



# 2015 Cotton Harvest Aid Evaluation Runnels County Dryland

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# Application

| Runnels Co Dry                          |                               |
|---|-------------------------------|
| Application Information                 |                               |
| Application Dates:                      | 9/16/2015                     |
| App. Code A:                            |                               |
| Cooperator:                             | Paul Minzenmayer              |
| GPS Coord. 31° 59' 14" N, 100° 3' 19" W |                               |
| Variety:                                | ST 4946 GLB2                  |
| Time:                                   | 11:00 am to 2:30 pm           |
| Temp (°F):                              | 92                            |
| % RH:                                   |                               |
| Wind Speed (mph) & Direction            | 7-9 mph out of southeast 159° |
| Row Spacing("):                         | 36"                           |
| Plot width (rows)                       | 4                             |
| Plot length                             | Strips 100 feet               |
| % Open                                  | 50%                           |
| Plant Height (mean inches)              | 24-30"                        |
| Sprayer Information                     | Spider Sprayer                |
|   | 10 gpa / 8002 Turbo Teejet    |
|   | 32 psi                        |
|   | 4 mph                         |

# Climate

| Daily Temperatures |        |        |
|--------------------|--------|--------|
| Date               | High   | GDD 60 |
| 9/16/15            | 95     | 22.5   |
| 9/17/15            | 95     | 22.5   |
| 9/18/15            | 96     | 24     |
| 9/19/15            | 98     | 24.5   |
| 9/20/15            | 96     | 24     |
| 9/21/15            | 90     | 20     |
| 9/22/15            | 100    | 21     |
| 9/23/15            | 97     | 21     |
| 9/24/15            | 96     | 21     |
| 9/25/15            | 97     | 23     |
| 9/26/15            | 101    | 21     |
| 9/27/15            | 103    | 21.5   |
| 9/28/15            | 96     | 19.5   |
| 9/29/15            | 59     | 17     |
|                    | Total  | 178    |
| Rain               |        |        |
| 9/20/15            |        |        |
| 9/26/15            |        |        |
| Total              | Inches |        |

# 7 Day Summary

Crop condition was near maturity and not actively growing but not severely stressed, having received a light rain shower a couple of weeks previously. Warm dry weather facilitated harvest aid performance and crop maturity.

- Boll opener products (ethephon and Finish Pro 6) improved percent open from 75-80 to 90-95.
- All Ginstar and Adios treatments were excellent with similar results and a slight increase in performance with Finish Pro 6 over using ethephon.
- Among the PPO treatments with ethephon, defoliation was good with slight differences between products. Sharpen defoliated the best with and without ethephon. The Sharpen alone treatment may be an alternative to Gramoxone.
- The Folex applications performed as well as the other products. Replacing 16 fl oz of ethephon with 8 fl oz of Finish Pro 6 increase boll opening but not defoliation after 7 days.
- 3 and 6 fl oz of Gramoxone SL (2lb) with ethephon defoliated well (65 and 75%) with 15-20% green leaf. Conditions must have been right as this treatment varies by location and timing.
- The higher rate, 16 fl oz of Gramoxone SL (2lb); treatments without ethephon had about 30 - 50% defoliation with 5-10% green leaf. The addition of AMS showed some increased defoliation.



7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 60 |
| % Desiccation | 15 |
| % Green Leaf  | 25 |
| % Open Boll   | 90 |

Treatment Name

|                      |
|----------------------|
| Ginstar              |
| Ethephon             |
| Non-Ionic Surfactant |

Rate

|       |
|-------|
| 4     |
| 16    |
| 0.25% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 65 |
| % Desiccation | 15 |
| % Green Leaf  | 20 |
| % Open Boll   | 90 |

Treatment Name

|                      |
|----------------------|
| Ginstar              |
| Ethephon             |
| Non-Ionic Surfactant |

Rate

|       |
|-------|
| 6     |
| 16    |
| 0.25% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 60 |
| % Desiccation | 15 |
| % Green Leaf  | 25 |
| % Open Boll   | 90 |

Treatment Name

|                      |
|----------------------|
| Adios                |
| Ethephon             |
| Non-Ionic Surfactant |

