

[00:01] Intro/Outro

Arkansas Row Crops Radio, providing up to date information and timely recommendations on row crop production in Arkansas.

[00:15] Jason Norsworthy

Welcome to the Weeds AR Wild podcast series as a part of the Arkansas Row Crops Radio. My name is Jason Norsworthy, Distinguished Professor and Elms Farming Chair of Weed Science with the University of Arkansas System Division of Agriculture. Today's topic will be the use of Brake in rice. And I'm joined by my extension counterpart, Dr. Bob Scott, as well as Dr. Kyle Briscoe, the senior technical development manager with SePRO. Bob and Kyle, it's great to have you on today.

[00:51] Bob Scott

Good afternoon, Jason.

[00:52] Kyle Briscoe

Good afternoon.

[00:56] Jason Norsworthy

As we start talking about Brake, you know, I can think back I think it was 2010 guys. I was on a tour with the EPA and USDA and we were doing tours of pig weed in Arkansas, I think it was Missouri and West Tennessee. And Harold Coble was part of that event. And Harold said he remembered in the early seventies actually testing a herbicide called fluridone that was highly effective on pig weed or Palmer Amaranth. But he said it was never brought to market because there was a herbicide called Diuron that was discovered at the same time and it was a lot less expensive to make than fluridone. We fast forward what, 30? Well, it been longer than that, I guess 40 years now. And all of a sudden it'd be 50 today. And here we are talking about the use of of Brake. What did I miss on that Kyle? I mean, what are your thoughts in terms of registration of Brake and use of Brake?

[02:02] Kyle Briscoe

Yeah. I mean, I think you covered covered it pretty well. Harold, you know, was mentioning what would effectively be a new mode of action, fluridone Group 12 PDS inhibitor that he said was very, very active when he looked at it in the seventies and early eighties. And so from there, there was a call put in to to SePRO to see if we would be interested in registering in cotton, specifically for the control pre-merger, its control of of resistant pig weed. At that time, SePRO was not in the agriculture space. We were in the aquatic space, in the T and O space. So we started development. There were some Section 18s in what, 2012, 2013, 2014, 2015. And then we launched in with the Section 3 registration, a premix product called Brake F2. There were a couple others after that. The straight goods for fluridone for the ag market, labeled Brake came out in 2018.

[03:19] Jason Norsworthy

And then, so that would be 2018 in in cotton. And then we fast forward and you know, last year 2023 after the growing season had really gotten started. You guys received registration on the use of Brake in rice?

[03:40] Kyle Briscoe

Yes, sir. Yep. Actually, rice and peanut last year.

[03:44] Jason Norsworthy

Rice and peanut and so. Yes. So, Bob, I mean, and we're joined by you today. And Bob, you left weed science back five years. What year?

[03:54] Bob Scott

A 2018 you said the magic day and. So when I left there was this thing called fluridone coming along and it was going to help us out on pig weed in cotton. And that was all I knew. And, and yeah let's fast forward to today and I rejoin the weed science world and one of the very, very first calls I got on rice was from a consultant I've known for years, and he wanted to know about using Brake on some row rice. So imagine my surprise and I started flipping through the MP44. There it was on page 99 down at the bottom. And luckily, you know, there was enough information there. Jason Y'all did a good job putting it in there that I was actually able to answer his questions based on what I saw there. But I will admit that I did talk to I can't remember if it was you or Tom Barber. But I did call and make sure I did not lead him astray. But, you know, it was interesting because that call hit on some of the things I think we're going to talk about today, because that guy was considering putting in on a cut field, Kyle and it was row rice. But, you know, the bottom end of that field would start flooding pretty early in the season. And so that could be a problem. And, you know, the the other thing that he wanted to know about that I didn't know is there is a rate range in there from 12 to 16 ounces. So I wasn't sure how to answer that question, but it turned out we we stopped at cut grand and didn't didn't recommend it on the on that field. But the flooding is also a problem, I guess, from the bottom up. Right, Jason, when it start?

