mg ai/ seed | | | Seed treatment. | | 12 |
| cyfluthrin (R) Tombstone 2 EC (See Generic Insecticides) | | 0.8-1.6 oz | 0.013-0.025 | 80-160 | | 0 | 12 |
| cypermethrin (R) Holster 2.5 EC | | 1.3-5.0 oz | 0.025-0.1 | 25-100 | | 14 | 12 |
| esfenvalerate (R) Asana XL 0.66 EC (See Generic Insecticides) | | 5.8-9.6 oz | 0.03-0.05 | 13-22 | | 21 | 12 |
| gamma-cyhalothrin (R) Proaxis 0.5 CS Declare 1.25 CS | | 1.92-2.56 0.77-1.02 oz | 0.0675-0.01 | 25-40 125-166 | | 21 | 24 |
| lambda-cyhalothrin (R) Warrior II 2.08 CS (See Generic Insecticides) | | 0.96-1.28 oz | 0.015-0.02 | 100-133 | | 21 | 24 |
| zeta-cypermethrin (R) Mustang Maxx 0.8 EC (See Generic Insecticides) | | 1.28-1.92 oz | 0.008-0.012 | 67-100 | | 14 | 12 |

COTTON INSECT CONTROL

| Insect | Insecticide | Formulation/ Acre | Lb ai/Acre | Acres/Gallon | Application/Comments | Minimum Days From Last Application to Harvest | Restricted Entry Interval (REI) Hours |
|---|--|----------------------|-------------|--------------|---|--|---|
| Beet Armyworm Apply treatment when 3-5 or more "hits" of small larvae occur per 100 ft of row. | bifenthrin + chlorantraniliprole (R) Elevest 2.22 SC | 5.6-9.6 oz | 0.084-0.167 | 13.3-23 | | 21 | 12 |
| | chlorantraniliprole Prevathon 0.43 SC | 14-27 oz | 0.045-0.098 | 4.1-9.7 | | 21 | 4 |
| | Vantacor 5 SC | 1.2-2.5 oz | | 107-51 | | | |
| | Shenzi 400 SC | 1.7-3.8 oz | | 75.3-33.7 | | | |
| | emamectin benzoate Denim 0.16 EC | 6-8 oz | 0.0075-0.01 | 4.7-9.1 | | 21 | 12 |
| | indoxacarb Steward 1.25 SC | 9.2-11.3 fl oz | 0.09-0.11 | 11-14 | | 14 | 12 |
| | lambda-cyhalothrin + chlorantraniliprole (R) Besiege 1.25 SC | 6.5-12.5 oz | 0.417-0.835 | 10-20 | | 21 | 24 |
| | methoxyfenozide Intrepid 2 F (See Generic Insecticides) | 4-10 oz | 0.06-0.16 | 12.8-32 | | 14 | 4 |
| | methoxyfenozide + spinetoram Intrepid Edge 3 F | 6-8 oz | 0.14-0.188 | 16-21.3 | DO NOT apply at closer than 4-day intervals. | 28 | 4 |
| | spinosad Blackhawk | 2.4-3.2 oz | 0.054-0.07 | | DO NOT apply more than 20 oz of Blackhawk per year. | 28 | 4 |
| Fall Armyworm Treat for 10-20 fall armyworms per 100 plants. Terminate sprays after NAWF=5 + 500 heat units or 500 heat units past the last effective boll date for your area. | bifenthrin + chlorantraniliprole (R) Elevest 2.22 SC | 5.6-9.6 oz | 0.084-0.167 | 13.3-23 | | 21 | 12 |
| | chlorantraniliprole Prevathon 0.43 SC | 14-27 oz | 0.045-0.098 | 4.7-9.1 | | 21 | 4 |
| | Vantacor 5 SC | 1.2-2.5 oz | | 107-51 | | | |
| | Shenzi 400 SC | 1.7-3.8 oz | | 75.3-33.7 | | | |
| | emamectin benzoate Denim 0.16 EC | 8-12 oz | 0.01-0.015 | 10.7-16 | | 21 | 12 |
| | indoxacarb Steward 1.25 SC | 9.2-11.3 oz | 0.09-0.11 | 11-14 | | 14 | 12 |
| | lambda-cyhalothrin + chlorantraniliprole (R) Besiege 1.25 SC | 6.5-12.5 oz | 0.417-0.835 | 10-20 | | 21 | 24 |
| | methomyl (R) Lannate 2.4 LV | 1.5-2.25 pt | 0.45-0.675 | 3.6-5.3 | Lannate may redden cotton. If excessive, stop use or alternate with other insecticides. Use Lannate as an occasional spray in regular schedule but not more than every 10 days. | 15 | 48 |
| | Lannate 90 SP | 0.5-0.75 lb | | | | | |
| | methoxyfenozide Intrepid 2 F (See Generic Insecticides) | 4-10 oz | 0.06-0.16 | 12.8-32 | | 14 | 4 |
| | methoxyfenozide + spinetoram Intrepid Edge 3 F | 6-8 oz | 0.14-0.188 | 16-21.3 | DO NOT apply at closer than 4-day intervals. | 28 | 4 |
| | novaluron Diamond 0.83 EC | 6-12 oz | 0.039-0.078 | 10.7-21.3 | | 30 | 12 |
| | spinosad Blackhawk | 2.4-3.2 oz | 0.054-0.07 | | DO NOT apply more than 20 oz of Blackhawk per year. | 28 | 4 |

