

Managing Cotton Regrowth in Delayed Harvest Situations

Dan Fromme

Associate Professor - Cotton, Corn & Gr. Sorghum Specialist

Dean Lee Research & Extension Center

LSU AgCenter

Alexandria, Louisiana



Background

- **Today's varieties are more robust and aggressive.**
- **Rainfall delays timely harvest in Louisiana cotton.**
 - **Regrowth is a problem**
- **Cotton planted behind corn or soybeans has the potential to supply a lot of residual nitrogen which can help stimulate excess juvenile regrowth.**



Background

- **Excessive nitrogen**
- **Timeliness issues**
 - Soybean harvest
 - Picker power
 - defoliation



Factors or causes of regrowth

- Warm temperatures
- Soil moisture
- Light penetration
- Excess nitrogen
- Reduction of defoliation rates



Regrowth

- Basal regrowth: is the first to form and hardest to control, but generally is less troublesome to a harvest operation.
- Terminal regrowth: often are a source of green staining, fine leaf trash, and excessive moisture in seed cotton.



Regrowth

- The combination of Prep with Folex/Def tended to promote terminal and basal regrowth, while Prep combination with Dropp and Ginstar provided some regrowth suppression. (cotton harvest management book)
- Plants treated with prep or prep + defoliant consistently were among the first to develop new leaves and generally had the most extensive new foliage. (cotton harvest management book)
- Additional chemical treatments often are insufficient to prevent staining during harvest and storage. (cotton harvest management book)



Defoliation

- **Not enough Dropp applied at defoliation**
- **Too much ethephon**

Use rates and expected activity for defoliant and desiccants

Harvest Aid ¹	Labeled Broadcast Rate/Acre	Max. Use per Season	Rainfree Period (hours) ²	Pre-Harvest Interval (Days)	Estimated min. temp.	Mature leaves	Juvenile growth	Re-growth prevention	Boll opening
Thidiazuron® SC	1.6-6.4 oz	9.6 oz	24	5	65 F	Excellent	Excellent	Excellent	None
Ginstar®	6.4-16 oz	16 oz	12	5	60 F	Excellent	Excellent	Excellent	None
Folex® 6	16-24 oz	24 oz	1	7	60 F	Excellent	Fair	Poor	None
Aim®	0.5-1.6 oz	3.2 oz	1	7	55 F	Excellent	Excellent	Poor	None
Display	1.0 oz	2 oz	1	7	55 F	Excellent	Excellent	Poor	None
ET®	1.5-2.75 oz	5.5 oz	1	7	55 F	Excellent	Excellent	Poor	None
Sharpen™	2.0 oz	2.0 oz	1	5	55 F	Excellent	Excellent	Poor	None
Ethephon	21-42 oz	42 oz	6	7	60 F	Fair	Poor	Poor	Excellent
Finish® 6 Pro	21-42 oz	42 oz	6	7	60 F	Excellent	Poor	Fair	Excellent
Glyphosate ³	11-44 oz	44 oz	4	7	55 F	Fair	Fair	Excellent	None
Desiccants									
Paraquat	3.1-32	32	30 min.	3	55 F	Fair	Excellent	Poor	Fair
Sodium Chlorate	4.5 # ai	N/A	24	7	55 F	Fair	Fair	Poor	None

¹ Addition of spray adjuvants may enhance defoliation during cold temperatures or when leaves are tough from drought-stressed conditions. However, adjuvants may increase leaf desiccation during the early season when temperatures are warm.

² Expected rainfree periods are estimates only and may or may not be exact. Other conditions, including temperature, moisture and crop status, will play a role in product performance.

³ Non-glyphosate tolerant (Roundup Ready Flex®; Glytol®/Liberty Link™) varieties only.



