

Enlist and Xtend: What Mixtures Are Approved?

 mississippi-crops.com/2017/03/23/enlist-and-xtend-what-mixtures-are-approved/

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

3/23/2017

Key Points to Remember:

1. Enlist Duo, Xtendimax with VaporGrip, Engenia, and FeXapan plus VaporGrip have associated websites, which are considered extensions of the federal labels, that list additives and herbicide products that may be mixed with each herbicide.
2. Enlist Duo is not approved for mixing with any herbicides, insecticides, or fungicides.
3. FeXapan is not approved for mixing with any additives or herbicides, insecticides, or fungicides
4. Engenia is the only dicamba formulation approved for application to Xtend crops that can be mixed with glyphosate

Information on herbicide mixtures has been prominent on most herbicide labels for many years. For example, the soybean section of the Liberty 280 label states “Liberty 280 may be applied in combinations with labeled rates of other products provided these products are labeled for the timing and method of application for the soybean to be treated.” Other labels may list herbicide products that may or may not be mixed with the herbicide.

Enlist Duo is the only herbicide product that contains 2,4-D labeled for application to crops in the Enlist Weed Control System. Xtendimax with VaporGrip, Engenia, and FeXapan plus VaporGrip are the dicamba herbicide products labeled in Mississippi for application to crops in the Roundup Ready Xtend Crop System. Each of these herbicides have associated websites (URLs found at bottom of this post), which are extensions of the federal labels, where lists of additives (drift and foam reducing agents, foliar macro- and micronutrient blends, surfactants, and water conditioning agents) and herbicide products approved for mixing can be found.

Language regarding mixtures on the federal label for Enlist Duo and supplemental labels for Xtendimax, Engenia, and FeXapan is similar. Labels for all four new auxin herbicide products instruct the applicator to check the list (found on the associated website) of tested additives/herbicides no more than seven days before the application and choose only an additive/herbicide that is on the list of tested products. Products containing ammonium sulfate (AMS) or urea ammonium nitrate (UAN) may not be mixed with Xtendimax, Engenia, and FeXapan.

Lists of approved additives/herbicides that can legally be mixed with the new auxin herbicides have changed multiple times during the last month, and it is likely they will change again before the time for in-season herbicide applications. The [Enlist Duo](#) website currently lists 199 additives that may be applied in mixtures in Enlist cotton or soybean. None of these products are herbicides, insecticides, fungicides, or plant growth regulators. Currently, the [FeXapan](#) website lists no additives or herbicides approved to mix with FeXapan.

Until recently, the Engenia website contained dropdown menus for approved nozzles and mixtures (additive or herbicide). However, the website currently only lists approved mixtures individually, so applicators must scan the entire list to determine if their desired mixture is listed. For example, with TeeJet TTI11004 nozzles, the mixture of Engenia plus Buccaneer plus Valor XLT is approved. Although the list is sorted by approved nozzle (TeeJet TTI11004 or TTI11005), the system utilized for listing approved mixtures for each nozzle is unclear. Approved herbicides include several formulations of pendimethalin. Other products include Sonic, Direx, Valor XLT, Rowel FX, Warrant, Authority XL, FirstRate, and Volunteer. The list also contains eight formulations of glyphosate, so Engenia is the only dicamba formulation approved for application to Xtend crops that can be mixed with glyphosate.



The [Xtendimax](#) website lists herbicides, adjuvants, and drift-reducing agents approved for mixture with Xtendimax. Currently, 92 adjuvants are approved, but 49 of those are listed in red with the additional restriction of requiring one of the drift-reducing agents listed on the site. Problematically, the only drift-reducing agent listed is Intact, which is manufactured by Precision Laboratories. Twenty-two herbicides have been approved for mixture with Xtendimax. These include several formulations of metribuzin, multiple products containing flumioxazin (Valor), and four products from the Authority brand. Approved products that may be applied postemergence in cotton or soybean are Caparol, Cobra, FirstRate, Reflex, Select Max, Warrant, and Warrant Ultra. Similar to the adjuvants, an approved drift-reducing agent must also be added to mixtures of Xtendimax and five of the postemergence herbicides listed.

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.