



“Rio Blanco” Integrated Pest Management Update

Vital Crop Production Information for **Crosby** and **Floyd** Counties

Steve Davis - Extension Agent - IPM 201 West Aspen, Suite 011 - Crosbyton, Texas 79322

office phone: (806) 675-2426 cell: (806) 789-7912 fax: (806) 675-2348

E-mail: sgdavis@ag.tamu.edu

Websites: <http://crosby-tx.tamu.edu/> or <http://entowww.tamu.edu/extension/>

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☛ **Cotton** production in Crosby and Floyd Counties has improved with open, hot, windy weather improving heat unit accumulations. Most fields are improving in appearance with excellent plant growth and are setting squares at a normal pace. Weather-related effects, in the form of heat stress, is obvious in some fields, especially dry land fields and corners and where irrigation has been late.

☛ Square set percentages have improved within the last week. Previously, first position squares appeared ‘blasted’ on a small percentage of plants due to lingering weather effects caused by excessive heat, hot winds and extremely low humidity. The cotton plant is notorious for attempting to remain vegetative and promote survival which limits fruit production in times of stress. Since levels of cotton fleahoppers and/or Lygus bugs have not been noted at economic levels, weather factors in combination with this survival characteristic, appear to be the main cause for aborted fruit.

☛ Although the ‘first position’ fruit should be retained by the cotton plant (producers are extremely concerned with this aspect of plant development), multi-year studies conducted by **Brant Baugh**, Lubbock County IPM Agent, and **Tommy Doederlein**, Lynn/Dawson IPM Agent, have shown that the cotton plant will compensate for this loss (to a degree) with a ‘normal’ year’s heat unit accumulation and a ‘normal’ open fall. (Here again, I’m describing a low percentage of cotton plants which have lost only one functional square.) We can only hope for a more ‘normal’ occurrence of heat unit accumulation and extended warm fall weather in 2005 than was experienced last year. The first three weeks of squaring is still

considered the most crucial and fields should be monitored closely during this period. Again, optimum square sets should be maintained above 85% for the first two weeks of squaring, with a 75% rate minimal during the 3rd week.

☛ From the state guide, economic thresholds for implementing control interventions for the **cotton fleahopper** are: **first week** of squaring, 25 to 30 fleahoppers per 100 terminals combined with less than a 90% square set (SS); **second week**, the same number of fleahoppers, combined with less than 85% SS; and, **third week** up until the first bloom, the same number of fleahoppers combined with less than a 75% SS. **Lygus bug** thresholds are identical in relation to SS percentages in each week of squaring, but fewer insects are needed to justify treatment. The **first week**, only one Lygus bug adult or nymph per three feet of row (average) is required; the **second week**, again, only one adult or nymph per three feet of row is necessary; and, the **third week**, 2 adults or nymphs per three feet of row is justifiable. After **peak bloom**, treatment for **Lygus** is justified when counts exceed two Lygus bug adults or nymphs per three feet of row with ‘less than acceptable’ fruit retention, or when plants have failed to retain squares and set bolls normally during the first 4 to 5 weeks of fruiting. With the season that we have experienced thus far, ‘less than acceptable’ fruit retention for the first 4 to 5 weeks of fruiting would be a disaster.

☛ Neither the cotton fleahopper nor Lygus bugs have been noted in Crosby/Floyd IPM Program fields in treatable numbers this week, even though some insecticides have

been applied in our area for fleahoppers. **Robert Carter**, local agricultural consultant, has reported some fleahopper treatments necessary, but those have been limited to fields adjacent to the 'Cap', and surrounded by pasture and CRP.



Lygus bug

Lygus bug nymph

• Latest heat unit accumulations are **803** HU's through June 29, 2005, (since January 1) with the average for the same time frame for the past **5** years yielding approximately **1,062** HU's accumulated for that same period. From May 1 through June 21, 2005, there have been **735** HU's accumulated.

• **Dr. Randy Boman**, Area Cotton Specialist, indicates the 2005 heat unit accumulation for the Southern High Plains area in the month of June is approximately **11%** above the long term average (30 years +). And, from the desk of **Dr. Eddie Bynum**, Nolan-Mitchell-Scurry-Jones IPM Agent, the table below indicates the HU's necessary to reach significant stages of cotton plant development. From this table, one can see that heat unit accumulations in our area have exceeded the amount necessary for the current local plant stage (1/3 grown square).

Growth Stage	From Emergence	From Previous Stage
1 st True Leaf	16	16
Pin-head Square	455	439
Match-head Square	560	105
1/3 Grown Square	770	210
First Bloom	1064	294
First Open Boll	1641	577
95% Mature Bolls	2271	630

• **Grasshopper** numbers continue to hold at sub-economic levels in local I.P.M. Program fields.

• **Beneficial predator** insects and spiders are still present in significant numbers.

• **Cotton aphids** present in Program fields last week have remained in low numbers and isolated in specific areas, predominantly dry land fields.

• **Latest Texas Cotton Production News from Plains Cotton Growers:** Producers in Texas planted 5.80 million acres in 2005, down 1 percent from 2004. Planting in the Rio Grande Valley was completed in early-April under favorable conditions. By the end of April, planting was near completion in South Texas. Cool weather in the southern Great Plains delayed planting activities as producers waited for soil temperatures to warm up before resuming planting. Planting progress was behind the 5-year average through mid-June. On June 13, crop condition in Texas was 51 percent good to excellent, 35 percent was rated fair, and 14 percent was rated very poor to poor.

• **Squash bugs** are now present in all Program pumpkin fields in Crosby and Floyd Counties, in primarily egg or mating adult stages. One isolated field with older plants, beginning to vine and bloom, has had two treatments in as many weeks due to excessively high pest numbers and the repeated occurrence of nymphal stage bugs. Coverage is critical when treating for these pests, and, with windy conditions that have been experienced this spring, it is crucial that insecticide treatments be made at the most opportune time of day. Early morning hours seem to be the most beneficial and ground rig applications can still be utilized in most cases to ensure penetration of the dense plant foliage and thorough coverage to the nymphs which are predominantly on the undersides of leaves.

• This Texas Cooperative Extension office would like to wish everyone a safe and happy 4th of July. Although we will be closed on the 4th, I can still be reached via cell phone.

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