[05:33] Jason Norsworthy

That that is correct. So let's just we'll start in terms of cut ground and you've mentioned that. And, you know, Tommy is is no longer with us, but Tommy did a good bit of work last year looking at the use of Brake on cut ground. You know, based on his results, I'll just tell you, we do not recommend Brake on cut ground. I think you need to stay away from it if you are on cut ground, I can't sit here and tell you, is it going to be two years, three years, four years? I don't know how many years it's going to take before you can actually use it on that ground. But we know going straight into cut ground with Brake is not advisable. You know, I saw some pictures of his plots. He had severe stinging loss and injury in in those trials. And I'm pretty certain there was even some yield responses associated with with those applications. I'm assuming, Kyle, that agrees with y'all's stance today. And that's I'm assuming that SePRO is not recommending you don't cut ground.

[06:35] Kyle Briscoe

Yes, sir. 100%. Not recommending a cut ground for all the points that you just made regarding Tommy's trial.

[06:43] Jason Norsworthy

So so just again, you know, I kind of posed a question there as I was talking about it, and that is, when can an individual potentially come back into it? Is it two years, three years, four years? And you may not be able to answer that question at this point.

[06:59] Kyle Briscoe

I do not, I do not have the data to date. It's something that's that's on the agenda, certainly per the label precautions it's 12 months. Is it longer than that? Likely is. I would say every year the injury potential is going to get less and less. But again, back to your original question, is it exactly two years? Exactly three years? Exactly four years? I do not have those data right now.

[07:27] Bob Scott

You know, Jason, my experience on the ground is with Command. You're not supposed to use Command on ground either because of the injury. And our recommendation is a year of a year of soybeans and also the addition of chicken later that field to increase organic material there. And the problem with trying to answer that question and it'll be the same for you guys is it will be us. How deep was the cut? The deeper the cut and then what they cut into what kind of junk was down there and just how bad it's going to vary. It's going to be different on every field. But, you know, my guess is that that one year of soybeans and some chicken later, you're going to improve your safety margin considerably for for that. And I would probably just go from there and see see what we run into that. But again, that's just a guess. I'm the rookie as far as working on Brake on this call, but that was our experience with Command.

[08:25] Jason Norsworthy

You know, when we think of Brake, as we've already mentioned, it's all about pig weed. I think that's why you guys brought it to market, Kyle. And you know, in terms of Brake, it is an outstanding residual pig weed material and you know, the called that I get from a lot of folks is I know that it's a great residual herbicide can I put it out preemergence? That label says three leaf but at the end of the day can I put it out pre emergence and you know up first of all the label is the label I'll state that. Secondly from a research standpoint we know that when we put it out pre emergence, delayed, pre, anything close early associated with an at planting application and that field goes underwater. We have a tendency under anaerobic conditions to start losing rice. Now we won't see we will not see injury or much injury to that rice until we go anaerobic. Now when we tend to put it on three leaf rise, we substantially, substantially reduce the risk of injury under those anaerobic conditions. So, you know, if some of it were to get on the bottom of that field, Bob, you mentioned the bottom of that field being flooded, I would venture to say in Arkansas here, most of our row rice fields there gonna hold water on the bottom third of that feel. It doesn't overly scare me to have a little bit of that under under water. But we do know that our risk for injury is greater when we go to a flooded situation for for some reason. The other thing that I've seen in my my plots or in working with it is that furrow tends to have a lot more injury in that furrow just because it's going to have a tendency to stay wet longer. We're going to see more injury in the furrow than we do on top of the bed. We see the same with Command. You put Command out. Where are you going to get the injury? You're going to get the injury in the furrow most than the top of the bed Brake isn't any different on that, but this is a herbicide that goes out three leaf stage. How late can we put it out now?

[10:50] Kyle Briscoe

We can put it out as late as you need to so the PHI is 30 days, so it gives you a lot of flexibility in those post applications.

[10:59] Jason Norsworthy

And so the key here he is Brake is not going to provide post emergence control. I want to make sure all of our growers, you putting it on three leaf rice, four leaf, five leaf rice, you've got pig weed up. Don't go out there thinking that you're going to spray Brake and that's going to get you to harvest and it's going to kill the pig weed because it's not you've got to mix it with an effective tank mix partner. You know, we've done a lot of work on pig weed. We understand that, you know, about one inch pig weed I can kill with Propanil, one inch I might can kill with Sharpen. We have not had very good look on two inch, three inch pig weed with those products. So you better be timely with those applications if you get into larger pig weed, my preferred product is Loyant. I'm going to use Loyant at eight ounces. I don't want 16 out there. A lot of this row rice is going to be hybrid rice. You're going to bang it around with Loyant at 16 ounces, eight ounces, you really reduce your risk. We've seen sequential applications of Loyant where I've got Brake in one of those applications we did a lot of work over the past several years. I know it's not on the label, Kyle, but I will tell you, eight ounces followed by eight ounces, about 14 days apart, with eight ounces of Brake in combination with eight ounces of Loyant 14 days apart. We had very few, if any, pig weed that was in those plots at the end of the year when the first application went on, about three leaf for leaf, four leaf rice. What are your thoughts on something like that?

