Soybean

Table 1. Banded cucumber beetle[5]

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
carbaryl Sevin (4F)	16 oz.	0.5	8	• 4 beetles per sweep.
lambda-cyhalothrin Warrior II (2.08CS)	1.28-1.60 oz.	0.02-0.025	100-80	
gamma-cyhalothrin Declare (1.25CS)	1.02-1.28 oz.	0.01-0.0125	125.5-100	

Table 2. Bean leaf beetle[5]

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
carbaryl Sevin (4F)	16 oz.	0.5	8	• After pod set, 2 beetles per sweep or when 10% of pods are damaged. • Pyrethroids may provide inconsistent control. • Trap crop.[1]
esfenvalerate Asana XL (0.66EC)	5.8-9.6 oz.	0.03-0.05	22-13	
lambda-cyhalothrin Warrior II (2.08CS)	1.28-1.60 oz.	0.02-0.025	100-80	
gamma-cyhalothrin Declare (1.25CS)	1.02-1.28 oz.	0.01-0.0125	125.5-100	
bifenthrin Brigade (2EC)	2.1-6.4 oz.	0.033-0.1	61-20	
bifenthrin, z-cypermethrin Hero (1.24EC)	2.6-6.1 oz.	0.025-0.06	49.2-21	
acephate Orthene (SP)	12-16 oz.	0.75-1.0	1.3-1	
lambda-cyhalothrin, thiamethoxam Endigo ZCX	4.0-4.5 oz.	premix	32-28.4	
imidacloprid, beta-cyfluthrin Leverage 360 (SC)	2.8 oz.	premix	45.7	
isocycloseram Vertento (3.33SC)	1.1-2.0 oz	0.028-0.052	116.3-64.0	

Table 3. Beet armyworm[3]

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
spinosad Blackhawk (0.36WG)	1.7-2.2 oz.	0.038-.049	9.4-7.3	• 12 worms, ½ inch or longer per row foot or 150 worms in 100 sweeps. If pod feeding occurs, treat when 10% of pods are damaged.
indoxacarb Steward (1.25EC)	11.3 oz.	0.11	11.3	
methoxyfenozide Intrepid (2F)	6.0-8.0 oz.	0.09-0.125	21.3-16	
chlorantraniliprole Vantacor (5SC)	1.2-2.5 oz.	0.047-0.098	106.7-51.2	
lambda-cyhalothrin, chlorantraniliprole Besiege (SC)	10 oz.	premix	12.8	
bifenthrin, chlorantraniliprole Elevest (SC)	5.6-9.6 oz.	premix	22.8-13.3	

Table 4. Blister beetles[5]

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
carbaryl Sevin (4F)	25 oz.	0.8	5.1	• Spot treat infested area when defoliation becomes excessive.

Table 5. Brown stink bug

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
cyfluthrin Tombstone (2EC)	2.8 oz.	0.044	45.7	• After pods appear, 1 stink bug per row foot or 36 in 100 sweeps. • Treat soybeans grown for seed at 1 stink bug per 6 row feet or 6 bugs per 100 sweeps. • **Use Pyrethroids With Caution:** Pyrethroid resistance is prevalent in Brown Stink Bugs in Louisiana.
beta-cyfluthrin Baythroid XL (1EC)	2.8 oz.	0.022	45.7	
z-cypermethrin Mustang Maxx(0.8EC)	4.0 oz.	0.025	32	
acephate Orthene (SP)	12-16 oz.	0.75-1.0	1.3-1	
lambda-cyhalothrin, thiamethoxam Endigo ZCX	4.0-4.5 oz.	premix	32-28.4	
bifenthrin Brigade (2EC)	6.4 oz.	0.1	20	
bifenthrin, z-cypermethrin Hero (1.24EC)	10.3 oz.	0.1	12.4	
imidacloprid, beta-cyfluthrin Leverage 360 (SC)	2.8 oz.	premix	45.3	
isocycloseram Vertento (3.33SC)	1.6-2.0 oz	0.041-0.052	80.0-64.0	

Table 6. Corn earworm[5,8]

