

# Crops - Commercial

<b>Cotton</b>					
Insect	Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound SP	Treatment Threshold / Remarks
<b>Pre-bloom</b>					
<b>Bollworm/ tobacco budworm</b>	indoxacarb Steward (1.25)	11.3 ounce	0.11	11.5	<p><b>Non-Bt, WideStrike, TwinLink, and BG2</b> cotton varieties: Treat when population reaches or exceeds 8 larvae/100 plants or 6% fruit injury of any kind.</p> <p><b>WideStrike 3, TwinLink Plus, and BG3</b> cotton varieties: Treat when population reaches or exceeds 8 larvae/100 plants or 6% fruit injury of any kind.</p> <p>Premix insecticides are available for this pest. See premix table.</p>
	spinosad Blackhawk (0.36)	2.4 - 3.2 ounce	0.054 – 0.072	6.7 – 5.0	
	chlorantraniliprole Prevathon (0.43)	14.0 - 27.0 ounce	0.047 – 0.09	9.1 – 4.7	
<b>Cutworms</b>	esfenvalerate Asana XL (0.66)	5.8 ounce	0.03	22.0	<p>Treat when loss of satisfactory stand is threatened, or in minimum tillage environment.</p> <p>Premix insecticides are available for this pest. See premix table.</p>
	beta-cyfluthrin Baythroid XL (1)	0.8 ounce	0.0065	160.0	
	bifenthrin Brigade (2)	2.6-6.4 ounce	0.04 - 0.10	20.0 – 50.0	
	cyfluthrin Tombstone (2)	0.8 ounce	0.013	154.0	
	lambda-cyhalothrin Karate Z (2.08)	0.9 - 1.3 ounce	0.015 - 0.02	142.0 – 98.0	
	Z-cypermethrin Mustang Max (0.8)	1.3 - 2.8 ounce	0.01- 0.017	80.0 – 47.0	
	gamma-cyhalothrin Declare (1.25)	0.77 - 1.02 ounce	0.0075 - 0.01	166.0 – 125.0	
	A-cypermethrin Fastac (0.83)	1.3 – 1.9 ounce	0.008 – 0.012	80.0 – 67.0	
<b>Plant bugs cotton flea hopper, clouded/ tarnished</b>	Flonicamid Carbine (50)	2.3 - 2.8 ounce	0.072 - 0.089	7.0 – 8.0	<p>Treat when 10 to 25 of these pests per 100 sweeps are found. Adjust pre-bloom treatment levels to maintain between 70% and 85% first position square retention.</p> <p>Control of cotton fleahoppers can usually be obtained with lower rates than the rates used to control other plant bug pests.</p>
	Thiamethoxam Centric (40)	2.5 – 3.0 ounce	0.0625 – 0.075	6.4 – 5.3	
	Imidacloprid Admire Pro (4.6)	0.9 – 1.7 ounce	0.032 – 0.062	142.0 – 75.0	
	imidacloprid (2)	2.0 – 4.0 ounce	0.032 – 0.062	64.0 – 32.0	
	imidacloprid (4)	2.0 ounce	0.0625	64.0	
	acetamiprid Strafer Max (70)	1.7 – 2.3 ounce	0.075 – 0.10	9.4 – 7.0	
	sulfoxaflor	1.5 – 2.25 ounce	0.047 – 0.071	10.7 – 7.1	

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	Transform (50)				
	clothianidin Belay (2.13)	3.0 - 6.0 ounce	0.05 - 0.1	42.7 – 21.0	Multiply clouded plant bug number by 1.5 when determining densities for treatment decision.  NOTE: Diamond will not control adults. For adult control, tank mix with an adulticide. Repeat applications at 7- to 14-day intervals as needed to maintain control.  Premix insecticides are available for this pest. See premix table.
	oxamyl Vydate C-LV (3.77)	11.2– 17.0 ounce	0.33 – 0.50	11.4 – 7.5	
	novaluron Diamond (0.83)	6.0 – 12.0 ounce	0.039 - 0.078	21.3 - 10.6	
<b>Spider mites</b>	abamectin (0.15) Agri-Mek (0.15)	8.0 – 16.0 ounce	0.009 - 0.0187	16.0 – 8.0	Treat when mite infestations cause areas where plants have discolored leaves. Anticipate repeating applications in 5 days.
	fenpyroximate Portal (0.4)	16.0 – 32.0 ounce	0.05 – 0.10	8.0 – 4.0	
	spiromesifen Oberon (4)	4.0 – 8.0 ounce	.0625 – 0.125	32.0 – 16.0	Premix insecticides are available for this pest. See premix table.
	etoxazole Zeal (72)	0.66 – 1.0 ounce	0.030 - 0.045	28.0 – 16.0	
	abamectin Agri-Mek SC (0.7)	1.75 – 3.5 ounce	0.009 – 0.019	73.1 – 36.6	
	hexythiazox Onager (1)	16.0 – 20.0 ounce	0.125 – 0.156	8.0 – 6.4	
<b>Thrips</b>	<b>Seed treatment</b>				
	acephate Orthene (90)	6.4 ounce/100 wt			
	Imidacloprid Gaucho Grande (600)	0.375 mg AI/seed			
	Avicta Elite	Commercial pre-treatment of imidacloprid + thiamethoxam			
	Aeris	Commercial pre-treatment of imidacloprid+ thiodicarb			
	<b>At planting in furrow</b>				
	acephate Orthene (90)	1.1 pound	1.0		Premix insecticides are available for this pest. See premix table.
	aldicarb AgLogic (15)	3.3 - 5.0 pound	0.5-0.75		
	imidacloprid	7.4 - 9.2 ounce	0.26 – 0.33		

