

Interview: 1
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Transcription: M. Dinan
7/29/20

I: Interviewer
R: Respondent

I: Alright [REDACTED], can you tell me about your role with Extension – what you do and who you work with?

R: Ok, so of course, [REDACTED] with Luna County Extension, located out of Deming, New Mexico. [REDACTED], so I deal with all aspects of agriculture including ranching and cattle production in Luna County.

I: Nice! How long have you been working in this position?

R: It'll be twelve years in August.

I: Oh wow, congratulations. That's exciting. And this next question is kind of tricky, but what are ranching operations like in Luna County? And I understand it can vary so much, so whatever details you can tell me would be great.

R: Well okay, so of course in Luna County being laid out in a Chihuahuan Desert setting, it's a tough way to make a living for sure. And there's a lot of management that goes into having these cows here, ya know, we look somewhere in the neighborhood of 3-5 cows per sections and that's probably high on most years. Some of this stuff may be more like a cow-calf pair to a section or something like that. A lot of this, ya know, doesn't work without proper management, and a lot of that being we supplement and travel long ways from water. These cows have to be pretty well adapted – the cattle that we run here – have to be pretty well adapted to this country. Ya know, you're not going to see a lot of cattle brought in from the north. Maybe some bulls, but most of the time we'll use a yearling bull to get them adapted and acclimated before we start to have them service these cows. But most of these cows are from the southwest region. Either we grow them ourselves or from different ranches around, maybe buy replacement heifers off of them or something like that and grow them up in this desert setting. As you get up in the northern part of this county, we start getting into some rockier, more mountainous, country and the feed gets a little bit better there. Of course our grass, a lot of our grammas and that sort of thing, but still a tough way to make a living here in Luna County is running beef cows. And these guys gotta be very attentive to what they're doing – either moving these cows around to different ranches they may have or different pastures they may have as well as keeping feed supplement out, and I've talked about that a little bit already. But ya know, range tubs, range cubes, maybe molasses to supplement in the way of syrup, and of course hay feeding as we're going into supposedly the rainy season, the monsoon season. We haven't had a whole lot around yet. We were fortunate this year to have a bit of fall and winter moisture, so that's carried us a long way into this ol' hot summer, but now when we get into over a hundred [degrees] everyday, that pretty much knocks anything back we had in the way of forbs and weeds and that sort of thing. And ya know, grass out here on this lower country is

all tabosa, so we don't really get any green-up until we get about an inch of rain on that stuff, and then we need a couple of tenths every couple of days for a while or half inch every week to kind of get it greened up where these cows can get a hold of it and actually start doing some good again. So right now, we're supplement feeding. I did the USDA NASS report this morning – survey – and I called that about 90% of our cow herd was receiving supplement feeding, so we do a lot of supplement feeding here so. I hope that kind of gave you the lay of the land of where we're at here. I don't know if that answered your question or not, I kind of beat around the bush.

I: No, no! That was really informative, and I had no idea about the state of supplement feeding here. I was thinking how nice a molasses supplement sounds to me right now, but I know those cows would much rather have grass of some sort, so I'm sure that's a really challenging landscape to navigate – grass availability and supplement costs. Can you describe the changes, either related to climate or landscape, that you've seen in the last twenty years?

[05:00]

And if you haven't been there that long, just as far back in your memory would be great.

R: Okay! Yeah, so I'm a native of Luna County. I went away for a little bit for college, and I worked in Texas for a while, but as a whole, I think our weather pattern and way that moisture falls, that would probably be the largest change I've seen. We've always had the heat and the way it comes on through these months of June, July, and August. But the thing that's kind of been what I would call different for us is where our rains actually fall. We always look for July, from about July 4th forward to receive our rains. In recent years, we've seen a lot more of our fall and winter moisture probably than we've ever had, and that's probably been in the last 3-5 years. So that's been the biggest change. Now, don't get me wrong – not so much this last year but 3 to 5 back – we also received some decent summer rains, monsoon rains, but it wasn't general. Spots of the county received it, where we didn't get a good general rain like we used to. So my biggest thing would just be our rain pattern's a little bit different, but we probably still receive our annual rainfall which is about 8.6 inches, but I'd have to say on the last few years that would be a touch higher but it kind of came at a time of year where it puts some moisture in the ground but it really didn't produce feed for us. So that's probably my biggest change that I've seen is we've seen the moisture, and that's great because it puts moisture in the ground, but we don't get any real good out of it because it falls after we've frosted over here.

I: Yeah, that's hard. You know rain is being helpful and hitting certain places, but if it's not helping the grasses grow and the other parts of the ecosystem that relies on the rain, that can be tricky. How do you see things changing in the next 20 years?

R: Oh boy, hah! If I could predict that, I'd probably be a rich man! Boy, that's kind of a tough question. As far as weather, how do I see it changing? Is that what you're asking?

I: Yes sir!

R: Well, I'm speculating here, so I would say it would probably remain on the pattern that we're looking at now, kind of what we've been discussing. Ya know, we might receive some of our summer rains. I think most of it is going to fall in the fall of the year and carry on into the winter.

I: Well, I'm placing your bet, and I'll get back in touch with you in twenty years.

R: Yeah! In twenty years if I'm still around, yeah I'd wanna see how that worked out!

I: Hah! How do the differential rain patterns, how does that affect livestock producers in Luna County?

R: So basically what you're asking is how do they manage around these rain patterns?

I: Yes! Asking that as well as any problems that it produces for them.

R: Okay, well we kind of started out with this, I kind of got ahead of myself. Our biggest deal is bridging the gap between when we receive rain and when we don't. A lot of supplement feeding goes on here, and I'm talking a truck load after truck load of feed goes to these cattle to keep them in here. We reduced our herds probably ten-twelve years ago. We cut these cow numbers back at least a quarter to what we used to have, maybe more. We've built them back up probably, but I'd say a quarter of our cows went away ten years ago and we haven't put them back just for the simple fact that our pattern has been that we're going to have to feed kind of year-round type of deal, or nine months out of the year.

[10:00]

We're going to have to keep some kind of supplement feed out for these cows. When it got real, real dry here in the early 2000s as it did all over the nation, a lot of our cow numbers went away, as well as if you'll remember, I think it was 2003 or 2005, when the BSE scare came in? A lot of our cow inventory numbers went away with all of that because our beef market went to pot, and we've never really recovered all of those numbers I don't think. I don't see that number there. But my biggest deal for management is that these folks have to spend so much money to keep the cow herd that they have. That's their biggest management thing is keeping these things going along and keeping the ranches stocked, so like I said maybe at 75% capacity. So that's reduced our revenue on calves being sold, as well as culled cows and bulls being sold because they're just not there. So our biggest management deal would be that we have to feed to bridge those gaps to keep in business.

I: Are there strategies currently on the ground or thoughts in place about ways that might be done?

