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## Cotton Insights Newsletter

A service provided by Windstar, Inc. affiliated gins.

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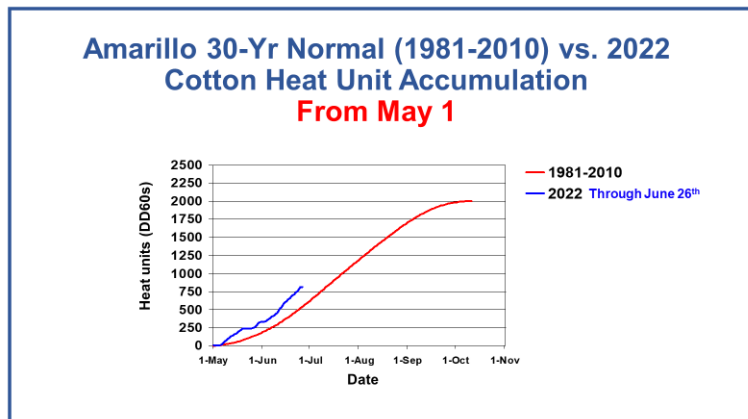
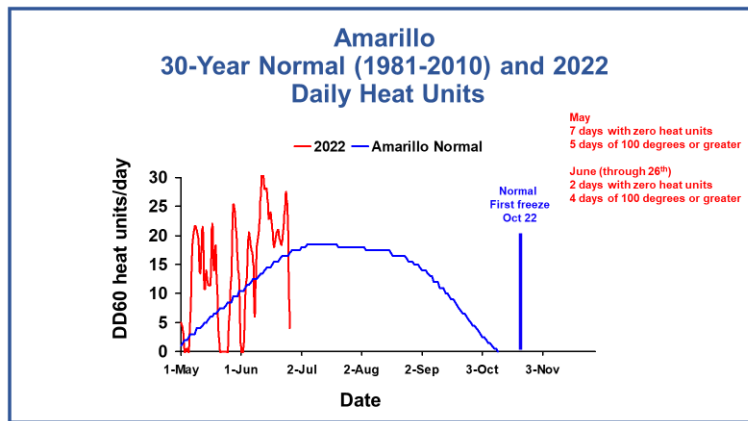
### Crop Update

The 2022 crop year has been challenging for most producers. Uncooperative weather and shortages of and high prices for many chemical input products have been experienced. Dry conditions in the early planting window were followed by high rainfall by mid- to late-May in many areas, and this extended into the first two weeks of June in some areas of western OK. Localized high intensity rainfall deluges resulted in crop losses in some fields. However, the wet conditions didn't seem to last very long, and by the June 20 final planting dates in western OK, the surface moisture evaporated in many fields due to what seemed to be incessant high winds coupled with several days of triple-digit temperatures.

Very likely, an extremely high percentage of dryland cotton acreage in many counties in our service area has been or will be abandoned. A considerable amount of irrigated acres have also gone under the insurance adjuster's knife. In many cases, what remains generally seems to be on track, and pinhead to matchhead squares were noted last week during various inspections of fields planted in early to mid-May.

