

Mississippi Crop Situation

August 22, 2008

Mississippi State University Extension Service

Number 22

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This Weeks Planting Report

National Agriculture Statistics Services (Mississippi) Crop Progress for Week Ending 8/17/08

Crop	This Week	Last Week	Last Year	5- Year Average
Corn Dent	98	96	100	96
Corn Mature	70	49	81	71
Corn Harvested	7	4	27	20
Cotton Setting Bolls	98	97	100	99
Cotton, Open Bolls	5	2	23	17
Peanuts Pegging	100	100	99	100
Rice Headed	81	69	99	97
Rice Mature	7	2	49	24
Sorghum Heading	98	96	100	100
Sorghum Coloring	80	68	92	96
Sorghum Mature	30	18	58	64
Sorghum Harvested	2	--	21	21
Soybeans Setting Pods	96	93	98	99
Soybeans Turning Color	25	10	48	55
Soybeans Dropping Leaves	6	1	27	35

****We will continue to send out newsletter from this point forward on an as needed basis****

Current Soybean Fungicide Recommendations

[Drs. Tom Allen, Billy Moore, and Richard Baird](#)

We have received several calls in the last few days regarding application guidelines for fungicides on lodged soybeans **OR** fungicides to prevent seed rot at or beyond R6. The target organisms/diseases for these types of late-season fungicide applications are mainly the Phomopsis/Diaporthe complex. These fungi are the major seed rotting organisms in our production system. With the potential of Tropical Storm Fay dumping inches of rain across our soybean growing acres we thought this would be an important time to present this information. As a reference, the photos on the left were taken last year in a field of soybeans that did not receive a late fungicide application and due to inclement weather pod and seed rotting fungi were able to impact yield due to a delayed harvest. Following the photos from top to bottom, Phomopsis seed decay symptoms on the exterior of a bean pod (A), signs of Diaporthe on the pod surface (B), and the interior appearance of a pod that has been infected with Phomopsis seed decay (C). Soybean seeds that are infected by this organism will appear white, chalky, and may additionally have some fungal growth present within the pod.



While MS does not have an extensive set of data on the late application of fungicides to prevent yield loss, in the past, observations have been made up to R6 that would indicate that seed rot may be prevented by applications of a fungicide at approximately R5.5. These fungicide applications have been shown to prevent seed rot during conditions of prolonged humidity. However, conditions favoring seed rot, and methods to control the situation using a fungicide after R6 have not been assessed in MS.

We recommend either Headline, Quadris, or Topsin M to control the situations that may develop late in the season in those cases mentioned above. Of course, a recommended rate of 6 fl. oz./Acre for maximum control (for Headline or Quadris) is always recommended to achieve the greatest amount of control. Topsin can be applied to soybeans at a rate of ½ to 1 pound/A. The full-labeled rate is always better than a reduced fungicide rate, however, data is lacking regarding this topic. A reduced fungicide rate recommendation is almost always based on estimations and we cannot state whether or not the applied, reduced rate will be beneficial to the particular situation. One of the most important things to remember with any fungicide is the pre-harvest interval (PHI). The PHI for Headline is 21 days, 14 days for Quadris and 21 days for Topsin.

However, with soybean prices where they are (essentially \$13.00/bushel), and depending on where and/or when your particular beans may have been priced, and the weather that could either delay harvest or increase the likelihood of a yield limiting situation due to seed and pod-rotting fungi this is a very important developing situation. Keep one thing in mind when deciding to make this type of a fungicide application, this is considered to be an “insurance” application, to insure against yield loss, this application will NOT enhance or increase yield. I suggest that this be considered a rescue treatment but will depend on the particular situation. Based on the closing market price of soybeans at the release of this newsletter:

Rescuing ≈ 2 bushels of soybeans/Acre = paying for the fungicide application

One additional thing to keep in mind, cooler temperatures are NOT favored by the fungi that can lead to pod and seed rotting. However, if temperatures and humidity both increase the development of this fungal complex could increase.