R: Ya know, I've had some folks try the rotational grazing, to do an intensity grazing rotation pattern. We've tried some of that. This wasn't done in recent years, probably 5 or 8 years ago. But the problem is is that there's just not enough forage on the ground to make it feasible to keep rotating those cattle through it. They would be better off, I hate to use this term, but sometimes we're better off just to dry-lot these cows and feed them up close to the house versus having them spread out where we have to travel further. Some of our BLM and state land, there are some rules and regulations that we have to be

real careful in how to feed them with hay and that sort of stuff. And so yeah! Some of these guys will bring them up closer to their headquarters or their house and just kind of feed them until we start getting some rain. And so, strategy would be to do whatever it takes to keep them fed. I know it sounds like I'm beating the same drum, but that's just the nuts and bolts to keeping our cattle on these ranches, is we have to bridge that gap a lot of feeding them.

I: No, that makes perfect sense. And gosh I can imagine folks are travelling great distances to check on cows and feeding cows given the lay of the landscape in Luna County. Is that correct as well?

R: It is, yes. But the county is not very populated and you're driving a long way to get anywhere anyways. Another thing that I would say, I've had some guys do this, is they've gone over to like Alamogordo and lease some of that McGregor range over there as well as the Otera Mesa and some of that stuff. So we've actually had cattle move out of here, they'll go lease some country over there, and let their ranch rest. Maybe they get a little more rain over there, or at least get some bigger area over there for these cows to mill around and make a living and let our place, maybe we're catching some rain, let it grow back a little bit and recover, but you can't hardly do that when some of those leases over there are going for over fifty dollars a head unit. That gets pretty pricey too. You can feed quite a few cattle for that. So I have a lot of people having to weigh the pros against the cons – should they move them, crate them somewhere? Or should they just leave them right here and bring them every bite that they're eating to keep them in a body-score condition that keeps them healthy and able to breed back and raise a calf and ween that calf for us.

I: Yeah, I was curious if that was something that a lot of folks were doing, but after hearing how expensive it is, I would assume it prevents a lot from doing it. Yeah, I it's a gamble too if you're unsure if it's going to rain while the cows are away and if your land will actually recover in the meantime.

R: Right.

I: Darn! Do you see a lot of people taking that chance though? I know there a lot of factors but what's the outlook for most people?

R: I could probably count on one hand the amount of producers that would even look at moving their cattle of their ranch. It's not that big of a deal, but I do have some larger guys that think about that and that have done it.

I: Has it been successful for the most part?

R: I would say it was about fifty percent successful. And talking to them, I'm not sure they would ever do it again! That's a huge undertaking.

I: Gosh, yeah! Just moving yourself across the state is tricky, not to mention fifty-plus cows going with you.

R: Yeah, or two or three hundred.

I: Oh my word, absolutely! What other resources are folks using? And these could be tools, educational programs, whatever comes to mind that people are looking into as a means to combat or cope with these various rainfall patterns.

R: Well, ya know there are several different programs that are offered through NRCS. A lot of our guys take part in USDA NRCS stuff. Cooperative Extension has been a big part with them as well. We go through our herd health programs. Ya know, until COVID hit, ya know we were doing at least 2 of those a year, maybe 3. We'd go over everything from herd health to how to manage the drought to different feed supplements to different mineral programs you should be on, weed control in the way of noxious and invasive weeds. Of course, I work with the Soil and Water Board here to convey a lot of that knowledge to producers. Basically just educational workshops and things like that are probably the most beneficial and probably the most utilized that we have and that being through Farm Service Agency, NRCS, and Cooperative Extension Service. So all three of us are kind of big players for our producers.

I: Do you see other technical assistance folks, or is it pretty much these people?

R: I'll give you an example. Here in the last five years, we've done some rainfall insurance work. We've had a couple guys come in a sell drought insurance to these guys, and some of those folks have really taken part. And if they offer some of them, I don't try to pry into what they received, but that's been some help, those guys showing them some things. But as far as some technical stuff that's come out, I'd have to say no.

I: Interesting! For all of the producers who are in Luna County, would you say a good bit of them coming to y'all for help or do you have a lot of folks who try to figure it out on their own? What does that look like?

R: I would say that probably anywhere from 75 to 80 percent of our producers are involved with us, and then we have those folks who are just going to do what they're going to do and it doesn't matter what you tell them or try to show them.

[20:00]

They're just set in the way they are going to do it. But I would say probably annually, we reach 75 percent of our people. And that's all producers, from the guy who has twenty cows to the guy that has up to four or five thousand cows.

I: Wow, that's a big reach! They're obviously different in the size of operations, but are there similar characteristics among the people who do come to y'all for help?

R: Yeah, I would say there are – how should I put this? They encourage any type of help we can offer up and they are always willing to learn. Ya know, they'll take a little piece of it, they may not take it all, but they'll take a little piece and go home and try it. So I guess we keep it interesting enough to keep them coming back! So yeah, they're always willing to try to learn something at one of these deals.

I: Haha! That's awesome! Yeah, I'm sure the programs are great. What I'm hearing with most folks is just getting them in the door is huge because like you said, they may not try everything, but something might change that could be a huge game changer for them. Now, do you see a lot of folks who kind of run into no longer being able to cope with these challenges posed by the climate?

R: Oh boy!

I: I know it's heavy!

R: Let me think about that one a sec. I would say that for a majority of our people, our producers, they are pretty well in it for the long haul. These are traditional ranches that maybe have been passed down, maybe it's the third or fourth generation on it. I don't see much fall-out from just getting drought or the market or – not many of these ranches change hands. The old ranches don't. There are a few little ones that do. Kind of the weekend warrior. But these established ranches, those guys are pretty determined and that's what kept them together. Ya know, having deep roots to a ranch and figuring out a way to do it. Ya know, if you think back here to 2014 to 2016 when the cattle market was the highest it's ever been and probably will never see that price again – well I shouldn't say that, we have a bet going for twenty years, so.

I: Haha!

R: That helped bail a lot of these guys out. And what I mean by that is hopefully a lot of them got their ground paid for, that if there was any debt on them we got those paid for when those cattle were worth three times what they are now. And it increased that profitability on a large enough scale to make a difference to kind of set them up for life. That's kind of how I look at that. If somebody didn't get all their finances straightened out right there and then, you probably weren't going to get just going along as we are now. So I think that was probably the biggest thing that helped my guys was get a lot of their cattle paid for, a lot of their land paid for, and maybe most of their machinery. So, ya know, I know that's kind of the long way around the barn, but most of these guys are pretty well – ya know, they may have a line of credit to operate to buy feed, to maybe buy some cattle, but hopefully they're paying out every year now. Hopefully have a lot of their mortgages taken care of.

[25:00]

So I think we're kind of set on these people being here. They've had to adapt to this country. And I think they're here.

I: That's great to hear! I always get nervous asking that question because it can be super hard and sad, and this is a very hopeful response, and I'm grateful for that. Do you see – you mentioned there are multi-generational operations – do you see a lot of people coming back to the ranch to take over?

