



# Northwest Plains Pest Management News

Volume XI Issue 15

Bailey and Parmer Counties

October 4, 2013

A fast and furious corn harvest continues, most of the area corn silage has been harvested and grain harvest is progressing rapidly. Reported yields have been variable but most reports have been encouraging. Some sorghum has been harvested but for the most part the area crop is just reaching physiological maturity. Harvest aid application decisions to prepare the area cotton crop for harvest are being deliberated.

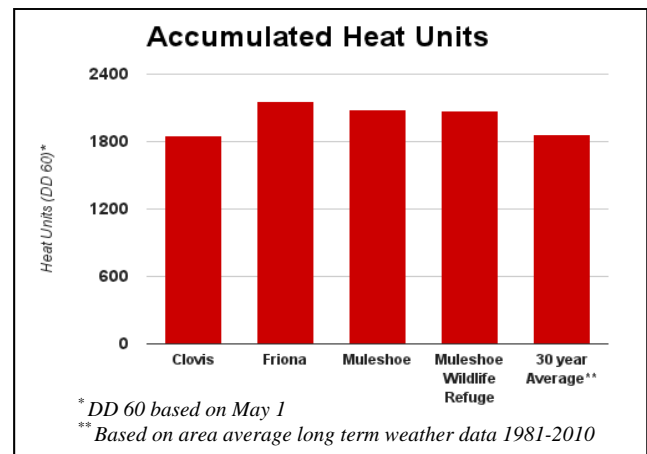
At this point cotton harvest aid applications will be weather driven, as it is unlikely that significant heat unit (HU) accumulations to further develop fiber will occur. Using historical weather data from 1980-2010 only 14 total HU are expected in October (14 HU is less than one normal August day). For best results harvest aid applications should be made on warm sunny days with an extended outlook of warm conditions.

Some factors that increase the performance of harvest-aid chemicals include the following:

- Warm, calm, sunny weather
- Soil moisture relatively low but sufficient to maintain cotton plant without moisture stress
- Soil nitrogen levels relatively low
- Leaves active and uniformly expanded on plants
- Little or no secondary growth evident on plants

<b>Potential Dailey Water Use*</b>	
Crop	Inches/Day
Wheat	.10
Sorghum	0-.20

\*Daily estimated crop water demands (inches of water per day) based on PET data from Halfway.



- 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 60o F), cloudy conditions
- Prolonged periods of wet weather following treatment
- Plants in vegetative growth state with low fruit set
- Plants severely moisture stressed at time of treatment
- High soil moisture and nitrogen levels
- Plants exhibiting secondary growth
- Poor spray coverage

Harvest-aid product selection, tank mix partners and rates vary with environmental and crop conditions. The following table is an excerpt from the “2013 High Plains and Northern Rolling Plains Cotton Harvest-Aid Guide”. The full guide can be viewed at <http://goo.gl/WkxFz4>



