



## Residual Herbicide Reminder—Daniel Stephenson, Ph.D.

Cotton planting is upon us and weed control strategies need to be considered. We have all heard about the potential shortage of glyphosate (Roundup, Touchdown, or any generic you like) this year. Also, the threat of glyphosate resistance is looming. Just read about the problems growers are experiencing in Arkansas and Georgia and you will see that resistance is not a minor issue. So, what do I recommend? You guessed it, residuals. Unfortunately, we are too late for preplant burndown residual herbicides such as Valor, 2,4-D, or dicamba (Clarity or Banval), which need to be applied at least 21 to 30 days before planting.

We have to focus on preemerge, postemerge over-the-top, and postemerge-directed application timings to target applications

of a residual in cotton. Below are some recommendations:

### PREEMERGENCE

- **Cotoran/Meturon 80 WP/4 L.**
  - 1 to 2 lb/acre 80 WP with rates increasing for heavier soil types.
  - 0.8 to 2 qt/acre 4 L with rates increasing for heavier soil types.
  - Cover seed at least ½-inch deep.
- **Staple LX tank-mixed with Cotoran/Meturon 80 WP/4 L.**
  - Increases control of yellow nutsedge.
  - Staple LX rate of 1.3 to 1.7 oz/acre.
  - Use Cotoran/Meturon 80 WP/4 L rates shown above.

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## Spot Replanting—Sandy Stewart, Ph.D.

With the cool weather and locally heavy rain in some cotton growing areas, there is some spot replanting either taking place or being considered. Normally this would be in areas of a field that are less well-drained, tend to crust more following a heavy rain, or have cooler soil temperatures. Under most conditions, spot replanting is usually discour-

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### Upcoming Dates:

- Northeast Research Station Field Day, St. Joseph—June 24
- Dean Lee Field Day, Alexandria—Aug. 21

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## Residual Herbicides (cont'd from Page 1)

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- Cover seed at least ½-inch deep.
- **Dual Magnum**
  - Do not apply preemergence to light soils.
  - 1 to 1.33 pt/acre for medium soils and 1.33 pt/acre for heavy soils.
  - Cover seed at least 1 ½-inch deep.
- **Prowl 3.3/Pendimax or Prowl H<sub>2</sub>O.**
  - Prowl 3.3/Pendimax
    - ✦ 1.2 to 3.6 pt/acre with rates increasing for heavier soil types.
  - Prowl H<sub>2</sub>O
    - ✦ 1.2 to 3 pt/acre with rates increasing for heavier soil types.
  - ◇ Need rain within 7 days for expected weed control.
- ◆ **Zorial Rapid 80**
  - ◇ 1.25 to 2.5 lb/acre with rates increasing for heavier soil types.

### POSTEMERGENCE OVER-THE-TOP

- **Roundup Ready cotton** – No over-the-top applications past 4-leaf cotton

- **Roundup Ready Flex cotton** – No cotton growth stage limit.
  - Glyphosate plus:
    - ✦ Dual Magnum at 0.5 to 1.33 pt/acre.
    - ◇ Staple LX at 1.0 oz/acre (Do not exceed 2 oz/year/acre.)
  - Sequence (Pre-mix of glyphosate and Dual).
    - ✦ Apply up to 2.5 pt/acre.
    - ✦ Do not apply prior to 3-inch cotton.
    - ✦ Do not exceed 3.5 pt/year/acre.
  - ◇ Envoke
    - ✦ Do not tank-mix with glyphosate for over-the-top applications  
0.10 oz/acre
- **Liberty Link Cotton**
  - ◇ Dual Magnum and Staple can be tank-mixed with Ignite 280 at rates shown above.
  - ◇ Do not tank-mix Ignite 280 and

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## Spot Replanting (cont'd from page 1)

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aged because the areas that are replanted rarely are able to 'catch up' to those areas with a good stand, resulting in two distinct ages of cotton in one field. In most years, this situation will be difficult to manage.

Because of the cool conditions, however, spot replanted cotton right now will likely not be drastically different in maturity compared with plants that

have already emerged. Between April 9 and April 30, weather data at St. Joseph, LA indicate that only 151 DD60s were accumulated. From April 16 to April 30, only 105 DD60s accumulated. Cotton seedlings can require as many as few as 45 and as many as 130 DD60s to emerge. Moreover, if we assume 50 DD60s are required to add a new node after emergence, then cotton planted as early as April 9 will have at most one true leaf, and many fields will still

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## Residual Herbicides (cont'd from Page 2)

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Envoke for over-the-top applications.

### POSTEMERGENCE-DIRECTED OR LAY-BY

- **Caporal 80 WP/4 L**
  - 1.5 to 2 lb/acre 80 WP with rates increasing for heavier soils.
  - 2.4 to 3.2 pt/acre 4 L with rates increasing for heavier soils.
  - Tank-mix 0.25% v/v non-ionic surfactant if applied alone.
- **Cotoran/Meturon 80 WP/4 L.**
  - 1 to 1.5 lb/acre 80 WP.
  - 0.8 to 1.2 qt/acre 4 L.
  - Tank-mix 0.25% v/v non-ionic surfactant if applied alone.
- **Direx/Karmex**
  - 0.4 to 0.8 pt/acre of Direx
  - 4 to 8 oz/acre of Karmex
  - Tank-mix 0.5% v/v surfactant if applied alone.
- **Suprend (Pre-mix of Caporal and Envoke)**
  - 1 to 1.5 pt/acre
  - Reflex

- 1 to 1.5 pt/acre
- Tank-mix 0.25% v/v non-ionic surfactant if applied alone.

- **Valor**

- Apply at lay-by only
- 1 to 2 oz/acre
- Tank-mix 0.25% v/v non-ionic surfactant if applied alone.  
Need 4-inches of bark on the cotton stalk to prevent injury.

