

INSECT MANAGEMENT

See the following table for insect control recommendations.

Thrips: Thrips cause serious crop stunting and yield loss from both direct feeding and virus transmission (tomato spotted wilt). All commercial peanuts planted in S. C. should be treated at-planting with a preventative in-furrow insecticide (Thimet or Phorate 20G, or Temik 15G. See the following table for Thimet / Phorate rates based on row spacing.

Soil Insects:

Lesser cornstalk borers attack pods, pegs, lateral stems, and the plant crown at the soil line during extended drought stress. Fields with lighter soils are particularly vulnerable. In addition to direct injury, this insect is associated with increased white mold and aflatoxin levels due to wounding of the plant. Rapid canopy closure and reduced soil temperatures reduce LCB risk. **Irrigation is the best defense against lesser cornstalk borer.** Granular Lorsban (13 lb/ac) can be applied at pod set (about 50-55 DAP) to high risk fields (sandy soils under drought stress). At least 1/4" rain is needed within 10 days of application to benefit from Lorsban. Lorsban also reduces pod damage from wireworm, burrower bugs, and southern corn rootworm feeding. Unfortunately, Lorsban causes outbreaks of corn earworm, granulate cutworm and spider mites under drought stress later in the season.

Burrower bugs primarily attack reduced-tillage peanut fields under drought stress. These are underground stink bugs which feed directly on kernels by piercing pods with their needle-like mouthparts. In addition to direct yield and grade loss, burrower bugs are associated with increased aflatoxin levels. **Irrigation is also the best defense against burrower bug injury.**

Wireworms are immature or larval stages of click beetles, and they commonly feed on peanut pods. Although wireworms are capable of causing significant injury, thus far economic damage to peanut has been minimal under S. C. conditions. The only practical treatment for wireworms is preventative Lorsban application.

Southern corn rootworm is the immature stage of the eleven-spotted cucumber beetle. This worm tunnels into peanut pods under high soil moisture conditions, usually in more organic soils such as found in bottom areas of a field. Rootworm injury has been a relatively minor concern thus far under S. C. conditions. Preventative granular Lorsban is the only practical treatment for rootworms.

Foliage Caterpillars:

Corn earworm is the most common foliage feeding insect on peanuts. Corn earworms usually appear in peanut fields during the last week of July or first week of August after the moths emerge from corn fields. Corn earworms initially feed in plant terminals, then blooms, older leaves, and pegs as the worms mature.

Fall armyworms are not usually an economic problem on peanut, but can occur in very high numbers during outbreak years. This insect usually shows up in peanut fields in mid-August, a couple weeks after corn earworms first appear.

Granulate cutworm can defoliate small plants in June and can also be a problem late in August where Lorsban was previously used because Lorsban kills fire ants and other predators. Granulate cutworms have distinctive chevron or "sergeant" markings along the back. Granulate cutworms initially feed on blooms, then leaves, pegs, and pods as the worms mature. During the day cutworms

can be found curled up under shed leaves and other organic matter on the soil surface. The larger larvae climb up the plant to feed at night.

Velvetbean caterpillars can defoliate late maturing peanuts rapidly during late September or October in the southern coastal plain counties of S. C, especially in Jasper, Hampton, Allendale, and Colleton counties. Velvetbean caterpillars range from light green to almost black, but the key identification characteristic is that the medium to large worms will thrash violently when handled. They are easy to control.

Scouting for Foliage Caterpillars:

Use a 3' shake cloth to look for worms starting the last week of July, especially on fields treated with Lorsban. Work the dowel handle up under the lateral stems to the plant crown and bend the other side of the plants over the cloth; then beat down vigorously 15 times to knock the worms onto the cloth. Shake the plants, bend them back out of the way, and count the worms on the cloth. Also count the worms under the cloth on both sides of the row to calculate worms per row ft. Check at least three areas of the field.

