

LIBERTY LINK COTTON

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A new cotton weed control option for 2004 is Liberty Link cotton. This is a system much like Roundup Ready. Liberty Link cotton is genetically engineered to tolerate the herbicides Liberty and Ignite (Ignite is the cotton version). Liberty and Ignite have the same active ingredient and are essentially non-selective, non-residual herbicides, which means they control the majority of weeds in a field, but do nothing to prevent further weed germination. Liberty Link corn has been available and used throughout the Midwest for several years. Liberty Link soybeans and rice were also developed but have never been sold.

There are some important contrasts between Liberty Link and Roundup Ready. Ignite is usually said to be “better on broadleaves” and “weaker on grasses and pigweed” as compared to glyphosate. (Technically pigweed is a broadleaf weed). Ignite will be very useful for growers who’ve had trouble controlling morningglory with glyphosate. Ignite has also been described as being halfway inbetween glyphosate and Gramoxone. It has a faster, burning type action. It takes roughly two days to kill weeds (versus 1 day for Gramoxone and 7 or so for glyphosate). It tends towards contact activity, and proper timing will be critical for adequate weed control- especially pigweed and grasses.

Ignite and Liberty Link cotton do not have any fruiting/flowering issues and can be applied over-the-top well past the 4-leaf stage, up to 70 days before harvest. Also, the label restricts total applications to 80 fl oz/acre/year. You can only make two-full rate applications with this limitation, although there is the option for three reduced-rate applications.

The biggest difference between Roundup Ready and Liberty Link cotton is that most growers will need to use Liberty in more of a pre-planned, traditional type program. Roundup Ready has tended more towards repeated, as-needed glyphosate applications until layby. A good preemergence herbicide treatment is needed for Liberty Link- especially for pigweed control. Prowl or Treflan, PPI are excellent. Preemergence Prowl can also be useful, but there is a risk of inadequate pigweed activity if the Prowl is not activated. Liberty Link and Roundup Ready both benefit from a good post-directed/layby treatment.

Growers with severe pigweed problems should avoid the Liberty Link system and stick with Roundup Ready. On the other hand, we have obtained very good pigweed control in our Liberty Link cotton trials the past two years. Again, the secret is to use a good, traditional preemergence treatment, spray Ignite on time and get back in with residual PD/layby herbicides. When discussing “carelessweed” control I use Murphy’s law- as long as you aren’t “trying” to control Palmer- Liberty will work. But if Palmer is in the drivers seat, I’d stick with Roundup Ready. If you’re having morningglory problems, Liberty is a good choice. One other weed worth mentioning is horsweed/marestail which happens to be controlled by Ignite.

This year will be a trial year only and more seed should be available in 2005. So it is the perfect “try it and see” situation. Finally, we need to discuss yield drag. I’m of the belief that there is no yield drag, although there have been cases of yield lag with other herbicide-tolerant systems. Regardless of the system- you always need to check variety trials, and plant a good, well-adapted variety. The economics are simple- it takes very few pounds of lint to buy all kinds of herbicides, so don’t go trading yield for a particular herbicide. That being said, the Liberty Link varieties have produced some good yields and high quality in some situations.

There is one other problem with Liberty Link. And, it’s not really with the system, it’s with people. We will need to exercise caution with drift and missapplication. With Roundup Ready cotton being everywhere, we are going to hit some Liberty fields with Roundup (by drift and by misapplication). In the early Roundup Ready and BXN days, a lot of us (me included) joined the “what’s-where?” club and killed a field by spraying the wrong herbicide on the wrong variety. Liberty will again require us to keep fields straight. Liberty does not have a bad drift profile, but it will injure adjoining crops when it’s drifted on to them.

We need this system for herbicide rotation/resistance prevention. The over-the-top flexibility is nice. However, timing is more important with this system, as is a more traditional, preemerge-approach. Spray on time and watch the pigweed. Pay attention to how Liberty Link performs in on-farm trials and demonstrations. Ignite and Liberty Link are a great additional tool to our cotton weed control arsenal.