GAINES COUNTY IPM NEWSLETTER

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General Situation

The end of the 2009 growing season is quickly approaching. Despite the dry conditions during the start of the season, we have ended up with a decent crop load in both cotton and peanuts. Yields in most fields are directly related to the irrigation capacity. However, June and July's rains greatly benefited the crop by adding valuable soil moisture that helped to carry the crop a little further. The hot dry conditions during August sped up crop maturity at the cost of some yield loss. Cotton plants shed excess squares and small bolls in the top 2 to 5 nodes. The plants only kept those bolls which it could carry or mature out. Insect pressure has been light during the last couple of weeks. We have found a few aphid populations in some cotton fields.

A majority of the cotton fields have accumulated 500+ Heat Units since cutout and therefore, are no longer susceptible to worms. See *Table 1* to determine the amount of Heat Units that your crop has accumulated since it cutout.

***Table 1*. Accumulated Heat Units (H.U.) from August 1, August 5, August 10, August 15 and August 20 to September 14, 2009**

	Date				
	August 1	**August 5**	**August 10**	**August 15**	**August 20**
Accumulated Heat Units	802	734	630	528	412

We accumulated an average of 21 Heat Units (H.U.) per day during the month of August. During the last two weeks we have accumulated an average of 14 H.U. per day. Therefore crop maturity will not proceed as quickly as it was during August.

1st Annual Gaines County Ag Fair (September 16, 2009) and 2009 Gaines County Ag and Oil Day Appreciation Day Celebration (September 17, 2009)

For further information please contact Seminole Area Chamber of Commerce at 432-758-2352

Texas AgriLife Extension and Research Center - Lubbock Centennial Celebration and Field Day – September 17, 2009 starting at 10:00

For further information please call 806-746-6101 or http://lubbock.tamu.edu/Centennial

Collection of Agriculture Waste Pesticides - October 14, 2009

Location: Agriliance – 101 Loop Hwy., Seagraves, TX 79359
Contact: Terry Millican, 432-758-4006, ext. 238 or at gaines@ag.tamu.edu

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Peanut Diseases

Currently we are finding pod rots caused by the soil borne pathogen Rhizoctonia. Sclerotinia blight, Southern Blight, and Early and late leaf spot have also been observed in some peanut fields. The cooler wet humid conditions are conducive for the growth and development of these pathogens. Before a fungicide is applied growers need to correctly identify the pathogen and determine if the pathogen is progressing or leveled off. They also need to weigh the cost and determine if the application is justified since we will be digging peanuts within the next 2 to 3 weeks. If a fungicide is justified then growers need to determine the spectrum of disease that they are trying to control. Not all of the products with activity against foliar diseases have activity against soil-borne diseases. Additionally, farmers need to pay close attention to the pre-harvest intervals of the various fungicides. Refer to product labels for this information. To maximize yields and reduce harvest losses growers should be checking maturity of their peanut fields using the hull scrape method described in the 2007 Texas Peanut Production Guide. Please contact the Texas AgriLife Extension Office in Gaines County to obtain a copy of this publication.

Cotton Defoliation

Premature crop termination has been shown to reduce lint yield, seed quality, micronaire, and fiber strength. Nodes above cracked boll is a tool that can be used to time harvest aid application. If the uppermost first position-cracked boll is within three nodes of the uppermost harvestable first position boll then no lint weight will be lost if a defoliant-type harvest aid is applied at that time. However, if the uppermost harvestable first position boll is four or more nodes above the uppermost first position cracked boll, then potential for some lint loss exists. The following factors will help to increase the performance of harvest-aid chemicals: Warm & sunny weather, soil moisture relatively low but sufficient to maintain cotton plant in active growth condition without moisture stress, low soil nitrogen levels, little or no secondary growth evident on plants, and plants with a high percentage of open bolls that have shed some mature leaves. Conversely some of the factors which negatively affect harvest-aid chemical performance include: applications made under cool (below 60°) cloudy conditions, prolonged periods of wet weather following treatment, plants in vegetative growth state with low fruit set, plants severely moisture stressed with tough leathery leaves at time of treatment, high soil moisture and nitrogen levels which contribute to rank dense foliage, and plants exhibiting secondary growth (regrowth).