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	Admire Pro (4.6)				
	Imidacloprid (4)	8.5 – 10.6 ounce	0.25 – 0.33		
	Imidacloprid (2)	17.0 – 21.1 ounce	0.25 – 0.33		
	<b>Foliar Sprays</b>				
	acephate Orthene (90)	3.2 ounce	0.18	5.0	Treat when immature thrips first appear on seedling cotton before fourth true leaf. Do not apply acephate or Orthene if spider mites are present.
	acephate Orthene (97)	3.0 ounce	0.18	5.3	
	dicrotophos Bidrin (8)	3.2 ounce	0.2	40.0	Premix insecticides are available for this pest. See premix table.
	dimethoate Dimethoate (4)	6.4 ounce	0.2	20.0	
	spinetoram Radiant (1)	1.5 – 3.0 ounce	0.01 – 0.02	85.0 – 42.7	
<b>Bloom to Harvest</b>					
<b>Beet armyworms</b>	methoxyfenozide Inrepid (2)	6.0-10.0 ounce	0.09-0.16	21.0-12.5	Treat when larvae are small and 5 to 6 hatch out spots (hits) are observed per 300 row feet.
	indoxacarb Steward (1.25)	11.3 ounce	0.11	11.5	
	spinosad Blackhawk (0.36)	2.4 - 3.2 ounce	0.054 – 0.072	6.7 – 5.0	Premix insecticides are available for this pest. See premix table.
	chlorantraniliprole Prevathon (0.43)	14.0 – 27.0 ounce	0.047 – 0.09	9.1 – 4.7	
<b>Bollworm/ tobacco budworm</b>	spinetoram Radiant (1)	2.8 – 8.0 ounce	0.022 – 0.0625	46 - 16	<b>Non-Bt, WideStrike, TwinLink, cotton varieties:</b> Treat when you find 20 eggs/100 plants or 6% fruit injury of any kind. Regardless of size of larvae, treatment may be warranted if damaged-boll counts exceed 2% and significant numbers of larvae are present and continuing to cause damage.
	indoxacarb Steward (1.25)	11.3 ounce	0.11	11.5	
	spinosad Blackhawk (0.36)	2.4 - 3.2 ounce	0.054 – 0.072	6.7 – 5.0	
	chlorantraniliprole Prevathon (0.43)	14.0 – 27.0 ounce	0.047 – 0.09	9.1 – 4.7	
					<b>WideStrike 3, TwinLink Plus, and BG3</b> cotton varieties: Treat when larvae 1/8-inch long or longer exceed 4 larvae/100 plants or 6% fruit injury of any kind. Regardless of size of larvae, treatment may be warranted