Rank-growing, unstressed peanuts can tolerate 8 foliage feeding worms per row ft. The treatment threshold is 4 worms per row ft. on stressed plants which have not lapped the middle or where Lorsban has previously been applied. Georgia Green is more susceptible to foliage feeding because this variety has a smaller, slower growing canopy. **Irrigation is the best defense against foliage-feeding worms.**

Spider mites:

Spider mites can damage drought stressed peanuts in August and September. Stressed fields should be spot checked for yellow "hits" which indicate where mites are feeding. Spider mites can be seen with a hand lens on the underside of leaflets. Comite and Danitol are labeled for mite control, but these products require ground application, thorough coverage, and potentially a second application in 5 days. Lorsban application greatly increases the risk of mite outbreaks. **Irrigation is the best defense against spider mite injury.**

PEANUT INSECT CONTROL
Jay W. Chapin, Extension Specialist

Insect	Product	Rate /acre	Comments
Thrips	Temik 15 G	5 lb = 5.8 oz/1,000 ft (38"rows)	Preventative in-furrow thrips control is a must on all peanuts planted in S.C.
	Thimet / Phorate 20G	4.7 lb (38" rows)	The maximum labeled phorate use rate is 5.5 oz/1,000 row ft. which is equivalent to 4.7 lb/ac on 38", 5.0 lb on 36", and 6.0 lb on 30" rows. For twin rows use 3.5 oz/1,000 row ft in each row, which equals 6.0 lb/ac on 38"centers.
	Orthene 75S Orthene 97	0.5 lb 6 oz	Use foliar Orthene if in-furrow treatments do not prevent stunting.
Leafhoppers	Orthene 75S	1.0 lb	Hopperburn starts on field borders in June - July. Treat if hopperburn is spreading across the field and approaching 15 - 20 % symptomatic leaflets.
	Orthene 97	12 oz	
	Asana XL	3.9 oz	
	Baythroid 2	1.0-1.8 oz	
	Brigade 2EC	2.1-6.4 oz	
	Mustang Max	1.75-4 oz	
	Karate Z	1.0 - 1.6 oz	
Declare	1 - 1.5 oz		
Three-cornered alfalfa hopper	Asana XL	3.9 - 5.8 oz	Treat at 45-60 days after planting to prevent injury. Ga. Green variety is particularly susceptible to three-cornered alfalfa hopper injury.
	Baythroid 2	1.8-2.4 oz	
	Brigade 2 EC	2.1-6.4 oz	
	Karate Z	1.3 - 1.9 oz	
	Orthene 75S	0.65 lb	
	Orthene 97	8 oz	
Declare	8 oz1 - 1.5 oz		
Corn earworm	Asana XL	3.9 - 5.8 oz	Unstressed plants with a large, closed canopy can tolerate 8 worms per row ft. Treat if populations reach 4 per row ft. on drought stressed, unlapped peanuts or on fields previously treated with Lorsban.
	Baythroid 2	1.8-2.4 oz	
	Brigade 2 EC	2.1-6.4 oz	
	Danitol 2.4 EC	10.6 - 16 oz	
	Karate Z	1.3 - 1.9 oz	
	Lannate 2.4 LV	12 -18 oz	
	Lannate 90 SP	0.25 - 0.38 lb	
	Mustang Max	3.2 - 4 oz	
	Declare	1.0-1.5 oz	
	Proaxis	2.5-3.8 oz	
Tobacco budworm	Orthene 97	16 oz	Same threshold as for corn earworm. Peanuts can withstand severe defoliation prior to pegging. We have not measured any yield response to treating early season budworm infestations.
	Steward	9.2 - 11.3 oz	
	Tracer	1.5 - 2.0 oz	
Fall armyworm	Danitol 2.4 EC	10.6 - 16 oz	Same threshold as for corn earworm. Fall armyworm attacks peanut in outbreak years from mid-August to early September.
	Brigade 2 EC	2.1-6.4 oz	
	Intrepid 2F	6 - 10 oz	
	Karate Z	1.3 - 1.9 oz	
	Mustang Max	3.2 - 4 oz	
	Steward	9.2 - 11.3 oz	
	Tracer	2.0 - 3.0 oz	
Beet armyworm	Intrepid 2F	6 - 10 oz	Same threshold as for corn earworm.
	Steward	9.2 - 11.3 oz	
	Tracer	2.0 - 3.0 oz	
Velvetbean caterpillar	Asana XL	3.9 - 5.8 oz	Velvetbean caterpillar is a late season pest (Sept. - Oct.) that can defoliate peanuts quickly. This pest is usually easy to control but often misidentified as an armyworm, leading to unnecessary treatment cost. Karate provides residual VBC control. Adding Dimilin 2L (2 fl oz/ac) to the last fungicide treatment will prevent VBC outbreaks in high risk areas (southern coastal plain counties). However do not use Dimilin to control an established population Steward will not control velvetbean caterpillar.
	Baythroid 2	1.8-2.4 oz	
	Brigade 2 EC	2.1-6.4 oz	
	Karate Z	1.3 - 1.9 oz	
	Mustang Max	1.3 - 4	
	Dimilin 2L	2.0 oz	
	Declare	1.3 oz	
Proaxis	3 oz		