There are a lot of factors that need to be considered and ideally each field should be considered as a separate entity and dealt with accordingly. Please keep these important factors in mind before purchasing, and applying a fungicide:

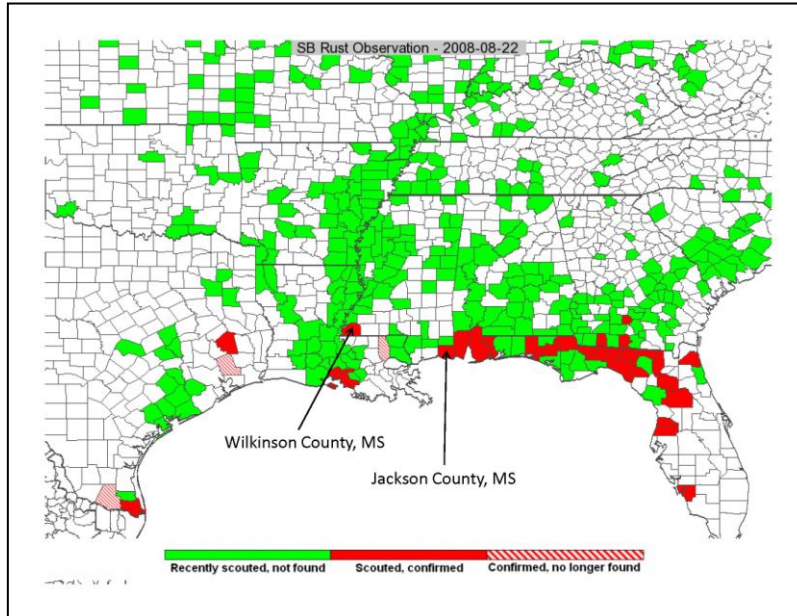
1. Yield potential
2. Number of days before expected harvest date (factor the PHI into your decision)
3. Weather conditions at, before, and after application
4. Whether or not these are continuous soybeans (beans following beans, not beans following wheat and soybeans)
5. Whether or not the soybean pods are in contact with the ground
6. Whether or not there is a disease already present in the field

7. Price you booked your soybeans

If you have specific questions regarding your particular circumstances please do not hesitate to call and discuss this issue with me (662-402-9995).

First Reports of Soybean in MS 2008

Dr. Tom Allen, Dr. Billy Moore, Mr. Andy Milling, Dr. Malcolm Broom



A VERY low level, and I want to stress, a VERY low level of soybean rust was identified in a commercial soybean field in Jackson County (southeast MS) on August 20 by the Mississippi State University Soybean Rust Team. Dr. Malcolm Broom, who has worked with us for the past three seasons, found a single leaf (ONE leaf) with a LOW level of rust pustules present. Less than 0.1% of the leaf surface contained pustules. After several minutes in the area where the leaf was recovered, we could NOT find another

infected leaf. This particular soybean field is approximately 70 acres in size and geographically speaking is very close to the Alabama state line and less than 30 miles from the Mobile County infected kudzu plot. The infected leaf was confirmed by the Envirologix ELISA test kit. The commercial soybean field was at the R5.7 growth stage.

Additionally, two kudzu patches in Wilkinson County (southwest MS), geographically VERY close to the LA line, were found to contain soybean rust infected leaves on August 21. One leaf in one kudzu patch contained 4-5 spots with 3-5 pustules each while the other kudzu patch (approximately 200 yards to the north of the first but NOT connected to one another) contained a single leaf with two spots that contained 2-4 pustules each. Both finds were confirmed with ELISA. The level of rust in these two kudzu patches was very similar to that from Jackson County. Both locations contain VERY low levels of rust (less than 0.05% of the leaf surface area was estimated to be infected) as we could not turn up another infected leaf after searching the area(s) for quite some time.

Based on these observations our statewide fungicide recommendations with regards to soybean rust control have NOT changed. We do NOT recommend the application of a fungicide at this time specifically for soybean rust control. Due to the late growth stage in the soybean field in Jackson County (the infected rust location) we would NOT recommend a fungicide application due to the very low level of inoculum production at this location and the very low level of identified soybean rust.

I will repeat, at this time we do NOT recommend a fungicide application for the control of soybean rust in MS.