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
spinosad Blackhawk (0.36WG)	1.7-2.2 oz.	0.038-.049	9.4-7.3	• After bloom, 3 worms per row foot or 38 in 100 sweeps. • **Use Pyrethroids With Caution:** Pyrethroid resistance is prevalent in corn earworms in Louisiana.[8]
esfenvalerate Asana XL (0.66EC)	5.8-9.6 oz.	0.03-0.05	22-13	
carbaryl Sevin (4F)	24-32 oz.	0.75-1.0	5.3-4	
Npv Heligen	1.0-1.6 oz.	See label.	128-80	
Npv Hearken	1.5 oz	See label.	85.3	
acephate Orthene (SP)	12-16 oz.	0.75-1.0	1.3-1	
indoxacarb Steward (1.25EC)	5.6-11.3 oz.	0.055-0.011	22.8-11.3	
lambda-cyhalothrin Warrior II (2.08CS)	0.96-1.60 oz.	0.015-0.025	133.3-79.4	
gamma-cyhalothrin Declare (1.25CS)	0.77-1.28 oz.	0.0075-0.0125	166.2-100	
z-cypermethrin Mustang Maxx (0.8EC)	2.8-4.0 oz.	0.0175-0.025	45.7-32	
beta-cyfluthrin Baythroid XL (1EC)	1.6-2.8 oz.	0.013-0.022	80-45.7	
cyfluthrin Tombstone (2EC)	1.6-2.8 oz.	0.025-0.044	80-45.7	
bifenthrin Brigade (2EC)	2.1-6.4 oz.	0.033-0.1	61-20	
bifenthrin, z-cypermethrin Hero (1.14EC)	4.0-10.3 oz.	0.04-0.1	32-12.4	

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
lambda-cyhalothrin, chlorantraniliprole Besiege (SC)	5-8 oz.	premix	25.6-16	• After bloom, 3 worms per row foot or 38 in 100 sweeps. • **Use Pyrethroids With Caution:** Pyrethroid resistance is prevalent in corn earworms in Louisiana.[8]
chlorantraniliprole Vantacor (5SC)	1.2-2.5 oz.	0.047-0.098	106.7-51.2	
Methoxyfenozide, spinetoram Intrepid Edge (EC)	4.0-6.4 oz.	premix	32-20	
bifenthrin, chlorantraniliprole Elevest (SC)	5.6-9.6 oz.	premix	22.8-13.3	

Table 7. Fall armyworm (corn strain)[5]

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
carbaryl Sevin (4F)	16 oz.	0.5	8	• Treat when seedling beans are reduced to 6 or less plants per foot. In older beans treat when defoliation becomes excessive.[5]
methomyl Lannate (2.4LV)	16-24 oz.	0.3-0.45	8-5.3	
spinosad Blackhawk (0.36WG)	1.7-2.2 oz.	0.038-.049	9.4-7.3	
indoxacarb Steward (1.25EC)	7.7-11.3 oz.	0.075-0.11	16.6-11.3	
lambda-cyhalothrin, chlorantraniliprole Besiege (SC)	8-10 oz.	premix	16-12.8	
chlorantraniliprole Vantacor (5SC)	1.2-2.5 oz.	0.047-0.098	106.7-51.2	
bifenthrin, chlorantraniliprole Elevest (SC)	5.6-9.6 oz.	premix	22.8-13.3	

Table 8. Fall armyworm (grass strain)[5]

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
carbaryl Sevin (4F)	16 oz.	0.5	8	• Treat when seedling beans are reduced to 6 or fewer plants per foot row foot. In older beans, treat when defoliation becomes excessive.[5] • Grass strain fall armyworm, unlike corn strain fall armyworm primarily originates from grass hosts.
methomyl Lannate (2.4LV)	6.7 oz.	0.3-0.45	8-5.3	
spinosad Blackhawk (0.36WG)	1.7-2.2 oz.	0.038-.049	9.4-7.3	
indoxacarb Steward (1.25EC)	7.7-11.3 oz.	0.075-0.11	16.6-11.3	
lambda-cyhalothrin, chlorantraniliprole Besiege (SC)	8-10 oz.	premix	16-12.8	
chlorantraniliprole Vantacor (5SC)	1.2-2.5 oz.	0.047-0.098	106.7-51.2	
bifenthrin, chlorantraniliprole Elevest (SC)	5.6-9.6 oz.	premix	22.8-13.3	
lambda-cyhalothrin Warrior II (2.08CS)	0.96-1.60 oz.	0.015-0.025	133.3-80	
gamma-cyhalothrin Declare (1.25CS)	0.77-1.28 oz.	0.0075-0.0125	166.2-100	
z-cypermethrin Mustang Maxx(0.8EC)	1.2-4.0 oz.	0.0075-0.025	106.7-32	
beta-cyfluthrin Baythroid XL (1EC)	0.8-1.6 oz.	0.007-0.013	160-80	
cyfluthrin Tombstone (2EC)	0.8-1.6 oz.	0.013-0.025	160-80	
bifenthrin, z-cypermethrin Hero (1.24EC)	2.6-6.1 oz.	0.025-0.06	49.2-20.9	
methoxyfenozide, spinetoram Intrepid Edge (EC)	4.0-6.4 oz.	premix	32-20	

Table 9. Grasshoppers[5]

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
diflubenzuron Dimilin (2L)	2.0 oz.	0.031	64	• Treat to prevent excessive stand loss or foliage loss. • **Not effective on adults**. Apply to second and third-stage nymphs only.