Rate

|       |
|-------|
| 4     |
| 16    |
| 0.25% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 55 |
| % Desiccation | 15 |
| % Green Leaf  | 30 |
| % Open Boll   | 90 |

Treatment Name

|                      |
|----------------------|
| Adios                |
| Ethephon             |
| Non-Ionic Surfactant |

Rate

|       |
|-------|
| 6     |
| 16    |
| 0.25% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 70 |
| % Desiccation | 10 |
| % Green Leaf  | 20 |
| % Open Boll   | 90 |

Treatment Name

|                      |
|----------------------|
| Ginstar              |
| Finish               |
| Non-Ionic Surfactant |

Rate

|       |
|-------|
| 4     |
| 8     |
| 0.25% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 75 |
| % Desiccation | 5  |
| % Green Leaf  | 20 |
| % Open Boll   | 90 |

Treatment Name

|                      |
|----------------------|
| Adios                |
| Finish               |
| Non-Ionic Surfactant |

Rate

|       |
|-------|
| 4     |
| 8     |
| 0.25% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 70 |
| % Desiccation | 10 |
| % Green Leaf  | 20 |
| % Open Boll   | 95 |

Treatment Name

Display  
 Ethephon  
 Crop Oil Concentrate

Rate

0.6  
 16  
 1%

Rate Unit

fl oz/a  
 fl oz/a  
 v/v





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 75 |
| % Desiccation | 10 |
| % Green Leaf  | 15 |
| % Open Boll   | 95 |

Treatment Name

|                      |
|----------------------|
| ETX                  |
| Ethephon             |
| Crop Oil Concentrate |

Rate

|      |
|------|
| 1.25 |
| 16   |
| 0.5% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 75 |
| % Desiccation | 10 |
| % Green Leaf  | 15 |
| % Open Boll   | 95 |

Treatment Name

|                      |
|----------------------|
| Aim                  |
| Ethephon             |
| Crop Oil Concentrate |

Rate

|    |
|----|
| 1  |
| 16 |
| 1% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 95 |
| % Desiccation | 5  |
| % Green Leaf  | 5  |
| % Open Boll   | 95 |

Treatment Name

Sharpen  
 Ethephon  
 Ams  
 MSO

Rate

0.75  
 16  
 1.7  
 0.5%

Rate Unit

fl oz/a  
 fl oz/a  
 fl oz/a  
 v/v





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 80 |
| % Desiccation | 10 |
| % Green Leaf  | 10 |
| % Open Boll   | 75 |

Treatment Name

Sharpen  
Ams  
MSO

Rate

0.75  
1.7  
0.5%

Rate Unit

fl oz/a  
fl oz/a  
v/v





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 90 |
| % Desiccation | 5  |
| % Green Leaf  | 5  |
| % Open Boll   | 90 |

Treatment Name

|                      |
|----------------------|
| Ethephon             |
| Folex                |
| Non-Ionic Surfactant |

Rate

|       |
|-------|
| 16    |
| 16    |
| 0.25% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 75 |
| % Desiccation | 15 |
| % Green Leaf  | 10 |
| % Open Boll   | 95 |

Treatment Name

|                      |
|----------------------|
| Finish               |
| Folex                |
| Non-Ionic Surfactant |

Rate

|       |
|-------|
| 8     |
| 16    |
| 0.25% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 65 |
| % Desiccation | 15 |
| % Green Leaf  | 20 |
| % Open Boll   | 90 |

Treatment Name

|                      |
|----------------------|
| Gramoxone SL         |
| Ethephon             |
| Crop Oil Concentrate |

Rate

|    |
|----|
| 3  |
| 16 |
| 1% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 75 |
| % Desiccation | 10 |
| % Green Leaf  | 15 |
| % Open Boll   | 90 |

Treatment Name

|                      |
|----------------------|
| Gramoxone SL         |
| Ethehon              |
| Crop Oil Concentrate |

Rate

|    |
|----|
| 6  |
| 16 |
| 1% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 50 |
| % Desiccation | 40 |
| % Green Leaf  | 10 |
| % Open Boll   | 85 |

Treatment Name

|                      |
|----------------------|
| Gramoxone SL         |
| Ams                  |
| Crop Oil Concentrate |

