Today's topic is Bahiagrass Management and I'm Dr. Leanne Dillard,

the Alabama State Forage Extension specialist.

So bahiagrass, this is one of the grasses that we used to pick on.

But now, as we've seen some problems with some of our other perennial options,

is quickly becoming more popular across the state.

It is a long-lived, warm-season perennial.

Traditionally, we see this grown in the southern half of Alabama.

But there are varieties that are adapted

through most of North Alabama and I'll talk about that in just a few minutes.

It's commonly used for pasture,

but it can be used for hay,

erosion control, and wildlife habitat.

Also, it's pretty common to use it in a sod-based rotation,

especially in the Gulf Coast Region of the state.

As you would plant peanuts or cotton for

several years and then put it into bahiagrass for a couple of years.

This picture here is from a successful sod-based rotation in Florida.

So what are the characteristics of bahiagrass?

It is very grazing tolerant and I'll talk about why that is a little bit later.

But compared to some of our other forage options,

it is very grazing tolerant.

It does have few disease and insect problems compared to Bermudagrass,

which obviously has Bermudagrass stem maggot and some of

our other issues with other perennial such as Bermudagrass and Tall Fescue as well.

It's very drought tolerant .

It only has moderate forage quality,

but it also only needs low to moderate fertility.

I'll compare this a lot to Bermudagrass,

because that is our most common warm-season perennial grass in Alabama.

But Bermudagrass is most successful under high fertility condition,

so this does give us an option for a lower fertility forage.

It's also tolerant of soil acidity,

which for about three quarters of the State can be an issue.

So that's a good thing, but I will say that if you live

in a Black Belt soil that is very basic,

say over seven and a half or eight,

you may struggle to get it established.

It is going to work better more on the neutral to acidic side.

So this graph demonstrates the different growing seasons of

different common grasses here in Alabama

and these are going to be our warm-season perennial grasses.

As you can see, bahiagrass,

which is the top row,

will grow from anywhere to mid-March through the beginning of November.

Now, we compare that with

an improved Bermudagrass or a hybrid Bermudagrass such as Tifton 85 or Russell,

and it's going to have a much shorter growing season

roughly mid-May through the beginning of October.

But you can also see the relative forage yield that Bermudagrass

is higher than that of bahiagrass.

But, again, the growing season is quite shorter.

Now, common Bermudagrass is going to have

a little bit longer growing season than the hybrid Bermudagrass that not much.

But then, obviously there, you're sacrificing yield.

Dallisgrass which is a pretty common forage,

especially in the Black Belt,

but going across the state,

has a similar growing season to that of bahiagrass.

Then Johnsongrass which, again,

is probably most popular as a forage in the Black Belt,

it does grow extensively across the state,

is again, going to be a little bit shorter than that of bahiagrass.

The bahiagrass are warm-season perennials that does have the longest growing season.

Now, there are several different varieties of bahiagrass.

Pensacola is probably the most common.

Most people have heard of Pensacola.

It's best used on less fertile soils and in pastures that will not be well-managed.

It is what we consider the parent of most of our improved bahiagrass varieties.

For the most part, I don't suggest using this anymore,

because we do have improved varieties.

But you can still find plenty of fields that are planted

in Pensacola and can easily get Pensacola seed.

Argentine was the original bahiagrass that

was brought actually from Argentina, South America.

It's not very cold tolerant and it's very susceptible to ergot or fungus disease.

So we don't see that as much anymore.

It's also the lowest yielding of our variety.

Honestly, I'm not even sure if you could find seeds anymore for this.

But it is the original bahiagrass that was brought to the US,

so I thought it was worthy of bringing that up.

This picture here you see on the screen is actually Pensacola and Argentine.

You can see the difference in the leaf size,

as well as the productivity.

In this particular picture,

Argentine has a little bit of a bigger leaf size.

Pensacola has a finer leaf,

which a lot of producers prefer the finer-leafed bahiagrasses.

So Tifton-9 is probably the most common variety that we see planted currently.

