

2013 Arkansas Cotton Quick Facts

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Cotton Variety Selection

- Select 4 or 5 proven varieties to spread risk and maturity across farm
- Plant new varieties on 10-15%
- Refer to Official Cotton Variety Trial results and MP 480 for variety performance info

Proven	Resistant to Bacterial Blight	Best Fit Region of Arkansas
NG 1511 B2RF	No	North to South
DG 2570 B2RF	No	North & Central
DP 0912 B2RF	No	North to South
DP 1133 B2RF	Yes	North to South
PHY 499 WRF	No	North to South
ST 5458 B2RF	No	North to South
ST 5288 B2F	Yes	North to South
New Varieties That Show Potential		
DP 1311 B2RF	No	North to South
FM 1944 GLB2	No	North to South
ST 4946 GLB2	No	North to South
ST 4145 LLB2	No	North to South
ST 5445 LLB2	Yes	North to South

Cotton Planting Dates

Percent of Total Yield Potential by Planting Date

Week Planted	Percent Yield Potential	
	North I-40	South I-40
Apr 16-22	NA	100
Apr 23-30	100	100
May 1-9	100	99
May 10-16	95	99
May 17-21	85	90
May 22-31	70	80
June 1-7	65	70

Seeding Rates

- General Recommendation – 48,000 Seeds/A
- Sandy Loams 35,000 – 40,000 sd/A
- Silt Loams 40,000-48,000 sd/A
- Clay Loams 55,000 sd/A

Seeding rates should be increased 10% if cotton is planted in late May or early June.

Field and Seedbed Prep

- Adequate field drainage is crucial to maintain high yields
- Recognize any compaction issues and utilize deep tillage to fracture hardpan
- Seedbeds should be firm and clean at planting time.
- Planting depth 0.75 – 1.25 in. into moisture

Fertility

Nitrogen (N) sources and rates

Nitrogen should be applied in split applications, the first during seedling establishment and the second by first square to maximize efficiency and manage nitrogen loss mechanisms.

- 32% UAN (1 gal = 3.5 units)
- Urea (46-0-0)
- DAP (18-46-0)
- Ammonium Sulfate (21-0-0-24)
- Nitrogen Rates 80-120 lbs of N per acre
- Total Available N needed = 140-160 lbs

Phosphorus (P) and Potassium (K)

P₂O₅ Recommendation (lbs P/Acre)

Yield Goal	Soil Test P (ppm)			
	<16	16-25	26-35	>36
3300 lbs ^A	90	70	50	0

K₂O Recommendation (lbs K/Acre)

Yield Goal	Soil Test K (ppm)				
	<61	61-90	91-130	131-175	>175
3300 lbs ^A	140	95	60	40	0

Sulfur (S):

- Apply 20 lbs of SO₄-S/Acre if a sulfur deficiency has occurred on this soil before
- 100 lbs of Ammonium Sulfate equals 24 lbs of actual S

Boron

Boron deficiency can result in bloom malformation and increased shed of small fruit. However, boron deficiency has not been a problem in Arkansas.

Plant Growth and Development

Under optimum conditions cotton plants should produce one node of stalk growth every 3 days. Second position fruiting forms are produced every 6 days.

- Emergence - 5-10 days after planting
- Squaring - 35 – 40 days after planting
- First bloom - 60 days after planting
- First Open Boll - 120-130 days after planting

Seed Treatments

- Systemic insecticides applied on seed or in-furrow are recommended on every acre.
- In-furrow fungicides are recommended if cotton is planted early under cool/wet soil conditions.
- Nematicide seed treatments are only recommended if Root Knot or Reniform nematode populations are present.

Weed Control

- Start clean with use of residual herbicides at burndown, tillage or broadcast application of Gramoxone. Remove any weeds present at planting with tillage or a non-selective herbicide.
- Overlap Residual Herbicides – Pre-plant, Pre-emergence, Post-emergence and at Layby. Consider adding another residual at 14 day intervals
- Alternate chemistries to prevent further resistance – Liberty Link Technology offers another tool to control pigweed.
- Continue to use residuals in Liberty Link systems and sequential applications of Liberty will be necessary to control large or high populations of pigweed.