[12:39] Kyle Briscoe

That's exactly what the data says, Loyant has proven to be whether it's a single application. Go back to rates. I agree with with reducing the rates. We haven't seen a whole lot of improvement in the control. The control has been good at eight ounces. That control has been good at 12 ounces. Don't think that you need to go up to 16 if you if you don't need to. But the key being get the pig weeds while they're small with whatever rate of Loyant that you would like and have the Brake in there to provide that residual control for the rest of the season.

[13:16] Jason Norsworthy

You know, one thing and you know, when you put out out Brake again this is an aquatic herbicide. It's highly mobile in water. It has a tendency to move. When we put it out in our research plots, I'll tell you, it has a tendency to move in plots adjacent to it. So we need to be mindful of that, that the product can move, it can move in water. And so with that, Kyle, any water that I'm catching on the end of the field, what am I going to do with that water?

[13:49] Kyle Briscoe

Well, that's the thing is you've got to be conscientious of what what's going on with the water, because there will be fluridone, at least a little bit of fluridone in that water.

[14:00] Jason Norsworthy

So you're you're not taking that and putting it back on a soybean field or a cotton field?

[14:05] Kyle Briscoe

That's correct. That's not recommended. And, you know, I think people just need to be aware of that. We're out there spreading that message that, you know, there may be some fluridone in that water. So we need to watch what we do.

[14:19] Jason Norsworthy

Of course. And I don't want to. And, you know, I laughed and said Cotton, I mean, I would expect cotton to probably be tolerant, considering that we we've got pre issues, but soybean would be a concern. I think corn, grain, sorghum, corn would definitely be a concern if we were we were pulling water and trying to pump it back onto corn. You know, something else that we saw last year in our our work and I know we're trying to address this year, is that when we tank mixed with some ALS herbicides, specifically Regiment and Grasp and then I know in a different trial we had Gambit in a in a trial where we we saw some issues and that was when we taint mixed with those we had a tendency to see more injury from Brake on that rice. So there definitely was an interaction going on there. And you know, this year, Kyle, I mean, we're working with you guys and we're seven days we're looking seven days before that Brake application trying to make that ALS application. We're looking at trying to make it seven days afterwards. What is y'all's recommendation today as it relates to ALS herbicides and Brake?

[15:29] Kyle Briscoe

So the recommendation is is to stay away from the tank mixes with Brake and ALS for now and go, it is seven to 10 days on either side now again, you're going to run the trial. We're going to we're going to get some we're going to generate some data to to put some numbers around those. But that is the current recommendation. Seven days before, seven days after. But do not tank mix at this moment based on, you know, the results over the past couple of years. What we've seen in your trials with the tank mixes.

[16:03] Jason Norsworthy

Okay. You know, I've really had good luck in my trials with post-flood applications of Brake just from an aquatic weed control standpoint as well as a tolerance standpoint. You know, we said a few moments ago that pig weed is really what we're going after, Kyle. But, you know, when I think of especially thin rice and I go to flood, aquatics can be very, very problematic for me. What are the chances of us getting a post-flood application label where we can put this stuff out by plane?

[16:47] Kyle Briscoe

So the chances are very good. The the key to that or the caveat is how long it's going to take. So quite honestly, we are working on it. We are having conversations with the agency on what it's going to take to remove that aerial restriction from the Brake label. That would give us the the opportunity to label for post emergent applications in paddy rice or post-flood, I should say.

[17:22] Jason Norsworthy

Okay. And you would agree, I mean, you've seen I know you've seen some of my plots. I mean, you've seen others. I mean, hey, Brake I say Brake. Sonar, which was registered in in aquatics is, I mean, that's the strength of the herbicide is a lot of the aquatic weeds that we have in rice. Would you agree with that?

