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00;00;16;06 - 00;00;42;14
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Welcome back to the Pasture to Profit podcast. I'm your host, Travis Taylor, CSU extension livestock specialist for the Golden Plains area in northeast Colorado. And I'm joined again today by my other co-host, Scott Stinnett, livestock and 4-H youth specialist in the Kit Carson County office here in eastern Colorado. And Scott, we are that time of year. It's February. People are calving.

00;00;42;14 - 00;01;06;05
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But we need to start thinking about what we're going to do with these cows come turnout time. And one of the things that we really probably ought to be taking a look at and planning for is our grazing season. So today on pasture profit, I think we need to address what we might do to look at or update or even create a grazing plan.

00;01;06;06 - 00;01;30;13
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So if we're looking at grazing plans, Scott wears a good place to start. Well, I think for most of our producers, let's let's back up and talk about historically how we used to do grazing plans. You know, when I first started teaching AG, when you were in college doing your master's degree, all these other things, we relied on that animal units per acre kind of deal.

00;01;30;15 - 00;01;53;27
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And at that time, back when, you know, in the last century, when you and I were in college, the average animal unit was based on 1,000 pound cow and the needs of 1,000 pound cow. And if you had a bull, you would, depending on how big your bull was, you could make that 1.5, 1.7 to 5 animal units.

00;01;54;00 - 00;02;27;07
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If you had calves you added in there, you know, 2 to 0.5, depending on the size of these calves. And there were a lot of charts and other information that was out there that we used for county averages, regional

averages, to figure out kind of what our stocking rates could be based on animal units, correct? Well, I think you hit that on the nose, but you and I have discussed on this podcast many times that the average gal we see in our High Plains area is not 1,000 pounds anymore.

00;02;27;09 - 00;02;53;23
Unknown
No, no longer are they. We see it in every aspect, from the amount of weight that we're seeing on cull cows that are going to harvest right now. We can tell that they're much larger than they were. We've talked about it that over over a ten year period, multiple decades, how much growth we've seen in cow size. We're adding 7 pounds essentially every every year.

00;02;53;24 - 00;03;22;02
Unknown
Just about is kind of every year these cows. So we've gone up, you know, within a decade, every decade they increased 60 to 70 pounds in just average weight. So when you and I were were messing around in college in the 90s, the 1990s, you know, since then we've had 30 years go by. So at 70 pounds, 30 years, there's 210 plus pounds that these cows have increased.

00;03;22;02 - 00;03;45;26
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So we were given those thousand pound cows for the animal unit. You know, they're way over 1200 now. And I would bet most of our producers have cows that are 1200 to 1400 is probably more of their average in size. Yeah, I think we look at it kind of the average that the meat animal research tells us that a registered Angus cow is these days is over 1,320 pounds.

00;03;45;28 - 00;04;15;21
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And, you know, so if that's the breed average on those people that are actually weighing those, you know, a 1,300 pound qiao that eats 2.5% of her body weight is consuming 32 pounds instead of 25 pounds. So, you know, we're looking at an extra we're feeding extra cattle out there, even though we don't see as many on the range compared to some of that data.

00;04;15;23 - 00;04;44;10
Unknown
You and I were in the 90s, but a lot of that data was done in the 60s and 70s, that was taught to us in the 90s. So we're trying to catch back up. So if we have this issue, Scott, what do you think the the calculations still tend to be the same. We're trying to calculate how much it forages out there and relate it to how much that a cow needs to consume a day.

00;04;44;13 - 00;05;13;25
Unknown
Right. And the thing that's very different from when you and I were back in our good old college days is the internet and the availability of information and the tools that are at producers disposal. And for us here

in the extension office to help a producer come up with a stocking rate so they can develop their grazing plan based on those, on a lot of information that is updated much more often than the textbooks we had when we were in college that were updated every seven years with information that might have been ten years old.

00;05;13;27 - 00;05;46;14
Unknown
So let's go on to you. And I use two different types of tools that are available online, and the one that I like to use that I've had a lot of luck with is called Web Soil Survey and website survey is a product from the NRCS, and it's based on not only some in the field types of observation, but also some satellite imaging as well as some sampling that's been done throughout.