Table 10. Green cloverworm[3, 5]

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
carbaryl Sevin (4F)	8-16 oz.	0.25-0.5	16-8	• 8 worms, ½ inch or longer, per row foot or 300 worms in 100 sweeps.
spinosad Blackhawk (0.36WG)	1.1-2.2 oz.	0.025-.049	14.5-7.3	
methomyl Lannate (2.4LV)	6.7 oz.	0.125	19.1	
indoxacarb Steward (1.25EC)	5.6-11.3 oz.	0.055-0.11	22.9-11.3	
lambda-cyhalothrin Warrior II (2.08CS)	0.96-1.60 oz.	0.015-0.025	133.3-80	
gamma-cyhalothrin Declare (1.25CS)	0.77-1.28 oz.	0.0075-0.0125	166.2-100	
z-cypermethrin Mustang Maxx (0.8EC)	1.2-4.0 oz.	0.0075-0.025	106.7-32	
beta-cyfluthrin Baythroid XL (1EC)	0.8-1.6 oz.	0.007-0.013	160-80	
cyfluthrin Tombstone (2EC)	0.8-1.6 oz.	0.013-0.025	160-80	
bifenthrin, z-cypermethrin Hero (1.24EC)	2.6-6.1 oz.	0.025-0.06	49.2-20.9	
chlorantraniliprole Vantacor (5SC)	1.2-2.5 oz.	0.047-0.098	106.7-51.2	
lambda-cyhalothrin, chlorantraniliprole Besiege (SC)	5-8 oz.	premix	25.6-16	
bifenthrin, chlorantraniliprole Elevest (SC)	5.6-9.6 oz.	premix	22.8-13.3	
methoxyfenozide, spinetoram Intrepid Edge (SC)	4.0-6.4 oz.	premix	32-20	
isocycloseram Vertento (3.33SC)	1.1-2.0 oz.	0.028-0.052	116.3-64.0	

Table 11. Kudzu bug

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
acephate Orthene (SP)	12-16 oz.	0.75-1.0	1.3-1	• 1 nymph per sweep.
bifenthrin Discipline (2EC)	6.4 oz.	0.1	20	
thiamethoxam, lambda-cyhalothrin Endigo ZCX	4.5 oz.	premix	28.4	
gamma-cyhalothrin Declare (1.25CS)	1.28-1.54 oz.	0.0125-0.015	100-83.11	

Table 12. Redbanded stink bug[4]

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
acephate Orthene (SP)	12-16 oz.	0.75-1.0	1.3-1	• 16 bugs in 100 sweeps. • **Caution:** 0.5 lb of acephate applied alone has provided unsatisfactory control of redbanded stinkbugs.
thiamethoxam, lambda-cyhalothrin Endigo ZCX	4.5 oz.	premix	28.4	
bifenthrin Brigade (2EC)	6.4 oz.	0.1	20	
bifenthrin, z-cypermethrin Hero (1.24EC)	10.3 oz.	0.1	12.4	
imidacloprid, beta-cyfluthrin Leverage 360 (SC)	2.8 oz.	premix	45.7	
clothianidin Belay (2.13SC)	4.0 oz.	0.067	32	
isocycloseram Vertento (3.33SC)	2.0 oz.	0.052	64	

Table 13. Salt marsh caterpillar[5]

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
methomyl Lannate (2.4LV)	24 oz.	0.45	5.3	• Spot treat when 8 worms per row foot or when seedling beans are reduced to 6 or fewer per row foot.
acephate Orthene (SP)	12.0 oz.	0.75	1.3	
methoxyfenozide Intrepid (2F)	4-8 oz.	0.06-0.125	32-16	
methoxyfenozide, spinetoram Intrepid Edge (SC)	4.0-6.4 oz.	premix	32-20	