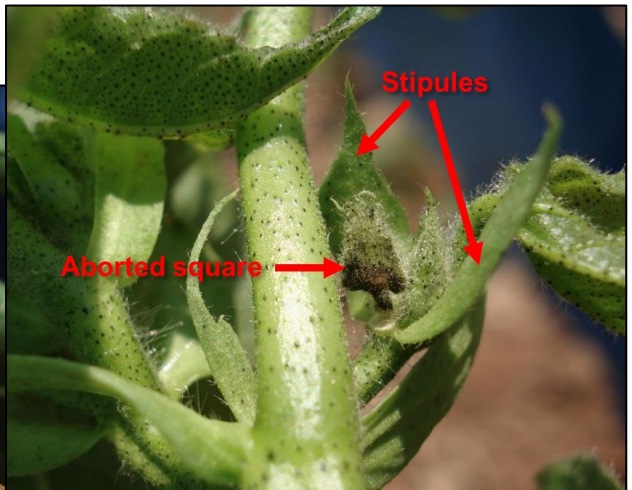
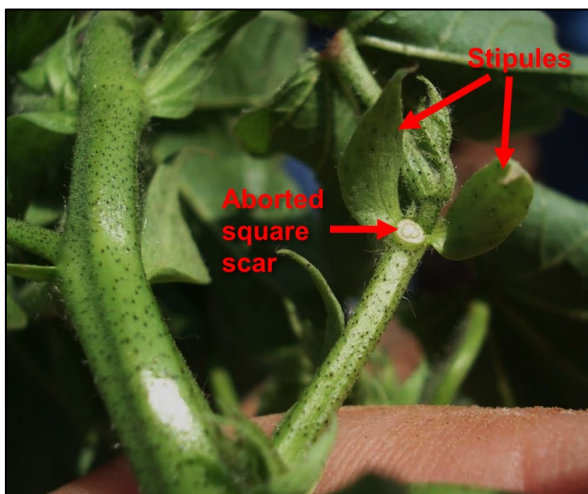
Daytime high temperatures thus far for the month of June at Amarillo have mostly been above normal, but June 1 and 2 actually had zero heat units accumulated. The month of June is closing in with about 32% above normal heat units. When scrutinizing the accumulated heat units graph for Amarillo, even with the seemingly endless "ups and downs" in temperatures, we are currently well above normal.

See the graphs below for the daily fluctuation in DD60s compared to "normal" and the Amarillo cotton heat unit accumulation from May 1.



## Insects

- Protecting early fruit from insect damage is critical, and growers need to be vigilant for cotton fleahoppers, lygus and other square robbing insects.



Photos courtesy of Shane Osborne, formerly OSU SWREC, Altus, OK

## Photos of First Position “Blasted” Pinhead Squares



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## Pre-Bloom Fruit Retention Goals

- It takes about 21 days to go from a pinhead sized square to a bloom
- Many times we can enter bloom with 100% square retention if factors align.
- Probably should target at least 85% square retention



### Square Retention Concerns

- With substantial May and June rainfall in some areas, we have a lot of alternate hosts for various “square thieves” growing in weedy dryland corners planted to grass, ditches, and other non-cropland. These areas can harbor multiple pest species including cotton fleahoppers and lygus bugs that can rapidly migrate into cotton as the weeds dry down or get mowed by growers.
- On any given fruiting branch, the difference in age between adjacent sequential fruit development on that branch (e.g. first and second position squares) is about 6 days or so.
- If the earliest first position square is lost, then a second position square on the same fruiting branch will be depended upon to produce the first bloom on that fruiting branch. For a given plant, this loss of the earliest first position square means that the first bloom date can be delayed around 6 days or so. If the first position square on next higher level fruiting branch is retained, then that delay to first bloom may be about 3 days. In our region, it is important to get to first bloom as quickly as possible, and retention of the squares on the first few fruiting branches is critical.
- This early season square loss is not something we need to encounter. This may necessitate higher plant growth regulator applications depending upon the planted variety’s growth potential and growing conditions.
- Pre-bloom cotton squares need to be protected through the bloom stage. At the bloom stage, cotton fleahoppers typically cease to be a problem, but lygus and other species can still be problematic well into bloom.
- If proper insect management has been implemented, growers have really done all they can do.