The following pages are from the *2009 High Plains and Northern Rolling Plains Cotton Harvest-Aid Guide* by Dr. Randy Boman, Dr. Mark Kelley, Dr. Wayne Keeling, Dr. John Wanjura, and Dr. Todd Baughman. Please contact me if you would like a hard copy of this publication or you can obtain it on the web at http://lubbock.tamu.edu/cotton/pdf/2009HarvestAid.pdf

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2009 HIGH PLAINS COTTON HARVEST-AID DECISION TABLE

NOT ALL TREATMENTS ARE EQUALLY EFFECTIVE

RATES LISTED ARE UNITS OF PRODUCT PER ACRE

CROP CONDITION	DRY TEMPERATURES GREATER THAN 80° (0-3 DAYS AFTER TREATMENT)	DRY TEMPERATURES LESS THAN 80° (0-3 DAYS AFTER TREATMENT)	WET TEMPERATURES LESS THAN 75° (0-3 DAYS AFTER TREATMENT)
HEIGHT: Short 12-14 inches **YIELD:** up to 500 lb/acre	Gramoxone Inteon 8-16 oz[1]	Gramoxone Inteon 8-16 oz[1]	Gramoxone Inteon 8-16 oz[1]
	Firestorm or Parazone 5.3-10.7 oz[1]	Firestorm or Parazone 5.3-10.7 oz[1]	Firestorm or Parazone 5.3-10.7 oz[1]
	Gramoxone Inteon 4-8 oz followed by (FB) Gramoxone Inteon up to 48 oz total[2]	Gramoxone Inteon 8-12 oz FB Gramoxone Inteon up to 48 oz total[2]	Gramoxone Inteon 8-12 oz FB Gramoxone Inteon up to 48 oz total[2]
	Firestorm or Parazone 2.6-5.3 oz FB Firestorm up to 32 oz total[2] or Parazone up to 21 oz total[3]	Firestorm or Parazone 2.6-5.3 oz FB Firestorm up to 32 oz total[2] or Parazone up to 21 oz total[3]	Firestorm or Parazone 2.6-5.3 oz FB Firestorm up to 32[2] oz total or Parazone up to 21 oz total[3]
	Gramoxone Inteon 6-10 oz + defoliant/desiccant[4]	Gramoxone Inteon 8-12 oz + defoliant/desiccant[4]	Gramoxone Inteon 10-24 oz + defoliant/desiccant[4]
	Firestorm or Parazone 4-6.7 oz + defoliant/desiccant[4]	Firestorm or Parazone 5.3-8 oz + defoliant/desiccant[4]	Firestorm or Parazone 6.7-16 oz + defoliant/desiccant[4]
	Ginstar 6-8 oz banded	Ginstar 8 oz banded	Ginstar 8-10 oz banded
	Aim EC 1 oz + COC with or without defoliant/desiccant	Aim EC 1 oz + COC with or without defoliant/desiccant	Aim EC 1 oz + COC with or without defoliant/desiccant
	Aim EC 1 oz + COC FB Aim EC 1 oz + COC[5]	Aim EC 1 oz + COC FB Aim EC 1 oz + COC[5]	Aim EC 1 oz + COC FB Aim EC 1 oz + COC[5]
	ET 1.5-2 oz + COC with or without defoliant/desiccant	ET 1.5-2 oz + COC with or without defoliant/desiccant	ET 1.5-2 oz + COC with or without defoliant/desiccant
	ET 1.5-2 oz + COC FB ET 1.5-2 oz + COC[5]	ET 1.5-2 oz + COC FB ET 1.5-2 oz + COC[5]	ET 1.5-2 oz + COC FB ET 1.5-2 oz + COC[5]
	Blizzard 0.5-0.6 oz + COC with or without defoliant/desiccant	Blizzard 0.5-0.6 oz + COC with or without defoliant/desiccant	Blizzard 0.5-0.6 oz + COC with or without defoliant/desiccant
	Blizzard 0.5-0.6 oz + COC FB Blizzard 0.5-0.6 oz + COC[5]	Blizzard 0.5-0.6 oz + COC FB Blizzard 0.5-0.6 oz + COC[5]	Blizzard 0.5-0.6 oz + COC FB Blizzard 0.5-0.6 oz + COC[5]
	Resource 6-8 oz + COC FB Resource 4-6 oz + COC[5]	Resource 6-8 oz + COC FB Resource 4-6 oz + COC[5]	Resource 6-8 oz + COC FB Resource 4-6 oz + COC[5]