COTTON INSECT CONTROL

| Insect | Insecticide | Formulation/ Acre | Lb ai/Acre | Acres/Gallon | Application/Comments | Minimum Days From Last Application to Harvest | Restricted Entry Interval (REI) Hours |
|--|--|------------------------------|-------------------|---------------------|---|--|--|
| Cabbage Looper | <i>Bacillus thuringiensis</i> | Check label. | | | | 0 | 4 |
| Soybean Looper | bifenthrin + chlorantraniliprole (R) Elevest 2.22 SC | 5.6-9.6 oz | 0.084-0.167 | 13.3-23 | | 21 | 12 |
| Economic damage seldom occurs; treat when 25% defoliation occurs and bolls are still being developed. | chlorantraniliprole Prevathon 0.43 SC | 20-29 oz | 0.067-0.097 | 4.4-6.4 | | 21 | 4 |
| | Vantacor 5 SC | 1.7-2.5 oz | | 75-51 | | | |
| | Shenzi 400 SC | 2.5-3.8 oz | | 51.2-33.7 | | | |
| | emamectin benzoate Denim 0.16 EC | 8-12 oz | 0.01-0.015 | 10.7-16 | | 21 | 12 |
| | indoxacarb Steward 1.25 SC | 6.7-9.2 fl oz | 0.065-0.09 | 14-19 | | 14 | 12 |
| | lambda-cyhalothrin + chlorantraniliprole (R) Besiege 1.25 SC | 10.5-12.5 oz | 0.1-0.12 | 10-12 | | 21 | 24 |
| | methoxyfenozide Intrepid 2 F (See Generic Insecticides) | 4-10 oz | 0.06-0.16 | 12.8-32 | | 14 | 4 |
| | methoxyfenozide + spinetoram Intrepid Edge 3 F | 4-8 oz | 0.094-0.188 | 16-32 | DO NOT apply at closer than 4-day intervals. | 28 | 4 |
| | spinosad Blackhawk | 2.4-3.2 oz | 0.054-0.07 | | DO NOT apply more than 20 oz per year. | 28 | 4 |
| Stink Bugs (Green and Southern Green) | acephate Acephate 90 Orthene 97 (See Generic Insecticides) | 0.83 lb 0.77 lb | 0.75 | | | 21 | 24 |
| Treat when stink bugs exceed 1 bug per 5 row feet or when 20% of medium bolls display internal signs of feeding and stink bugs are observed. | beta-cyfluthrin (R) Baythroid XL 1 EC | 1.6-2.6 oz | 0.013-0.021 | 48-80 | | 0 | 12 |
| | bifenthrin (R) Brigade 2 EC (See Generic Insecticides) | 3.8-6.4 oz | 0.06-0.1 | 20-33 | | 14 | 12 |
| | cyfluthrin (R) Tombstone 2 EC (See Generic Insecticides) | 1.6-2.6 oz | 0.025-0.041 | 49-80 | | 0 | 12 |
| | dicrotophos (R) Bidrin/Dicromax 8 EC | 4.8-8.0 oz | 0.3-0.5 | 16-26.7 | DO NOT apply more than 3.2 oz pre-bloom. DO NOT apply more than 16 oz after first bloom. | 30 | 144 |
| | esfenvalerate (R) Asana XL 0.66 EC (See Generic Insecticides) | 5.8-9.6 oz | 0.03-0.05 | 13-22 | | 21 | 12 |
| | lambda-cyhalothrin (R) Warrior II 2.08 CS (See Generic Insecticides) | 1.6-2.56 oz | 0.025-0.04 | 50-80 | | 21 | 24 |

