



INSECTS AND WEEDS IN FOCUS

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COASTAL BEND IPM PROGRAM COTTON INSECT REPORT

Generally, Kleberg County fields are at the 3rd-4th true leaf stage, however some fields are still unplanted while a few are already at matchhead square. In Nueces County our program fields range from pinhead square stage to unplanted. San Patricio County area fields are, in general, more mature with most at first square or very near. Obviously, there is a lot of variability this year as some producers planted early, while many others decided to wait on a rain.

We have begun receiving some reports of fleahoppers occurring in San Patricio County. So far we have not seen fleahoppers in our IPM program fields in any county. However, don't let your guard down and stay watchful!!! Dr. Parker and I have seen fleahoppers on their wild hosts (e.g., horsemint, buttercup, woolly croton, silverleaf nightshade) all over the area. As these wild host plants begin to mature and dry down, becoming less succulent, you can bet the fleahoppers will migrate over into cotton fields in search of more suitable host plant material.

Thrips and aphids have stayed relatively low in most IPM program fields. However, we are seeing some moderate aphid populations in a few fields in Kleberg and San Patricio County. These outbreaks have usually been very spotty

within fields, but should be closely monitored so that you are not surprised by rapid population increases. Don't forget – aphid damage curls leaves down, while thrips cause leaves to curl up. Speaking of thrips, populations have been quite low but there are exceptions in some areas and specific fields. Most fields are starting to mature past the thrips damage window.

Just as a side note, we have started seeing a few bollworm eggs and small larvae in some fields. So far there has not been a situation that might cause concern, but it does remind us that the potential is always there for bollworm problems. At emergence from the egg the bollworm larvae immediately begin feeding on the tender terminal foliage of the cotton plant. This damage can be severe, causing delayed plant development and nonproductive growth. Within 2-3 days, these maturing worms will move over into fruiting structures and begin feeding.

Finally, ladybeetle abundance has been VERY high in many IPM program fields across all three Coastal Bend counties. Additionally, we have seen lots of spiders and aphid parasitoids working area fields. Also present, but in fewer numbers, have been big-eyed bugs and minute pirate bugs. Please try to remember the importance of natural enemies as you plan your insect pest control strategies.

Until our pest situation becomes more complex, I will continue to write a general insect pest report. As the season progresses and insect occurrence becomes much more variable, I will probably begin breaking the pest report down into Kleberg, Nueces, and San Patricio County sections. EDB

IPM NEWS AND NOTES

I recently got my mobile phone up and going. If anybody, for any reason needs to call, they may do so here at the office at the above phone number or on the road at (512) 850-0167. Feel free to call me at any time for any reason.

We recently hired a new scout to help us collect insect pest information here in the Coastal Bend. His name is Ty Glaser and he attends Odem High School. Ty will be helping us scout cotton in Nueces and San Patricio Counties until school is out, at which time he will also be used in Kleberg County. Producers in Nueces and San Patricio Counties should watch for him and his scouting vehicle, a

Ford Bronco, as he gets oriented into scouting cotton. EDB

BOLLWORM/TOBACCO BUDWORM PHEROMONE TRAP CATCHES

Bollworm moth trap captures have been much greater and sustained over a longer period than at anytime during the last 10 year period. The good news is that tobacco budworm moth numbers have been very low so far. Whether or not infestations will develop in our crops (corn, sorghum, soybeans or cotton) is not known but I believe these trap captures point to a potential for heavier than normal bollworm activity. Weather conditions, plant growth stage, natural enemies and amount of insecticide use may all have an impact on the level of field infestations. First significant infestations might occur just before or during early bloom. RDP

COTTON GROWTH STAGE ESTIMATES BASED ON 3 PLANT EMERGENCE DATES

The following growth stage predictions are based on emergence dates of March 10, 24 and April 9 using this years temperatures through April 19. These growth stages are reached when 50% of the plants exhibit a particular stage.

EM	FS	PH	MH	OT	FB	FO
3/10	4/11	4/16	4/24	4/30	5/17	6/28
3/24	4/23	4/28	5/05	5/10	5/26	7/05
4/09	5/07	5/11	5/18	5/23	6/07	7/15

EM=emergence, FS=first square, PH=pinhead square, MH=matchhead square, OT=1/3 grown square, FB=first bloom and FO=first open bollRDP

COTTON GROWTH & DEVELOPMENT

Cotton plants with adequate water respond at a specific rate of growth to temperature. It is reported as accumulated heat units or DD60's for cotton. The daily and accumulated heat units (DD60's) for Corpus Christi from March 1, 1999 are provided below. RDP

