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Crop Production Guide Series

Thrips Control Critical for Irrigated Cotton

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Many producers still want to believe that thrips mainly make the cotton look bad and only occasionally cause yield reductions. But over 20 years of testing have proven that thrips usually take a pretty big bite out of your potential yield. In fact, for irrigated fields, proper thrips control gave an average yield increase of 21%. **I firmly believe that thrips are High Plains producers' most important annual pest in irrigated cotton!**



Every thrips control test that I have ever conducted from Lamesa to Denver City, over to Ralls and up to Plainview and across to Farwell has yielded a net profit from proper thrips control of not less than \$16.00 per acre to often as much as \$119.00 per acre. This of course was with our best treatments and on irrigated fields only. Of the four tests I conducted on dryland fields, I either lost money or lost more money. Why such a disparity between dryland and irrigated test results? Water is the answer; or rather the lack of water in dryland fields during the critical month of July. Without these mid summer rains, thrips control will cause the plant to produce more leaf area and retain more squares than it can support under moisture-limited circumstances. Now, if you knew you would receive a decent rain event in July, then thrips control would pay for dryland fields too.

I believe that thrips control in all timely planted irrigated acreage should be handled through preventative treatments and not foliar applications based on scouting, thresholds and insecticides.

Why? It is not that we don't have good scouting techniques, workable thresholds or effective foliar insecticides. It is because foliar applications rarely are applied in a timely manner either because of poor scouting or delaying the application due to weather problems or the need to do something else on the farm that is considered more important. Our foliar thresholds are based on counting thrips on seedling cotton through the 5th-6th true leaf stage and separating winged adults from wingless immatures. These are very tiny insects making it a daunting task for many to find.

For the initial foliar application, the treatment level is reached when the average total thrips number per plant equal or exceed the number of true leaves on scouted plants. But once thrips have been controlled with either an at-planting insecticide or the first foliar application, decisions on follow-up applications must include a second factor --percent immatures. So even if the total thrips number means treatment criteria, immature thrips must comprise at least 30% of the total thrips you counted before spraying is justified. This is because insecticide applications are geared toward preventing reproduction. They can't stop adult thrips from flying into your field. Once wingless immatures show up in sufficient numbers, it is clear that adults flying in are no longer being killed and hence prevented from reproducing.



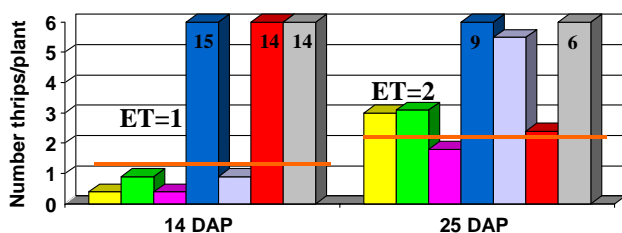
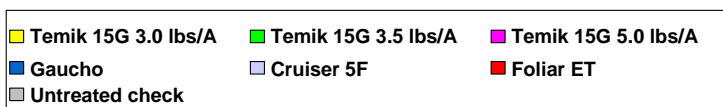
I have used Orthene (Address is the same) as my standard test foliar insecticide but Bidrin and dimethoate are just as good. Bidrin is more toxic certainly than either of the other products. On small cotton you can band the insecticide on and significantly reduce cost. You can even "piggyback" the treatment with your Roundup applications. But remember, some of the greatest need for thrips control (and hence benefit) will occur prior to your 1st Roundup application. Also, if you decide to wait until the last "end-of-window" Roundup application, you will get some benefit but will miss a lot compared to where an earlier application had also been made.

I have the most experience with Temik as I have evaluated its performance since 1978. It has always been a top performer but its residual activity has appeared to decline over the years. Initial tests showed the effectiveness of the 2.0-2.5 lb/acre rate. This gave as much as 4 weeks of residual control. But lately I have upped my rate recommendation to 3.0-3.5 lb/acre for thrips control. Even at that higher rate range I barely get beyond 21 days after planting for thrips control. The 5 lb and higher nematode rates sometimes push residual thrips control to higher levels but not always.

Seed treatments have given mixed results over the years. Orthene (acephate) was used in earlier years as a treatment applied at the delinters or in a producer planterbox treatment. Sometimes it worked well and sometimes it didn't. Its erratic performance and more recent competition have all but eliminated this as a viable seed treatment. Gaucho came along and got good reviews from other areas of the country but it never performed well in our area. Tests showed that it did poorly in controlling western flower thrips, our most common species. Recently Cruiser has entered the market as a seed treatment. It has shown the most promise of all seed treatments evaluated as a competitor to Temik. **The Cruiser seed treatment does not appear to give quite the level of thrips control as Temik (both % reduction and residual activity) but in the two tests we have been able to take to yield so far, yield increases were the same for Cruiser treated cotton and Temik treated cotton.**

A final and important benefit of controlling thrips in our area is the earliness factor. Our tests have confirmed that proper thrips management can move crop maturity dates up by as much as 7-14 days. This is no trivial benefit in northern areas where rapidly declining Fall temperatures can limit heat unit accumulation in general. Earliness is also a plus for late planted (replanted) fields or where the ability to spread harvest over a longer time period is important for large operations.

Thrips control with at- planting insecticides. Lariat, Texas. 2003.



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\$\$ net returns on thrips control in cotton. Farwell, Texas. 2002