It is a derivative of Pensacola,

but it has greater seedling vigor, which is important.

I guess one issue with bahiagrass is establishment can be difficult.

It also has the more upright growth habit,

which makes it better for hay production and

it also produces 25 percent greater yield than Pensacola.

This is why we suggest planting it rather than Pensacola.

As the name suggests, it was developed in Tifton, Georgia.

So it has moderate cold tolerant and to Central Alabama.

Where, again, Argentine is going to do much better in the extreme Gulf Coast,

the Panhandle Florida and places like that.

AU Sand Mountain was developed here in Auburn, in Alabama.

Actually, at the Sand Mountain Research Station at Crossville.

So this was, I believe,

a standard Pensacola that was planted in Sand Mountain

just to see how it would do and a few of the plant survived,

and they were able to ecotype it,

and sell it as AU Sand Mountain.

It is the most cold tolerant.

If you are Birmingham North,

this is the variety that I would suggest planting.

Some of the others may survive,

but this is going to be the most prolific.

In recent years, it's been difficult to find seed,

but I actually recently spoke with a seed producer in

Geneva County that is producing

Sand Mountain seed and selling it through the Alabama Farmers Co-op.

So the seed is limited but you will be able to find some this year,

if you are in the northern third of the state.

TifQuik is a variant of Tif-9,

which again, is going to be from Pensacola.

As I've said, Pensacola is the parent of most of our varieties.

It is superior in seedling vigor than Tifton-9.

Otherwise, it's essentially Tifton-9.

So all the other characteristics are very similar.

I will mention and I haven't yet that all have these varieties,

you're going to see the quality is pretty much standard across all of them.

The big difference is going to be in

the yield and that's where the benefit is going to be.

TifQuik, as the name suggests,

does germinate a little bit faster and have a higher germination rate than Tifton-9.

It is a little bit more expensive.

So that's where you have to consider your personal situation,

whether how long you can keep cattle off of pasture,

whether you choose between TifQuik and Tif-9.

The last variety I'm going to talk about is the variety

developed at the University of Florida, UF-Riata.

It has later Fall growth and earlier in the Spring compared to our Tifton varieties.

But it's only been studied in the Lower Coastal Plain of Alabama.

Since it was developed in the Panhandle of Florida,

it's cold tolerance has not been really pushed.

I really like this variety,

especially, like I said,

if you are in the Coastal Plain,

the Lower Coastal Plain, the Headland area, the Mobile area.

But at this point, we need further studies to see how

far North we can successfully grow UF-Riata.

So here's a picture comparing some of the varieties that I've talked about.

This one in Headland.

It's outside of Dothan, the Wiregrass Research Station,

about 10 years ago.

It just shows you the differences.

You can see the Tifton-9 is a much thicker stand than that of the Pensacola.

Also, again, I've mentioned it, remember,

it has a much more erect growth habit and you can see

that as it slightly lodged compared to the Pensacola,

which is much lower growing.

It's really difficult, as you can see here,

to see the difference between the TifQuik and the Tif-9.

Again, remember, TifQuik is Tif-9 with just a little bit better seedling vigor.

So the plant itself is pretty much the same.

So establishment of bahiagrass.

As with most forages,

prepared seed bed is always per method.

Now obviously, if you're in a highly-erodible soils,

this is not the method I would suggest,

but if you're an area that is,

you're capable of doing the prepared seedbed,

be it full tillage or conservation tillage,

this will increase your germination which is, again,

one of the challenges of dealing with, excuse me bahiagrass.

So you want to plant scarified seed.

That basically is the conditioning of the seed,

either it can be physical or it actually likes basically scrape the seed,

or it can be chemical.

Again, a lot of our warm season forages and bahiagrass in particular have

a very thick seed coat which is why we get a lot of hard seed.

It is seed that will germinate but not necessarily in the first year of, when we plant.

So by scarifying it,

it help to plant,

the seed germinate faster.

We do want to plant about 10-15 lbs of the acre in March or April,

so around this time of year.