<http://nwpiipm.blogspot.com/>



IPM radio show on Fox  
Talk 950 AM Wednesdays  
from 1:00-2:30



<https://twitter.com/NWPIPM>

**2013 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° F (0-3 DAYS AFTER TREATMENT)	DRY TEMPERATURES LESS THAN 80° F (0-3 DAYS AFTER TREATMENT)	WET TEMPERATURES LESS THAN 75° F (0-3 DAYS AFTER TREATMENT)
<b>HEIGHT:</b> Short 12-14 inches  <b>YIELD:</b> up to 500 lb/acre	Gramoxone SL 2.0 8-16 oz <sup>1</sup>	Gramoxone SL 2.0 8-16 oz <sup>1</sup>	Gramoxone SL 2.0 8-16 oz <sup>1</sup>
	Firestorm or Parazone 5.3-10.7 oz <sup>1</sup>	Firestorm or Parazone 5.3-10.7 oz <sup>1</sup>	Firestorm or Parazone 5.3-10.7 oz <sup>1</sup>
	Gramoxone SL 2.0 4-8 oz followed by (FB) Gramoxone SL 2.0 up to 48 oz total <sup>2</sup>	Gramoxone SL 2.0 8-12 oz FB Gramoxone SL 2.0 up to 48 oz total <sup>2</sup>	Gramoxone SL 2.0 8-12 oz FB Gramoxone SL 2.0 up to 48 oz total <sup>2</sup>
	Firestorm or Parazone 2.6-5.3 oz FB Firestorm up to 32 oz total <sup>2</sup> or Parazone up to 32 oz total <sup>3</sup>	Firestorm or Parazone 2.6-5.3 oz FB Firestorm up to 32 oz total <sup>2</sup> or Parazone up to 32 oz total <sup>3</sup>	Firestorm or Parazone 2.6-5.3 oz FB Firestorm up to 32 oz total <sup>2</sup> or Parazone up to 32 oz total <sup>3</sup>
	Gramoxone SL 2.0 6-10 oz + defoliant/desiccant <sup>4</sup>	Gramoxone SL 2.0 8-12 oz + defoliant/desiccant <sup>4</sup>	Gramoxone SL 2.0 10-24 oz + defoliant/desiccant <sup>4</sup>
	Firestorm or Parazone 4-6.7 oz + defoliant/desiccant <sup>4</sup>	Firestorm or Parazone 5.3-8 oz + defoliant/desiccant <sup>4</sup>	Firestorm or Parazone 6.7-16 oz + defoliant/desiccant <sup>4</sup>
	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 <sup>5</sup>	Aim EC 1 oz + COC FB Aim EC 1 oz + COC <sup>5</sup>	Aim EC 1 oz + COC FB Aim EC 1 oz + COC <sup>5</sup>
	ET 2 oz + COC with or without defoliant/desiccant	ET 2 oz + COC with or without defoliant/desiccant	ET 2 oz + COC with or without defoliant/desiccant
	ET 2 oz + COC FB ET 2 oz + COC <sup>5</sup>	ET 2 oz + COC FB ET 2 oz + COC <sup>5</sup>	ET 2 oz + COC FB ET 2 oz + COC <sup>5</sup>
	Display 1 oz + COC with or without defoliant/desiccant	Display 1 oz + COC with or without defoliant/desiccant	Display 1 oz + COC with or without defoliant/desiccant
	Display 1 oz + COC FB Display 1 oz + COC <sup>5</sup>	Display 1 oz + COC FB Display 1 oz + COC <sup>5</sup>	Display 1 oz + COC FB Display 1 oz + COC <sup>5</sup>
	Resource 6-8 oz + COC FB Resource 4-6 oz + COC <sup>5</sup>	Resource 6-8 oz + COC FB Resource 4-6 oz + COC <sup>5</sup>	Resource 6-8 oz + COC FB Resource 4-6 oz + COC <sup>5</sup>
	Sharpen 1 oz + MSO + AMS with or without defoliant/desiccant	Sharpen 1 oz + MSO + AMS with or without defoliant/desiccant	Sharpen 1 oz + MSO + AMS with or without defoliant/desiccant
Sharpen 1 oz + MSO + AMS FB Sharpen 1 oz + MSO + AMS <sup>5</sup>	Sharpen 1 oz + MSO + AMS FB Sharpen 1 oz + MSO + AMS <sup>5</sup>	Sharpen 1 oz + MSO + AMS FB Sharpen 1 oz + MSO + AMS <sup>5</sup>	