R: Do you mind restating that a little bit? It was kind of cutting out on the phone.

I: Oh I'm sorry! I was talking about how you said a lot of these ranches were multi-generational, and I'm curious if there are the kids or young folks coming back to take over?

R: Ok, now that's a difficult question! Ha!

I: Oh boy, haha!

R: [Sighs] how do I see that? Yeah, these have been multiple generational ranches, with most of our guys probably reaching seventy years old. Between 60 and 70 years old. And I'm thinking – this is just kind of a shot in the dark, just thinking about our demographics around here – that about 1 in 7 of these ranches have somebody to come back. A kid, a niece, a nephew, a younger person that maybe a rancher is helping them get started. I don't see a whole lot of young people coming back, let's just put it like that.

I: I've heard that quite a bit unfortunately. Are there programs in the area or other resources that people are using to connect young people to agriculture or with families with people who aren't family members, or things of that sort?

R: Well, actually the New Mexico Farm Bureau does a good job with their Young Farmer and Rancher program. We actually have a young man who serves on the Board here with me that is actually our district rep for them. So I know they have a network for the younger folks. And I know there are some programs through the USDA, the first-time farmer and rancher programs. Of course through Cooperative Extension, we've done the New Mexico Youth Ranch Management Camp, I don't know if you're familiar with that or not, where we usually take 20-30 kids to a ranch for a week, let them take part in all the different aspects of ranching that they may be faced with in New Mexico. But as far as a lot of formal programming, I do not see that. I think the younger generation has to go look for it to find some help with that.

I: Yeah! There are only so many resources – or that will only be as helpful as folks that are interested in getting into that and curious about the industry. Is that what you're saying?

R: Right.

I: Yeah! That's really interesting. I've chatted with some people whose ideas for tackling these challenges is definitely reaching these younger generations who have nothing to do with agriculture and convincing them to get into this industry whether that be through neat documentaries or other things of that sort to highlight this world. But I think I'm going to have to look into that camp because it sounds like something I want to do! That's really good to know about.

[30:00]

Alright [REDACTED] you mentioned regenerative, or rotational grazing, excuse me, and other solutions that you think would be helpful in combatting these challenges you see in these areas. But

thinking big, and like if you could do anything, what solutions would you put into practice or maybe see other folks put into practice, but just haven't yet or can't?

R: Okay, well one big thing, and we have some guys who are pro-active in this, is our brush control. We start looking at creosote, I think that's one of our biggest threats, but it's bigger than that because creosote grows there because nothing else will. I think soil health and soil biology is a huge factor. If we can clear up the brush and do something to kind of reclaim this ground. But it would take so much money and time and I just don't know if it's feasible to do all of that. Down here in some of this lower country from here to the Mexican border, that's just all it is is creosote and sand dunes. So we have a hard time getting anything established. Now we have been successful in some of projects of treating creosote, but you're talking 20 to 25 years for this stuff to recover. A lot of these guys don't have the time or the money to do that. You're talking about a guy being 70 years old and you're asking him to kill brush and replant grass, well he'll be 90 years old by the time he sees any benefits. So he's going to tell you pretty much to just go jump in a lake. He's just trying to make it a couple more years and hang it up. Either sell it or pass it on to his kid, or nephew, or niece. So I've seen that. We've talked about the rotational grazing a little bit, but it's time and labor intensive and really doesn't get that much benefit for the effort that goes into it. So I don't think that's the answer unless you have one of these better ranches that has some turf, or what I call it, a turf ranch. Something that's grass versus shrubbery and all that stuff. A lot of this country, if you try to rotational graze it, it's just not going to happen because there's not enough to carry those cattle along anyways. So I would say that brush control would be big for us but it also comes with a waiting period if you will.

I: Yeah, it seems like with a lot of this that timing and time is not on our side for the most part, but I think southwest New Mexico definitely, if it can reduce some shrub and restore to some grassland, that would be. . . gosh, so cool. I'd love to see it. Well, is there anything else that might have come to mind that you would like to share?

R: Hm, no. I just don't know if I was able to answer your questions for what you were looking for. I would ask if there was something you needed to ask or clarify to get what you were looking for, then to please ask me again. But I mean, that's pretty much Luna County ranching in a nut shell.

I: No, that was so helpful! I learned so much!

R: Yeah, it's not an easy task!

[35:00]

I: What I'm hearing is it's hard country, but resilient people, and there's good things going on and that could happen, so I'm excited. I guess one thing that you could clarify, and I'm sorry if you're repeating this, but the size of ranches in Luna County?

R: Well okay, ya know we have some guys that have ranches that are a hundred sections. We have some guys that have multiple ten-section ranches. So to come in here and ask what the size of ranches are in Luna County, I would have to say probably between 25 and 30 sections if you put it on an average, with

some of those being a lot bigger. Ya know, I have a family here that has ground in this county, they ranch here, they ranch in Grant County, and they ranch in Hidalgo County. And those are the kind of guys I'm talking about that have four to five thousand cows. We have one local rancher here that runs about 3500 cows, probably has about 300 sections tied up, so if we looked at it on a graph it's somewhere in the neighborhood of 25-30 sections would be the average. But to give you an idea of what that looks like, you'll have a guy with one to two sections and another with 300 sections. So, it's kind of all over the board. But I would go in to say that 30 sections is about the average. Might be a touch bigger than that.

I: Okay! That's good to know. And then lastly, down the line we're hoping to chat with livestock producers themselves, just because we know that each individual experience can be so different from the next, and I'm wondering if you know anybody who might be interested in chatting with us?

R: Okay, can I actually get back to you and email you their names and numbers? I'd like to visit with them before I just throw them to the wolves.

I: Of course! Totally! And if it helps, I can give you a heads up when we're thinking about starting that process, just so you don't have to do anything right away or anything like that. I'll reach out again.

R: Yeah! Just give me a reminder email. That will give me a chance to chat with them. A lot of these times, we don't get a good interview because we don't set it up correctly. And a lot of these guys will go "What?" and hang up. If they've been conditioned a little bit, with "hey someone is going to try to call you and talk with you a little bit about your management techniques," they are a little more apt to talk then. So that would just be a little courtesy that I owe my guys, to give them a heads up.

I: I completely understand! I definitely don't want to blindside or inconvenience anyone, so I definitely appreciate your strategy. And I'll definitely follow up with you soon. In the meantime, I'll transcribe our interview into a Word Document and send it over to you for your memoir or just to make sure I caught everything correctly. And then of course I'm happy to keep you updated with any findings or project-related events like workshops if you're interested.

R: Okay! And the other thing that we might talk about, and I think I alluded to this early on, is a lot of these ranches are state and BLM leases. We don't have a lot of deeded land per se, I mean a majority of it is public land that these guys are making a living on. So I think that's important to know too. These guys are not in this solely alone, especially on the brush control. A lot of this is public land and if we started new projects on this, it would be for the benefit of generations to come, not just who we're working with. I go over to the east side of the state where [REDACTED] is from and visit with those guys and people in agriculture and go to the northern part and they have no idea what we do over here, and they just think we are completely crazy to try and stay in the cattle business down here.