We don't want to go deeper than an inch,

so about a quarter to a half an inch.

I always suggest to producers it's much better to

go too shallow than it is to go too deep.

So I would make sure your drill is set at a quarter of an inch

and then in some areas where it may be less firm,

you may go down to a half an inch and that's okay.

In this, also cultipacking and making sure we have a firm seedbed is very important.

You can see in this picture here that I

took several years ago at some plots we were doing that the,

but we do see some divides from this,

the tractor tires they're not very deep.

So we want to make sure we have a good firm seedbed before we plant.

You can broadcast bahiagrass.

You do want to increase your seeding rates to about 18-20 lbs per acre in this scenario,

so that you're able to,

because you're going to have less seed to soil

contact so that you're able to have more seed out there.

Now, with Tifton-9 and TifQuik,

since they have better germination,

it is suggested that you can reduce

the seeding rate a little bit compared to the more traditional like Pensacola.

So the for suggestion for Tifton-9 and

TifQuik are eight to 10 lbs per acre when you drill it,

either no till or in conventional till,

and 12-15 lbs per acre in broadcast.

Now when it comes to the other varieties,

we don't have as much information.

Our other novel variety, so with those,

I would suggest using the higher seeding rate.

It's always better to have a little too much seed than they're not quite

enough especially in a crop that is difficult to establish.

So but if you are using the Tifton varieties,

you can reduce that a little bit which obviously,

that reduces your cost per acre in establishment.

So in terms of fertility,

I mentioned already that

bahiagrass have a lower fertility requirements

than some of our other warm season perennials.

So our general recommendation is 75-175 lbs to the acre.

I would say 75 is going to be for a pasture situation and

then a 175 is going to be in a hay situation.

Also, if you are considering producing seed,

and I'll talk about the benefit

of keeping your field per seed production a little bit later.

As with all crops, we do need potash as well as phosphorus.

We know those at 40 lbs the acre a piece.

That is in terms of P_2O_5 and K_2O.

It is tolerate of soil acidity but we still need lime.

Obviously, our soils are naturally very acidic on outside the Black Belt.

So annual lime is going to be anywhere from 0.3-0.5 tons per acre.

I would refer to your soil test when it comes to this.

You always want to soil test and follow your soil test recommendation.

Many of our soils now are high in phosphorus and probably won't require it.

Many of our soils are acidic,

so you probably would need more lime.

So in past years,

we do suggests full testing every two years,

and in hay crop situation,

we suggest doing it every year.

So the typical forage quality for bahiagrass is

about 85-90 RFQ or Relative Forage Quality,

getting an idea of what that means.

Bermudagrass can range from 90 to a 100,

and novel tall fescue is anywhere from a 100 to a 120.

So you can see it's slightly lower than bermudagrass and I would say

that it's slightly lower in quality or similar in quality that goes for bermudagrass.

The thing, one thing that's unique about

bahiagrass is close grazing is necessary to obtain good utilization,

but as I mentioned earlier,

all varieties are similar in quality.

So planting the new varieties are not going to get you benefit there,

but they will increase your yield which will increase your clipping capacity.

When we look at the forage yield,

and now this is Pensacola,

at different nitrogen fertilization and clipping frequency.

We can see that with no nitrogen application, on average,

we're producing about 1,240 lbs of dry matter per acre,

and that's averaged across clipping frequency of every week,

two, three, four or six weeks.

Now, when we look at the addition of 50 lbs of nitrogen,

we're able to almost double that and a 100 lbs.

Again, we're not seeing quite the same increase.

Now, at 200 lbs of nitrogen,

we do see it jump up to about 2.5 tons per acre which is quite substantial,

but still when you consider bermudagrass and think about bermudagrass,

then we can produce seven,

eight tons of dry matter per acre,

we're still seeing it's relatively low.

Obviously, the less frequent you clip,

the more biomass you're going to produce.

So this gives you an idea clipping frequency may be,

you can even see that terms of hay clippings or in rotational grazing.

