

# Enlist and Xtend: At What Growth Stages Can I Spray?

 [mississippi-crops.com/2017/03/08/enlist-and-xtend-at-what-growth-stages-can-i-spray/](http://mississippi-crops.com/2017/03/08/enlist-and-xtend-at-what-growth-stages-can-i-spray/)

By Jason Bond, Research/Extension Weed Scientist, MSU-DREC

3/8/2017

## Key Points to Remember:

1. In-season applications of Enlist Duo are labeled from preemergence up to mid-bloom in Enlist cotton and preemergence up to the R2 growth stage in Enlist soybean.
2. Xtendimax with VaporGrip, Engenia, and FeXapan plus VaporGrip may be applied preemergence or postemergence up to seven days prior to harvest in Xtend cotton and to the R1 growth stage in Xtend soybean.
3. Enlist Duo, Xtendimax with VaporGrip, Engenia, and FeXapan plus VaporGrip must all be applied to small weeds for maximum efficacy.

Enlist Duo is a premix of glyphosate and 2,4-D choline, and it is the only herbicide product that contains 2,4-D labeled for application in the Enlist Weed Control System. Labeling allows two postemergence applications with rates ranging from a minimum of 3.5 to a maximum of 4.75 pints per acre for a single application. In both Enlist cotton and soybean, Enlist Duo may be applied during burndown. In-season applications are labeled from preemergence up to mid-bloom in Enlist cotton and preemergence up to the R2 growth stage in Enlist soybean.

Multiple herbicide products containing dicamba are labeled for application in the Roundup Ready Xtend Crop System in Mississippi. 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. For Xtendimax and FeXapan, the application rate is 22 ounces of formulated product per acre. The equivalent rate for Engenia is 12.8 ounces of formulated product per acre.

All three products may be applied during burndown, as preemergence treatments, and/or as postemergence treatments in Xtend cotton and soybean. Postemergence treatments can be made up to seven days prior to harvest in Xtend cotton, but the R1 growth stage is the cutoff for postemergence applications in Xtend soybean.

The R1 growth stage being the last growth stage for postemergence applications of Xtendimax, Engenia, or FeXapan in Xtend soybean is significant for two reasons. First, the maximum soybean growth stage for application of glyphosate in Roundup Ready 2 soybean is R2. Although glyphosate is not included in the formulation of any of the dicamba products labeled for application in Xtend soybean (nor can it be tank mixed), growers accustomed to making postemergence herbicide application out to the R2 growth stage must account for this difference in the cutoff if they choose to use Xtendimax, Engenia, or FeXapan. Second, depending on planting date, soybean variety, row configuration, weather, etc., soybean at the R1 growth stage may still be relatively small with a significant amount of time before 100% canopy closure when new weed emergence slows or ceases.

The Enlist Duo label does not specify a cutoff for applications based on weed size. It suggests application when the majority of weeds are 3 to 6 inches in height and application of the maximum rate “when weeds are larger than 6 inches, weeds are known or suspected to be glyphosate resistant...” Labeling for Xtendimax, Engenia, and FeXapan restricts application to weeds  $\leq 4$  inches in height.



The important point related to weed size at application is that all of these herbicides must be applied to small weeds. There's a perception these new herbicide-resistant crop technologies represent a return to the days when Palmer amaranth of any size could be completely controlled with a single herbicide application. That is simply not true. There is no more flexibility with weed size at application in the Enlist or Xtend systems as there is with the herbicide-resistant technologies we have had available prior to 2017.

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

Enlist Duo: [www.enlisttankmix.com](http://www.enlisttankmix.com)

Xtendimax with VaporGrip: [www.xtendimaxapplicationrequirements.com](http://www.xtendimaxapplicationrequirements.com)

Engenia: [www.engeniatankmix.com](http://www.engeniatankmix.com)

FeXapan plus VaporGrip: [www.fexapanapplicationrequirements.dupont.com](http://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.