## Cotton Fleahoppers – Texas A&M AgriLife Extension Entomology Publication

- Earlier planted fields are well into squaring but some later planted fields are lagging behind. Cotton fleahoppers can build up in alternate hosts and move into cotton and feed on developing squares. Fields should be scouted and initial fruit should be protected from these insects. With all of the rainfall across the region, fleahopper populations will likely be able to build up on alternate hosts growing in ditches and other non-cropland areas.
- There is an excellent comprehensive publication available entitled “Managing Cotton Insects in Texas” (ENTO-075, 4/19). This 38-page guide has photographs of nearly all of the insects found in Texas cotton throughout the growing season. It was generated by several Texas A&M AgriLife Extension entomologists including Dr. David Kerns (College Station), and Dr. Suhas Vyavhare (Lubbock). Thanks to all of the team members who assembled this outstanding publication.
- It discusses IPM strategies, sampling techniques, labeled insecticides and rates, as well as other important information on numerous pest species. Many beneficial arthropods (good guys) are also included. If unknown insects are encountered in cotton fields, this is a great reference to aid in identification. Every Texas, Oklahoma, and Kansas cotton producer should have a color hard copy of this publication available as a handy reference.
- To obtain a PDF copy of this publication, click on the link below:  
<https://lubbock.tamu.edu/files/2019/04/ENTO-075-2019.pdf>
- **Fleahopper photographs and discussion can be found beginning on page 10 of the above publication.**

### Fleahopper Action Threshold for Panhandle, South Plains, Permian Basin, Rolling Plains, and Trans Pecos:

Fleahoppers	Week of squaring	Square set
25-30 per 100 terminals (terminal inspection method)	1 <sup>st</sup> week	<90%
	2 <sup>nd</sup> week	<85%
	3 <sup>rd</sup> week	<75%
	After 1 <sup>st</sup> bloom, treatment is rarely justified	

## Additional Reference Publication: 2019 Insect and Mite Pest Control Suggestions for Cotton

- Another cotton insect management guide from Texas A&M AgriLife Extension personnel is also available. This guide provides quick reference tables which includes several foliar insecticide options for various pests. Fleahopper information is found on page 4 of the guide. To download this guide, click on the link below:
- [https://lubbock.tamu.edu/files/2019/08/2019-Cotton-Insect-Control-Suggestions\\_ENTO090.pdf](https://lubbock.tamu.edu/files/2019/08/2019-Cotton-Insect-Control-Suggestions_ENTO090.pdf)

I have fully reproduced text concerning cotton fleahoppers below:

- *“When fleahoppers are abundant early in squaring stages, a heavy square loss can cause poor boll set and reduce yield. The first 3 weeks of squaring are the most sensitive to cotton fleahopper feeding, particularly in dryland cotton production.*
- *Insecticides applied during early bloom can result in outbreaks of aphids, bollworm, and tobacco budworm because of the destruction of predaceous insects and spiders. Avoid using broad-spectrum insecticides after the second week of squaring.”*

### Products labeled for foliar application to control cotton fleahopper include\*:

Product name/ trade name	Insecticide active ingredient/s	Formulated rate (fl oz or oz/acre)	lb active ingredient/acre	Acres treated per gallon/lb
Vydate	Oxamyl	8–32	0.125–0.5	16–4
Orthene 97	Acephate*	4	0.244	4
Acephate 90	Acephate	4.4	0.248	3.64
Intruder Max 70/Strafer Max	Acetamiprid	0.6–1.1	0.025–0.05	26.67–14.55
Carbine 50	Flonicamid	1.7–2.8	0.053–0.089	9.41–5.71
Centric 40	Thiamethoxam	1.25–2.5	0.0313–0.0625	12.8–6.4
Admire Pro	Imidacloprid*	0.9–1.7	0.032–0.061	142.2–75.3
Alias 4	Imidacloprid	1–2	0.0313–0.0625	128–64
Dimethoate 400	Dimethoate*	8	0.25	16
Bidrin 8 / Dicromax 8	Dicrthropos*	4.0–8.0	0.25–0.5	32–16

\*Various generics/brands available

\*Table is reproduced from the publication: 2019 Insect and Mite Pest Control Suggestions for Cotton (Table 5, page 4), and is available here:

[https://lubbock.tamu.edu/files/2019/08/2019-Cotton-Insect-Control-Suggestions\\_ENTO090.pdf](https://lubbock.tamu.edu/files/2019/08/2019-Cotton-Insect-Control-Suggestions_ENTO090.pdf)