2009 HIGH PLAINS COTTON HARVEST-AID DECISION TABLE (continued)

NOT ALL TREATMENTS ARE EQUALLY EFFECTIVE

RATES LISTED ARE UNITS OF PRODUCT PER ACRE

CROP CONDITION	DRY TEMPERATURES GREATER THAN 80° (0-3 DAYS AFTER TREATMENT)	DRY TEMPERATURES LESS THAN 80° (0-3 DAYS AFTER TREATMENT)	WET TEMPERATURES LESS THAN 75° (0-3 DAYS AFTER TREATMENT)
HEIGHT: Medium 15-24 inches **YIELD:** 500+ lb/acre	**FOR TREATMENTS LISTED BELOW, A SEQUENTIAL APPLICATION OF PARAQUAT (OR OTHER DESICCANT ACTIVITY PRODUCT) 10-14 DAYS AFTER INITIAL TREATMENT WILL LIKELY BE NECESSARY TO SUFFICIENTLY CONDITION CROP**		
	Gramoxone Inteon 6-10 oz[1] + defoliant/desiccant[4]	Gramoxone Inteon 8-12 oz[1] + defoliant/desiccant[4]	Gramoxone Inteon 10-24 oz[1] + defoliant/desiccant[4]
	Firestorm or Parazone 4-6.7 oz[1] + defoliant/desiccant[4]	Firestorm or Parazone 5.3-8 oz[1] + defoliant/desiccant[4]	Firestorm or Parazone 6.7-16 oz[1] + defoliant/desiccant[4]
	Gramoxone Inteon 4-8 oz followed by (FB) Gramoxone Inteon up to 48 oz total[2]	Gramoxone Inteon 6-8 oz FB Gramoxone Inteon up to 48 oz total[2]	–
	Firestorm or Parazone 2.6-5.3 oz FB Firestorm up to 32 oz total[2] or Parazone up to 21 oz total[3]	Firestorm or Parazone 4-5.3 oz FB Firestorm up to 32 oz total[2] Parazone up to 21 oz total[3]	–
	Ginstar 6-8 oz	Ginstar 8 oz	Ginstar 8-10 oz
	Aim EC 1 oz + COC + defoliant/desiccant	Aim EC 1 oz + COC + defoliant/desiccant	Aim EC 1 oz + COC + defoliant/desiccant
	Aim EC 1 oz + COC FB Aim EC 1 oz + COC[5]	Aim EC 1 oz + COC FB Aim EC 1 oz + COC[5]	Aim EC 1 oz + COC FB Aim EC 1 oz + COC[5]
	ET 1.5-2 oz + COC with or without defoliant/desiccant	ET 1.5-2 oz + COC with or without defoliant/desiccant	ET 1.5-2 oz + COC with or without defoliant/desiccant
	ET 1.5-2 oz + COC FB ET 1.5-2 oz + COC[5]	ET 1.5-2 oz + COC FB ET 1.5-2 oz + COC[5]	ET 1.5-2 oz + COC FB ET 1.5-2 oz + COC[5]
	Blizzard 0.5-0.6 oz + COC with or without defoliant/desiccant	Blizzard 0.5-0.6 oz + COC with or without defoliant/desiccant	Blizzard 0.5-0.6 oz + COC with or without defoliant/desiccant
	Blizzard 0.5-0.6 oz + COC FB Blizzard 0.5-0.6 oz + COC[5]	Blizzard 0.5-0.6 oz + COC FB Blizzard 0.5-0.6 oz + COC[5]	Blizzard 0.5-0.6 oz + COC FB Blizzard 0.5-0.6 oz + COC[5]
	Resource 6-8 oz + COC FB Resource 4-6 oz + COC[5]	Resource 6-8 oz + COC FB Resource 4-6 oz + COC[5]	Resource 6-8 oz + COC FB Resource 4-6 oz + COC[5]
	Prep 16 oz + Ginstar 3-5 oz	Prep 16-21 oz[6] + Ginstar 3-5 oz	Prep 21 oz[6] + Ginstar 3-5 oz
	Prep 16-21 oz + Def 8-16 oz	Prep 16-21 oz[6] + Def 16 oz	Prep 21 oz[6] + Def 16 oz
	Prep 16-21 oz + Aim EC 1 oz + COC or + Blizzard 0.5-0.6 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz[5] + COC	Prep 16-21 oz[6] + Aim EC 1 oz + COC or + Blizzard 0.5-0.6 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz[5] + COC	Prep 21 oz[6] + Aim EC 1 oz + COC or + Blizzard 0.5-0.5 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz[5] + COC
	Finish 6 Pro 21 oz + defoliant (Def 8 oz or Ginstar 3-5 oz)	Finish 6 Pro 21-32 oz[6] (defoliant may be required)	Finish 6 Pro 21-42 oz[6] (defoliant may be required)
	FirstPick 3 pts + Ginstar 3 oz	FirstPick 3-4 pts[6] + Ginstar 5 oz	FirstPick 4 pts[6] + Ginstar 6-8 oz