The two locations identified on August 20 and 21 are the farthest east/west points that could occur in MS (or very close to that reality). The location in Jackson County is a few miles from AL while the Wilkinson County locations are only a few miles from LA. The area around the kudzu in Wilkinson County was the area most impacted by the spring flood that has only now receded (or I should say almost since we still cannot drive to the main soybean commercial areas in the county as the road is still impassable due to low lying areas along the Mississippi River). There are a little more than 800 acres of soybeans in southwest MS that have recently reached approximately R1. These beans were planted in a high area that was not impacted by the flood and the latest beans were planted 3 weeks ago. We hope that we'll be able to see this area within the next two weeks when we return to this location.

I would have to look at my notes but this is at least the 6th time we have scouted this kudzu in Wilkinson County. We were last there 5 weeks ago when it was very dry and the kudzu was not only scorched, but dropping leaves and setting seed in some parts of the large patch. This part of the state has received quite a bit of rain over the past four weeks, and pastures in the area are green for the first time this season. This particular kudzu location has put on a lot of new growth in the past few weeks and filled in some of the thinner areas in the gorge where it occurs.

The Wilkinson County kudzu location was the site of our first rust report for 2007. Historically speaking, this is the first time that we have found a kudzu patch that has contained soybean rust two years in a row.

If you have specific questions regarding this situation, please do not hesitate to call me (662-402-9995). We will continue to keep you abreast of the situation. Please stay tuned to email updates, the website (www.sbrusa.net), and the soybean rust hotline (1-866-641-1847). I have not had a chance to update the hotline, but will have this completed at some point today.

Soybean Insects

Angus Catchot and Dr. Jeff Gore

Soybean Loopers: Loopers are considered a major pest of soybeans throughout the south. Because loopers migrate into our area every year usually about mid-August we generally miss the big looper flights due to our widely adopted early planted soybean system in MS. However, over the last two years we have shifted a larger portion of our acres in MS to later plantings and group V soybeans to work around harvest of other grain crops. We have also increased our double crop behind wheat acres substantially. These practices have pushed our crop into the window where we are once again exposed to loopers at a time when our crop is susceptible to this pest. This is problematic for producers since it often puts us in a higher priced tank mix situation to control loopers and other pest since soybean loopers have developed resistance to several chemistries.


Brief Biology: The life cycle of soybean and cabbage loopers are nearly identical. On average it takes about 3 days for the eggs to hatch. The larval stage last 13-14 days then they pupate on the underside of the foliage. The pupa stage last for about 7 days and then they go through a pre-oviposition stage for about 3.5 days. From egg to adult is about 26-28 days on average. (Handbook of Soybean Insects: Leon G. Higley and David J. Boethel). Remember with most defoliating caterpillars, they will consume 90% of the foliage that they will eat in their lifetime in the last 3 days of their life. This is why our threshold of 19/25 sweeps also has the clause of ½ or greater in size. So if you are checking a field and find numerous newly hatched loopers, you will

have time to wait until your next check before they get enough size to cause extensive defoliation. This also allows natural control factors such as disease and beneficial insects to do.

Soybean Loopers or Cabbage Looper: As a general rule of thumb, the loopers that we see in June and early July are usually cabbage loopers. This time of year populations are generally soybean loopers in our area. However, we can have cabbage loopers mixed in with them. This can sometimes cause confusion about control options since cabbage loopers are very easy to control and soybean loopers are difficult to control.

Can you tell them apart? Most people believe that soybean loopers have black legs and cabbage loopers have white legs. However, a paper published in the Journal of Entomological Science 33(4) 421-425 in 1998 by Doug Jost and Henry Pitre showed that this can be an unreliable method of distinguishing between soybean and cabbage loopers. In 1995, 99% soybean loopers collected from cotton and soybeans had black legs and 31% of the cabbage loopers collected in cotton had black legs. The only cabbage looper they were able to collect out of soybeans in 1995 had black legs. In 1996, only 50% of the soybean loopers collected from cotton had black legs and only 55% of the soybean loopers collected out of soybeans had black legs. The safe thing to do is assume they are the more difficult to control soybean loopers.