COTTON INSECT CONTROL

| Insect | Insecticide | Formulation/Acre | Lb ai/Acre | Acres/Gallon | Application/Comments | Minimum Days From Last Application to Harvest | Restricted Entry Interval (REI) Hours |
|---|--|------------------------------|-------------------|---------------------|---|--|--|
| Stink Bugs (Green and Southern Green) (cont.) Terminate sprays after NAWF=5 + 450 heat units or 450 heat units past the last effective boll date for your area. | oxamyl (R) Vydate 3.77 CLV | 13.6 oz | 0.4 | 9.4 | DO NOT graze or feed plants to livestock. | 14 | 48 |
| | zeta-cypermethrin (R) Mustang Maxx 0.8 EC (See Generic Insecticides) | 2.64-3.6 oz | 0.016-0.022 | 35.6-48.5 | | 14 | 12 |
| Brown Stink Bug Treat when stink bugs exceed 1 bug per 5 row feet or when 20% of medium bolls display internal signs of feeding and stink bugs are observed. Check at least 25-50 bolls per 40 acres. | acephate Acephate 90 S Orthene 97 (See Generic Insecticides) | 0.83 lb 0.77 lb | 0.75 | | | 21 | 24 |
| | bifenthrin (R) Brigade 2 EC (See Generic Insecticides) | 3.8-6.4 oz | 0.06-0.1 | 20-33 | | 14 | 12 |
| | dicrotophos (R) Bidrin/Dicromax 8 EC | 8 oz | 0.5 | 16 | DO NOT apply more than 3.2 oz pre-bloom. DO NOT apply more than 16 oz after first bloom. | 30 | 144 |
| | oxamyl (R) Vydate 3.77 CLV | 13.6 oz | 0.04 | 9.4 | DO NOT graze or feed plants to livestock. | 14 | 48 |
| Whitefly Treat infested areas when 50% of the plants are infested. | acephate Acephate 90 S Orthene 97 (See Generic Insecticides) | 0.56-1.1 lb 0.52-1.031 lb | 0.5-1.0 | | | 21 | 24 |
| | acetamiprid Intruder/Strafer 70 WP | 1.7-2.3 oz | 0.75-0.1 | | | 28 | 12 |
| | bifenthrin (R) Brigade 2 EC (See Generic Insecticides) | 3.8-6.4 oz | 0.06-0.1 | 20-33 | | 14 | 12 |
| | flupyradifurone Sivanto 1.67 SL | 10.5-14 oz | 0.14-0.18 | 9.14-12.2 | Do not apply more than 28 oz of Sivanto per acre per year. | 14 | 4 |
| | thiamethoxam Centric 40 WG (See Generic Insecticides) | 2 oz | 0.05 | | | 21 | 12 |