Table 14. Southern green stink bug, Green stink bug

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
cyfluthrin Tombstone (2EC)	1.6-2.8 oz.	0.025-0.044	80-45.7	• After pods appear, 1 stink bug per row foot or 36 in 100 sweeps. Treat soybeans grown for seed at one stink bug per 6 row feet or six bugs per 100 sweeps. • Trap crop[1,2]
z-cypermethrin Mustang Maxx (0.8EC)	3.2-4.0 oz.	0.02-0.025	40-32	
lambda-cyhalothrin Warrior II (2.08CS)	1.60-1.92 oz.	0.025-0.03	80-66.7	
gamma-cyhalothrin Declare (1.25CS)	1.28-1.54 oz.	0.0125-0.015	100-83.11	
beta-cyfluthrin Baythroid XL (1EC)	1.6-2.8 oz.	0.013-0.022	80-45.7	
acephate Orthene (SP)	12-16 oz.	0.75-1.0	1.3-1	
bifenthrin Brigade (2EC)	2.1-6.4 oz.	0.033-0.1	61-20	
bifenthrin, z-cypermethrin Hero (1.24EC)	4.0-10.3 oz.	0.04-0.1	32-12.4	
imidacloprid, beta-cyfluthrin Leverage 360 (SC)	2.8 oz.	premix	45.7	
thiamethoxam, lambda-cyhalothrin Endigo ZCX	4.0-4.5 oz.	premix	32-28.4	
isocycloseram Vertento (3.33SC)	1.6-2.0 oz	0.041-0.052	80.0-64.0	

Table 15. Soybean looper[3, 5]

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
methomyl Lannate (2.4LV)	24.0 oz.	0.45	5.3	• 8 worms, ½ inch or longer, per row foot or 150 worms in 100 sweeps. • **Caution:** Resistance to Intrepid, Vantacor, Elevest and Besiege has been detected across the South.
spinosad Blackhawk (0.36WG)	1.7-2.2 oz.	0.038-.049	9.4-7.3	
indoxacarb Steward (1.25EC)	5.6-11.3 oz.	0.055-0.11	22.9-11.3	
methoxyfenozide Intrepid (2F)	6.0-8.0 oz.	0.09-0.125	21.3-16	
chlorantraniliprole Vantacor (5SC)	1.2-2.5 oz.	0.047-0.098	106.7-51.2	
lambda-cyhalothrin, chlorantraniliprole Besiege (SC)	10 oz.	premix	12.8	
bifenthrin, chlorantraniliprole Elevest (SC)	5.6-9.6 oz.	premix	22.8-13.3	
methoxyfenozide, spinetoram Intrepid Edge (EC)	4.0-6.4 oz.	premix	32-20	
Emamectin benzoate Denim (0.16EC)	8.0-12.0 oz.	0.01-0.015	16-10.6	

Table 16. Threecornered alfalfa hopper

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
esfenvalerate Asana XL (0.66EC)	5.8-9.6 oz.	0.03-0.05	22-13	• Starting at pod set, 3 nymphs per row foot or 1 adult per sweep.
lambda-cyhalothrin Warrior II (2.08CS)	1.60 oz.	0.025	80	
gamma-cyhalothrin Declare (1.25CS)	1.28 oz.	0.013	100	
cyfluthrin Tombstone (2EC)	1.6-2.8 oz.	0.025-0.044	80-45.7	
beta-cyfluthrin Baythroid XL (1EC)	1.6-2.8 oz.	0.013- 0.022	80-45.7	
z-cypermethrin Mustang Maxx (0.8EC)	2.8-4.0 oz.	0.017-0.025	45.7-32	
acephate Orthene (SP)	12-16 oz.	0.75-1.0	1.3-1	
bifenthrin, z-cypermethrin Hero (1.24EC)	4.0-10.3 oz.	0.04- 0.1	32-12.4	

Table 17. Velvetbean caterpillar[3, 5]