**2013 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° F (0-3 DAYS AFTER TREATMENT)	DRY TEMPERATURES LESS THAN 80° F (0-3 DAYS AFTER TREATMENT)	WET TEMPERATURES LESS THAN 75° F (0-3 DAYS AFTER TREATMENT)
<b>HEIGHT:</b> <b>Medium</b> <b>15-24 inches</b>  <b>YIELD:</b> <b>500+ lb/acre</b>	<b>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</b>		
	Gramoxone SL 2.0 6-10 oz <sup>1</sup> + defoliant/desiccant <sup>4</sup>	Gramoxone SL 2.0 8-12 oz <sup>1</sup> + defoliant/desiccant <sup>4</sup>	Gramoxone SL 2.0 10-24 oz <sup>1</sup> + defoliant/desiccant <sup>4</sup>
	Firestorm or Parazone 4-6.7 oz <sup>1</sup> + defoliant/desiccant <sup>4</sup>	Firestorm or Parazone 5.3-8 oz <sup>1</sup> + defoliant/desiccant <sup>4</sup>	Firestorm or Parazone 6.7-16 oz <sup>1</sup> + defoliant/desiccant <sup>4</sup>
	Gramoxone SL 2.0 4-8 oz followed by (FB) Gramoxone SL 2.0 up to 48 oz total <sup>2</sup>	Gramoxone SL 2.0 6-8 oz FB Gramoxone SL 2.0 up to 48 oz total <sup>2</sup>	—
	Firestorm or Parazone 2.6-5.3 oz FB Firestorm up to 32 oz total <sup>2</sup> or Parazone up to 32 oz total <sup>3</sup>	Firestorm or Parazone 4-5.3 oz FB Firestorm up to 32 oz total <sup>2</sup> or Parazone up to 32 oz total <sup>3</sup>	—
	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 <sup>5</sup>	Aim EC 1 oz + COC FB Aim EC 1 oz + COC <sup>5</sup>	Aim EC 1 oz + COC FB Aim EC 1 oz + COC <sup>5</sup>
	ET 2 oz + COC with or without defoliant/desiccant	ET 2 oz + COC with or without defoliant/desiccant	ET 2 oz + COC with or without defoliant/desiccant
	ET 2 oz + COC FB ET 2 oz + COC <sup>5</sup>	ET 2 oz + COC FB ET 2 oz + COC <sup>5</sup>	ET 2 oz + COC FB ET 2 oz + COC <sup>5</sup>
	Display 1 oz + COC with or without defoliant/desiccant	Display 1 oz + COC with or without defoliant/desiccant	Display 1 oz + COC with or without defoliant/desiccant
	Display 1 oz + COC FB Display 1 oz + COC <sup>5</sup>	Display 1 oz + COC FB Display 1 oz + COC <sup>5</sup>	Display 1 oz + COC FB Display 1 oz + COC <sup>5</sup>
	Resource 6-8 oz + COC FB Resource 4-6 oz + COC <sup>5</sup>	Resource 6-8 oz + COC FB Resource 4-6 oz + COC <sup>5</sup>	Resource 6-8 oz + COC FB Resource 4-6 oz + COC <sup>5</sup>
	Sharpen 1 oz + MSO + AMS with or without defoliant/desiccant	Sharpen 1 oz + MSO + AMS with or without defoliant/desiccant	Sharpen 1 oz + MSO + AMS with or without defoliant/desiccant
	Sharpen 1 oz + MSO + AMS FB Sharpen 1 oz + MSO + AMS <sup>5</sup>	Sharpen 1 oz + MSO + AMS FB Sharpen 1 oz + MSO + AMS <sup>5</sup>	Sharpen 1 oz + MSO + AMS FB Sharpen 1 oz + MSO + AMS <sup>5</sup>
	Prep 16 oz + Ginstar 3-5 oz	Prep 16-21 oz <sup>6</sup> + Ginstar 3-5 oz	Prep 21 oz <sup>6</sup> + Ginstar 3-5 oz
	Prep 16-21 oz + Folex 8-16 oz	Prep 16-21 oz <sup>6</sup> + Folex 16 oz	Prep 21 oz <sup>6</sup> + Folex 16 oz
	Prep 16-21 oz + Aim EC 1 oz + COC or + Display 1 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz <sup>5</sup> + COC OR + Sharpen 1 oz + MSO + AMS	Prep 16-21 oz <sup>6</sup> + Aim EC 1 oz + COC or + Display 1 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz <sup>5</sup> + COC or + Sharpen 1 oz + MSO + AMS	Prep 21 oz <sup>6</sup> + Aim EC 1 oz + COC or + Display 1 oz + COC or + ET 1.5 oz + COC or + Resource 6-8 oz <sup>5</sup> + COC or + Sharpen 1 oz + MSO + AMS
	Finish 6 Pro 21 oz + defoliant (Folex 8 oz or Ginstar 3-5 oz)	Finish 6 Pro 21-32 oz <sup>6</sup> (defoliant may be required)	Finish 6 Pro 21-42 oz <sup>6</sup> (defoliant may be required)
	FirstPick 3 pts + Ginstar 3 oz	FirstPick 3-4 pts <sup>6</sup> + Ginstar 5 oz	FirstPick 4 pts <sup>6</sup> + Ginstar 6-8 oz