[40:00]

It's always kind of unique to me to go listen to some of their stories and tell some of ours and they think I'm just BSing them but I'm completely serious when I'm telling them. So that's how diverse New Mexico is! You can drive five hours and everything be totally different.

I: Yeah! It blows my mind! Do you see a lot of producers having two separate management plans because they have some private and some public?

R: No, I don't. I think these guys are trying to do the best with what they have whether it's their deeded ground or state or lease, and of course their feet are held by the fire with how many cows they can have on that leased ground. Ya know, I think like we talked, we're at 75% capacity and I don't think anyone is trying to push the envelope to hurt this country any more than it's already been hurt for the last hundred years. So I don't see them doing two different plans, I just see them doing a fairly good job with what they have to work with.

I: I can imagine too with the regulations too that some land managers put on people that it would be hard to do anything other than that, like in addition to anything other than what they have to do on public land.

R: Yep.

I: It's always so interesting hearing about the public lands' role in all of this too. Especially in this part of the state! [REDACTED] thank you so much for taking the time to talk with me. Again, I really learned so much, and I'm excited to keep learning more in this part of the state.

R: Well, like I say, every part has its beauty. People come here and say "I can't believe you live here," and I'll say "let's go look around a bit." And then they start to see the beauties that we do have. Like I said, every part of the country, I don't care where you go, there are pros and cons to living there.

I: Oh my gosh, ain't that the truth. And the lesser-known positive parts, you kind of don't want people to know about so you can keep it to yourself!

R: Right! Well, like I said, if you need anything else, just shoot me an email. With this wacky schedule we're on, I'm usually here Mondays, sometime in the mornings, but almost every afternoon I'm here. And I'm here Wednesday mornings and afternoons, and Friday I'm here all day.

I: Okay, that's perfect. Thank you so much!

R: My other staff comes in the other days. But you can just email me or call me on those days, and if I don't answer or maybe took the day off, I will get back in touch with you.

I: I believe that! It's been so easy to chat with you.

R: Well I just hope it's been worthwhile and what you were looking for. So many times I'm like ah, I don't know!

I: No, don't you doubt it at all! This was exactly what I'm looking for. And it's hard to know exactly what you want to say in these because there is so much to talk about too. But this is exactly what I needed, and I'll be sure to reach out if I come across another question or need clarifying.

R: Great! Very good.

I: Have a great rest of the day and stay safe!

R: Same to you, thanks!

I: Thank you, bye!

Interview: 2

7/13/20

Transcription: M. Dinan

7/14/20

I: Interviewer

R: Respondent

I: Well to begin, tell me about your role as Otero County's Extension Ag. Agent.

R: [REDACTED]. But we're fortunate – we have an FCS agent as well as a 4-H agent. So the bulk of my time is devoted to agriculture, or things pertaining to agriculture, here in the county. We're the second largest – the second largest geographically here in the state. We have one major city – Alamogordo – and some smaller communities around. The bulk of our agriculture is limited to the irrigation areas we have up and down the Penasco, the Fresnel, Tularosa Creek, as well as our ground water wells we use out in the basin. We grow pistachios, fruit trees, forage crops, no real truck crops, no real chile of any consequence. We have a couple farmers markers – about three of those scattered around the county when they're up going. So we have small producers that will take stuff to that. But the vast majority of our agriculture is utilizing our native rangelands for the grazing of cattle. That said, there's only about 18,000 head of cattle here in the county, and that varies from year to year as we were talking about depending on drought and forage availability. 11 percent of the county is deeded land, the rest is – 11 percent is tribal land, and the rest is federal or state lands. So that includes national monuments, national forest, BLM land, and state land, as well as a very large military reservation that goes the full length of our county.

I: How long have you worked in this position, or how long have you worked in New Mexico? Are you pretty familiar with this area?

R: [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]. And then about not quite 5 years ago, I went back to work for the University, and in this position as an extension agent. My career has always been related to the livestock industry, most specifically cattle.

I: Wow, it seems like a really exciting career path you've taken, and that helps me with my next question: I'd like to know how you would describe the changes you've seen in your region related to climate and landscape in the last 20 years.

R: So I'll go back further than that. My dad was a range and wildlife biologist for the US Forest Service. I spent many hours travelling with him as a youngster. I saw these forests as well as forests in other parts of the state. I've watched them over the years – encroachment of timber and brush species has

increased drastically. The number of elk have gone up significantly, the number of mule deer have gone down significantly. The number of permitted animal units have probably gone down.

[05:00]

. . . So we've always cycled through in my years since the late - early seventies is when I can really remember things and talk to it. We've gone through wet and dry years, dominated more by dry years than wet years. And producers have always just had to adapt depending on the availability of forage.

I: I definitely want to talk more about their adaptation strategies, but I'm also curious how you see things changing looking forward the next twenty years?

R: Well, I think land managers are going to have to go manage their lands. I truly believe a lot of our agencies are stymied by the inability to implement alternative grazing strategies, to do logging, to do thinning, do brush control on a large scale. Here in the Sacramento's, I've been involved in the Southern Sacramento Restoration project, that's been put on hold. Between endangered species and other things, special interest groups have lobbied successfully, or sued successfully, to shut some of that down, if not indefinitely at least temporarily. So what happens is, and we're seeing it here, is we're seeing a big loss to our native range lands. They're still there, the acreage is still there; however, the open, savanna-type rangelands are disappearing. And I think it's a combination of things, but that needs to be addressed because it's extremely expensive to try and restore those, and even if you're a private land owner you're not going to pay for that restoration with the revenue you derive through cattle raising and riding. We work on these projects and grants, I work for the Soil and Water Conservation District, I'm on the board of the Southcentral Mountain Rural Conservation Development Council – Committee. So I see first-hand a lot of the projects we have going, and those are wonderful – those projects are great. It's just that a small percentage of what needs to be done. And I think a lot of folks will point fingers at public land managers, but I don't think it's entirely their fault. They have a lot to deal with – those special interest groups are tough. One problem we have here in the Sacramento's, is we have a pretty significant population of feral horses, and that situation is just at a standstill. Nothing is being done significantly, other than on tribal lands or places like that, and that's very detrimental to our range and very detrimental to our environment, and we need to get some solutions to those. Both sides of the table need to come together. Right now, some of the special interest groups don't want to see anything happen to these horse populations, and I'm telling you we have thousands of head here that need to be counted and under control for both wildlife as well as livestock.

I: How do you talk about these challenges with livestock producers?

R: Well they know the challenges. It's preaching to the choir when you do that. Some of our livestock producers are pretty progressive and some of them not so much, so in some instances I think there's been a wedge driven between public land managers and livestock producers. I'd like to see practices like they've done in Arizona and other states where they bring in public land users as well as public land managers and they will make up a board – ya know, an advisory board – that looks at alternative management practices. That just hasn't happened here.