[17:40] Kyle Briscoe

Yes, sir. Yes. The the fluridone is going to take care of all your major aquatic weeds in terms of control. It's going to pick up hemp sesbania as well, we're going to get some barnyard grass activity and then maybe even a little little yellow nutsedge based on some data that that you generated, Jason, last year from those post-flood applications.

[18:05] Jason Norsworthy

But along those lines, I want to reiterate, I mean farmer amaranth in row rice is where we really think the niche is at this point. Kyle You know, again, I get folks that call me and say, Hey, I want to spray brake for barnyard grass. Would you would you recommend Brake be the go to product for barnyard grass?

[18:27] Kyle Briscoe

So Brake is going to be provide I would call it I generally call it suppression of barnyard grass. It's not a no, it's not a yes. This will be bang up. It's certainly better on on crabgrass and goose grass than it is barnyard grass. There is some activity there. The wetter it is, the better the activity will be. It's not unlike what we see with pig weed control, for example.

[18:53] Jason Norsworthy

Okay, sounds good. What about. What about varieties? You know, last year we did some work. You know, everyone when you call, they want to know, would you recommend Brake? Would you recommend it here? And one of the first questions I have for them is, well, what did you plant? And, you know, a lot of our row rice is hybrid. I think you'd agree with that, wouldn't you Bob?

[19:19] Bob Scott

Oh yeah I'd say I'd say the vast majority of it is.

[19:24] Jason Norsworthy

But you know even with the seed shortage there is today, you can't just guarantee that 100% of it is. And, you know, when we when we flooded up on this and even in three leaf rice last year Dyna-Gro 263 and PVL02 were two of I think about 12 cultivars 13 cultivars that we planted that we had substantial injury associated with. And you know with that I was thinking here, Kyle, today as we sit here, I started preparing for this this podcast I mean, we've got five, six, maybe even seven new rice cultivars that came to market this year. I mean, Ozark, PVL04, there's the Max Ace hybrid. I mean, RiceTec has several I think Dyna-Gro has one in addition to 263. And so how do we handle these cultivars, rice cultivars that we haven't tested knowing that some in the past have been sensitive.

[20:29] Kyle Briscoe

So very good question. It's going to take some time, to be quite honest. Currently you know, we our messaging is, hey, give us a call, ask us, you know, let's talk about what you're planting if we've got information, we'll share it with you. If we don't, use it on a small scale or very small scale, let us get let us gather some data and generate some data before we just go wide scale on some of these new varieties. But again, that's going to take time and especially with there being however many new varieties released every year. Certainly there's a continuation of work that needs to happen.

[21:12] Jason Norsworthy

Along those lines, Kyle I know you guys, you've put together a either a fact sheet or a little booklet on the do's and do nots when it comes to the use of Brake in rice. Can you comment a little bit on that and the availability of it?

[21:31] Kyle Briscoe

Yes, sir. It is a frequently asked questions on Brake herbicide in furrow, irrigated rice specifically. So things as simple as the formulation in the mixing order are covered. We also have the the weeds that are in the spectrum of control, including some that are suppression as well. We've talked through the different varieties and some of the sensitivity that we've seen. We've talked through the tank mixes with ALS that's all in there. There is some data with tank mixes with Loyant focused on pig weed control and and then, you know, shifting back to something that we covered just a little bit earlier but in a little bit different since I we we rank the crops so the questions that we get on drift all the time. So what happens if we were to drift on to corn? Well, corn is going to be more sensitive than, say, soybeans or cotton. So so there's some information in there around. Well, if you do drift, here's what you should expect. The availability, you know, everybody that that deals in rice with SePRO can send a PDF I can provide you and Bob with PDF as well and certainly distribute as needed. We distributed to all the consultants so that that we have a relationship with as well as several retailers and growers. So it's out there. Please holler at me, kyleb@sepro.com if we need a copy.

[23:17] Jason Norsworthy

You know, Bob's our peanut weed scientists or peanut expert grew up on a peanut farm over in Oklahoma. And I guess before we get off of here, Kyle, I want to give you the opportunity. I mean, talk to me about about peanut. Let's talk to Bob about peanuts. Talk to our listeners about about peanuts. What's different about peanut versus rice and how how you guys are recommending the use of a Brake?