So we do suggest about a 28-30 day rest period in bahiagrass.

So you would see that around the four-week mark which is here,

we've got 1,300 lbs at N/A up to 5,600 lbs per acre at 200 lbs of nitrogen.

So again, the recommended rate that we suggest is somewhere between that 50 and a 100,

about 75, 200 lbs of nitrogen per acre.

So improved varieties.

Remember, I told you that they're going to produce more.

So this study was done on Pensacola.

So remember that if you're planting Tifton-9, TifQuik,

UF-Riata, you're going to easily get 10-15 percent more yield compared to this table.

So looking at forage availability,

and I've brought this up because I've mention now several times

that close grazing is the best way to utilize bahiagrass,

which is the opposite of what we typically say, right?

We typically say eat half, leave half.

Well, in bahiagrass, the growth happens,

is a little bit different than most forages,

so to leave half fractions but I

have to graze a little bit faster than we would with some of our others.

So when we look at our bahiagrass,

when we look at two inches to greater than five inches,

and you add those numbers a percent of forage cutting height.

It doesn't matter which column you use, which nitrogen rate.

Let's bring, these purposes talk about no nitrogen applications,

so this column right here.

You can see that for every inch,

you're going to see roughly,

and this should be four to five not four to 52,

9.4, eight percent, almost 10 percent, 11 percent.

So when you add those up,

in the above two inches,

you're only going to have 40-50 percent of your total forage yield.

Now, for most of our forages,

we talk about grazing down to only three to four inches.

Bermudagrass, we can push a little bit lower but,

so this is 40-50 percent and above two inches.

Your bottom two inches are going to have over,

at least half of your forage biomass.

So that's why we say that to keep the best utilization,

you really have to push it a little bit

further than you do some of our other grass option.

Now, having said that,

we only want to do that in and establish stand.

If this was the first year of the stand,

I definitely would not push it that far,

but if it's an established stand of bahiagrass

and you're following appropriate fertility,

then you should be able to push it down into that,

right at two-inch mark.

You can see in the first inch,

this last row here,

40 percent of the grass is in that first inch.

So it does make it a bit challenging to manage.

You also need to keep this in mind when looking at hay production.

Now, if you can remember these data is from

Pensacola and I did tell you the Tifton varieties have more erect growth habit.

So the data would be a little bit different with those,

we might see the numbers shift a little bit upwards,

but if you are dealing with Pensacola, unfortunately,

we see that about 40-50 percent of our forage is in that first inch.

So Grazing management, carrying capacity for the bahiagrass is

about three quarters to about 1.25 animal units per acre per year.

Animal unit is defined as a 1,000 lbs of animal,

feed that to 500 lbs feeders or 1,000 lb cow.

So comparing that to bermudagrass,

it's about one to 1.5,

the bermudagrass is able to give you a little bit more.

As mentioned it several times,

bermudagrass is higher yielding than bahiagrass.

Then Novel Tall Fescue is about a half to one,

so similar a little bit lower.

So it does have a pretty good carrying capacity,

and remember it's going to be growing a little bit longer than the bermudagrass.

The bermudagrass is just so much more productive.

You're going to have a higher stocking density for a period of time,

where bahiagrass you're going to have

a smaller stocking rate for stocking density over a longer period of year.

So looking at the formats which is always important.

This is Stocker cattle Data.

Obviously, in terms of average daily gain was

the easiest thing to measure Stocker cattle can be the easiest way to do this.

We're going to see anywhere from three quarters to one lb per head per day.

This obviously is not going to be profitable.

If you're working on a stocker cattle system,

obviously stockering cattle during the summer is a huge challenge.

We compare that to bermudagrass,

we're talking about three quarters that's

what you need bermudagrass and then even lower that novel tall fescue.

The novel tall fescue identify which obviously does not have fescue toxicosis.

It's going to be a cold season,

they're always getting higher quality than that of our one season.

Now, if you were to do this, keeping this in mind,

this could easily be a system where you graze and also supplement Stockers,

and that's how you can be economical that way.