I: Do you think that – is there a reason why that hasn't happened here?

[10:00]

R: I don't know if there's a definite reason, I think there's a lot of hard things that have to be overcome. And I think we need, we need more people in the public land management sector that have a better concept of how livestock production can go hand-in-hand with regenerative grazing, wildlife management, and healthy ecosystems. There's a mindset quite frequently across the whole United States that livestock are a detriment and not an asset to range management. And most good range managers who have seen what proper grazing can do understand that those work together and not against each other. But that mindset is getting further and further away.

I: Yeah, I feel I hear about that mindset often and how different that can be – but the goals can be the exact same, the ideas people have about them are conflicting and it makes it harder on management.

R: Well, I think part of that is an educational process. I'm on the Board of Directors for New Mexico Cattlegrowers, and when I go to meetings or activities – and again, it's people preaching to the choir – we need people from all the various agencies as well as producers to come together and discuss these things. And then, quite frankly, the public interest groups need to be educated properly. I think they move a lot on emotion, especially in the case of feral horse, they don't move on science. And they get threads or portions of information that is not complete, and they base their arguments on segments of information instead of getting the whole picture. And that's tough [cuts out]. . . you can be proactive and try to educate, but if people have made up their mind, a lot of them don't want to be confused by the facts.

I: Yeah, I can imagine that having new information might change the agenda they have in mind. Thinking about these relationships with private interest groups, and relationships public land managers, and of course the dryer and hotter climate, how does all of that threaten producers in Otero County?

R: Repeat that again? How does what threaten what?

I: Oh, how do all of these challenges threat producers?

R: So, the biggest thing is, even in good years, our native range requires several acres to the animal unit, right? And it can vary greatly in my county, I go from the high desert at about 4000 feet up into alpine area where we get considerably more rainfall. That said, it still – in either locale and between those locations – it requires a fairly large acreage to run an animal unit. And you understand animal units, so I'm not going to get into that. So the way it threatens us is, is we have pressure from agencies because they have to comply with other groups. We have an extreme amount of pressure from the invasion of both native and non-native species of vegetation, right? And then we go through years where it's not raining properly. I do a forage loss assessment every fall – well, I work on it in the summer and again in the fall, but since I've had this job – it's going on 5 years now – our monsoon season has come later each summer, it's been pushed back and pushed back. Even in years where we get close to normal rainfall, that rain doesn't fall timely enough for what we would normally frown in the form of vegetation. So the

challenge for producers is when do I make the decision to down-stock? And most of them have done that, I don't know who – there are very few who are up at capacity for their allotment or for their own private lands. Most of them are below that. And ironically, most of them don't report that they downsize because they're scared federal land managers will cut their permit if they know they voluntarily do that. So they'll pay for their full allotment, for their full head count, even though they may not be grazing it at that time. And ya know, I wish we could get past that because it would be good fuel to show agencies that producers are voluntarily cutting down their numbers, and that would help them sell the ranchers' cause to the general public. But you can't blame the producer for being slightly skeptical that if I voluntarily cut my numbers, what's going to keep them from saying "you know you're right, let's go ahead and go to these numbers." They want the opportunity, when they get more rain, when they get more forage, to stock back up a little.

I: Yeah, and just to have that information over the years to see trends – truthful trends –

R: Exactly, it would be more representative of what's actually out there. And that's why when I tell you we have around 18000 head of cattle, I think that varies a lot. I think we have some producers may not have a good count of what they have, and I think we have others that don't have that but they'll let that number ride so they can maintain their allotments.

I: I'm curious though, why would they get in trouble for –

R: Oh they won't get in trouble, they're concerned that if they voluntarily downsize, like they often do, and they report that, then the powers at be in the bureaucratic system will say "ok if you're going to cut your permit from 400 to 350, we're going to go ahead and do that too and we won't charge you for the other fifty head." And the history has shown us that when allotments are cut, they are not restored to their previous carrying numbers.

I: Right, it's like we're seeing you operate at this number, why go any higher. That's tricky yeah, wow. You mentioned earlier these adaptation strategies that producers are using, because we know they are so resilient and so innovative, can you tell me about the strategies producers are using in Otero County?

R: Well mostly they'll do deferment, they'll try to rotate around. They'll have to come down in numbers, that's just a given. We know that when it's dry or when we don't have forage, we can't feed our way through a drought. I'll have producers – I have some that I know quite well – that have leased alternative grazing so that they don't have to get their numbers down and can continue forward. Because, quite frankly, we don't have a lot of really huge producers. We have some few pretty good sized permits, but for the most part this is a second job. It is a revenue they derive from their agriculture enterprise, but it's not one that furnishes everything for the household. Many of them have to do other things so that they can ranch.

I: What are the other incomes that people are pursuing?

R: Oh various things, whatever kind of job they can have to have a day job. They do this on the side. Some of them ranch full time. Some of the ones that ranch full time will work with other people related

to agriculture to help supplement that ranching. Not a whole lot of fee hunting or things like that because there's so much public lands. There's not large sections of deeded lands where that comes into play, so most of them do that.

[20:00]

. . . And our country doesn't always lend itself to intensive grazing systems, because it is so rugged and much of it is so remote, and trying to implement herd-type grazing is extremely laborious and not practical, and most people are stocking at a moderate rate and their cattle is dispersed over a very large area.

I: Are there other barriers to adaptation as a result of these agencies, or other factors?

R: Sure, and it's kind of the nature of the beast. We have a lot of allotments up in the high country and most – not all of them, but a lot – are seasonal. So let's say they come on in May and go off in October. And when you do that every year, year after year, on the same pastures for grazing cattle at the same time, there's no interruption or altering the removal of forage on those allotments. We just stock lightly so that we can disperse. But in those same allotments, we're contending with high numbers of elk, and we need our wildlife, right? And other things that compete directly with the cattle, and the cattle compete directly with them. So, we can – they can adjust numbers, the agencies can adjust numbers, but I'd like to see them work on adjusting more grazing pressures, but that's really hard when you have large herds of elk hitting areas that have decent grasslands pretty hard. So I think one of the biggest contributors we can do to our grazing area here is to expand it, and that's through brush control. Logging, whatever it takes to open up more of our country back what it looked like many, many years ago when fire was the natural thinner of our forest and came through here. Now, we can't have fires because it's so devastating, it's such a fuel load, that the result are catastrophic, right?

I: Do you think there's hope in turning brush back to grassland? I know that's a huge issue in southwest New Mexico, grassland restoration, and if it's even feasible.

R: I'm sorry, what was that you asked? I'm having a hard time hearing everything you said.

I: Oh, I'm so sorry! I'm curious if you think there's hope turning the brush back to grassland?