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					<p>if damaged-boll counts exceed 2% and significant numbers of larvae are present and continuing to cause damage.</p> <p><b>Use Pyrethroids With Caution:</b> Pyrethroid resistance is prevalent in bollworms in Louisiana.</p> <p>Premix insecticides are available for this pest. See premix table</p>
<b>Brown stink bugs</b>	acephate Orthene (90)	0.8 pound	0.72	1.25	See green stink bug thresholds.
	dicrotophos Bidrin (8)	6.0 - 8.0 ounce	0.33-0.5	24.0 – 16.0	
	oxamyl Vydate (3.77)	17.0 ounce	0.5	7.5	Premix insecticides are available for this pest. See premix table.
<b>Cotton aphid</b>	flonicamid Carbine (50)	1.4 - 2.8 ounce	0.044 - 0.089	11.4 - 5.7	Treat when honeydew, leaf crinkling and stunting begin to occur uniformly.
	sulfoxaflor Transform (50)	0.75 – 1.0 ounce	0.023 – 0.031	21.3 – 16.0	
	acetamiprid Strafer Max (70)	1.1 ounce	0.05	14.5	Note: if neonicotinoid insecticides fail to provide effective control, switch to Strafer Max 70 Carbine 50 or Transform 50.
<b>Fall armyworms</b>	novaluron Diamond (0.83)	6.0 – 12.0 ounce	0.039 - 0.077	21.3 - 10.6	Treat when egg masses or small larvae appear.
	methoxyfenozide Intrepid (2)	6.0 – 10.0 ounce	0.09-0.16	21.0-12.5	
	spinosad Blackhawk (0.36)	2.4 - 3.2 ounce	0.054 – 0.072	6.7 – 5.0	Premix insecticides are available for this pest. See premix table.
	chlorantraniliprole Prevathon (0.43)	14.0 – 27.0 ounce	0.047 – 0.09	9.1 – 4.7	
<b>Green stink bugs</b>	acephate Orthene (90)	0.8 pound	0.72	1.25	Treat stink bugs when 1 adult/nymph are found per 6 row feet, 5% adults/nymphs are found in sweep nets or 15% to 20% of 12- to 16-day-old bolls have internal injury.
	beta-cyfluthrin Baythroid XL (1)	1.6-2.6 ounce	0.0125 - 0.02	80.0 - 50.0	
	dicrotophos Bidrin (8)	4.0 - 8.0 ounce	0.25-0.5	32.0 – 16.0	Stink bug populations normally are very clumped in fields; thus, numerous samples may be required to assess infestation.
	bifenthrin Brigade (2)	2.6-6.4 ounce	0.04-0.1	50.0 - 20.0	
	cyfluthrin	1.6 - 2.6 ounce	0.025 - 0.041	80.0 - 50.0	

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	Tombstone (2)				Premix insecticides are available for this pest. See premix table.
	lambda-cyhalothrin Karate Z (2.08)	1.6 - 2.56 ounce	0.025 - 0.04	80.0 – 50.0	
	z-cypermethrin Mustang Max (0.8)	2.6-3.6 ounce	0.017-0.022	47.0 - 36.0	
	a-cypermethrin Fastac (0.83)	2.6 – 3.6 ounce	0.017 – 0.023	49.0 – 36.0	
	gamma-cyhalothrin Declare (1.25)	1.28-2.05 ounce	0.0125-0.02	100.0 - 62.5	
	acephate Orthene (97)	0.75 pound	0.72	1.29	
	oxamyl Vydate (3.77)	11.2-17.0 ounce	0.33-0.5	11.4-7.5	
<b>Loopers</b>	methoxyfenozide Intrepid (2)	6.0 – 10.0 ounce	0.09 - 0.16	21.0 - 12.5	Before cutout, treat when loopers cause 30% defoliation. After cutout treat at 45% defoliation.  Premix insecticides are available for this pest. See premix table.
	indoxacarb Steward (1.25)	9.2 ounce	0.09	14.0	
	spinosad Blackhawk (0.36)	2.4 - 3.2 ounce	0.054 – 0.072	6.7 – 5.0	
	chlorantraniliprole Prevathon (0.43)	20.0 – 29 ounce	0.067 – 0.097	6.4 – 4.4	
<b>Plant bug clouded, tarnished</b>	acephate Orthene (90)	0.55 – 1.1 pound	0.5 – 1.0	1.8 – 0.9	After first flower, treat at two to three tarnished plant bugs per 5 feet black drop cloth, 10 tarnished plant bugs per 100 sweep net samples or 10% dirty squares.  NOTE: Diamond will not control adults. For adult control, tank-mix with an adulticide. Repeat applications at 7- to 14-day intervals as needed to maintain control.
	acephate Orthene (97)	0.8-1.0 pound	0.75-0.97	1.3-1.0	
	dicrotophos Bidrin (8)	6.0 – 8.0 ounce	0.33 - 0.5	24.0 – 16.0	
	novaluron Diamond (0.83)*	6.0 – 12.0 ounce	0.039 - 0.078	21.3 - 10.67	
	sulfoxaflor Transform (50)	1.5 – 2.25 ounce	0.047 – 0.071	10.7 – 7.1	
	oxamyl Vydate (3.77)	11.2 – 17.0 ounce	0.33 – 0.5	11.4 – 7.5	
	thiamethoxam Centric (40)	2.5 – 3.0 ounce	0.0625 – 0.075	6.4 – 5.3	
	flonicamid Carbine (50)	2.8 ounce	0.089	5.7	
	malathion Fyfanon (ULV)9.9C	16.0 ounce	1.25	8.0	
					Multiply clouded plant bug number by 1.5 when