It will be difficult to get enough gain on the stocker though,

to be able to be economical.

Now for a mature cow,

this is perfect forage in each equality demands quite well.

So it's really good for cow-calf operation.

So Hay Management, obviously hay is quite popular in bahiagrass?

One, because it is more drought-tolerant,

intends to stay green longer during the drought than bermudagrass.

But also there's a big interest at the moment in the horse industry and bahiagrass,

because it's perceived to have

less carbohydrates or less sugars available so it's better for Hay Management courses.

Also, it has more finer wheat.

So it is moderate quality when cut in less than five-week intervals.

So this is going to be similar to bermudagrass,

you want to be cutting this approximately every 28 to 30 days.

The TDN is going to be 50 to 56 percent.

The requirement for a maturity cow is 55, so again,

as I said, a good quality for your cow-calf operation.

Crude Protein is going to range from nine to 11 percent.

A lot of that's going to be dependent on the weather conditions,

as well as your nitrogen fertility,

and nitrogen fertility has a huge impact on food protein.

Again, for a mature cow,

we're talking about eight to nine percent requirement.

So again, it's going to be able to meet the demand.

For a stalker cow,

we're talking about upwards of 55 percent to 70 percent TDM requirement,

and more 14 to 15 percent

good protein so they're likely going to have the supplement in those animals.

As I just mentioned the majority of

the forage biomass is below 1.5 to two-inch more cutting height.

So it's typically not considered a good species for hay production.

I would say that the caveat today is if you are working with an improved variety,

typically nine to 10 tip quick or you have to add it.

You can more successfully make hay,

I'm not saying that there are people that you can't made hay of this bahiagrass.

Definitely, you can't but your yield will suffer.

Really a below 1.5 to two inches,

even if we were able to cut lower than that,

you would be getting so much stool into your hay,

you would really be reducing the quality of it.

So I would suggest,

if you're interested in bahiagrass hay,

looking for an improved variety.

You're also going to get higher yields which has been help to be more profitable.

So bahiagrass can be invasive in the bahiagrass hay fields.

So if you do have bahiagrass that you're

grazing or cutting for hay and also bermudagrass,

I would try my best not to let there be any contamination,

washing equipment before you go between fields,

and not feeding bahiagrass hay and bermudagrass.

While there's no effect on nutritive quality,

because the bahiagrass would dry darker than the bermudagrass,

is not very visually appealing.

There are some options of dealing with bahiagrass and bermudagrass,

but they're extremely expensive.

So prevention is the best case here,

if you are trying to keep them separate.

So this is the graph just showing the average forage yield from either Tifton-85,

or Coastal bermudagrass versus Tifton-9, Pensacola,

and Argertine bahiagrass, and this was done in Tifton, Georgia.

So Southern Georgia in the Coastal Plain over three years.

We can see as you would expect Tifton 85 is the highest producer of all five varieties.

Pushing about 1,700 lbs of dry matter per acre.

Now coastal, did a little bit worse but it was higher than the Tifton-9.

Then we look at our Tifton-9,

Pensacola, Argertine, you can see they kind of stair step down.

So again, if you're in hay production,

I would suggests it's probably worth it to upgrade to Tifton-9.

If you are using Pensacola just where the added yield,

you're going to get about 2,000 more pounds of dry matter on average per year.

When you have Tifton-9 compare to Pensacola.

Seed production, and this is something we see quite a bit in Florida,

as well as South Alabama,

as a way of getting a little extra money of your pasture.

So it can be an additional source of income on both pastures and hayfields.

Newer varieties are Plant Variety Protected,

so it's illegal to collect speed unless this is certified field.

Those are going to be your UF-Riata, Tifton-9, and TifQuik.

This is not apply to Pensacola.

So if you have a Pensacola field,

you can very easily harvest you're seed.

The field of Pensacola and Argentine can be harvested

to offset fertilizer and other production costs.

They produced about 150 to 400 lbs of seed per acre.

