

LibertyLink[®] Cotton System

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The LibertyLink[®] Cotton System is a new transgenic, postemergence herbicide management system for cotton developed by Bayer CropScience. LibertyLink cotton varieties marketed by FiberMax have a genetically based resistance to Ignite[®] herbicide (also called Liberty[®], Finale[®] and Rely[®]). Ignite can be used over-the-top of cotton up to 70 days prior to harvest. Essentially, that means that postemergence applications of Ignite can be made up to the early bloom period. Use rates will be 32 to 40 oz./acre, not to exceed 80 oz. per season.

The chemical name for Ignite is glufosinate ammonium, but do not get that confused with glyphosate, the chemical name for RoundupWeathermax[®], Touchdown[®], and numerous generic products. These are very different herbicides and LibertyLink and Roundup Ready[®] cotton varieties are not interchangeable. In other words, **you cannot spray glyphosate products over the top of Liberty Link varieties, and you cannot spray Ignite over-the-top of Roundup Ready varieties**, or the result will be dead cotton plants.

Ignite is a non-selective contact herbicide that has activity on both grasses and broadleaf weeds, but its strength is annual broadleaf weeds. It has no soil activity and translocation within the plant is limited. Therefore, thorough coverage is essential. A spray volume of 15 gal/acre and use of flat fan, extended range flat fan, and Turbo Teejet type nozzles are recommended. Plants show chlorosis and wilting within three to five days after application. The resistant cotton varieties possess an enzyme that converts the herbicide to a non-phytotoxic compound. Results from several years of testing across the Cotton Belt indicate that LibertyLink cotton varieties are totally resistant to the herbicide. Ignite does not require the addition of any type

of spray additive or ammonium sulfate. However, for larger weeds or when weeds are under stress, the addition of ammonium sulfate may improve control.

Unlike the current Roundup Ready system, Ignite applications should be based on the size of the target weeds, not the size or growth stage of the cotton crop. Research conducted in Texas and across the Cotton Belt has shown that for optimum control Ignite should be applied to weeds while they are small. Generally, weeds should be no larger than two to four inches tall at application time (consult the label for specific weed recommendations).

Similar to all herbicides, Ignite has strengths and weaknesses. One of the strengths is morningglory and cocklebur control, while one of its weaknesses is pigweed and grass control. Most morningglory species can be treated up to 6 inches in size, but sharppod morningglory (a perennial) should be treated when two inches tall and repeat applications will be necessary. Also, pigweed species should be treated when very small for optimum control (one to three inches tall). Most grasses should be treated when three to six inches in height, but regrowth may occur.

Results from Ignite weed management studies conducted in Texas have shown that the best strategy for season-long weed control is to utilize a tandem approach, consisting of a residual soil applied herbicide(s) followed by early- and/or mid-postemergence applications of Ignite (as dictated by weed pressure). This tandem approach provides the best scenario for maintaining a weed-free situation during the initial four to eight weeks after planting (the time period when weed interference is most detrimental to crop productivity) and for season-long control.

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Several LibertyLink varieties are available this season. These include the picker varieties FiberMax 981LL (FiberMax 989 background), FiberMax 832LL (FiberMax 832 background), FiberMax 966LL (FiberMax 966 background), FiberMax 958LL (FiberMax 958 background), and the stripper variety FiberMax 5035LL.

This will be the initial season to evaluate the Ignite/LibertyLink System on a commercial field-scale basis. As

with most new technologies, we still have much to learn. However, our research to this point indicates that when used properly this new transgenic herbicide system should provide another viable option for managing weed pests. Remember, for best results follow label recommendations on optimum weed size at application and use a carrier volume of at least 15 gallons of water.



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Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914, in cooperation with the United States Department of Agriculture. Chester P. Fehlis, Director, Texas Cooperative Extension, The Texas A&M University System.