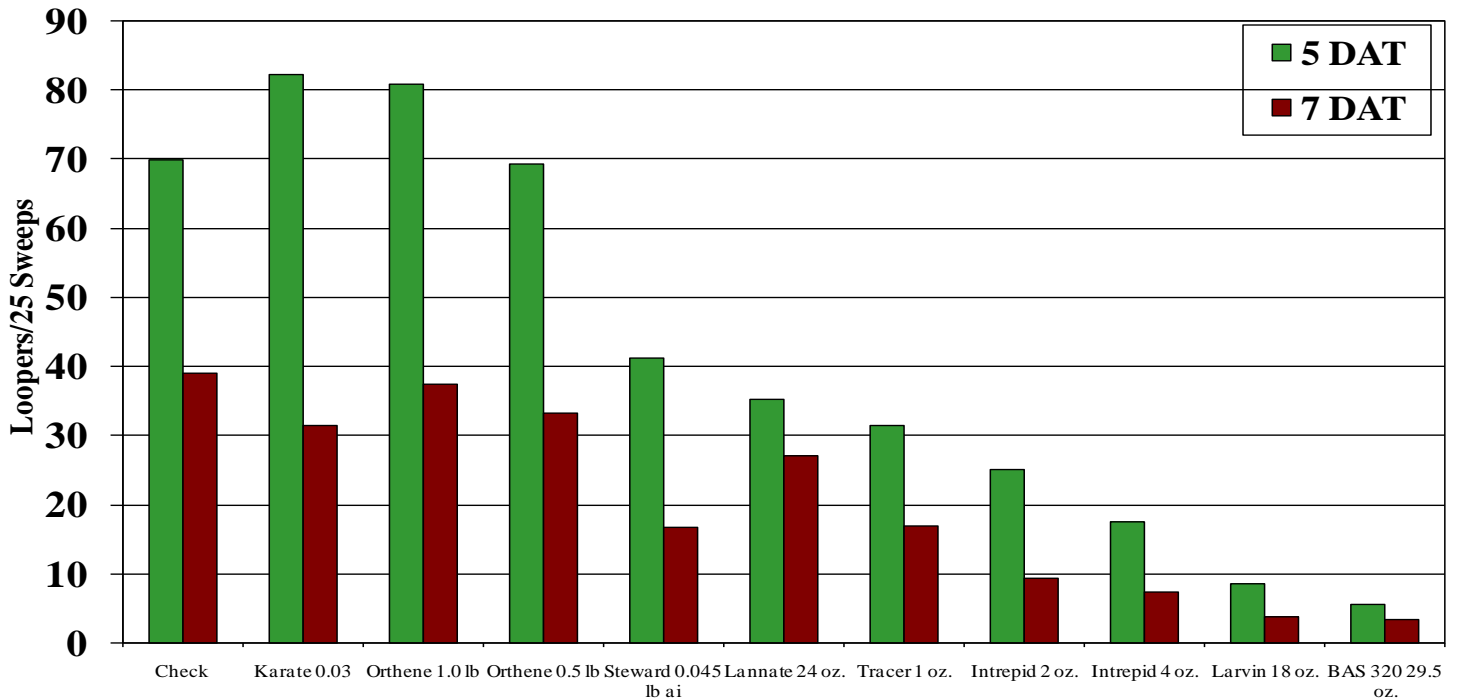
Control Options:

<p><i>Soybean Looper</i></p> 	Insecticide	Amount of Formulation per Acre	Pounds Active Ingredient per Acre	Acres 1 Gallon or 1.0 lb. Dry Will Treat	Comments
	indoxacarb Steward 1.25SC	5.6 - 11.3 oz.	.055 - .11	22.8 - 11.5	Toxic to fish, birds, and aquatic invertebrates. Do not feed or graze livestock on treated fields. Postharvest interval: 21 days. Maximum AI per acre per season: 0.44 lbs.
	methoxyfenozide Intrepid 2F	4 - 8 oz.	.06 - .12	32 - 16	Drift and runoff may be toxic to sensitive aquatic vertebrates. Do not apply by air within 150 feet or by ground within 25 feet of surface water. Preharvest interval: 14 days for seed; 7 days for hay or forage. Maximum AI per acre per season: 1 lb AI (or 4 applications per acre per season). REI: 4 hours.
	spinosad Tracer 4SC	1 - 2 oz.	.031 - .062	128 - 64	Toxic to bees and mollusks. Do not feed treated forage or hay to beef or dairy cattle. Preharvest treatment interval: 28 days. Maximum AI per acre per season: 0.186 lbs. REI: 4 hours.
	thiodicarb Larvin 3.2F	18 - 30 oz.	.45 - .75	7.1 - 4.3	Toxic to fish, aquatic invertebrates, birds, and mammals. Do not feed forage, hay, or straw to livestock. Preharvest interval: 28 days. Maximum AI per acre per season: 3 lbs. REI: 48 hours.