2009 HIGH PLAINS COTTON HARVEST-AID DECISION TABLE (continued)

NOT ALL TREATMENTS ARE EQUALLY EFFECTIVE

RATES LISTED ARE UNITS OF PRODUCT PER ACRE

CROP CONDITION	DRY TEMPERATURES GREATER THAN 80° (0-3 DAYS AFTER TREATMENT)	DRY TEMPERATURES LESS THAN 80° (0-3 DAYS AFTER TREATMENT)	WET TEMPERATURES LESS THAN 75° (0-3 DAYS AFTER TREATMENT)
HEIGHT: Greater than 24 inches **YIELD:** 1000+ lb/acre	**FOR TREATMENTS LISTED BELOW, A SEQUENTIAL APPLICATION OF PARAQUAT (OR OTHER DESICCANT ACTIVITY PRODUCT) 10-14 DAYS AFTER INITIAL TREATMENT WILL LIKELY BE NECESSARY TO SUFFICIENTLY CONDITION CROP**		
	Prep 21 oz + Def 8-16 oz	Prep 21 oz + Def 16 oz	Prep 21-28 oz[6] + Def 16 oz
	Finish 6 Pro 21 oz + defoliant (Def 8 oz or Ginstar 3-5 oz)	Finish 6 Pro 21-32 oz[6] + defoliant (Def 8-10 oz or Ginstar 4-6 oz)	Finish 6 Pro 32-42 oz[6] + defoliant (Def 8-10 oz or Ginstar 6-8 oz)
	Finish 6 Pro 21 oz + Aim EC 1 oz + COC or + Blizzard 0.5-0.6 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz[5] + COC	Finish 6 Pro 21-32[6] oz + Aim EC 1 oz + COC or + Blizzard 0.5-0.6 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz[5] + COC	Finish 6 Pro 32-42[6] oz + Aim EC 1 oz + COC or + Blizzard 0.5-0.6 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz[5] + COC
	Prep 21 oz + Ginstar 3-5 oz	Prep 21-24 oz[6] + Ginstar 4-6 oz	Prep 24-32[6] oz + Ginstar 6-8 oz
	Prep 21 oz + Aim EC 1 oz + COC or + Blizzard 0.5-0.6 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz[5] + COC	Prep 21-24 oz[6] + Aim EC 1 oz + COC or + Blizzard 0.5-0.6 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz[5] + COC	Prep 24-32[6] oz + Aim EC 1 oz + COC or + Blizzard 0.5-0.6 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz[5] + COC
	FirstPick 3-4pts + Ginstar 3-5 oz	FirstPick 4-5 pts[6] + Ginstar 6-8 oz	FirstPick 6-7pts[6] + Ginstar 6-8 oz
	FirstPick 3-4 pts + Aim EC 1 oz + COC or + Blizzard 0.5-0.6 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz[5] + COC	FirstPick 4-5 pts[6] + Aim EC 1 oz + COC or + Blizzard 0.5-0.6 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz[5] + COC	FirstPick 6-7 pts[6] + Aim EC 1 oz + COC or + Blizzard 0.5-0.6 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz[5] + COC
	Ginstar 6-8 oz	Ginstar 8 oz	Ginstar 8-10 oz
LATE MATURING	**CONDITIONING TREATMENT ONLY** (Apply after daily heat units drop below 5, but 7 days before average first killing freeze date)		
	Gramoxone Inteon 4-8 oz	Gramoxone Inteon 6-12 oz	Gramoxone Inteon 10-16 oz
	Firestorm or Parazone 2.6-5.3 oz	Firestorm or Parazone 4-8 oz	Firestorm or Parazone 6.7-10.7 oz
	Prep 21-24 oz	Prep 21-32 oz[6]	Prep 32-42 oz[6]
	Prep 21-24 oz + Def 8 oz or + Ginstar 8 oz or + Aim EC 1 oz + COC or + Blizzard 0.5-0.6 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz[5] + COC	Prep 21-32 oz[6] + Def 8 oz or + Ginstar 8 oz or + Aim EC 1 oz + COC or + Blizzard 0.5-0.6 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz[5] + COC	Prep 24-32 oz[6] + Def 16 oz or + Ginstar 8-16 oz or + Aim EC 1 oz + COC or + Blizzard 0.5-0.6 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz[5] + COC