R: Well, it's not just brush, right? Some of it is timber. I think that one – it's going to be costly, we're going to have to prescribed fire and things like that that can do large areas in a more economical fashion. But we still have areas in the high country where logging could still be an option, and they've tried, to reintroduce a little of that. But then of course, we got shut down. So it's almost like when a federal agency finds a way that they can allow certain areas without disturbing critical habitat for spotted owls, jumping mice, or whatever it might be, they can open areas to that kind of thing. Now we have someone coming in harvesting logs that they can sell. A lot of our brush control is a one-sided, costly thing. It's utilizing our biomass that we're removing to try to get some return, and then when that gets shut down, it's just stymied, so nothing goes forward. And so is there hope that we can restore it? Yes, but the atmosphere and attitudes around it are going to have to change for that to happen. In

today's world, a lot of people think cutting the trees is a bad thing, and if you're familiar at all with western rangelands, you understand there's a carrying capacity for vegetation just like there is a carrying capacity for wildlife or livestock, and we have surpassed that carrying capacity in a lot of our forests and they're not healthy.

[25:00]

. . . Here we're seeing large beetle infestations on drought-ridden Douglas firs and large conifers. That's costly to the Forest Service to clean that up. A lot of our topography is such that logging is very difficult because of the grade, the steepness, of where those trees are. And I think it would help restore our water situation if we could get our biomass down also. Not only open up more brows for wildlife and cattle, but open up more forest, and at the same time, maybe get our water tables back up.

I: Oooh, I like that logic. I think that's an excellent strategy. I'm going to bring it back to this idea of drought again. What resources, possibly educational resources, are producers using around drought and a dryer weather system?

R: Resources in the form of monetary resources?

I: Um, that or educational programs or tools they are using?

R: Ok, I participated – some of our producers had a gentleman come in and talk about regenerative grazing, gave us a good talk. It wasn't super well attended, but we had about 8 producers there. It was a very intriguing talk with really neat information. It was hands on. It wasn't some test we did out on a couple thousand acres on the Jornada. He had live, acting ranches doing this with good results and all different kinds of rainfall areas, from back east to Midwest to going down into Mexico in country much like we have here and doing it there. So I think that's a great resource, but in a ranching situation like we have here where the vast majority of our producers have public land leases – BLM, or Forest Service, or state – public land managers have to buy into that concept of alternative grazing systems. They have to give the OK, they have to help the producer to be able to go in and chop it up with electric fences, move those cattle around, distribute water better. I mean, we'll do a few of those things, but from a large scale a different kind of management usually doesn't happen, and it's not because the producer doesn't want to cooperate, it's because the public land managers' hands are tied. So if you think about it, in a concept that I have a ranch, right? And my ranch has so many deeded acres and then my allotment is such and such size, that's the working unit I have to work with. The geographic size of it doesn't change. So if the geographic size of it doesn't change, how we manage the acres within that given unit has to change. And in order for that change to take place, all parties have to be agreeable to do that. And what you see repeatedly is when new concepts are trying to be introduced or done, there may be push-back within the agency, and there may be push-back from the producer, but more importantly there is push-back from special interest groups that are watchdogs on these agencies, and they'll make a move to hinder it. So the current lawsuit that the Wild Earth Guardians have on the spotted owl issue, stopping all the logging in the western states, they may not win that lawsuit, but they can tie it up long enough. So now industries that rely on keeping people employed, and setting up in a location, and maybe setting up a lawsuit, and maybe moving guys into an area to do this work – they have to keep working. So when

they shut these things down, what do these people do? They have to be pay-rolled, they have to keep these people employed or they run out of business. So they will either go to areas where they can do that on private lands or they fold up. It's hard to invite industry in that accompanies some of those stymied management techniques . . .

[30:00]

. . . because they all know it's an on-again-off-again type of situation with their ability to go do work.

I: Wow, that's really interesting. Do you see folks who have part private land, part public – or working on public – that they'll do two different management strategies?

R: Oh absolutely, and thing like the Rural Conservation Development and Soil and Water Conservation – those private land managers can sometime get aid to do that. And we're doing that right here in the Sacramento's, we're doing thinning and stuff. But we're only working on deeded land right now. Well, first of all, a lot of those grants weren't available to public lands, but even when we get some shared monies, if it's shut down, it's shut down. Whereas a private land manager can go ahead and do thinning practices and things like that. But in this county, keep in mind, there's not huge – there's one or two fairly large deeded ranches and they're going to do what they're going to, right? And quite often that's owned by outside money, it's not a mom and pop ranch that's been around for generations ranching. So, for the most part, we are in a situation where we have to deal with smaller acreage of deeded land and larger acreage of allotment land. And it could be BLM, Forest Service, or state.

I: Wow. Kind of going back to the services y'all provide as Extension – what are the characteristics of producers who are most likely to accept your help?

R: So, most of them – part of it is building a rapport. Part of it is bringing something that's usable. So I can come in and do a program on regenerative grazing, but I don't think the attendance would be that great, but most of those producers know there's only so much I can do, I'm [the producer] am a federal land user, I'm a public land user. I do a lot of – I don't do a lot – I do a fair number of reproductive clinics, we do things on trichs [Trichomoniasis], we do things on managing your heifers' reproductive-type clinics. I do a lot of forest-wise talks – but that's not to my bigger producers. Some of it is – and we do fire-wise talks, excuse me – and we do fire-wise talks for our producers. And most of them are pretty savvy around what they need on their deeded homesteads and their working facilities and we'll implement things to be fire-wise. Being fire-wise on federal lands is up to the federal land manager.

I: How about the folks who ya know, might not be coming to y'all or using a federal land manager, are there other people that they're seeking advice from?

R: Ah well, besides from each other? Well, coffee shops! There's private consulting folks out there, but I'll be honest with you, most of our producers don't have the economic resources to hire an outside group. For those that are willing to work with the university, we have a whole host of things we can provide them free of charge. On nutrition – we do a lot of programs on nutrition. Mineral, water needs. All those things are great and they help. But at the end of the day, my greatest natural resource in this

county is native rangeland. And that greatest amount of that rangeland is controlled by federal agencies. So until we have buy-in from federal agencies to work with producers and not be hindered by other groups giving their input, that situation will not change.

I: Yeah, I'm hoping for some change. Now, you talked about these folks having alternative incomes. How do you anticipate what producers will do when they can no longer cope with drought or the barriers that federal agencies put on them, what are the solutions for them? What happens when they can no longer cope with those challenges?

R: So, my concern is this: when those smaller producers – the joke is that you're a good rancher if you're wife has a good job in town. And there's a lot of truth to that. The wife may have insurance, she has a steady paycheck however big or small it is, and that enables that family to operate things, ok? If it gets to a point where the numbers are such that you're not running enough head to be making a lucrative enterprise – and we're not talking making a living to be just in the black on a regular basis. And the cattle industry is a gamble, everyone knows that, but you've got to have enough numbers to where you can make a go of it. I think on those smaller allotments, if the pressure gets too great, those won't be picked up. Now we have allotments on the Forest Service now, I don't know about the BLM, that have what are called "in deferment" or not being used. And for different reasons. As for how many young people getting out of college today who want to make a living as a ranch manager in this part of the world – a lot of them are going to area points further east where there are deeded ranches, lots of deeded ranches, or in other parts of the state where there are large deeded ranches. And they'll take a job with them. But to try to take over mom or dad's little place is very hard because young people may not want to contend with that standard of living or it's just not feasible for them to contend with that standard of living. So I think those will go away, to answer your question.