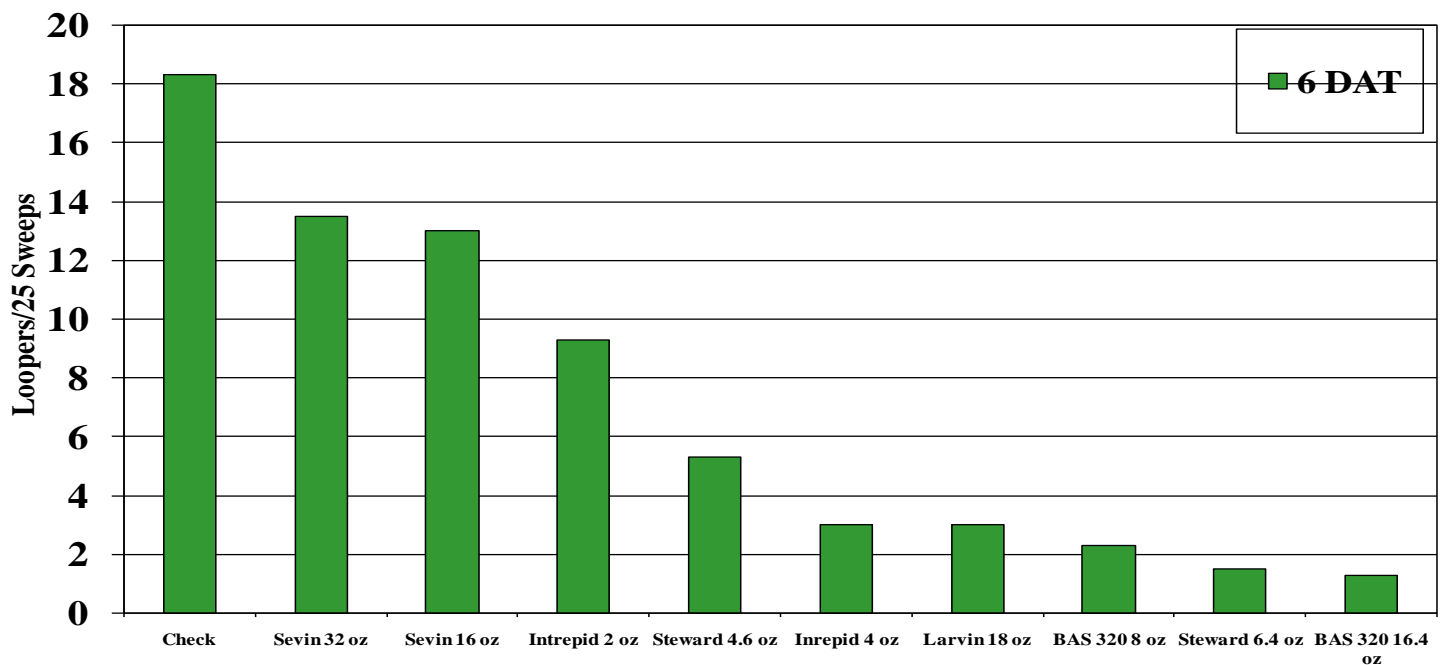
2006 Soybean Looper Trial

Greenwood, MS 2006



Soybean Looper Trial

Benoit, MS 2007



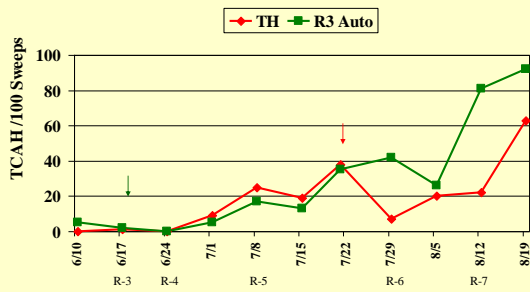
*Rain 4.5 hours after application

Dr. Gordon Andrews:

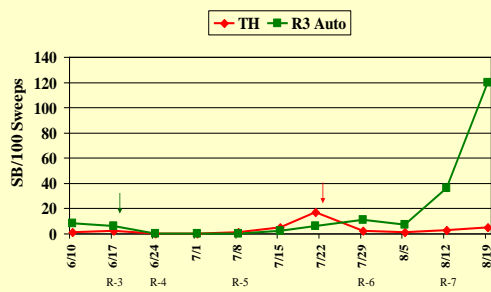
The following graphs contain data collected from three tests which are being conducted in the Mississippi delta this growing season. The objectives of these tests are to look at insect populations and soybean yields produced by two soybean insect management strategies on large (40-50 acre) fields. Strategy/treatment 1 requires no insecticide treatment until published thresholds are sampled from the fields except for three cornered alfalfa hoppers which will be treated at a lower threshold of 40 adults or 2 nymphs per 100 sweeps. Strategy/treatment 2 requires an application of insecticide at the R-3 stage of development and the use of published insect treatment thresholds for the remainder of the season. Test 1 is near Lake Washington in Washington County, test 2 is near Cruger in Holmes County, and test 3 is near Gunnison in Bolivar County.

Test 1

Three Cornered Alfalfa Hoppers (TCAH) per 100 Sweeps (Orthene 1 lb AI/Acre)

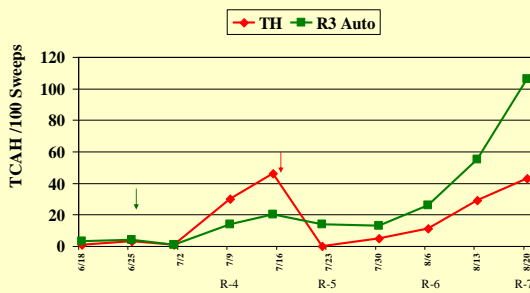


Total Stinkbugs (SB) per 100 Sweeps (Orthene 1 lb AI/Acre)

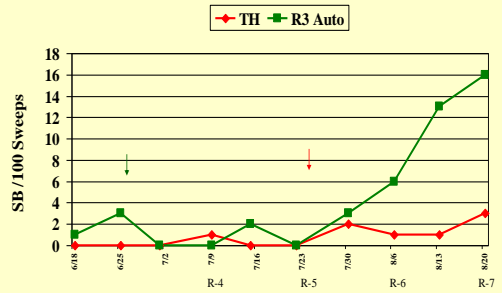


Test 2

Three Cornered Alfalfa Hoppers (TCAH) per 100 Sweeps (Mustang Max 0.025 lb/Acre)

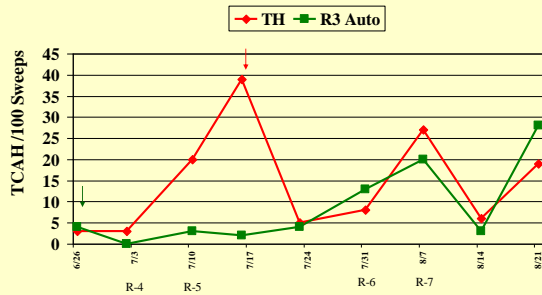


Total Stinkbugs (SB) per 100 Sweeps (Mustang Max 0.025 lb/Acre)