Weed Control cont'd

Glyphosate-resistant Palmer pigweed is present in all cotton producing counties. Farm-wide pigweed management is recommended utilizing non-selective and residual herbicides to reduce seedbanks on ditches, turnrows and field borders.

Herbicides

- Refer to the MP44 Recommended Chemicals for weed and brush control for the latest herbicide recommendations.

Insect Control

Insect Thresholds

- **Monitor square and boll retention; maintain 80% going into bloom.**
- **Cutworms**- Plant into clean fields. Treat when stand is threatened
- **Thrips**- 2-5 Thrips per plant AND damage present (min. 5 plants checked per area)
- **Tarnished Plant Bugs**- 3 TPB per 5 row feet - drop cloth (Problem Fields- 1TPB per 3 row feet)
- **Bollworm and Tobacco Budworm**
1 BW or 1 TBW (<0.25") per 2 row feet (Non-Bt Cotton)
1 BW or TBW (>0.25") per 4 row feet
- **Armyworm**- 10-20 FAW present/100 plants
- **Aphids** -50% of plants infested with growing colonies and no predators.
- **Spider Mites**- 50% of plants infested with growing colonies
- **Stink Bugs**- 1 per 6 row feet or 20% boll damage
- **Loopers**- 20% defoliation

Insecticides

- Refer to the MP144 Insecticide Recommendations for Arkansas for the latest insecticide recommendations.

Termination (Heat units passed cutout NAWF-5)

Heat Unit Interval	Termination
250	Tarnished Plant Bugs
350	Bollworms, Budworms,
450	Stink Bugs
500	Defoliators (Spider Mites, Armyworms)

Disease Control

- **Seedling Diseases**- If planting into cool/wet soil early in season use a systemic fungicide seed treatment or in-furrow spray
- **Foliar Diseases**- Maintain optimum Potassium levels to fight foliar diseases. Fungicide use is only recommended on early/severe infestation.
- **Bacterial Blight**- Plant disease free seed or resistant varieties
- **Nematodes- Root Knot and Reniform** - Sample every 3 years, rotation to resistant crop can reduce numbers
Light to Moderate Pop. – Seed treatment or in-furrow nematicide
Heavy Pop. - Soil fumigant and/or seed trt.

Disease Control Products

- Refer to MP 154 Arkansas Plant Disease Control products Guide for the latest disease recommendations.

Irrigation

- Start on time (7-10 days before bloom).
- Irrigate when 2" deficit on sandy soil and a 3" deficit on heavier soils according to the Irrigation Scheduler.
- The PHAUCET program is recommended on furrow irrigated cotton. This program is available through the County Extension Office.
- Termination- 350-450 Heat Units past cutout (NAWF-5)

Plant Growth Regulators

- **Early Maturing Varieties:**
Wait until 10 nodes and apply 6-8 oz or at bloom use 10-16 oz. (higher rates needed if terminals are extending). Use as needed the rest of the season.
- **Full Season Varieties:**
Use a low rate multiple application strategy.
Use 6-8 oz. at 10 nodes, use 8-10 oz. 14 days later, then use 16-20 oz. after bloom (higher rates needed if terminals are extending).

Defoliation

- Start checking at 850 Heat Units past cutout (NAWF-5)
- In most cases cotton can be safely defoliated when 60% of the bolls are open.
- Cut uppermost harvestable boll – seed coat will be dark and no jelly present
- Refer to the MP503 Mid-South Defoliation Guide

Application

- Coverage is key.
- No air induction tips.
- Use a minimum 5 gallons of water/acre for air applications
- Use at least 15 gallons of water/acre for ground applications
- Two applications are recommended for best results

Defoliation Products

- Refer to the MP 503 Mid-South Cotton Defoliation Guide for the latest defoliation recommendations.

Visit www.arkansascrops.com for specific MP guides and other crop management information

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