Insecticide	Amount of Concentrate per Acre	Pounds Active Ingredient per Acre	Acres Treated per Gallon or Pound	When to Treat (Economic threshold)
carbaryl Sevin (4F)	8-16 oz.	0.25-0.5	16-8	• 8 worms, ½ inch or longer, per row foot or 300 worms in 100 sweeps. • **Preventive–**Apply at or shortly after bloom.
spinosad Blackhawk (0.36WG)	1.1-2.2 oz.	0.025-.049	14.5-7.3	
lambda-cyhalothrin Warrior II (2.08CS)	0.96-1.28 oz.	0.015-0.02	133.3-100	
gamma-cyhalothrin Declare (1.25CS)	0.77-1.28 oz.	0.0075-0.015	166.2-100	
cyfluthrin Tombstone (2EC)	1.8 oz.	0.028	71.1	
beta-cyfluthrin Baythroid XL (1EC)	1.6-2.8 oz.	0.013-0.022	80-45.7	
z-cypermethrin Mustang Maxx (0.8EC)	2.8-4.0 oz.	0.0175-0.025	45.7-32	
methoxyfenozide Intrepid (2F)	4.0-8.0 oz.	0.06-0.125	32-16	
methomyl Lannate (2.4LV)	6.7 oz.	0.125	19.1	
bifenthrin, z-cypermethrin Hero (1.24EC)	4.0-10.3 oz.	0.04-0.1	32-12.4	
diflubenzuron Dimilin (2L)	2.0 oz.	0.031	64	
chlorantraniliprole Vantacor (5SC)	1.2-2.5 oz.	0.047-0.098	106.7-51.2	
lambda-cyhalothrin, chlorantraniliprole Besiege (SC)	5.0-8.0 oz.	premix	25.6-16	
bifenthrin, chlorantraniliprole Elevest (SC)	5.6-9.6 oz.	premix	22.8-13.3	
methoxyfenozide, spinetoram Intrepid Edge (EC)	4.0-6.4 oz.	premix	32-20	
isocycloseram Vertento (3.33SC)	1.6-2.0 oz	0.041-0.052	80.0-64.0	

[1] **Trap crops for control of bean leaf beetle or stinkbugs:** Where bean leaf beetle and stinkbugs occur in damaging numbers, both pests can be controlled by the use of the same early planted trap crops. Plant early maturing varieties, Group IV or V, in small blocks near favorable hibernation quarters two weeks before planting most of the crop. Areas planted to trap crops need not exceed 5% of the total acreage. Bean leaf beetles are attracted to the trap crop areas as soon as the plants emerge. The Southern green and brown stinkbug are attracted to the trap areas at the beginning of the flowering and pod set. Thus, treatment will differ for the two pests. For bean leaf beetles, foliar insecticide applications can be made to control the first field generation that develops in the trap crop. The first treatment should be made when new adults begin to emerge, about four to five weeks after planting and the second, one week later.

[2] For southern green stinkbugs, treat the trap area or soybeans grown for seed with a recommended material at one bug per 6 feet of row or six bugs in 100 sweeps and before immature bugs become adults. Start monitoring insect numbers at bloom. A second application may be necessary. For both pests, it is imperative that the insects produced in the trap areas be prevented from moving to the main plantings regardless of how many applications are required. ***The widespread adoption of early planting and early maturing varieties has made trap cropping less feasible in some areas.***

[3] Beet armyworms, green cloverworms, soybean loopers, and velvetbean caterpillars should be counted together, and an insecticide to control them should be applied when any combination of the four reaches 300 worms in 100 sweeps. However, treatment should be made anytime soybean loopers and/or beet armyworms exceed 150 worms in 100 sweeps.

[4] Effective control of the redbanded stinkbug has been difficult to achieve with labeled insecticides. Multiple applications may be required to achieve season-long control.

[5] Prior to bloom, soybeans can tolerate 30% to 35% defoliation. During bloom and pod set, defoliation should not exceed 20%-to 25%.

[6] Recent LSU AgCenter research has shown satisfactory control of soybean looper with Lannate at 0.45 pound AI per acre. In past years, however, this pest has been highly resistant to Lannate at some locations. Producers should be aware that the current use of Lannate might still give inconsistent results.

[7] LSU AgCenter Research indicates that low rates of Blackhawk will not give satisfactory control of rapid outbreaks of soybean looper that far exceed the economic threshold. Also, the ground application is more effective than the aerial application.

[8] Some corn earworms are exhibiting resistance to pyrethroids. When numbers exceed two times the action threshold, use other products or add 0.5 lb of Orthene (acephate) to the recommended pyrethroid.

CAUTION: A species of green stinkbug that feeds almost exclusively on morning glory occurs in soybean fields infested with this weed. This species is not a pest and should not be controlled. The adult can readily be recognized by a white, heart-shaped spot in the middle of the upper surface. In early September, this species turns a dark brown to deep red resembling the brown stinkbug, but it can be recognized by the white spot.

CAUTION: The lesser cornstalk borer can be a serious soil insect problem. Most problems occur in late-planted soybeans that follow wheat or ryegrass. Drought and high temperatures are also usually associated with the problem.

