

## **A NEW HERBICIDE FROM BAYER CROPSCIENCE FOR USE IN LIBERTYLINK® COTTON**

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### **Abstract**

A new non-selective herbicide is now available from Bayer CropScience for use in the LibertyLink Cotton System. IGNITE® herbicide (Glufosinate ammonium) may be sprayed over-the-top of LibertyLink varieties from crop emergence to early bloom or 70 days prior to harvest. IGNITE herbicide coupled with the LibertyLink Cotton System offers excellent crop resistance and application timings that are based on weed size rather than crop growth stage. Control of over 100 major cotton weeds is fast and effective with symptoms occurring within hours as yellow spotting. Chlorosis and wilting occur in 3-5 days with complete weed death in 8-10 days. IGNITE herbicide is rainfast in 4-hours, and has a half life of 9 days in the soil, with no residual activity.

The mode of action for IGNITE herbicide takes place in the nitrogen reduction and photorespiration process. IGNITE inhibits the glutamine synthetase enzyme, which results in the lack of the amino acid, glutamate. This inhibition leads to a rapid buildup of ammonia and also uncouples photorespiration leading to a disruption in photosynthesis. These symptoms occur rapidly and often mimic the appearance of PPO's such as Blazer®, or Cobra®. The inhibition of amino acids is usually a starvation process, thus the SU's and glyphosate are slow acting. No other herbicide inhibits Glutamine synthetase, thus a "unique mode of action", and less likelihood of natural development of glufosinate resistance is very low.

IGNITE may be applied to both LibertyLink and non-LibertyLink cotton varieties. Applications of IGNITE herbicide to LibertyLink varieties can occur as over-the-top postemergence sprays, preplant burn-down, post-directed spray or hooded applications. Non-LibertyLink varieties can utilize the preplant burn-down or hooded applications. Extreme care should be taken when making hooded sprayer applications in Non-LibertyLink varieties to make certain that no spray drift escapes from under the hoods.

Applications of IGNITE herbicide by ground should use a minimum of 15 gallons of water per acre, with either a Flat Fan or Turbo TeeJet® spray nozzle. Air induction nozzles are not recommended for use with IGNITE herbicide due to the larger droplet size. Aerial applications of IGNITE herbicide should use a minimum of 10 gallons per acre and a spray setup that will develop a medium spray category. Rates of application for IGNITE range from 32 – 40 oz/A depending on weed size. IGNITE is recommended as part of an overall herbicide program which consists of a residual herbicide applied PPI, pre-emerge at plant or in the first post-emerge application. 2 – 3 applications of IGNITE over-the-top or directed may be applied. A total of 40 oz/A per application may be applied at one time not to exceed 80 total oz/A for the season. The addition of AMS or an AMS containing additives at labeled rates may increase herbicide efficacy on some weed species under certain conditions such as drought stress, low water pH, hard water or arid conditions.

LibertyLink Cotton will initially be available in FiberMax picker varieties; FM 958LL, FM 966LL, FM 981LL, FM 832LL and one stripper variety FM 5035LL.

IGNITE herbicide and the LibertyLink Cotton system offer the benefits of flexible weed control, high yield-potential varieties, and no detrimental effects of IGNITE on LibertyLink varieties when used at labeled rates.