As a reminder, base postemergence application timings on weed size, not just cotton growth stage or size. Better control with residuals can be expected if applied prior to weed germination. Also, care should be taken to calibrate your sprayer and make sure that spray tips are working properly.

If you have any suspected resistance or any other problems, please feel free to call myself or any other LSU AgCenter weed science personnel so that we can help. My office number is (318) 473-6590 and cell number is (318) 308-7225. Good luck.

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## Spot Replanting (cont'd from page 2)

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be in the cotyledon stage. Therefore, spot replanted cotton will likely 'catch up' very quickly to older seedlings that have been so slow to grow off.

In most years, if producers decide to spot replant, it is advisable to choose an earlier maturing variety to compensate for the assumed difference in age with the spot replanted cotton. At this point in Louisi-

ana, an earlier maturing variety is probably not necessary because of the slow emergence and growth of earlier planted cotton. As conditions continue to warm, and the later this decision is made, the reverse will be true. An important point is to ensure that spot replanting takes place with a variety with an identical gene package; i.e. spot replant a B2RF variety with a B2RF variety, etc.

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## Spot Replanting (cont'd from Page 3)

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Another consideration is whether or not a pre-emergence herbicide has been applied. Follow labels closely if a PRE such as Cotoran, Dual, Prowl, etc. has already been applied.

Spot replanting is normally not a standard recommendation and in many years can lead to more difficult management of the entire field. However, where skippy stands in isolated areas warrant spot replanting this year, the difference in age between existing cotton and replanted cotton is likely to be minimal. Producers should remember that this will become less true as conditions warm and existing cotton gets larger.



*Skippy stand due to soil crusting from a packing rain.*

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## Seep Water Problems—How Late Can We Wait to Plant?—Sandy Stewart, Ph.D.

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With the extremely high level of the Mississippi River over the past couple of months, seep water flooding of fields close to the Mississippi River levee has delayed planting of some intended cotton acres in parishes bordering the river. The river level appears to be slowly on its way back down at this point. Questions now loom as to how late cotton can still be planted in those fields and what are some of the management considerations?

Many years of research in Louisiana have established that the optimal cotton planting window in

Louisiana is from April 15 to May 15. Yields tend to decline for cotton planted after May 15, although the actual yield loss per day differs from year to year, mainly depending on how warm and dry the latter part of the growing season is. As seep water is not likely to subside completely in the next two weeks, many of these fields in question are likely to be planted to cotton after the ideal window has passed, if at all.

*“the decision to plant cotton in late May and early June has a great deal to do with the level of risk a producer is willing to assume”*

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## Seep Water Problems (cont'd from Page 4)

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### ***Latest Possible Planting Date***

The real question concerns the absolute latest that cotton planting should be considered. Once again, there is not a definitive answer to this because we have no way of predicting late season weather patterns. However, we do know that because of the relatively long growing season in Louisiana, late planted cotton can perform well, if not optimally. Many of us have witnessed a full season variety such as DP 555 BG/RR make surprisingly high yields when planted abnormally late. However, it is almost always the conditions at the end of the season rather than the beginning that contribute to this success.

Extremely late planted cotton is usually subject to greater insect pressure and will be exposed to more weather related issues such as tropical storms and fall rains. Therefore, the decision to plant cotton in late May and early June has a great deal to do with the level of risk a producer is willing to assume. After June 10, the risks become too great, in my opinion, and cotton planting should not be considered.

An additional consideration may be crop insurance. For many policies, the final planting date for insuring

cotton in Louisiana is May 25. This may not apply to all situations and growers should check closely with their insurance providers and Risk Management for the most definitive answer on crop insurance.

### ***Management for Late Planted***

#### ***Cotton***

If producers are able to and decide to plant cotton late after the seep water subsides, there are a few management options to be considered. The goal with any of these is to gain as much earliness as possible.

**Choose an early maturing variety.** A shorter, more determinate variety is much easier to

manage when planted late and will reduce risk and exposure to late-season storms and rain.

**Varieties with a gene package that includes Roundup Ready Flex stacked with Bollgard II or Widestrike are preferable.** The two-gene Bt traits will provide some additional protection to late-season insect pressure, while the RRFlex allow more time for weed control. Because of warm conditions and ample heat units at planting, late-planted cotton emerges and develops quickly, reducing the time allowed for over-the-

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*Mississippi River levee in Concordia Parish showing water on right inside the levee and production field on left outside the levee.*

## Seep Water Problems (cont'd from page 5)

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top glyphosate applications to Roundup Ready cotton.

### **Early retention is a key to earliness.**

Late-planted cotton develops quickly because of warm conditions and can often have higher early retention than cotton planted on time. However, diligent scouting and monitoring of pant bug populations is needed to help ensure good early retention. Things can happen quickly in late-planted cotton and good retention on lower fruiting nodes will help hasten maturity.

**Avoid excessive nitrogen rates.** Excess nitrogen can lead to rank growth and has been shown to delay maturity in some cases. Stay with a standard N rate based on soil type and previous crop, or consider cutting back by 10%.

**One of the keys to managing late-planted cotton is to reach early bloom as soon as possible.** Therefore, try to avoid match head square applications of mepiquat. Try to time the first mepiquat application to first bloom. With good early retention and a well-timed mepiquat application at early bloom, some gain in maturity can be expected. As always, allow growing conditions to dictate the need for and the actual rate of mepiquat applications.



*Water flowing into the Atchafalaya River at Old River Control Structure*



*Water flowing into the Atchafalaya River at from the Auxiliary Control Structure of the Old River Project. Note the fisherman at the end of the structure. The fish must be biting good to get them out there!*



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