00;05;46;17 - 00;06;14;07
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And because it's based on soul type and soil fertility, we're able to look at the possibility of forage production in three different ways. And so to do that, if you're a producer and you're listening to us, you can Google up Web Soil survey and it'll bring you to the USDA NRCS web soil survey. And there's a big green button at the top that says Start Web Soil Survey.

00;06;14;09 - 00;06;39;06
Unknown
And when you do that, then you can it brings up this big map. And you can select what's called an AOI, an area of interest. And the area of interest that I would select, obviously is the pasture that you're wanting to look at. So for example, today as I kind of talk through how this works, I've used a quarter section that's right there around the family home and one that we turn out some a few cows on in the summer.

00;06;39;07 - 00;07;02;28
Unknown
And so 160 acre little plot that I found. It's relatively flat piece of ground. And so you select that on the map as you zoom in as part of your a AOI, and then you can click on what's called Soil Data Explorer on one of the tabs across the top. And when you do that, it can give you lots of different things that you can look at.

00;07;02;28 - 00;07;24;18
Unknown
And I said, this is a soil survey. So a lot of it's based on soil, but another set of tabs pop up right below that. And the one I'm looking at says suitability and limitations for use. And when you do that you'll you'll have lots of different selections in here. Building site and development, construction materials, land classifications, military operations.

00;07;24;21 - 00;07;51;18
Unknown
But the one I'm interested in is vegetative productivity. And it gives you multiple options in here crop productivity, forest productivity, the

Iowa and the Minnesota crop suitability, corn suitability. But I'm going to click on the one that's for range production. And it gives it to you in three different possible ways to look at this. You can look at it as a favorable year, a normal year or an unfavorable year.

00;07;51;20 - 00;08;23;01
Unknown
So I took the little 160 acres there and mapped it out and asked for the gist of normal year. And when it gave me the results, there's a button you click called View the Ratings and it gives you essentially one, two, three, four, five columns. The first one is a map unit symbol, which kind of tells you on the map to color coding of what you're looking at, the map unit name, which is the soil type, and then the rating and the pounds per acre per year.

00;08;23;03 - 00;08;46;24
Unknown
That little unit within your AOI will produce. And then it tells you how many acres are in that little portion of it of your AOI and a percentage. And so when I did this for this 160 acres, it pretty much came up with two main soil types. One of it was 150%, and the other was a 150 acres, and the other one was ten acres.

00;08;46;27 - 00;09;10;26
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And in the production ratings, what I like to do is you take the ratings, the pounds per acre, multiply it by the next column, which is acres in the AOI, and then it'll tell you that will give you a subtotal for that map unit of how many pounds per how many total pounds in that acreage is there. And so I did our calculations for all three types of years.

00;09;10;26 - 00;09;52;15
Unknown
And on our little 160 acres, I came up with that. In a normal year it produced 283,600 pounds of forage of vegetation. In a favorable year, it jumps way up to 364,624 pounds per acre per year, and in an unfavorable it drops as far as 159,000 pounds 872. And so these are the total possible forage productions based on years of the soil type and years of normal, what they would consider average precipitation.

00;09;52;17 - 00;10;19;01
Unknown
I'm one of these guys that I'm going to suggest that we do take half, leave half. So I'm going to take all those numbers and cut them in half. And once I've got them cut in half, I'm down to a normal year is about 140,000 pounds of forage in a year. The bad years are down to 79, nearly 80 zero 0 pounds per year, and a favorable year would be as high as 182,000 pounds per year.

00;10;19;03 - 00;10;35;25
Unknown
Now, thinking about the cows that we run on 180 days, I've got cows way about 1,400 pounds. I like to estimate that they're going to eat about 3% of their body weight a day. They need two and a half, but they're going

to eat three because they're cows. They're going to eat till they're full. And so that's about 42 pounds a day.

00;10;35;25 - 00;11;03;21
Unknown
So in 180 days we multiply that out. They're going to need about 7,560 pounds for the summer season. So taking that 7560 and I know I'm going a little bit fast, but 7560 is how much each cow needs for that summer grazing period. On our little plot there at the house. We can divide it out, and if it's a normal year, we can put about 18 head out there on that 140,000 pounds of forage in a bad year.