I: You've kind of touched on this, but I would love to hear more – are there solutions that you would like to put into practice, or like to see others put into practice, to address all of these challenges?

R: Well, some of the solutions that have been success stories is some of the producers have been able to work with agencies to get more fencing, more infrastructure, to have these huge vast pastures that are sections. It is hard to manage those intensively, so by cross-fencing and establishing waters, that helps a lot. Doing weed and brush control helps immensely when it can be done. But again, the biggest thing I see here is getting our over-grown population of large, woody species under control. Getting them back to a balance where we can maintain spotted owl, jumping mice, you name it, whatever wildlife that's been targeted or on our endangered list, and the habitat they need. But also provide more habitat for our large ungulates – elk, deer, especially elk. Elk are more competitive grazers than are say deer or browsers. But isn't it ironic that our elk populations are going up and our deer populations are going down? So, keeping a healthy forest, keeping a healthy rangeland, those are going to require commitment and a big about-face by public land managers to implement that. If they can at all do it.

I: Yeah, I really like that whole-ecosystem approach, and in that ecosystem there are definitely humans involved.

[40:00]

R: Sure. And that's part of the deal with prescribed fire - our wooded area is so peppered with small chunks of private land - maybe somebody has a small cabin, or a few acres, or whatever, or they have whole subdivisions up around Cloudcroft. Prescribed fire's not going to be a prescription that we're going to do because of the risk involved. So we do mastication, we do other things, we do thinning - all of that takes money and resources. So it's a commitment. I'll give you an example. When we were working on the Southern Sacramento Restoration project, a lot of it was to cut down on the fire danger to minimize fuel loads and get the forest healthy again. Well, there were those Guardians to protect the spotted owl. So if we have a fire, the first thing that's going to go is spotted owl habitat. Because our grass will come back, our elk will come back, our livestock will come back, but those trees that they need to protect for habitat that they don't want anybody to cut, are threatened by the very same trees adjacent to these bunches where the owls are by fire. And it's not a matter of if, it's a matter of when. They have a catastrophic fire in those areas.

I: Wow, that's so interesting. I don't think I've ever thought of that problem in that way.

R: Nor have many of these people who lobby for some of these things and throw these lawsuits out there. It's a balance and has to be a balance, and it has to be managed by man, because there are so many people into our woodlands, our wilderness areas, whatever you want to call them, that without man's intervention to manipulate for a more conducive habitat for all of the above, it won't happen. Because if you leave it alone and do nothing, Mother Nature steps in. And she doesn't ask anybody from any special interest group what the outlook should look like.

I: That's so true. I'm hopeful for plenty more conversations with plenty more groups and having that dialogue open up. I think you're so right that that needs to happen, and that that educational component needs to happen. Yeah, there's so much still to learn. I really appreciated you chatting with me about all of these things! I certainly learned so much. I want to be able to give you enough time to get ready for your other meeting, but I want to see if there was anything else that came to mind that you wanted to talk about or share before we part?

R: Not really, you've done a really good job. Look, don't take this old man's rambling as the gospel. I mean my school has been education and on-the-ground. Generally, there's two sides to every story, and you need to research those properly. And I'll give you an example of that. There are a lot of people opposed to the production of cattle specifically to the impact it has to our environment because of methane gases and things like that. So you can look at what the EPA has put forth on different things that are pollutants to our current world. In the US, these aren't numbers coming from an Ag college, these aren't numbers coming from an agricultural group, they're coming from the EPA. Worldwide, tire-culture is about 20% of the footprint. In the US, it's about 10%. So because of our laws and restrictions and our oversight, so we do a pretty good job. The biggest contributors are the people driving to the rallies in their automobiles. So industry and autos are number 1 and 2. Of agriculture, 3% of the footprint comes from cattle, ok?

[45:00]

. . . And what I don't think people understand is yes, cattle emit methane when they regurgitate, belch, do those kind of things. So do elk and deer and other ruminates, but when you think about it in these terms of western rangelands, we don't have to break out a plow, we don't have to fertilize, we don't arrogate or use water that are for municipalities, right? We utilize native range. And it's a wonderful resource when it's managed properly. And the best things humans can do to try to harvest some of that native range while maintaining a good balance of a healthy food system, is to graze livestock, right? Their input is very small. They don't drive around on roads, we have some feed roads that we get out on to check on cattle and go to pens. Most of our windmills now are solar because it's more efficient. And we're providing minerals, salt, and water to wildlife species that inhabit the same area. So I think that needs to be worked on, I think people need to illustrate that.

I: I think that's a really good point, and I think too that people are missing those facts that you brought up, but they're also not taking into account the lifestyle and the culture that's wrapped up in working with the landscape.

R: Well, it is, and people have hung their hats up on that before, that it's not a career, it's a lifestyle. But some people don't care about lifestyles. I'd rather appeal to people's science, to their brain, make them think about it instead of being like "hey man, this is our way of life and you're taking it away from us." Some people don't care about that, a lot of people don't.

I: That's a very good point.

R: Alright!

I: Alright! Well thank you so much! What I'm going to do is transcribe our audio and send that back to you just so you feel comfortable with everything that's there. I'll follow-up in a couple of days with that, and I hope you have a great rest of your day. Thank you so, so much for your time!

R: You too and be safe.

I: You too! Bye!

R: Bye-bye!

Interview: 3
6/15/20
Transcription: M. Dinan
6/18/20

I: Interviewer
R: Respondent

I: To begin, I'd love if you could tell me about your role with extension.

R: [REDACTED]
[REDACTED] My primary focus is beef cattle. I do some sheep stuff, very little on the smaller, like goat or chickens, that kind of stuff. Most of the work I do is in beef cattle production. And my primary job responsibility is to go around the state and educate cattle producers on best management practices, and that would include managing through drought, whether it be nutrition, reproduction, that kind of thing, selection. And then I also oversee the Tucumcari Bull Test in Tucumcari, New Mexico, and what that entails is producers from across New Mexico, Texas, Colorado, bring their bulls, their registered bulls in, and we measure their feed intake, and their growth, and other parameters, and we help sell those bulls for them in the Spring. And then the third thing I'm involved in is called the Range Improvement Task Force, and this Task Force is charged with helping bring science to policy issues, predominantly, particularly if there's a conflict of some kind, we evaluate what's the science behind the source of the problem and try and come up with a resolution for that. And in doing so too, there's a research component where I'm also evaluating water use in livestock as part of that.

