

University of Georgia Herbicide Programs for Tropical Spiderwort (Benghal Dayflower) Control in 2013 Cotton

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Tropical spiderwort is a noxious, exotic, invasive weed that can spread quickly. Upon initial observation, tropical spiderwort appears to be a grass (Figure 1). While not a grass, it is a monocot (in contrast to broadleaf weeds, which are dicots) with leaves and stems usually fleshy and succulent. The stems will creep along the ground and root at the nodes. Vegetative cuttings from stems are capable of rooting and reestablishing following cultivation. Tropical spiderwort will produce seed above and below ground (Figure 2).

Prior to glyphosate-resistant Palmer amaranth challenging our cotton industry, this weed was the most problematic weed of cotton. However, Roundup-based programs developed to control Palmer amaranth have indirectly controlled tropical spiderwort very effectively. During 2011/2012 with greater adoption of Liberty-based programs, tropical spiderwort became more problematic as Liberty is not effective in controlling this weed. A programs approach is needed for both Roundup and Liberty based systems. Tables 1 through 3 are suggestions for the management of tropical spiderwort in Georgia cotton. Refer to the most recent cotton production guide or pest control handbook for herbicide rates and proper cotton sizes at time of application.

Figure 1. Newly emerged.



Figure 2. Underground fruiting structures.

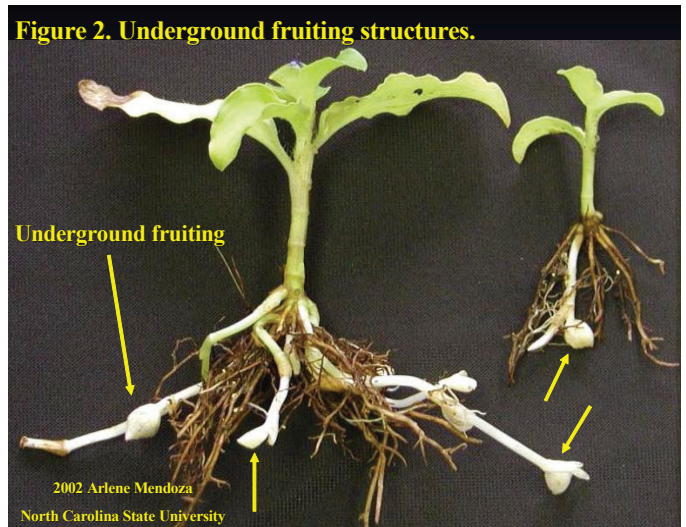


Table 1. Managing Tropical Spiderwort in Roundup Ready Cotton.¹

Preemergence	POST 1	POST 2	Layby Directed
Warrant ² + herbicides appropriate for other weeds	Roundup + Staple, Dual Magnum ³ or Warrant ² (Use Staple if spiderwort or Palmer amaranth are up)	Roundup + Dual Magnum ³	Direx + MSMA (Add Aim if spiderwort is greater than 3 inches; the addition of Dual Magnum ³ or Warrant ² would improve residual control)

¹ Deep turning the land will provide fair control of spiderwort.

² Apply Warrant no more than twice per season, once topically. Dual Magnum can be applied topically once per crop.

³ Dual Magnum can be applied topically once per crop.

Table 2. Managing Tropical Spiderwort in GlyTol/Liberty Link Cotton. ¹

Preemergence	POST 1	POST 2	Layby Directed
Warrant ² + herbicides appropriate for other weeds	<p>Liberty + Staple, Dual Magnum³ or Warrant²</p> <p>OR</p> <p>Roundup + Staple, Dual Magnum³ or Warrant²</p>	<p>Liberty + Staple, Dual Magnum³ or Warrant²</p> <p>OR</p> <p>Roundup + Staple, Dual Magnum³ or Warrant²</p>	<p>Direx + MSMA</p> <p><i>(Add Aim if spiderwort is greater than 3 inches; the addition of Dual Magnum³ or Warrant² would improve residual control)</i></p>
	<p><u>Considerations for selecting POST 1 and 2 treatments:</u></p> <p>1. Use Liberty instead of Roundup if Palmer amaranth has emerged.</p> <p>2. With Liberty or Roundup: add Staple if spiderwort has emerged but use Dual or Warrant if spiderwort has not emerged.</p>		

¹ Deep turning the land will provide fair control of spiderwort.

² Apply Warrant no more than twice per season, once topically.

³ Dual Magnum can be applied topically once per crop.

Table 3. Managing Tropical Spiderwort with Liberty Link Cotton. ¹

Preemergence	POST 1	POST 2	Layby Directed
Warrant ² + herbicides appropriate for other weeds	<p>Liberty + Staple <i>(spiderwort emerged)</i></p>	<p>Liberty + Dual Magnum³ <i>(before spiderwort not emerges)</i></p>	<p>Direx + MSMA</p> <p><i>(Add Aim if spiderwort is greater than 3 inches; the addition of Dual Magnum² or Warrant³ would improve residual control)</i></p>
	<p>Liberty + Dual Magnum³ or Warrant² <i>(spiderwort not emerged)</i></p>		

¹ Deep turning the land will provide fair control of spiderwort.

² Apply Warrant no more than twice per season, once topically.

³ Dual Magnum can be applied topically once per crop.

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