Dicamba Update: How One Co-op's Approach Is Paying Off (excerpt from CropLife March 1)

Jeff Nagel is an Agronomist with Ceres Solutions Co-op. He has been working in Indiana since 1996. "In the past few years, the spread of glyphosate-resistant weeds, particularly waterhemp, is changing the game in weed control," Nagel says. He believes farmers need access to all herbicide trait technologies, and they need to be more proactive in weed management. CropLife® had the chance to chat with him recently about Ceres' aggressive approach to dicamba.

CL: As dicamba enters its third year of use, how has your approach at Ceres Solutions to the technology and training changed?

If we step back in time two years ago, what would be going into the 2017 season, we did extensive training with all of our applicators and provided that training to farmers also. We probably went into more detail with our commercial applicators, and we partnered with manufacturers. We got pretty deep into why there are concerns about off-target movement, the sensitivity of soybeans, and concern with residential areas. We went into label application requirements and had them do exercises with field scenarios: how to make determinations, given wind direction and so on. We did that two years ago, and that got us in the right direction.

Then, we developed some internal guidelines that are a little more stringent than the label. For example, we have certain areas with specialty crops, like cantaloupes and watermelons, in southwest Indiana. Although they are not as sensitive as soybeans, we chose not to apply within a half-mile of a specialty crop, regardless of wind direction, just to protect ourselves. We did things like, even if the wind is blowing away from a residential area, we chose to buffer it, just to make sure we wouldn't have off-target issues after the application.

CL: Did you create the stricter internal guidelines in 2017, before the dicamba launch?

Yes. The first year out, we had a lot of training.

Advance to 2018, prior to the use season, the state chose through the Office of Indiana State Chemist to take leadership of the training. We sent all of our applicators to the training meetings. We did sponsor four meetings, where the method of delivery was through Purdue Extension. They presented the State Chemist presentation at those meetings. So, Indiana took a little different approach, and we said, we're going to send all of our applicators to the State Chemist training, and provide these other meetings and have Purdue Extension present the topics for farmers. These presentations generally took one hour.

We managed it pretty well, that '17 crop season, and we managed it fairly well in the '18 crop season. I think the foundation of that extensive training was very helpful.

Going now into the '19 season, the Indiana State Chemist chose not to do that training and reverted back to letting the registrants do the training. Registrants are having meetingsthroughout the state. We are having four meetings facilitating the training for our applicators and farmers. After Ceres training, we'll have a break, and then we'll have a farmer training provided by the manufacturers. We are partnering with Bayer and BASF on these meetings. There are lots of opportunities to get training this year from the registrants. They can go to other meetings, too.

CL: What has your experience been – has Ceres seen incremental improvements in results?

Dicamba is more sensitive; it is difficult. The application window is narrow. In 2017 and 2018, we were able to spray through the R1 growth stage. This year, post applications have to be within 45 days of planting or up to R1, or whichever comes first. That narrows the window.

I think there are some things we did to help alleviate some of the issues. For example, we don't mix any hot loads through the load bays at the branches. That was our internal guideline. We tried to say, where can we have issues? Tank contamination can be an issue as far as nurse trucks, load bay equipment, and the sprayer itself. We said, here are ways we can eliminate this. One of our internal requirements is that our dicamba applications would only be made through injection units to try to mitigate load bay and nurse tank contamination. I think that helped tremendously.

Some of our internal guidelines are a little more restrictive, as far as buffering residential areas, even when wind is blowing away. If we are next to a non-dicamba-tolerant soybean field, when the wind is blowing away, we can spray, but we've chosen to buffer that to put an extra measure of safety in there.

Through two years of use, have we had issues? Yes, but they haven't dramatically increased. We've managed to steward it relatively well. Between the federal label and our internal restrictions, we've been able to minimize off-target concerns. Most of them, if they have issues, are on non-DT soybeans.

CL: Did you see an improvement over 2017?

We started in 2017 being aggressive on the training and guidelines internally. I feel like that set the stage. Within Ceres, we didn't have a big difference in the number of complaints between 2017 and 2018, because we started with more aggressive guidelines to begin with.

CL: It's like you guys already saw it coming.

Yeah. We have glyphosate-resistant weeds like waterhemp and Palmer amaranth. We knew that we needed to use the technology to control weeds. In '17, there were some growers that planted dicamba beans, so there was a shift to those beans. Partly it was the new genetics, and partly it was for weed control, but some planted them with no intention of spraying dicamba on it. Then when they started having more weed issues, it got used, and '18 was a big shift toward dicamba beans and Liberty beans. The number of straight Roundup Ready beans we sell today is very small.

CL: Overall, are they very satisfied with the control they are getting? What feedback are you getting?