00;11;03;21 - 00;11;38;20
Unknown
We had to cut that down to ten head, because we've only got 80,000 pounds of forage available for them out there. But on a favorable year we get up to 180,000 pounds and we can run about 24 head that summer. So that's how I use the Web Soil survey. First of all, once again finding an AOI, then asking what its vegetative production is, understanding the size of the cows that I'm running, and doing a little bit of pencil to paper math on my on my tablet here, and coming up with how many head I think I can run in a season.

00;11;38;23 - 00;12;04;24
Unknown
Well, I think that's works out the math, right. And you kind of have a plan of what you're going to have. So on a normal year, you know, if you're projecting that going forward, you can kind of look at a long range forecast. Because everything in our area when we talk normal, below normal, above normal, we're usually talking about precipitation in the Great Plains region.

00;12;04;27 - 00;12;30;06
Unknown
Right. And normal is a relative term. Even if you look at data from Noah and all the National Weather Service's, they take an average over so many years, and every year they slide it a little bit, whether it's a 30 year average, a 50 year average. And so as climates change over time, those normals and favorable and unfavorable will also change as well.

00;12;30;06 - 00;12;48;05
Unknown
But the thing I'll say from running this little deal is it works out about right, because this is the home place. And we know in the past we've been running somewhere around a dozen to to 15 head of cattle out there. So we're never getting on the high end of 24. We're never really on that really super low end of ten.

00;12;48;11 - 00;13;26;10
Unknown
So it works out. I can I can anecdotally verify that all the calculations using Web Soil Survey have worked out very well for this piece of property. Right. And I think that's something that we look at. So I use something a little bit different when I'm looking at some of those

predictions I use something that's been based. And it's we're lucky we live in the Great Plains area because we're just kind of on that area from Montana that goes down into the plains of Texas, where the University of Nebraska developed a product called Get Grass Cast and Grass Cast.

00;13;26;10 - 00;13;49;18
Unknown
If you Google it, it will come up with a deal, and it provides you with some maps that you'll be able to look at. But it does a monthly prediction of where we are at or where our grass is based on four different factors that go in, including moisture, including environmental transpiration and how dry. We're getting some other things.

00;13;49;18 - 00;14;17;20
Unknown
And it also looked some links to some long range forecasts for your area. So you can kind of go in and look. But similar to the website survey, it gives us maps. Some of those are if we have above if we have below, we can kind of look at those maps and take a chance and see what we're going to get in terms of maybe forage production, but it does it on a percentage basis.

00;14;17;20 - 00;14;54;23
Unknown
So if you look at eastern Colorado in places last year, we had a fairly good year and we were anywhere from 15 to 23% above our normal. You can also look in some of the data that they have on there and look up things. I was looking for the Golden Plains area and the counties in the Golden Plains area, on average, production on what they consider a mean production or average production ranges from 861 pounds up to 1,447 pounds.

00;14;54;26 - 00;15;27;00
Unknown
And Scott, the other thing that I would like to interject here is pounds of grass does not always equate to nutritional value of that grass, because a species such as buffalo grass, holds its energy value and holds its protein value better than something like Western wheatgrass, where really high protein value when it's green in the spring. But with all the lignin and biomass that we have in it, the protein value decreases even there.

00;15;27;00 - 00;15;50;26
Unknown
And blue gramma is one of those ones that we may not see as big a decrease in protein, but the energy value in blue gramma towards winter, the dormant stage of winter is not nearly as good as it is and hold its energy value. It is as it is during the summer growing season. So what grasses? We have types of grasses.

00;15;50;26 - 00;16;13;27
Unknown

All this needs to be taken in. I think what I would encourage us from this deal is to a number one know how many acres we've got be try to estimate what we have out there for production and see. Let's just get an idea of how big our cows are. Take out those cull cow sheets that you've been selling at the sale barn.