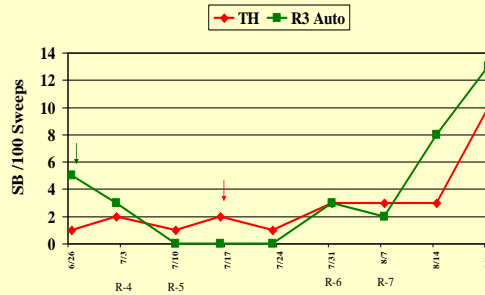


Test 3

Three Cornered Alfalfa Hoppers (TCAH) per 100 Sweeps (Baythroid XL 0.02 lb/Acre)



Total Stinkbugs (SB) per 100 Sweeps (Baythroid XL 0.02 lb/Acre)



These three tests continue to produce interesting results. In a short survey this week only two people with a good knowledge of soybeans agreed with my decision not to spray the stinkbugs in test one. I agree it is very close call. My question is how many people are checking beans two weeks into R-7. All attempts will be made to get the yield from these fields and have the beans graded. The graphs show some big and consistent differences in the three cornered alfalfa hopper and stinkbug populations between the two insect management strategies except in test 3 where insect populations remain low.

Bollworm/Budworm Traps

Pheromone Traps Captures – Don Cook, Chris Daves, and Fred Musser. Week of August 18, 2008.

County	This week last year Bollworm	Bollworm	This week last year Budworm	Budworm	Beet Armyworm
Calhoun	--	71	--	8	75
Chickasaw	173	112	22	36	46
Grenada	70	68	0	6	-
Hinds	56	94	1	1	6
Lafayette	--	85	--	0	0
Lee	118	99	34	7	3
Lowndes	347	21	5	2	3
Madison	100	44	0	4	15
Monroe	--	24	--	3	10
Noxubee	104	1	17	6	0
Oktibbeha	--	18	--	0	5
Pontotoc	--	70	--	1	0
Prentiss	46	45	5	14	6
Rankin	--	46	--	11	7
Scott	--	14	--	4	2
Union	38	50	1	0	4
Warren	--	168	--	20	49
Webster	--	98	--	0	1

Ryan Jackson USDA Trap line

August 18, 2008

County	This Week last Year Bollworm	Bollworm	This Week last Year Budworm	Budworm
Washington	17	91	2	55
Sharkey	39	83	1	0
Humphreys	19	102	2	32
Yazoo	3	22	8	5
Holmes	40	42	1	7
Leflore	76	39	8	15
Tallahatchie	46	90	11	18
Coahoma	55	90	23	14
Bolivar	27	104	6	0
Sunflower	60	70	29	38

Armyworms in Pastures

Dr. Chris Daves

Over the past few weeks fall armyworms have been showing up in hay fields and pastures all across the state. This has generated many calls regarding what products are labeled for use and what type of grazing and hay restrictions are associated with each product. Below is a table with some of the current treatment options for armyworms in hay fields and pastures.

The treatment threshold is 5-7 worms per square foot. When choosing a product, keep in mind that insect growth regulators will be slower in terms of initial knock down, but are very effective at controlling armyworm populations. Also, keep in mind that Lannate and Methyl are both restricted use pesticides and should be used with caution.

Cattlemen not familiar with the risks associated with restricted use products should consider using one of the other control options available.



Products	Rate	Class of Insecticide	Grazing Restriction	Hay Restriction
Mustang Max	2.8 oz./ac.	Pyrethroid	0	0
Karate Z	1.28 oz./ac.	Pyrethroid	0	7
Sevin	1.88 lbs./ac.	Carbamate	14	14
Malathion 5E	2 pts./ ac.	Carbamate	0	0
Tracer	1 oz./ac.	Spinosyns	0	3
Intrepid	4 oz./ac.	Insect Growth	0	7
		Regulator		
Dimilin 2L	2 oz./ac	Insect Growth Regulator	0	0
*Methyl 4 EC	1.5 pts./ac.	Organophosphate	15	15
*Lannate SP	¼ - 1 lb./ac.	Organophosphate	7	3
*Lannate LV	¾ - 3pts./ac.	Organophosphate	7	3

*Restricted Use Pesticides.

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