COTTON INSECT CONTROL

| Insect | Insecticide | Formulation/ Acre | Lb ai/Acre | Acres/Gallon | Application/Comments | Minimum Days From Last Application to Harvest | Restricted Entry Interval (REI) Hours |
|--|---|--|-------------------|-----------------------------------|---|--|--|
| Multiple Pests For control of multiple pests exceeding thresholds.. | acephate + bifenthrin (R) Acenthrin 80 S | 6-21 oz | 0.3-1.05 | | Plant bugs, Bollworm, Stink Bugs, Whitefly. | 21 | 24 |
| | bifenthrin (R) + avermectin Athena 0.87 E | 10-17 oz | 0.068-0.116 | 7.5-12.8 | Bollworm, Stink Bugs, Spider Mites. | 20 | 12 |
| | bifenthrin (R) + acetamepid Argyle 1.52 OD Savoy 1.8 EC | 5-9 oz 3.6-12.9 oz | 0.06-0.11 | 14-25.6 9.9-35.6 | Aphids, Plant bugs, Bollworm, Stink Bugs, Whitefly. | 28 | 12 |
| | bifenthrin + chlorantraniliprole (R) Elevest 2.22 SC | 4.8-9.6 oz | 0.084-0.167 | 26.7-13.3 | Cutworms, Grasshoppers, Bollworm, Tobacco Budworm, Loopers, Beet Armyworm, Fall Armyworm, Stink Bugs. | 21 | 12 |
| | chloryrifos + lambda-cyhalothrin (R) Lambdafos 2.69 EC | 16-42 oz | 0.33-0.76 | 3.05-8 | Plant bugs, Bollworm, Stink Bugs, Whitefly. | 21 | 24 |
| | cyantraniliprole + abamectin Minecto Pro | 6-10 oz | 0.064-0.11 | 12.8-21.3 | Bollworm, Armyworms, Saltmarsh Caterpillar, Spider Mites. | 20 | 12 |
| | dicrotophos (R) + bifenthrin Bidrin XP II | 8-12.8 oz | 0.31-0.5 | 10-16 | Plant bugs, Bollworm, Stink Bugs, Whitefly. | 30 | 144 |
| | gamma-cyhalothrin + spinosad (R) Consero 5.25 SC | 2.8-4 oz | 0.054-0.083 | 32-45 | Bollworm, Tobacco Budworm, Green Stink Bugs, Armyworms, Loopers. | 28 | 24 |
| | imidacloprid/beta-cyfluthrin (R) Leverage 360 SC | 2.8-3.2 oz | 0.067-0.075 | 40-45.7 | Plant bugs, Bollworm, Stink Bugs, Whitefly. | 14 | 12 |
| | imidacloprid/bifenthrin (R) Brigadier 2 SC Swagger 1 SC Avenger 1 SC | 3.8-7.7 oz 7.6-15.4 oz 7.6-15.4 oz | 0.06-0.12 | 16.6-33.7 8.3-16.8 8.3-16.8 | Plant bugs, Bollworm, Stink Bugs, Whitefly. | 14 | 12 |
| | lambda-cyhalothrin + chlorantraniliprole (R) Besiege 1.25 SC | 6.5-12.5 oz | 0.417-0.835 | 10.24-19.7 | Bollworm, Tobacco Budworm, Green Stink Bugs. | 21 | 24 |
| | lambda-cyhalothrin + thiamethoxam (R) Endigo 2.7 ZCX | 4.5-5.5 oz | 0.08-0.09 | 28.4-36.6 | Plant bugs, Bollworm, Stink Bugs, Whitefly. | 21 | 24 |
| | novaluron + acetamepid Cormoran 1.51 DC | 6-12 oz | 0.06-0.12 | 10.7-21.3 | Plant bugs, Fall Armyworm, Stink Bugs, Whitefly, Aphids. | 30 | 12 |
| | zeta-cypermethrin + bifenthrin + imidacloprid (R) Triple Crown 2.25 | 4.5-6.4 oz | 0.079-0.112 | 20-28.4 | Plant bugs, Bollworm, Stink Bugs, Whitefly. | 14 | 12 |