Rate

|    |
|----|
| 16 |
| 1  |
| 1% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 30 |
| % Desiccation | 65 |
| % Green Leaf  | 5  |
| % Open Boll   | 90 |

Treatment Name

Gramoxone SL  
Crop Oil Concentrate

Rate

16  
1%

Rate Unit

fl oz/a  
v/v





7 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 30 |
| % Desiccation | 65 |
| % Green Leaf  | 5  |
| % Open Boll   | 90 |

Treatment Name

|                      |
|----------------------|
| Gramoxone SL         |
| Direx                |
| Crop Oil Concentrate |

Rate

|     |
|-----|
| 16  |
| 0.5 |
| 1%  |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |

# 14 Day Summary

- All Ginstar and Adios treatments were excellent with no regrowth
- Among the PPO treatments with ethephon, defoliation was good with only slight differences. Aim and Display had the lowest regrowth followed significantly by Sharpen and ETX. The 0.75 fl oz application of Sharpen without ethephon; performed well with little regrowth.
- The Folex applications had slightly lower defoliation performance with noticeably more regrowth in both treatments. The Folex with Finish Pro 6 had much less regrowth.
- 3 and 6 fl oz of Gramoxone SL (2lb) with ethephon defoliated well, 90%; but regrowth was an issue.
- The higher rate, 16 fl oz of Gramoxone SL (2lb); treatments without ethephon had about 30% defoliation. The additions of AMS and diruon showed some increased defoliation and reduced plant regrowth.





14 Day Rating

|               |      |
|---------------|------|
| % Defoliation | 97.5 |
| % Desiccation | 2.5  |
| % Green Leaf  | 0    |
| % Regrowth    | 0    |

Treatment Name

|                      |
|----------------------|
| Ginstar              |
| Ethephon             |
| Non-Ionic Surfactant |

Rate

|       |
|-------|
| 4     |
| 16    |
| 0.25% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





14 Day Rating

|               |      |
|---------------|------|
| % Defoliation | 97.5 |
| % Desiccation | 2.5  |
| % Green Leaf  | 0    |
| % Regrowth    | 0    |

Treatment Name

|                      |
|----------------------|
| Ginstar              |
| Ethephon             |
| Non-Ionic Surfactant |

Rate

|       |
|-------|
| 6     |
| 16    |
| 0.25% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





14 Day Rating

% Defoliation      97.5  
 % Desiccation      2.5  
 % Green Leaf        0  
 % Regrowth         0

Treatment Name

Adios  
 Ethephon  
 Non-Ionic Surfactant

Rate

4  
 16  
 0.25%

Rate Unit

fl oz/a  
 fl oz/a  
 v/v





14 Day Rating

|               |      |
|---------------|------|
| % Defoliation | 97.5 |
| % Desiccation | 2.5  |
| % Green Leaf  | 0    |
| % Regrowth    | 0    |

Treatment Name

|                      |
|----------------------|
| Adios                |
| Ethephon             |
| Non-Ionic Surfactant |

Rate

|       |
|-------|
| 6     |
| 16    |
| 0.25% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





14 Day Rating

|               |      |
|---------------|------|
| % Defoliation | 97.5 |
| % Desiccation | 2.5  |
| % Green Leaf  | 0    |
| % Regrowth    | 0    |

Treatment Name

|                      |
|----------------------|
| Ginstar              |
| Finish               |
| Non-Ionic Surfactant |

Rate

|       |
|-------|
| 4     |
| 8     |
| 0.25% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





14 Day Rating

% Defoliation      97.5  
 % Desiccation      2.5  
 % Green Leaf        0  
 % Regrowth         0

Treatment Name

Adios  
 Finish  
 Non-Ionic Surfactant

Rate

4  
 8  
 0.25%

Rate Unit

fl oz/a  
 fl oz/a  
 v/v





14 Day Rating

|               |      |
|---------------|------|
| % Defoliation | 87.5 |
| % Desiccation | 5    |
| % Green Leaf  | 7.5  |
| % Regrowth    | 20   |

Treatment Name

|                      |
|----------------------|
| Display              |
| Ethephon             |
| Crop Oil Concentrate |