Soybean

Insecticide Precautions and Limitations (refer to insecticide label for complete information)
Abbreviations: REI: re-entry interval; AI: active ingredient; GPA: gallons per acre

- **Asana XL:** Extremely toxic to fish and aquatic invertebrates. Do not feed or graze livestock on treated fields. Do not exceed 0.2 lb AI per acre per season. Preharvest interval: 21 days. REI: 12 hours.
- **Baythroid XL:** Same as cyfluthrin (2) except the maximum AI per acre per season is 0.0875 lb. Preharvest interval: 21 days.
- **Brigade:** Toxic to fish and aquatic invertebrates. Do not exceed 0.3 lb AI per acre per season. Preharvest interval is 18 days. REI: 12 hours.
- **Carbaryl (Sevin):** Toxic to bees, estuarine, and aquatic organisms. Preharvest intervals: 21 days for grain, 14 days for grazing or forage. Maximum AI per acre per season is 6 lb. REI: 12 hours.
- **Cyfluthrin:** Toxic to fish and aquatic invertebrates. Maximum AI per acre per season is 0.175 lb. Do not feed forage within 15 days of harvest. Preharvest interval: 45 days. REI: 12 hours.
- **Declare:** Extremely toxic to fish and aquatic organisms and toxic to wildlife. Do not graze or harvest treated soybean for forage, straw, or hay for livestock feed. Do not apply more than 0.03 lb AI per acre per season. Preharvest interval: 30 days. REI: 24 hours.
- **Dimilin:** Toxic to aquatic invertebrates. Do not make more than two applications per season. Preharvest interval: 21 days. REI: 12 hours.
- **Endigo ZC:** Toxic to fish, aquatic organisms, and wildlife. Do not apply to water. Avoid weather conditions that favor drift and runoff. Do not exceed a total of 9 fluid oz. of Endigo, or 0.06 lb AI of lambda-cyhalothrin products, or 0.125 lb AI of thiamethoxam products per acre per season. Do not graze or harvest straw, forage, or hay for livestock. Preharvest interval: 30 days. REI: 24 hours.
- **Hero:** Toxic to fish, oysters, shrimp, and aquatic invertebrates. Do not exceed 0.4 lb AI per acre per season. Do not graze or harvest forage, straw, or hay for livestock. Preharvest interval: 21 days. Re-entry interval: 12 hours.
- **Intrepid:** Drift and runoff may be toxic to sensitive aquatic invertebrates. Do not apply by air within 150 feet or by ground within 25 feet of surface water. Apply no more than 1 lb AI per acre per season or four applications per acre per season. Preharvest interval: 14 days for seed and seven days for hay or forage. REI: Four hours.
- **Karate:** Toxic to fish, aquatic organisms, and bees. Do not graze or harvest treated forage, straw, or hay for livestock. Do not apply more than 0.06 lb AI per acre per season. Preharvest interval: 30 days. REI: 24 hours.
- **Lannate:** Toxic to fish, aquatic invertebrates, bees, and wildlife. Do not apply within 14 days of harvest. Do not apply more than 1.35 lb AI per acre per year. Do not graze forage within 3 days of last application. Preharvest interval: 12 days. REI: 48 hours.
- **Leverage 360:** Extremely toxic to fish and aquatic invertebrates. Direct sprays and residues are highly toxic to bees. Avoid drift and runoff when treating. Use of this product on highly permeable soils with a shallow water table may result in groundwater contamination. The maximum formulated product allowed per crop season: 9 fluid oz. (0.07 lb AI of beta-cyfluthrin and 0.14 lb AI of imidacloprid). Preharvest interval: 21 days for seed and 15 days for hay and green forage. REI: 12 hours.
- **Mustang Maxx:** Toxic to aquatic invertebrates, fish, oysters, and shrimp. Do not apply more than 0.15 lb AI per acre per season. Preharvest interval: 21 days. REI: 12 hours.
- **Orthene/Acephate:** Apply by air at 5-10 GPA and by ground at 10-50 GPA. Do not harvest for hay or forage. Do not apply more than 2.0 ai AI per acre per season. Preharvest interval: 14 days. REI: 24 hours.
- **Steward:** Toxic to fish, birds, and aquatic invertebrates. Do not feed or graze livestock on treated fields. Do not apply more than 0.44 lb AI per acre per year. Preharvest interval: 21 days. REI: 12 hours.
- **Blackhawk:** Toxic to bees and mollusks. Do not apply more than 0.186 lb A.I. per acre per year. Do not feed treated forage/hay to beef or dairy cattle. Preharvest interval: 28 days. REI: Four hours.