00;16;13;27 - 00;16;39;01
Unknown
And if they're legitimate and you haven't fed those cows an excessive amount of concentrate or dry allotted them for a period of time, you might have a pretty good idea of what your average cows way just from your cold cow returns as you get from weaning, and maybe your opens in the fall or something. So I think there's ways that we can look at that and start estimating what's there and have a plan for it.

00;16;39;04 - 00;17;00;28
Unknown
That's the thing about all of these grazing plants. We're trying to look into the future, and none of us have a crystal ball, but we can use the information from the past to try our best to come up with a proper grazing plan, including our stocking rates. For me, the website survey is very static data. It's historical data.

00;17;01;05 - 00;17;23;18
Unknown
It doesn't move. Your grass cast is a little more current as it uses some some of the forecasting and and takes into effect what is recently happened with precipitation and other things. Another thing that producers probably can do to help themselves out is if you've used some of these tools, and there's a lot more of them out there as well.

00;17;23;22 - 00;17;49;07
Unknown
But do some monitoring, set up some some cattle panels and keeping animals out of a grazing area, and then just measure your forage production that's in there. Take some photographs and use some site line management of your grazing areas. Take the same picture three times during the grazing season and see how much it's changed. And compare it year after year after year from the same spot.

00;17;49;07 - 00;18;11;01
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And you can tell whether you're what kind of changes you're having in your grazing areas, and how much is actually being grazed off by your cattle. And again, understanding your cattle, their nutritional needs, their actual weights, those things are going to make a big difference in your grazing plan. But starting now, start gathering up the information you need to make that.

00;18;11;01 - 00;18;28;21
Unknown
And we're going to call it what it is to make that best guess on how well we're going to be able to utilize the grazing areas that we have, because we can all get a pretty good estimate and get some pretty good forecasts

on what the weather is going to be like. But nobody has that crystal ball. Absolutely.

00;18;28;21 - 00;19;00;19
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And the other thing I would encourage people to do is get out of their vehicle, get down and look over top of the grass, not just going down the road and looking out across it, but get over top of it, look down in it, look at it for the amount of bare ground or the amount of actual leafy vegetation you have on that, and make sure that you're taking those, like you said, those pictures at the same location and GPS points or along the same transit line as you said.

00;19;00;19 - 00;19;32;26
Unknown
So I think that's great advice and it's important for us to have a plan probably in this area. It's going to change during the year, but if we go in with a plan and then maybe develop some trigger points along the way to control our stocking rate with things such as early weaning or selling off some old cows, or just being able to can help us plan and be ahead of this curve in this semi-arid area that we're in.

00;19;32;29 - 00;19;54;10
Unknown
Yes. And if producers need help. That's exactly what we're here for in extension, come into our county extension offices. And if we can help you sit down and start with that grazing plan, start, show you how to use some of these tools like grass casts and a web soil survey, and help you come up with that overall grazing plan.

00;19;54;10 - 00;20;17;12
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And yeah, let's figure out exactly what you need, and maybe we can help you improve your grazing management for this upcoming grazing season. Well, and Scott, if they need to contact you, where do we find you? Well, again, I'm here in the Kit Carson County office in Burlington, Colorado, and you can reach me by phone at (719)346-5571. Or you can shoot me an email.

00;20;17;13 - 00;21;00;27
Unknown
And it's my name Scott.Stinnett@colostate.edu. And if you need to reach me, Travis Taylor, or have any suggestions or questions about this podcast or future podcast, please call me at the Yuma County Extension Office in Wray, Colorado at (970)332-4151 or at the standard CSU email at Travis.Taylor@colostate.edu. And we'd also like to throw out there that coming up here in May.

00;21;01;00 - 00;21;25;19
Unknown
They're going to be hosting a hoof to plate program on campus at CSU hosted by CSU Animal Sciences. And so we hope you'll look for that information coming out soon through CSU social media, maybe posted at your sale barn, or if you get one of our newsletters or any other

correspondence from CSU extension, that will be something to look forward to this May.

00;21;25;24 - 00;21;34;29
Unknown
And with that, I think that will wrap up this session of our Pasture to Profit podcast for Scott and myself. We hope to see you here next time.

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