

Enlist and Xtend: What Can I Spray and on Which Crops Can I Spray It?

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Key Points to Remember:

1. Herbicide products containing 2,4-D will injure or kill Xtend cotton and soybean.
2. Herbicide products containing dicamba will injure or kill Enlist cotton and soybean.
3. Xtend soybean do not exhibit resistance glufosinate (Liberty 280, Interline, etc.).
4. Xtendimax with VaporGrip, Engenia, and FeXapan plus VaporGrip are dicamba-only herbicide products and contain no glyphosate.

Problems with herbicide-resistant weeds continue to intensify in Mississippi. Thirteen different weed species in Mississippi have been identified as resistant to at least one herbicide mode of action. Nine of those 13 species are resistant to glyphosate. Among the nine glyphosate-resistant weed species in Mississippi, Palmer amaranth dictates how most weed control programs are designed. Some populations of Palmer amaranth in the Delta are also resistant to ALS and/or PPO herbicides. New tools for weed control have been needed for several years to combat herbicide-resistant weeds. Additional options are available for 2017 in the form of the Enlist Weed Control System from Dow Agrosciences and the Roundup Ready Xtend Crop System from Monsanto.



These new herbicide-resistant technologies offer the option to use herbicides previously not labeled in cotton and soybean. The herbicide product labeled for use in the Enlist Weed Control System contains 2,4-D while those labeled for use in the Roundup Ready Xtend Crop System all contain dicamba. Neither dicamba nor 2,4-D are new herbicides. Although 2,4-D and dicamba have been labeled for other uses for decades, in-season applications on cotton and soybean are a new concept as control of broadleaf species is a strength of both.

The herbicide resistance traits in the Enlist Weed Control System confer resistance to glyphosate (Roundup PowerMAX, Roundup WeatherMAX, etc.), glufosinate (Liberty 280, Interline, etc), and 2,4-D choline. This system was developed in corn, cotton, and soybean. It is likely that placement of Enlist corn in Mississippi will be minimal. The herbicide labeled for use in Enlist crops will be sold under the tradename Enlist Duo, which is a premix of glyphosate and 2,4-D choline. The choline salt is a new form of 2,4-D and represents a vast improvement in 2,4-D's tendency to volatilize compared with older forms such as 2,4-D ester and 2,4-D amine. Enlist Duo is the only herbicide product that contains 2,4-D labeled for application in Enlist crops. (NOTE: Although Enlist Duo is labeled for application to soybean, not all exports of soybean with the Enlist trait have been approved.)

The Roundup Ready Xtend Crop System was developed for cotton and soybean. In contrast to the Enlist system where herbicide resistance traits are identical between cotton and soybean, there are differences in the traits for Xtend crops. Bollgard II Xtendflex cotton varieties exhibit resistance to glyphosate, glufosinate, and dicamba. However, Roundup Ready 2 Xtend soybean varieties only exhibit resistance to glyphosate and dicamba with no resistance to glufosinate.

Whereas Enlist Duo is the only herbicide product containing 2,4-D labeled for application to Enlist crops, multiple products containing dicamba are labeled for application to Xtend cotton and soybean. Xtendimax with VaporGrip from Monsanto, Engenia from BASF, and FeXapan plus VaporGrip from DuPont are the dicamba herbicide products labeled for Xtend crops in Mississippi. It is important to remember that all of these herbicide products contain only dicamba, and there is no glyphosate included. Xtendimax and FeXapan are both DGA salts of dicamba (similar to Clarity) with an additive (Vapor Grip) designed to reduce herbicide volatility. Engenia is a new low volatile (BAPMA) salt of dicamba. These three herbicides are the only dicamba products that can be applied to Xtend cotton and soybean in Mississippi.

More information for each of these herbicide products can be found at the following sites:

Enlist Duo: www.enlisttankmix.com

Xtendimax with VaporGrip: www.xtendimaxapplicationrequirements.com

Engenia: www.engeniatankmix.com

FeXapan plus VaporGrip: www.fexapanapplicationrequirements.dupont.com

Producers interested in purchasing auxin-containing herbicides intended for in-crop use on 2,4-D- or dicamba-tolerant crops must first complete mandatory online training. The self-paced online training may be accessed 24/7 at <http://www.auxintraining.com> via most devices, including tablets and personal computers. In Mississippi, additional conditions placed on the use of these auxin herbicides prohibit producers from applying herbicides in wind speeds in excess of 10 miles per hour. Applicators are required to keep application records. Licensed pesticide dealers are required to keep records pertaining to the sales of these herbicides.