**2013 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° F (0-3 DAYS AFTER TREATMENT)	DRY TEMPERATURES LESS THAN 80° F (0-3 DAYS AFTER TREATMENT)	WET TEMPERATURES LESS THAN 75° F (0-3 DAYS AFTER TREATMENT)
<b>HEIGHT:</b> <b>Tall</b> Greater than 24 inches  <b>YIELD:</b> 1000+ lb/acre	<b>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</b>		
	Prep 21 oz + Folex 8-16 oz	Prep 21 oz + Folex 16 oz	Prep 21-28 oz <sup>6</sup> + Folex 16 oz
	Finish 6 Pro 21 oz + defoliant (Folex 8 oz or Ginstar 3-5 oz)	Finish 6 Pro 21-32 oz <sup>6</sup> + defoliant (Folex 8-10 oz or Ginstar 4-6 oz)	Finish 6 Pro 32-42 oz <sup>6</sup> + defoliant (Folex 8-10 oz or Ginstar 6-8 oz)
	Finish 6 Pro 21 oz + Aim EC 1 oz + COC or + Display 1 oz + COC or + ET 2 oz + COC or + Resource 6-8 oz <sup>5</sup> + COC or + Sharpen 1 oz + MSO + AMS	Finish 6 Pro 21-32 <sup>6</sup> oz + Aim EC 1 oz + COC or + Display 1 oz + COC or + ET 2 oz + COC or + Resource 6-8 oz <sup>5</sup> + COC or + Sharpen 1 oz + MSO + AMS	Finish 6 Pro 32-42 <sup>6</sup> oz + Aim EC 1 oz + COC or + Display 1 oz + COC or + ET 2 oz + COC or + Resource 6-8 oz <sup>5</sup> + COC or + Sharpen 1 oz + MSO + AMS
	Prep 21 oz + Ginstar 3-5 oz	Prep 21-24 oz <sup>6</sup> + Ginstar 4-6 oz	Prep 24-32 <sup>6</sup> oz + Ginstar 6-8 oz
	Prep 21 oz + Aim EC 1 oz + COC or + Display 1 oz + COC or + ET 2 oz + COC or + Resource 6-8 oz <sup>5</sup> + COC or + Sharpen 1 oz + MSO + AMS	Prep 21-24 oz <sup>6</sup> + Aim EC 1 oz + COC or + Display 1 oz + COC or + ET 2 oz + COC or + Resource 6-8 oz <sup>5</sup> + COC or + Sharpen 1 oz + MSO + AMS	Prep 24-32 <sup>6</sup> oz + Aim EC 1 oz + COC or + Display 1 oz + COC or + ET 2 oz + COC or + Resource 6-8 oz <sup>5</sup> + COC or + Sharpen 1 oz + MSO + AMS
	FirstPick 3-4pts + Ginstar 3-5 oz	FirstPick 4-5 pts <sup>6</sup> + Ginstar 6-8 oz	FirstPick 6-7pts <sup>6</sup> + Ginstar 6-8 oz
	FirstPick 3-4 pts + Aim EC 1 oz + COC or + Display 1 oz + COC or + ET 2 oz + COC or + Resource 6-8 oz <sup>5</sup> + COC or + Sharpen 1 oz + MSO + AMS	FirstPick 4-5 pts <sup>6</sup> + Aim EC 1 oz + COC or + Display 1 oz + COC or + ET 2 oz + COC or + Resource 6-8 oz <sup>5</sup> + COC or + Sharpen 1 oz + MSO + AMS	FirstPick 6-7 pts <sup>6</sup> + Aim EC 1 oz + COC or + Display 1 oz + COC or + ET 2 oz + COC or + Resource 6-8 oz <sup>5</sup> + COC or + Sharpen 1 oz + MSO + AMS
	Ginstar 6-8 oz	Ginstar 8 oz	Ginstar 8-10 oz
	<b>LATE MATURING</b>	<b>CONDITIONING TREATMENT ONLY</b> <b>(Apply after daily heat units drop below 5, but 7 days before average first killing freeze date)</b>	
Gramoxone SL 2.0 4-8 oz		Gramoxone SL 2.0 6-12 oz	Gramoxone SL 2.0 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 <sup>6</sup>	Prep 32-42 oz <sup>6</sup>
Prep 21-24 oz	Prep 21-32 oz <sup>6</sup>	Prep 24-32 oz <sup>6</sup>	

## FOOTNOTES

FB=Followed by

<sup>1</sup>- 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 SL 2.0, 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.

<sup>2</sup>-No more than 48 oz/acre total of Gramoxone SL 2.0 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 SL 2.0 or Firestorm in a second application will depend upon green leaves remaining. Use higher rates if regrowth is excessive.

<sup>3</sup>-No more than 32oz/acre total of Parazone may be applied (in up to 3 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.

<sup>4</sup>-Tankmix partners with Gramoxone SL 2.0, Firestorm, or Parazone can include sodium chlorate, Folex, Aim, Display, ET, and Resource.

<sup>5</sup>-No more than: 3.2 oz/acre total of Aim 2EC, 2.0 oz/acre total of Display, 2.0 oz/acre total of Sharpen, 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.

<sup>6</sup>-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 SL 2.0, and Firestorm and Parazone for Equivalent Paraquat Active Ingredient Rates

Paraquat (Active Ingredient) Lb/Acre	GRAMOXONE SL 2.0 (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	32	4

## Brand Names and Similar Products

COMMONLY USED	SIMILAR PRODUCT
Prep (ethephon, 6 lb/gal)	Boll'd (Agrisolutions) Boll Buster (Loveland Products) Ethephon-6 (Arysta Lifescience) Flash (3 lb/gal, Helena) Setup 6SL (MANA) Super Boll (Nufarm)
Ginstar EC (thidiazuron + diuron)	Adios (Arysta Lifescience) Cutout (Nufarm) Redi-Pik 1.5EC (MANA)
Dropp SC (thidiazuron - not normally used in the High Plains due to low temperature sensitivity)	Daze 4SC (Agrisolutions) FreeFall SC (Nufarm) Klean-Pik (MANA) Take Down SC (Loveland Products)
Def (discontinued by Bayer CropScience)	Folex (Amvac)