Depending on the year,

again, I could easily set off your fertilizer cost if nothing else.

There's several custom seeds combines

in Alabama that will come and harvest your seeds for you.

So the growth of tillers that later developing

the seedheads is stimulated by grazing and mowing.

So we suggest grazing and mowing through the beginning of the summer,

I find a 100 lbs and then a 500 lbs of nitrogen per acre,

and producing seed is quite expensive for maturity standpoint.

They do have a higher fertility requirement.

So one of the challenges of doing this is to determining when seed is,

it's time to harvest the seed.

Maturity rates will vary.

So you want to check multiple seedheads.

But the easiest thing to do is just grab the seedhead,

try to strip it with your hand.

If the seedhead is mature,

it'll easily released from the seedhead and bahiagrass

colored is not the greatest indicator of whether the seed is mature or not,

because often, it's still grain but ready to be harvested.

You want to dry this seeds as quickly as possible to avoid any heat damage.

As obviously, the seed is going to mature at different rates crop yield,

so you will have some immature seed that will not be completely drive in the field.

So the timing is going to be on each year is

only dependent on rainfall fertility in management.

But generally, we're going to stay it mid to late June in the Coastal Plain.

So Weed Management and the bahiagrass as with any pasture or

hayfield the best defense and management is against vigorous bahiagrass growth.

By managing it correctly in terms of fertility,

and cutting or grazing height,

we can make sure that our bahiagrass will be able to compete.

The bahiagrass is extremely

competitive and is able to under the right conditions has weed most of it.

As example of that,

mini bermudagrass are producers have it as a weed in the bermudagrass.

So for Broadleaf weeds,

the easiest option is 2,4-D,

or we do not all want to do that,

during the establishment year or before bahiagrass about eight inches tall.

For Grassy Weeds, specifically Vasseygrass and Smutgrass,

which tend to be problems in the bahiagrass.

You can use Velpar,

which is going to be an again an expensive option.

You want to apply April through late July,

and about 0.67 to 1.12 lbs of active ingredient per acre.

You can only apply this when a soil moisture is sufficient,

humidity is high, and the air temperature is greater than 80 degrees Fahrenheit.

It will injure bahiagrass by temporary burning, and yellowing it,

about two to four weeks after application that will help

reduce your vasseygrass and smutgrass.

So for worse specific situations on your weaker control options,

I would suggest going to be ACES website at aces.edu,

search IPM Guides and pull up this publication,

which is IPM-0028 Pastures and Forage Crops,

Insect and Weed Control Recommendations.

This is going to give you an information on

specifically what herbicide options are currently legal.

Excuse me, an elevator for bahiagrass.

I would also say regardless of what was publications says,

always read the label of the herbicide,

so that you can verify that it will not kill your bahiagrass.

So as part of this,

I want to bring up a current topic or a new upcoming topic which is Brunswickgrass.

So Brunswickgrass is an emerging weed problem in bahiagrass.

The reason it's emerging is because it's a cousin to bahiagrass.

They look very similar, but unfortunately,

even though it's got moderate quality,

it's not palatable to livestock.

So you can see in this field which was in,

I believe, Levy County Florida.

The types of grass that you see in that field are Brunswickgrass,

and over-eaten areas are the bahiagrass.

So you can see how quickly it could take over a field

because the cattle are going to select for the bahiagrass,

make it weaker and since they're not grazing,

the Brunswickgrass is able to take up quite quickly.

So we can out-compete bahiagrass and basically

lead to a field of what is a bahiagrass look alike,

and I'll show you some pictures in a minute so you can distinguish between the two.

I will say we have this grass or this weed in Alabama.

We do not see it nearly as much as a problem in Florida,

but we do have it in Alabama.

So this point, what we're trying to do is trying to keep it from becoming a problem,

we control it before it does.

So in this picture,

you can see Brunswickgrass,

it has a seed head very similar to dallisgrass.

It's got three to four resins,

which are the lines of seeds,

compared to bahiagrass which typically has two.