Rate

|     |
|-----|
| 0.6 |
| 16  |
| 1%  |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





14 Day Rating

|               |      |
|---------------|------|
| % Defoliation | 92.5 |
| % Desiccation | 2.5  |
| % Green Leaf  | 5    |
| % Regrowth    | 60   |

Treatment Name

|                      |
|----------------------|
| ETX                  |
| Ethephon             |
| Crop Oil Concentrate |

Rate

|      |
|------|
| 1.25 |
| 16   |
| 0.5% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





14 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 90 |
| % Desiccation | 5  |
| % Green Leaf  | 5  |
| % Regrowth    | 20 |

Treatment Name

|                      |
|----------------------|
| Aim                  |
| Ethephon             |
| Crop Oil Concentrate |

Rate

|    |
|----|
| 1  |
| 16 |
| 1% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





14 Day Rating

|               |     |
|---------------|-----|
| % Defoliation | 95  |
| % Desiccation | 2.5 |
| % Green Leaf  | 2.5 |
| % Regrowth    | 50  |

Treatment Name

Sharpen  
 Ethephon  
 Ams  
 MSO

Rate

0.75  
 16  
 1.7  
 0.5%

Rate Unit

fl oz/a  
 fl oz/a  
 fl oz/a  
 v/v





14 Day Rating

|               |      |
|---------------|------|
| % Defoliation | 92.5 |
| % Desiccation | 5    |
| % Green Leaf  | 2.5  |
| % Regrowth    | 10   |

Treatment Name

Sharpen  
Ams  
MSO

Rate

0.75  
1.7  
0.5%

Rate Unit

fl oz/a  
fl oz/a  
v/v





14 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 90 |
| % Desiccation | 5  |
| % Green Leaf  | 5  |
| % Regrowth    | 70 |

Treatment Name

|                      |
|----------------------|
| Ethephon             |
| Folex                |
| Non-Ionic Surfactant |

Rate

|       |
|-------|
| 16    |
| 16    |
| 0.25% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





14 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 85 |
| % Desiccation | 10 |
| % Green Leaf  | 5  |
| % Regrowth    | 30 |

Treatment Name

|                      |
|----------------------|
| Finish               |
| Folex                |
| Non-Ionic Surfactant |

Rate

|       |
|-------|
| 8     |
| 16    |
| 0.25% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





14 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 90 |
| % Desiccation | 0  |
| % Green Leaf  | 10 |
| % Regrowth    | 60 |

Treatment Name

|                      |
|----------------------|
| Gramoxone SL         |
| Ethephon             |
| Crop Oil Concentrate |

Rate

|    |
|----|
| 3  |
| 16 |
| 1% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





14 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 90 |
| % Desiccation | 5  |
| % Green Leaf  | 5  |
| % Regrowth    | 60 |

Treatment Name

|                      |
|----------------------|
| Gramoxone SL         |
| Ethephon             |
| Crop Oil Concentrate |

Rate

|    |
|----|
| 6  |
| 16 |
| 1% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





14 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 50 |
| % Desiccation | 50 |
| % Green Leaf  | 0  |
| % Regrowth    | 20 |

Treatment Name

|                      |
|----------------------|
| Gramoxone SL         |
| Ams                  |
| Crop Oil Concentrate |

Rate

|    |
|----|
| 16 |
| 1  |
| 1% |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |





14 Day Rating

% Defoliation      30  
 % Desiccation      70  
 % Green Leaf      0  
 % Regrowth      30

Treatment Name

Gramoxone SL  
 Crop Oil Concentrate

Rate

16  
 1%

Rate Unit

fl oz/a  
 v/v





14 Day Rating

|               |    |
|---------------|----|
| % Defoliation | 30 |
| % Desiccation | 70 |
| % Green Leaf  | 0  |
| % Regrowth    | 0  |

Treatment Name

|                      |
|----------------------|
| Gramoxone SL         |
| Direx                |
| Crop Oil Concentrate |

Rate

|     |
|-----|
| 16  |
| 0.5 |
| 1%  |

Rate Unit

|         |
|---------|
| fl oz/a |
| fl oz/a |
| v/v     |