Date	Daily H.U. ¹	Acc. H.U. ¹	Date	Daily H.U. ¹	Acc. H.U. ¹
3/1	5.6	5.6	3/26	6.1	222.3
3/2	16.5	22.1	3/27	10.6	232.9
3/3	3.0	25.1	3/28	5.4	238.3
3/4	4.7	29.8	3/29	4.5	242.8
3/5	11.8	41.6	3/30	2.9	245.7
3/6	12.2	53.8	3/31	5.0	250.7
3/7	9.8	63.6	4/1	11.1	261.8
3/8	15.3	78.9	4/2	13.4	275.2
3/9	13.7	92.6	4/3	14.3	289.5
3/10	13.2	105.8	4/4	15.3	304.8
3/11	12.5	118.3	4/5	16.8	321.6
3/12	14.5	132.8	4/6	12.7	334.3
3/13	2.7	135.5	4/7	15.6	349.9

3/14	0.0	135.5	4/8	18.0	267.9
3/15	0.0	135.5	4/9	16.2	384.1
3/16	3.6	139.1	4/10	18.4	402.5
3/17	10.4	149.5	4/11	16.8	419.3
3/18	11.9	161.4	4/12	17.1	436.4
3/19	9.0	170.4	4/13	17.3	453.7
3/20	4.1	174.5	4/14	19.0	472.7
3/21	2.1	176.6	4/15	7.7	480.4
3/22	4.1	180.6	4/16	2.2	482.6
3/23	11.9	192.5	4/17	1.9	484.5
3/24	12.9	205.5	4/18	7.0	491.5
3/25	10.7	216.2	4/19	2.0	493.5

^a H.U. = heat units. Accu. H.U.= accumulated heat units

The following chart provides estimates of the number of heat units (DD60's) required to reach various stages of plant growth development based on the cultivar DPL50.

From/to	Emerge	2 true LF	4 true LF	6 true LF	Pinhead SQ
Planting	90	190	285	375	425
Emerge		100	195	285	335
2 true LF			95	185	235
4 true LF				90	140
6 true LF					50

Table continued

From/to	Matchhead SQ	One third grown SQ	First bloom	First open boll
Planting	545	645	1005	1905
Emerge	455	555	915	1815
2 true LF	355	455	815	1715
4 true LF	260	360	720	1620
6 true LF	170	270	630	1530
Pinhead SQ	120	220	580	1480
Matchhead SQ		100	460	1360
One-third grown SQ			360	1260
First bloom				900

POST EMERGENCE WEED CONTROL PRECAUTIONS

Throughout South Texas producers are busy trying to control weeds in corn, cotton and sorghum. For the most part, the weather has cooperated fairly well. The diversity of crops being grown side by side dictates that care must be taken to minimize drift from one crop to another.

There are more options to control weeds post emergence than at any time in past history. While this can be very helpful, producers should be aware of some potential pitfalls if careful attention is not paid to details.

First, be sure that the crop being treated is safe to spray. This includes checking for proper growth stage, plant condition, and genetic make-up. Many crops are reaching the stage that an over-the-top treatment may cause damage.

Second, make sure that the weed treated is found on the label. Weeds that are misidentified may not be controlled. There are many look alike weeds that may not be controlled by the same treatment. Further,

weeds that are too large may not be killed. Labels are very specific about the proper weed size for satisfactory results.

Third, be sure to follow the label as to recommended spray adjuvants. Most post emergence herbicides require the addition of either a crop oil concentrate or non-ionic surfactant. Adding additional materials above the label requirements will usually not be necessary for good performance and in some cases may actually suppress activity and/or damage the crop being treated.

Fourth, good spray coverage is a must for satisfactory results. This includes use of the proper amount of carrier as well as choosing the proper nozzle and its orientation over the row. If the crop canopy is too large, spray coverage may be intercepted by the crop and not reach the target weed. JEB

SUNFLOWER MOTHS LAYING EGGS

Sunflower moths are attracted to plants just beginning to bloom. About 80% of their eggs are laid on the plant within 4 to 7 days after buds begin to open (yellow ray petals first become visible). These eggs hatch in 24-72 hours and generally by that time about 20% of the heads have a ring of "seed flowers". For the first 5-6 days after hatching young larvae are relatively exposed as they feed on pollen and floral parts. Apply insecticide at this stage when any moths are found in the field. It has been my experience that they are present every year at this time; therefore, an automatic application is probably appropriate. A second application 5 days later is generally needed and under sustained infestations sometimes a third treatment is needed. Numerous insecticides are labeled but in our area methyl parathion alone or mixed with a pyrethroid seems to be the standard treatment.

The adult sunflower moth is a small, slender, silver-to-buff gray and about ½ inch long. It is most often seen resting on sunflower heads during the blooming period, especially in early morning and early evening.

We would be glad to send you a copy of TAEX publication B-1488, "Managing Insect Pests of Texas Sunflowers." RDP

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