Always remember that you want your bahiagrass to give you the peace love sign,

if it's not doing that,

it's either infested with dallisgrass or Brunswickgrass.

Now, Brunswickgrass in terms of the leaves is actually very similar to

bahiagrass while dallisgrass has a much thicker leaf.

So when you look at the bunch of grass,

you can tell the difference between the dallisgrass and the bahiagrass.

Now, Brunswickgrass, bahiagrass and dallisgrass are all in the same genus.

So that's what can make them very difficult to distinguish,

is because there are very close cousins.

So Brunswickgrass, just like bahiagrass,

is a perennial summer grass.

It has a similar growing season and appearance of that a bahiagrass.

You can imagine, if you're looking at this field without the seed heads,

you could very quickly just assume that it was a field of bahiagrass.

So again, it has similar flowering to the Pensacola bahiagrass,

but it's often has three to four resins per head.

I will tell you even our bahiagrass expert down in Florida,

Dr. Ann Blount, who was the one that initiated this.

Initially, she had a hard time telling the difference,

and she's a forage breeder and this is what she does every day.

So they are very very similar.

So the easiest thing to do to confirm or deny if you

have Brunswickgrass is to dig up the roots.

So especially if there's not seed heads present to be able to look at.

If you look at Brunswickgrass, it has a long,

skinny rhizomes and you'll see it's pillar where the plants are connected.

Where bahiagrass has a much short,

stubby rhizome. You can see it there.

It's shaped like a J,

and it's not going to be connected as these are.

You see they have what appears to be two plants connected by the same root.

You're not going to see that in bahiagrass.

So you can also look at the seed.

While the seed is similar in size and color,

Brunswickgrass seed typically has a bullseye on it.

As you can see in the picture there,

compared to bahiagrass which is usually a lighter color of brown,

not in this spectrum,

but it usually is more of a white color.

Also, it's not going to have the dot in the middle.

So that's the easiest way to tell on the seed-wise.

So again, prevention is the key to control this problem.

We do this by buying certified seed.

We just talked a little bit about seed production,

and how that can be used as a secondary source of income.

But the way this has gotten around and spread,

is through brown-bag seed because it is not tested for contamination.

So certified seed is always tested.

It has to be in certified fields which are checked regularly.

You see for any weed component,

and also they go through a lab and here's an example of a seed tag you see here.

It's going to list the amount of weed seed.

Now, Brunswickgrass is not listed as a noxious weed.

Any noxious weed seed that's found has to be listed on the label,

but you can call the certifying lab,

give them the information there about the lot,

and they can tell you any weed seeds they found.

They just don't print it on the tag.

But certified seed does have to have below 0.1 percent weed seed total.

This also gives you obviously information on germination rates,

hard seeds and things like that to help better calculate your seeding rates.

So insect management, probably,

the most common concern for insects in bahiagrass is fall armyworms.

There are some other smaller issues

with billbugs and things like this but I'm not going to talk about those,

I'm going to focus on fall armyworms.

They do have the most severe outbreaks,

late Summer, early Fall after a dry period.

We see that some years,

we don't get very much and in other years,

it takes off and we see a horrible amount of armyworms.

They will reduce the yield but usually if you have a good established stand,

you don't have to worry about this stand being killed.

You're just going to reduce your grazing.

I will say anecdotally that most people see that

the fall armyworms will attack other forages first before they become to the bahiagrass,

which I think is a good thing.

So you'll see they'll take out the Bermuda grass first,

and then they'll come back to the bahiagrass.

You can treat for fall armyworms,

but usually in bahiagrass,

given the quality and the yield,

the loss is not enough to justify the treatment because it is quite expensive.

But again, if you are interested in learning more about fall armyworms,

and management of bahiagrass or other pasture crops,

you can either go back to our IPM guide for insect and weed control recommendations.

Also, we do have a separate publication on

management of fall armyworms in pastures and hayfields,

that talks specifically about just fall armyworms.

Those can again be found on the ACES website, aces.edu.