The label is the law. Always read and follow all pesticide label restrictions.

PEANUT INSECT CONTROL (cont.)

Insect	Product	Rate /acre	Comments
Granulate Cutworm	Steward	9.2 - 11.3 oz	Treat if cutworms reach 4 per row ft. on fields previously treated with Lorsban. Or treat if defoliation exceeds 30 % on small plants in June. Granulate cutworms now resistant to pyrethroids.
Spider mites	Comite 6.5 EC Comite II Danitol	2 pt 2.25 pt 16 oz	Use ground application, 20 gal/ac at 40-60 psi. Prevent mites with irrigation. Lorsban causes mite outbreaks.
Lesser cornstalk borer	Lorsban 15 G	13.3 lb	Apply with a 5" bander the first week of July. Lorsban can cause spider mite and worm outbreaks. Rainfall is needed within 10 days of application. Lorsban also provides significant white mold control, but triggers outbreaks of worms and spider mites.
Burrower bug	Lorsban 15 G	13.3 lb	See comment above.
Southern corn rootworm and Wireworms	Lorsban 15 G Lorsban 4E	13.3 lb 2 qt	Lorsban 15G can be applied from planting until the first week of July for rootworm or wireworm suppression. Use Lorsban 4E at-planting only.

Peanut Insecticide Use Precautions

Active Ingredient	Brand Name	Pre-Harvest (Days)	Comments
acephate	Orthene 75S Orthene 97	14	Do not feed or graze.
aldicarb	Temik 15G	90	Apply in-furrow.
beta-cyfluthrin	Baythroid 2	14	Do not exceed 0.066 ai per ac per season.
bifenthrin	Brigade	14	Do not exceed 0.5 lb ai per season. Do not feed or graze treated vines.
chlorpyrifos	Lorsban 15G	21	Do not exceed 26.6 lb 15G /ac per crop year.
diflubenzuron	Dimilin 2L	28	Do not exceed 3 appl. per season.
esfenvalerate	Asana XL	21	Do not feed or graze.
fenthrothrin	Danitol 2.4 EC	14	Do not feed forage or hay within 14 days of treatment. Do not exceed 2.66 pt/ac per season.
gamma cyhalothrin	Declare, Proaxis	14	Do not exceed 0.38 pt/ac (Declare) or 0.96 pt (Proaxis) per season.
indoxycarb	Steward 1.25 SC	14	Do not exceed 45 fl oz/ac per season.
lambda-cyhalothrin	Karate Z 2.08	14	Do not feed or graze.
methomyl	Lannate 2.4 LV Lannate 90 SP	21	Do not feed treated vines.
methoxyfenozide	Intrepid 2F	7	Do not exceed 64 fl oz per year.
propargite	Comite 6.5 EC	14	Do not exceed 1 appl. per season.
phorate	Thimet 20G	90	Do not apply more 5.5 oz /1000 row ft or more than 7.5 lb per ac. Do not feed or graze hay.
spinosad	Tracer	3	Do not exceed 9 fl oz/ac per season.
zetamethrin	Mustang Max	7	Do not exceed 0.15 lb ai/ac per season. Do not feed or graze treated vines.

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