

Dicamba usage on large pigweeds: silver bullet or desperate move?

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With so much rain that we have received since early May, many people are frustrated about not be able to get into field to work on their crops. Weeds are taking a full advantage of this weather and growing out of control quickly. I have heard several farmers state they do not plan to use dicamba, but they may need to use it because pigweeds are getting out of control. Some people may also believe that dicamba is the new silver bullet to control large pigweed. So, I want to write a short article to discuss about this topic and answer some questions.

How does dicamba work on pigweed, especially on large pigweed in cotton?

As a general rule of thumb, if you spray 0.5 lb/A of dicamba (22 oz of Xtendimax or 12.8 oz of Engenia) under optimal weather conditions, you will see consistent control of pigweeds smaller than 5 inches. When pigweeds get to between 5-12 inches, you may or may not kill them depending on environmental conditions, tank mixes and your luck. If they grow bigger than 12 inches, dicamba is not going to kill them but only make them sick. They will recover from the injury and produce seeds at the end. This is based on my observations and experience in the field, there is almost no way that dicamba can kill large pigweed (> 12 inches) by itself.



Picture 1: large pigweeds survived 0.5 lb ai/A dicamba.

Can I use dicamba on large pigweeds and still get a decent control?

The answer is yes, as long as you do not have an unrealistic expectation that dicamba is going to kill everything out there. You will need a follow up application to clean them up better. After dicamba application, following with Liberty or Gramoxone under a hood are good options. But please keep this in mind, we are talking about suppressing large pigweed instead of a total kill. Nothing will get rid of them all unless you pull them by hand.

How should I spray dicamba, by itself or in a tank mix?

We are testing different programs in our trials this summer for large pigweed control in cotton. At this point, I would recommend **spraying dicamba with glyphosate and a soil residual herbicide** (Warrant,

or Outlook) in a tank mix for postemergence control, because grass pressure is high in some fields in south AL. A few crop fields that I came across in the last two weeks look like hayfield. Moreover, glyphosate will provide additional control to other problematic broadleaf weeds such as sicklepod, morningglory, coffeeweed, spurge, ground cherry, FL beggarweed, etc.

A follow up application of Liberty after dicamba will boost weed control significantly on large pigweeds, and this application can be sprayed as soon as 3-4 days after dicamba application. This is because dicamba will change the shape of large pigweed and make it curl close to the ground (see picture 2), so Liberty will have much better coverage on these pigweeds. Dicamba as an auxin herbicide can also make pigweed more physiological active in the first a few days after application so it will respond to Liberty better. A follow up treatment of dicamba after dicamba will increase pigweed control but this could be a slow kill compared to Dicamba followed by Liberty, as indicated by past research studies. Last thing to mention, **do not forget about drift reducing agent if you mix Roundup with Xtendimax or Engenia! Do not use ammonium sulfate or any other fertilizer in this application! Do not mix dicamba with Liberty, it is illegal!!!** If you got a question about dicamba tank mix, call me first before you spray.



Picture 2: Dicamba curled pigweed and make it easier for Liberty to get better coverage as compared to if these pigweeds are still erect. This is the same as if you knock over a large pigweed with your tractor and spray Liberty on it immediately after, this pigweed usually gets hurt more than other pigweeds growing in same field.

I know dicamba is a postemergence herbicide, but does dicamba provide any residual weed control?

The answer is yes, and I have observed it in my trials for 3 years in a row. See picture 3 below. The residual weed control by dicamba is significant enough to notice, but certainly not comparable to strong combos such as Reflex + Diuron, Reflex + Warrant or Valor + Warrant, etc. Therefore, using soil herbicides with dicamba is still important for season-long weed control. In the situation that a crop stand is weak and stressed by too much rainfall and disease, and POST application cannot be applied timely. The residual weed control of soil herbicides and dicamba will be very beneficial to hold weeds back.



Non-Treated Check



Dicamba at 1 lb/A



Reflex at 12 oz/A



Warrant at 3.2 pt/A



Reflex 12 oz + Warrant 3.2 pt/A



Brake F16 at 16 oz/A

Picture 3: Soil herbicide evaluation at Bay Minette. Treatments applied on May 8, 2017 and pictures taken on June 27, 2017. Pigweed pressure in this field is very high.

Will dicamba works on other weeds too?

Depends on what you have in your field. It will not touch grass and nutsedge, and this is the reason why I recommend to tank mix Roundup with it. But when it comes to broadleaf weeds, both dicamba and 2,4-D will provide effective control or suppression to a broad range of broadleaf weeds, such as sicklepod, morningglory, FL pusley, FL beggarweed, spurge, tropical spiderwort, horseweed, sida, wild poinsettia, common purslane, etc. Some of these weeds cannot be adequately controlled by Roundup alone.



If I use the same sprayer for my Xtend cotton and peanut, will dicamba residues in the sprayer hurt my peanut and cause yield loss?

No, unless you did a terrible job cleaning your sprayer. The data from my sprayer cleaning study shows as long as you thoroughly rinse the sprayer 3 times with clean water at 10% of tank size, wash sprayer exterior, and clean filters, mesh screen and nozzle bodies with 3% ammonium solution, the remaining dicamba residual inside the sprayer will be around 0.5-2 ppm (in most of cases). This concentration is not enough to cause problem on peanut consider its tolerance to dicamba is much better than soybean (you need about 10% of 0.5 lb ai/A dicamba in your sprayer to cause noticeable peanut yield loss based on Alabama trial data). Tomato is very sensitive to dicamba, therefore, buy a few transplants and spray them as bioassay is a good idea to test cleanout efficacy. One thing I have to mention here is **clean your sprayer as soon as you finish spraying dicamba and do not let it sit in the sprayer for days before you wash it!!!** The longer you let it sit, the more it gets absorbed in your sprayer hose and sludge in the hose.

Where can I find the latest requirement about dicamba application in row crops?

<http://www.xtendimaxapplicationrequirements.com/>
<http://www.engeniatankmix.com/>

If you do not see the product that you want to tank mix with Xtendimax or Engenia, that means they are not allowed by EPA! Please always use labeled product, nozzles and spray setting during any dicamba application! Keep close attention to environmental conditions during an application of dicamba or 2,4-D and always be aware of the locations of sensitive crops near you. Be safe than sorry!

Questions? Please contact:

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