Yes. We tried to do fall burndowns to alleviate some burndown issues in the spring, but this year we couldn't get those done. Regardless of the platform – whether it's Liberty or dicamba – we've been really stressing putting a residual herbicide at or near planting, then spraying small weeds. So, we're

making those applications earlier on soybeans. Then where we have late-germinating weeds like waterhemp and Palmer that will keep coming, we're layering in Group-15 herbicides.

We're trying to be more proactive in that message of: start clean, use a residual at planting, spray small weeds, layer another residual herbicide. Where we're doing that, we're having effective weed control.

CL: How much have you heard about the issue with DRAs in the tank mix potentially leading to weed resistance?

Yeah, it is a bit of a concern. There are some things we have learned. Number one, if you use that residual herbicide, you take a lot of pressure off the post application. Coverage is obviously important, with bigger droplet size. If you don't use a residual herbicide, and let's say you're tilling ground and waiting to spray until the weeds come up, and you're spraying dicamba, you're putting all the pressure on that post application.

Some of these fields where you have waterhemp like a carpet, coverage becomes more critical. One way you address that is, don't let a lot of weeds to come up to begin with, and that helps on the post application.

Two, the original labels called for 10 gallons of water volume at minimum, and now both BASF and Bayer have moved to a minimum of 15 gallons. With these larger droplet sizes, the volume of water is important. We would say to use a minimum of 15, and if you've got a lot of weed pressure, use 20.

We've learned that with certain nozzles, to bring that pressure range up to the higher end of the recommended range instead of the lower end. That's helped us a little bit.

Farmers may make different decisions. We are pretty strongly aligned with WinField United, and they have invested heavily in adjuvant research and they have wind-tunnel equipment, so we rely on their information. The main one we run is OnTarget, so we're running a drift reduction agent whenever we make those applications to try to minimize off-target concerns. It does make droplets bigger, so maybe we bump that pressure, get the residual herbicide down, and increase spray volumes where we have more intense weed pressure.

CL: Are there any other lessons you've learned through this experience?

It is definitely a higher management system. It makes you less efficient because of all the steps you have to do, and you're having to watch the windows to make applications. With the 3-to-10-mph wind parameter and direction of the wind, you have a narrower window to make an application.

The nice thing about the residual herbicide is that it gives you a little breathing room – a little more space in that window to find the time. If you don't use the residual herbicide and weeds are coming, it makes it much more difficult to manage.

CL: How much more time are retailers and applicators putting in now than before?

That's a good question. It's quite a bit, because you've got to check the DriftWatch site and the manufacturer website, you need to survey the field, and document what's around the field. That's generally done shortly before the application to assess where the residential areas, the non-DT soybeans, sensitive areas, and specialty crops are. It definitely increases the workload. I don't know that I have a percentage of time, but it's more than other systems.

CL: I wanted to address the neighborly relations element of dicamba use. How have you seen dicamba impact interactions among farmers?

There are two different areas. We've seen farmer-to-farmer collaboration a little bit in terms of checking to see what their neighbors are doing or seed selection they're making, so that's helpful sometimes. Maybe they're leaning toward dicamba or Liberty, and their neighbor is thinking dicamba, so there may be conversations there, which makes it go easier.

Outside of that, I think it's been after the crop is planted. You're following up and checking the most sensitive things. You have to be careful of the non-DT soybeans, so that's mainly Liberty and non-GMO beans. There is, I would say, a much bigger effort going into contacting neighbors.

In the case of Ceres applying, we have to determine somehow what is in those fields. The case of farmer-to-farmer is probably where we have seen more issues. Many farmers have taken it seriously, are stewarding it properly, and then there are some that are probably still a little bit careless with the neighbor. They forget just how little dicamba it takes to show symptomology on non-DT soybeans.

CL: Looking at 2019, are you guys feeling optimistic on the season even with all the added requirements?

I think the added requirements are going to make a tighter window for application. Is there some concern for getting applications made timely, covering the acres? There's always that concern.

The Office of Indiana State Chemist was looking toward a cutoff date at one point in time, and that's been put on the back burner for the '19 season. I think it's going to be very critical that everyone stewards this as properly as they can to minimize off-target issues. Up to 45 days after planting or R1 is a more compressed window.

With the tighter window for application, we will be post spraying a lot of V2 to V4 soybeans. But using a residual herbicide at planting, spraying small weeds, and layering a Group-15 herbicide where needed, agronomically, is the right thing to do anyway. I think growers, with the Roundup system, got used to waiting and spraying big weeds. It's agronomically not the right thing to do.

I think it's manageable. The concern would be, how many days do we have to get those applications made? That's a bit dependent on the growing season. In '17 we had very tight windows. In '18 we had more favorable weather to get it done. You're always a little dependent on what that weather is like when you have to make those post applications.

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