Thrips - Identification & Control

Many of you know from experience how damaging thrips can be in cotton. Our region is known for having the highest levels of thrips and greatest potential damage to seedling cotton of anywhere in the United States.

Thrips can cause stunting, maturity delays, and yield losses. This is especially true if the thrips are present in high numbers and are reproducing on cotton plants. With the loss of Temik, many of you are relying on seed treatments to hold the moderate pressure we are seeing this year. Seed treatments lack persistence and with optimal conditions provide you with three weeks of residual control. This makes early detection an essential component in controlling this pest.

Across the county it appears that earlier planted cotton holds the heaviest pressure. As host plants were burned-down prior to planting and wheat is drying down, thrips are migrating to cotton, which has plenty of new growth/foliage for them to feed.

When scouting for thrips, carefully examine the terminal and its newly expanded leaves for crinkled or puckered leaves, twisted, darkened bud tissue, and small silvery areas in the expanding leaf tissue. Pay close attention to the expanded cotyledon up to the first or second true leaf stage. Cotton plants are most vulnerable to thrips injury at this stage. Older damaged leaves will remain crinkled and reveal little recent activity. A sample of at least 10 plants selected randomly from throughout your field is suggested for finding live thrips.

Acephate or Orthene has proven to provide consistent control against thrips. Some of you have contacted me in regards to the appropriate application rate. Although a 1/4-pound of active ingredient per acre has been our foliar standard for thrips, 1/3-pound of active ingredient per acre is somewhat more effective and can reduce the odds of a second foliar application. Keep in mind that higher rates can lead to longer residuals. In addition, acephate is relatively inexpensive.

It is advantageous to monitor the activity of thrips until your cotton reaches the 7th leaf stage. Cotton is generally susceptible to damage until it reaches this stage in growth. If I can assist you in the identification or control of thrips please contact me at 902-1704.

Post-Emergence Thrips Control – Use of Acephate

INSECT Insecticide, Mode of Action (MOA), & Formulation	**Amount/Acre**	**Active Pounds /Acre**	**Acres/gal (lb)**	**Pre-Harvest Interval Days**
Acephate, MOA 1B				21
(Orthene) 75 S	3 to 4 oz	0.14 to 0.19	5.3 to 4 (lb)	
(Orthene) 90 S	0.2 lb	0.18	5 (lb)	
(Orthene) 97 S	2.5 to 3 oz	0.15 to 0.18	6.4 to 5.3 (lb)	
(Orthene) 97 ST	6 oz	0.375	2.67 (lb)	

Replanting Decisions

Recent rainfall and warmer temperatures should promote rapid growth for established cotton and encourage germination for recently planted cotton. Some of you have had questionable stands and opted to replant. As a general rule, 1 plant per foot has the potential to produce profitable yields.

Soil moisture, temperature, and seed depth have been the leading cause of inadequate stands across the county. In addition, in-furrow fertilizer applications have led to problems. Extension specialist Dr. Jack Bachelor has indicated that fertilizers should not be used in-furrow with cotton. We have often seen ammonia toxicity in cotton from relatively low rates of in-furrow fertilizers, as cotton is very sensitive to ammonia. In some years you may notice minimal damage from in-furrow fertilizer applications at planting, but in most years severe damage can be noted.

With the cost of seed, pre-emergence herbicides, diesel, and labor, it would take a very “skippy” stand (less than 1 ppf) to justify replanting at this point in the season. I would encourage you to weigh all options before opting to replant. If I can assist you in this regard feel free to contact me at 902-1704.

Weed Control – Palmer Amaranth

Controlling Palmer Amaranth should start with a good pre-emergence herbicide program. It is essential that we take the pressure off of the post-emergence options we have, and the key to doing this is to apply more residuals upfront. This approach seems more expensive but in reality, herbicides almost always pay for themselves. Many of you have applied one or more pre-emergence herbicides behind the planter to control palmer amaranth. From what I can see, they are paying for themselves.

Post-Emergence Options – Roundup Ready (Always review label(s) prior to these applications)

Herbicide, Mode of Action Code* and Formulation	Amount of Formulation Per Acre	Pounds Active Ingredient Per Acre	Precautions and Remarks
glyphosate MOA 9 + S-metolachlor, MOA 15 **(Sequence) 5.25 L**	2.5 pt	0.70 (lb a.e.) + 0.94	APPLY ONLY TO ROUNDUP READY CULTIVARS. Apply to 3- to 4-leaf cotton. Do not add any adjuvants and do not mix with other pesticides. Compared with glyphosate alone, Sequence will provide residual control of annual grasses and pigweed species. Varying degrees of foliar burn on cotton can be expected. The amount of foliar burn is greater when the combination is applied under hot and humid conditions or when there is dew on the cotton. Cotton recovers and there is no lasting adverse effect.
glyphosate MOA 9 + acetachlor, MOA 15 **(Warrant) 3.0 ME**	See label 1.5 qt	0.56 to 0.75 (lb a.e.) + 1.1	APPLY ONLY TO ROUNDUP READY CULTIVARS. Apply overtop cotton with glyphosate to 2- to 3-leaf cotton. Can be applied to 5- to 6-leaf cotton if directed. Warrant provides residual control only and does not control emerged weeds.

Post-Emergence Option(s) – WRF Phytogen Cotton <u>Only</u> (Always review label(s) prior to these applications)

glufosinate-ammonium, MOA 10 **(Ignite 280 SL) 2.34 L**	23 to 43 fl oz	0.42 to 0.79	APPLY ONLY TO LIBERTY LINK CULTIVARS OR CULTIVARS WITH TOLERANCE OF GLUFOSINATE. Can be applied overtop or directed from cotton emergence until the early bloom stage. Good spray coverage is critical. Use flat-fan nozzles and a minimum of 15 gpa. Better coverage may be obtained on larger cotton with a semi-directed application. Multiple applications are allowed, but do not exceed a total of 87 fl oz per acre in one season. Glufosinate controls most annual grass and broadleaf weeds, although timing of application on pigweed and grasses (especially goose grass) is critical. Pre-emergence herbicides are encouraged to help in control of pigweed and grasses. Glufosinate is generally more effective on broadleaf weeds than grasses. Broadleaf weeds should be 2 to 3 in. tall and Grasses 1 to 2 in. tall. An adjuvant is not necessary. **Glufosinate may be mixed with Staple (1.3 to 1.7 fl oz) for better pigweed control and residual control of susceptible species. Alternatively, glufosinate may be mixed with Dual Magnum (1 to 1.33 pt) for residual control of susceptible species. Do not mix Dual and Staple.** Post emergence grass control herbicides, such as Poast or Select, should not be mixed with glufosinate. Applications of post emergence grass herbicides and Ignite should be separated by at least 5 days.

Adam L. Lasiter
Agricultural Ext. Agent
adam_lassiter@ncsu.edu

403 Government Circle,
Suite 2
Greenville NC 27834
(252) 902-1704