FOOTNOTES

FB=Followed by

[1] - Use on cotton with natural leaf shed. High rates can cause green, healthy leaves to stick. Always use a non-ionic surfactant when applying paraquat-based products (Gramoxone Inteon, Firestorm, Parazone). There is some concern for the single high dose rate on hairy-leaf cotton varieties. Poor leaf grades may be obtained. Make sure the cotton has 80% open bolls at application, use enough paraquat to completely kill all foliage, then stripper harvest only when leaves are dry enough to "crunch" when crushed by hand. Avoid stripper harvesting moist, dead leaves or high leaf grades may be encountered.

[2] - No more than 48 oz/acre total of Gramoxone Inteon or no more than 32 oz/acre total of Firestorm may be applied (in up to 3 multiple applications) in one season based on the Texas Special Local Need 24c label. The need for and rate of Gramoxone Inteon or Firestorm in a second application will depend upon green leaves remaining. Use higher rates if regrowth is excessive.

[3] - No more than 21oz/acre total of Parazone may be applied (in up to 4 multiple applications) in one season based on the current label. The need for and rate of Parazone in a second application will depend upon green leaves remaining. Use higher rates if regrowth is excessive.

[4] - Tankmix partners with Gramoxone Inteon, Firestorm, or Parazone can include sodium chlorate, Def, Aim, Blizzard, ET, and Resource.

[5] - No more than: 3.2 oz/acre total of Aim 2EC, 1.25 oz/acre total of Blizzard, 5.5 oz/acre total (in no more than 2 applications) of ET, and 14 oz/acre (in no more than 2 applications with a maximum of 8 oz/acre per single application) of Resource may be applied during the growing season.

[6] - Ethephon-based product (such as Finish 6 Pro, FirstPick, Prep, Super Boll, Boll'd, Boll Buster, and Setup) activity is determined by rate and temperature. At lower temperatures, boll opening response can be enhanced by increasing rate.

Conversion Table for Gramoxone Inteon, and Firestorm and Parazone for Equivalent Paraquat Active Ingredient Rates

Paraquat (Active Ingredient) Lb/Acre	GRAMOXONE INTEON (2 LB/GAL)		FIRESTORM and PARAZONE (3 LB/GAL)	
	Product Oz / Acre	Approximate Acres/Gal	Product Oz / Acre	Approximate Acres/Gal
0.0625	4	32	2.6	48
0.0938	6	21.3	4	32
0.1250	8	16	5.3	24
0.1563	10	12.8	6.7	19
0.1870	12	10.7	8	16
0.2500	16	8	10.7	12
0.3750	24	5.3	16	8
0.5000	32	4	21.3*	6
0.7500	48	2.7	Firestorm 32 (Parazone not labeled)	Firestorm 4 (Parazone not labeled)

*Denotes current maximum seasonal use rate for Parazone as a cotton harvest aid.

Brand Names and Similar Products

BRAND NAME PRODUCT	SIMILAR PRODUCTS
Prep (ethephon, 6 lb/gal)	Boll'd (Agriliance) Boll Buster (CPS) Flash (3 lb/gal, Helena) Setup (MANA) Super Boll (Nufarm)
Ginstar (thidiazuron + diuron)	Adios (Arysta) Redi-Pik (MANA)
Dropp (thidiazuron - not normally used in the High Plains due to low temperature sensitivity)	FreeFall (Nufarm) Klean-Pik (MANA)
Def (tribufos)	Folex (Amvac)