Leaf Sticking or Dessication



2017 Plant Height

0 Nitrogen



120 Nitrogen



2017 Harvest Time

0 Nitrogen

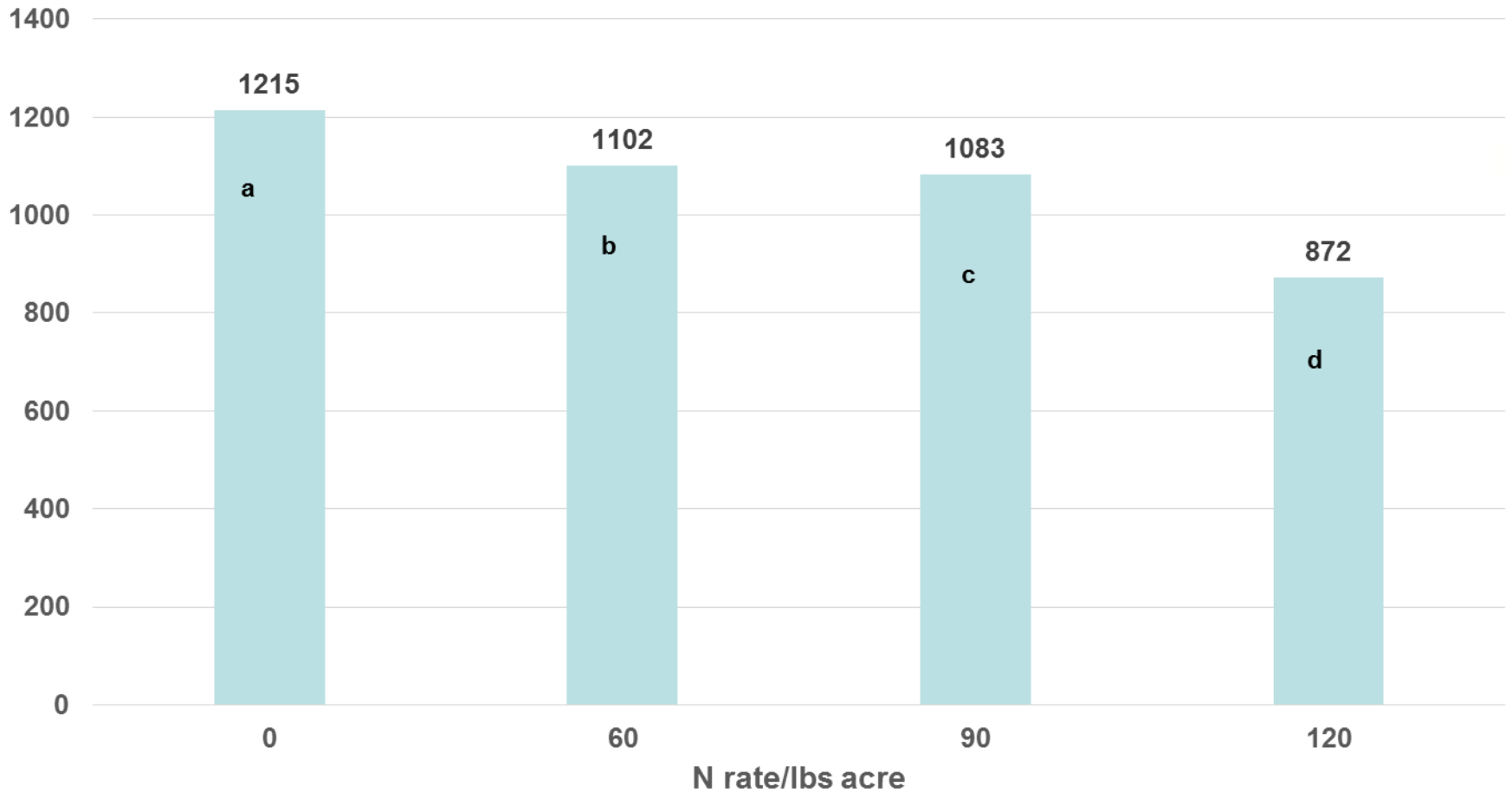


120 Nitrogen





2017 lint yield per acre silt loam





2018 N Rates

0

30



August 8



August 8



2018 N Rates

60

90

40 inches



August 8

43 inches



August 8



2018 N Rates

120

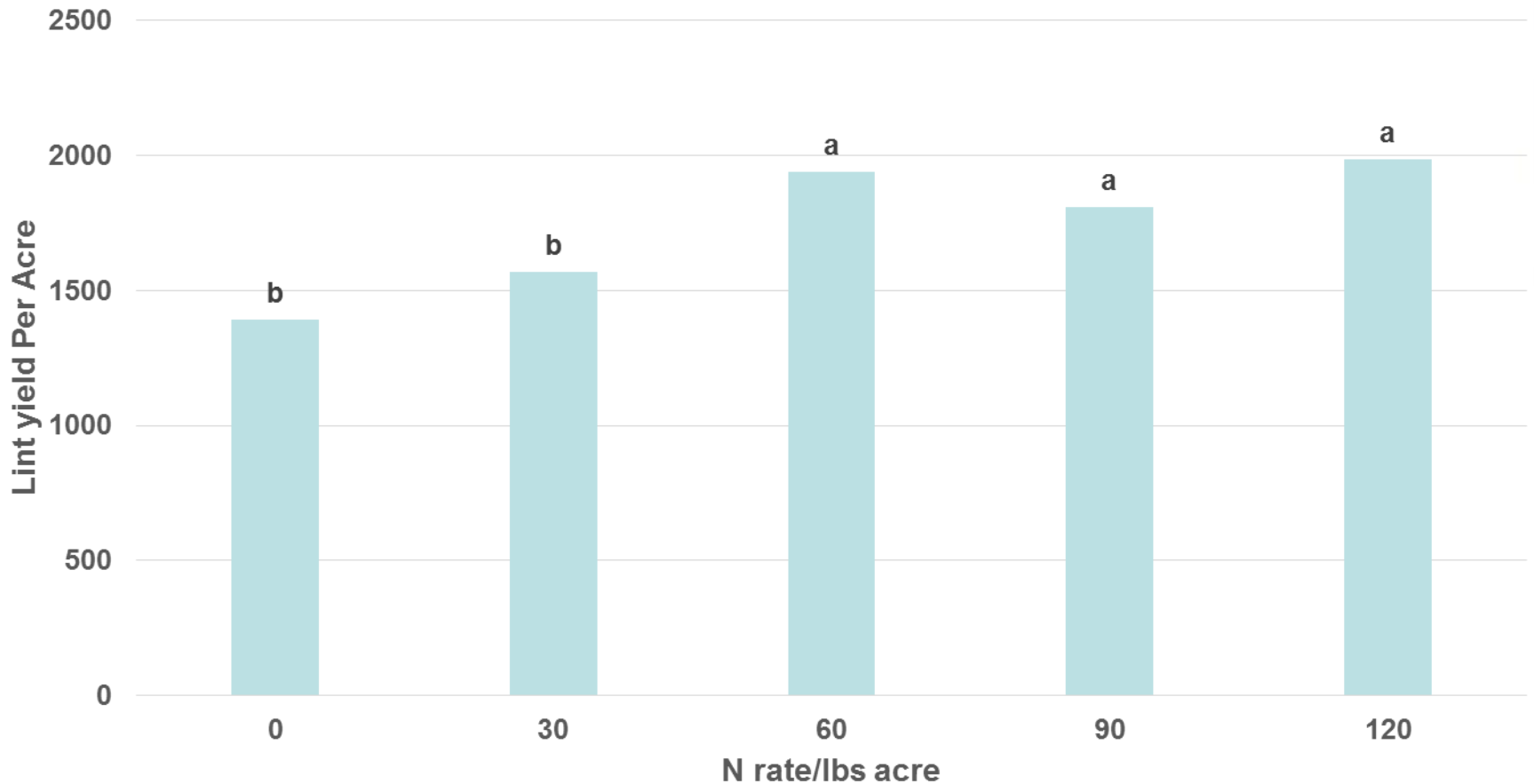


46 inches

August 8



2018 lint yield per acre silt loam





LSU Recommendations Nitrogen rates

Soil Type	Dryland	Irrigated
Clay	90-120	100-120
Clay loam	90-120	100-120
Fine sandy loam	60-90	60-90
Loamy sand	60-90	60-90
Silt clay	90-120	100-120
Silt clay loam	90-120	100-120
Silt loam	60-90	60-90
Very fine sandy loam	60-90	60-90



Conclusions

- **Do not delay defoliation**
 - **Stop treating cotton like a second class citizen**
- **Defoliate only what can be harvested within 10-14 days after harvest aid application is made to reduce the amount of time for potential regrowth.**
- **Increase Dropp rates**
 - **Addition of dropp in your regrowth application**
- **Prep promotes regrowth**
- **Terminal regrowth more of a harvest issue than basal regrowth**
- **Nitrogen rates**



Recipes



On the Web

- **Isuagcenter.com**
 - topics
 - crops
 - cotton

Thank You



Questions

Dan Fromme

8105 Tom Bowman Drive

Alexandria, Louisiana 71302

dfromme@agcenter.lsu.edu

Office: 318-473-6522

Cell: 318-880-8079