[23:47] Kyle Briscoe

So so I appreciate it. The the use in peanut is going to be almost identical to the use in cotton. So folks that are familiar with cotton applications which are behind the planter, pre emergent before the crop emerges that's the same way in peanut. Now I will say the the main difference between the cotton and peanut pre emergence use is the rate range. So in peanut you can only go up to 16 fluid ounces to the acre on your sandy ground your sands, and your loamy sands. You want to keep that at 12 ounces because peanut is more sensitive than cotton. Also it is is recommended that you tank mix with another residual herbicide. Everybody's got their preferred tank mix. You know, there's a lot of Brake and Valor that goes out in peanut. There's a lot of Brake and Dual that goes out and peanut. Brake, Warrant. and certainly would depend on what the mixed weed species is in your particular fields. But yeah, if you think about Brake use in peanut compared to rice, it's it's quite different and we're talking about pre emerge before the crop emerges and peanut versus post emerged three leaf an older in furrow irrigated rice so you know.

[25:09] Jason Norsworthy

I was brought up you brought up one point there and I want to because I had forgotten on the rice and I just want to touch on here and that is the fact that Brake is a much more effective herbicide on a silt loam than on a soil that is high in clay. Clay, and I'm not going to sit here and say that it doesn't work on a clay, but the activity is much greater on silt, loam and even sandier soils than on clay soils. I've done a lot of work in cotton up there at the research station, the Northeast Research and Extension Center in Keiser, which is a Sharkey, Clay and you know, the performance there was much less than what we saw on a silt loam saw over at Mariana more of our typical cotton soils and I haven't done rice work up there for irrigated rice worked at Keiser on that clay. So but there's no reason for me to think that in row rice we're not going to see reduced activity versus a silt long so.

[26:19] Kyle Briscoe

That's correct the lighter the soil, the more active Brake is. And this just goes spans across crops, right. We're talking about soil types and in the affinity to to adsorbed to to the soil particles and certainly fluridone has a lot more affinity for clay than it does sand.

[26:38] Jason Norsworthy

Hey Bob, you had something you wanted to say.

[26:41] Bob Scott

Yeah. I just was also going to say we have some varietal issues in peanuts. It looks like with the Spanish saying do not apply in Spanish or Valencia, is that correct?

[26:52] Kyle Briscoe

Yes sir, do not by the Spanish or Valencia and I will also speak to the GA-16HOs, which I don't know if there are any in Arkansas, but it's a fairly popular variety down in Georgia, South Georgia, we have we have seen increased sensitivity in that GA-16HO.

[27:15] Bob Scott

And here's where I'm going to get in trouble and get emails from people because I've been out of the game for a little while. But I do think most of our peanuts are runners and not Spanish, but there's probably exceptions in some out there. So just that need to be aware.

[27:34] Jason Norsworthy

So Kyle, we have listeners outside of Arkansas to these podcast these year each each year, each each week. I was actually talking to someone here from the Midwest just a couple of weeks ago that said they tune in to our podcast each week and try to understand what's happening here in the in the Mid-South and so with that, you know, we've we've got a label now for Rice, we have a label for Peanuts, we've got a cotton label in place. What next? What are we missing? What's SePRO going to call me up tomorrow and say, hey, guess what, we've got a new label and what's it in now?

[28:11] Kyle Briscoe

Well, I'll put it like this. We are open to exploring anything that you can think of. How about that?

[28:21] Jason Norsworthy

If the crop is tolerance you guys would be interested in trying to register that.

[28:27] Kyle Briscoe

Yes, sir. Yes, we've got. We've got some irons in the fire out west in some crops that aren't grown in the Mid-South. But certainly if we think that there's a fit on a crop in the Mid-South and we can prove that there's there's tolerance there, then, then we'll explore it.

[28:42] Jason Norsworthy

Sounds great. Bob, any anything else before we before we close.

[28:48] Bob Scott

Now Jason, I appreciate it, I feel like I've learned as much today as I contributed, so I appreciate being a part of this fun. Kyle Look forward to doing a little bit of my own work with Brake this year and thank you for being on the Weeds AR Wild podcast for sure.

[29:04] Jason Norsworthy

Well I'd like thank both of you for taking the time out of your busy schedule to join us today. And also our listeners for joining us for this episode of The Weeds AR Wild podcast series on the Arkansas Row Crops Radio.

[29:39] Intro/Outro

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