CROP UPDATE
COPING WITH THE DROUGHT
DEFOLIATING DROUGHT-STRESSED COTTON
Volume I

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DROUGHT-STRESSED COTTON

In drought-stressed situations, growers are looking at a difficult defoliation situation with a limited budget. There is generally no good answer to offer for defoliation in this situation. Sometimes, we forget that probably the best condition for easy defoliation is to have a good boll load.

High Micronaire

We often see high micronaire in dry years as the less mature fruit are shed during stress. The less mature fruit have lower micronaire, and when we lose them, we are left with the older fruit that tend to have higher micronaire. There are only two things to do to manage micronaire. One is to defoliate on time and not allow the least mature bolls to become overly mature (black seed coats). The problem is that a lot of the cotton will be ready at one time, and if we defoliate it all to stop the upward drift of micronaire values, we will be faced with tremendous regrowth. Therefore, this is only of value to the portion of the crop that will be harvested first.

The other option is to let the crop try to make a top crop. Do not try this on your entire crop. A conservative recommendation would be to not do this at all. Because defoliating everything at once is not a good option, keep an eye on some fields to see how viable this option might be. First, defoliate the better cotton and keep an eye on your worst cotton. Notice if it has started to set any new fruit. Any squares developed now, will need two months of good weather to mature and open the bolls. That is, of course, a big gamble but one you might consider on the poorer cotton if it has already started to set new fruit.

REGROWTH

Expect to see significant regrowth in a dry year, because the plant will find residual nitrogen and have little boll load to invest in if moisture returns. Cotton root development stops during bloom as the plant turns its attention to boll fill. In a drought, the root system actually dies back some. Once the rains return, it often takes a little time, but they will start to grow again and will find unused nitrogen.
It is easier to prevent regrowth than to take it off. Use Dropp or other products that contain thidiazuron rather than herbicidal defoliants in order to get enough thidiazuron in the plant to help deal with regrowth. Use the standard high rate of 0.2 pound of Dropp 50 WP to maximize regrowth activity. This is equal to 0.1 pound of active ingredient per acre or 3.2 ounces of product of the 4 SC formulations of Dropp, Freefall, or thidiazu. If you use a product with a thidiazuron plus diuron mixture, such as Ginstar, you need to be aware that if you apply a rate high enough to get the 0.1 pound active ingredient of thidiazuron, you will very likely stick leaves. The best choice for this product is probably to apply the rate of Ginstar appropriate for the temperatures, at the time of defoliation, and to spike that with additional thidiazuron to bring the total thidiazuron in the mixture up to 0.1 pound active ingredient of thidiazuron.

**NEW DEFOLIANTS**

Most of you have had some experience with Aim and ET by now. Both of these products are PPO-inhibitors that have herbicidal-type activity. Blizzard and Resource are two new defoliants that are also PPO inhibitors and are similar to Aim and ET. Blizzard rates range from 0.5 to 0.6 ounce per acre while Resource rates range from 4 to 6 ounces. With Resource, add a NIS at 1 quart per 100 gallons of spray solution. Under dry or cool weather, a methylated seed oil (MSO) or organosilicone adjuvant may be used. The Blizzard label states that a crop oil concentrate or surfactant should be added to mixtures containing Blizzard. Both products can be used in mixtures with ethephon-based products. Like any herbicidal defoliant, they will tend to release regrowth and should be used with thidiazuron where regrowth is expected to be a problem.

**SOIL FERTILITY**

The most valuable business asset you have is your SOIL. Make it work for you! Keep the soil pH and fertility at optimum levels for maximum yield potential. Soil test – it will pay huge dividends.

Sincerely,

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