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					determining densities for treatment decision.  Premix insecticides are available for this pest. See premix table.
<b>Spider mites</b>	abamectin Agri-mek (0.15)	8.0 – 16.0 ounce	0.009 - 0.0187	16.0 – 8.0	<p>Treat when mite infestations cause areas where plants have discolored leaves. Anticipate repeating applications in 5 days.</p> <p><b>Use Abamectin With Caution:</b> Abamectin resistance in two spotted spider mites has been detected in Louisiana.</p> <p>Premix insecticides are available for this pest. See premix table.</p>
	propargite Comite II (6.0)	24.0 – 36.0 ounce	1.1 – 1.7	5.3 – 3.5	
	dicofol Dicofol (4)	1.0 quart	1.0	4.0	
	fenpyroximate Portal (0.4)	16.0 – 32.0 ounce	0.05 – 0.10	8.0 – 4.0	
	spiromesifen Oberon (4)	4.0 – 8.0 ounce	0.0625 – 0.125	32.0 – 16.0	
	etoxazole Zeal (72)	0.66 – 1.0 ounce	0.03 - 0.045	28.0 – 16.0	
	abamectin Agri-Mek (0.7)	1.75 – 3.5 ounce	0.009 – 0.019	73.1 – 36.6	
	hexythiazox Onager (1)	16.0 – 20.0 ounce	0.125 – 0.156	8.0 – 6.4	
<b>Whitefly</b>	acephate Orthene (90)	0.83-1.0 pound	0.75-0.9	1.2-1.0	Apply when 50% of plant terminals have clustering whiteflies. Control may require three to four applications at 5-day intervals.
	thiamethoxam Centric (40)	2.0 ounce	0.05	8.0	
	acetamiprid Strafer Max (70)	1.7 – 2.3 ounce	0.075 – 0.1	9.4 – 7.0	
	acephate Orthene (97)	0.8-1.0 pound	0.75-0.97	1.3-1.0	
	spiromesifen Oberon (4)	4.0 – 8.0 ounce	.0625 – 0.125	32.0 – 16.0	

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## Cotton

**Premix Insecticide Products:** The following products are available as premixes of two or more insecticides.

<b>Trade Name (Insecticides)</b>	<b>Amount of Concentrate per Acre</b>	<b>Acres Treated per Gallon or Pound SP</b>	<b>Primary Target Pests:</b> (See label for other pests that may be controlled)
Athena (bifenthrin, abamectin)	10.0 – 17.0 ounce	12.8 – 7.5	Spider mites
Besiege (chlorantraniliprole, lambda-cyhalothrin)	6.5 – 12.5 ounce	19.7 – 10.2	Most caterpillar pests, stink bugs
Bidrin XP II (dicrotophos, bifenthrin)	8.0 – 12.8 ounce	16.0 – 10.0	Stink bugs, plant bugs
Brigadier (imidacloprid, bifenthrin)	5.1 – 7.7 ounce	25.0 – 16.6	Stink bugs, plant bugs
Cobalt Advanced (chlorpyrifos, lambda – cyhalothrin)	16.0 – 42.0 ounce	8.0 – 3.0	Stink bugs, plant bugs
Endigo ZC (thiamethoxam, lambda – cyhalothrin)	3.5 – 5.5 ounce	36.6 – 25.6	Stink bugs, plant bugs
Fyfanon Plus ULV (malathion, gamma – cyhalothrin)	8.0 – 16.0 ounce	16.0 – 8.0	Stink bugs, plant bugs
Gladiator (zeta – cypermethrin, avermectin B1)	13.0 – 19.0 ounce	9.8 – 6.7	Stink bugs, spider mites
Hero (zeta – cypermethrin, bifenthrin)	5.2 – 10.3 ounce	24.6 – 12.4	Stink bugs
Intrepid Edge (methoxyfenozide, spinetoram)	3.0 – 6.0 ounce	42.6 – 21.3	Thrips
Leverage 360 (imidacloprid, beta – cyfluthrin)	3.2 ounce	40.0	Stink bugs, plant bugs
Stallion (chlorpyrifos, zeta – cypermethrin)	9.25 – 11.75 ounce	13.8 – 10.9	Stink bugs, plant bugs
Triple Crown (imidacloprid, zeta – cypermethrin, bifenthrin)	4.5 – 6.4 ounce	28.4 – 20.0	Stink bugs, plant bugs
Velum Total (fluopyram, imidacloprid)	14.0 – 18.0 ounce	9.1 – 7.1	Thrips