I: Wow. You've got quite a lot on your plate, but it's so interesting all the different things you get to help with and all the different scales, all the way from the individual person to policy level – that's so neat. And you're based in Dona Ana County, but you pretty much go all over the state?

R: Right, I'm housed on campus but we cover the full state as all the extension specialists do.

I: Great! Well that helps me with my next question. And it's kind of tricky because, ya know, when you think about the diversity in ranch operations across the state like we talked about earlier, there's just so many ways to describe them. But if you were to talk about Dona Ana, or even wider, covering the Arid Lowlands region, what are ranch operations like there?

R: So being in the very south central part of the state, or just the southern part in general, is different than mid- and northern, where it requires almost double the land need to raise the same amount of cows as other places. Which raises a lot of problems right. So they need a lot of land, just because stocking rates are so low. And the producers understand this.

[5:00]

Ya know, they realize that they need a smaller animal typically that's more efficient that can handle these harsh conditions, that will travel to water. And that's probably their biggest limitation is water access. They definitely have a different approach, because they have to. It's just such a different environment. I don't know if that really answered your question.

I: No, it definitely did.

R: It did? Good.

I: Yeah, I guess that has implications on grazing management? And ya know, the land base too, if it's private or public? Can you tell me a little bit about that?

R: About the what now?

I: About the grazing management in this area?

R: So, like I said, I think it depends. I've seen as low as 40 acres to the cow to as much as 100 acres to the cow, with it being more towards that 100 acres in some cases that's required to run a cow year round. They don't have that ability because the environment really doesn't allow them to do like pasture rotations on it because we just don't get the rain. That's one of their limitations on being able to do adequate pasture rotation that some areas can do. So from a management standpoint, minimally they'll see their cows in the fall and then they'll see their cows in the spring and that's about it. Most guys will run their bulls year round, which we try to educate that you might get better use of your grass by having a calving season, but logistically that's challenging for them to do that in the southern part of the state, so it is a different situation for them all together. And they, ya know like I said, they look at animals that are suited for the environment because they know they have to live there a long time. Like if you brought in a cow from Missouri to New Mexico, she would not handle it very well. They tend to buy cattle that were raised in similar environments.

I: Okay, is that associated with the cow breed or just where that cow was previously – is it like a genetics thing or an acclimation thing?

R: So, there's breeds that are more adapted to this climate than others, but with that said, there's English breeds like Angus and those that have adapted that do fine. But certainly, you see a lot of what I call thinner-hided cattle that have some brahman influence on them or bos indicus influence in them just to kind of help with the heat stress a little bit. By and large, it's kind of an all over the board breeds, but by the end of the day it's about the size of the cow and how well she breeds back and is she adapted to the environment. Most producers will just replace the cows that they cull with heifers that they raise, because they were raised in that environment, right?

I: That makes a lot of sense and is really interesting too. Can you tell me about the changes you've seen in your region related to climate or landscape? And ya know, we're thinking in the last 20 years, but if you haven't been here that long, just as far back in your memory that you can think of.

R: Right. I got here in 2013 and that was right at the peak of a pretty lengthy drought, where they culled – from statewide, they culled – I want to say almost 40 percent of the cow herd. They ran out of grass, right? So the cows left New Mexico. And then they slowly started to come back. How it's changed

[10:00]

... as far as weather pattern and trends that I've seen, ya know, if you talk to the producers that have lived there their whole lives, they'll say milder winters, monsoons are getting a little more sporadic, I guess. But it's really a feast or famine here, I've found, where you either get way too much moisture or nothing, and it's just a few miles apart where you get that. Like just Monday - was it Monday? What's today? No, today's Monday, so it must have been Friday that we got this huge rain where we got almost an inch of rain where I live – I live up behind A Mountain – and that's unheard of in June. Usually you have nothing until July. So it's gotten a little more erratic I think in its pattern.

I: Do you – how do you see things changing looking forward in the next 20 years?

R: So I think drought is just going to be part of the constant conversation. That, like with anything, the ranchers are going to figure out how to adapt to, whether they be less cows or different cows or more water development, I think where they would drill some wells where there hadn't been just to get some better pasture distribution, pasture use. Even like a cistern system where they start capturing rain water to help alleviate their lack of water. So things like that. They are pretty resilient folks, they're very tough, and I think they'll figure out how to survive. And again it's hard to predict 20 years from now. I think everything's cyclical, so hopefully we have enough good years in that 20 years to kind of offset the bad years.

I: When you talk about these changes with producers, how do those conversations go? And do you see these changes in the same way or have different outlooks on them?

R: So, what do you mean? As far as long-term conversations about what's going to happen down the road?

I: Yeah, or ya know, how they're working currently with changes from the past 20 years and yeah looking forward – just the conversation that's wrapped into both of those concepts.

R: That's a tough question to answer. I think you'd get a different answer from a different producer. A lot of these guys, particularly right now with what happened with COVID and what happened to their market, to have just so many other external issues that they're just trying to do a day-by-day situation. With that said, I have a friend of mine who is an extension agent in Montana where they get usually pretty much consistent moisture a year, a few dry years here and there, but nothing like what we deal with where it's multi-year droughts. Producers here are far more responsive quicker, meaning – so it's very dry in much of the state this year. They're already planning ahead on let's sell our calves early, maybe we'll sell pairs, ya know the cow and the calf, to save the grass, because at the end of the day their ultimate goal is to save their feed, their forage. So from that standpoint, they're very responsive. But are they going to look ten years down the road, I don't know, they're so busy dealing with today

that it's too hard to wrap their head around about how do we figure out ten years from now. With that said, they'll start thinking about water management

[15:00]

. . . and distribution as part of their long term plan. But like I said, they've got so much on their plate that that's kind of where their focus is.

I: Yeah, that makes a sense. And it's a good thing they are so responsive to the challenges right now, but yeah, I would hate to think that that would blindsides them down the road, or anything like that. And it's interesting to know how Montana who is kind of similar in precipitation, but how differently they work with it because of the consistency in it.

R: Yeah, I've lived in like seven different states and every state is different in terms of how they manage their cattle and resources. I would say New Mexico is probably the most conservative for sure.

I: Does that mean that they don't change as much as what they're doing, or don't stock as high?

R: Yeah.

I: Interesting. Drought. How does that threaten producers in this south-central region of New Mexico?

R: How does drought – what now? I'm sorry I missed that.

I: Oh I'm sorry, how does drought threaten producers in this area?

R: So there is a threshold that a producer can no longer do business. And it's a little different per individual what that number is – but everybody has a number of head of cattle they can run, still make a living, support a family, and so yeah. If drought says we have to cut your herd by 20 percent, that's like getting a 20 percent reduction in your pay. So if the ranch is designed to be the primary income source, that's hugely impactful. If someone's raising cows, but has a town job, right? Which, most producers today, that's kind of the situation. They have maybe fifty cows and have a town job, so if they have to sell twenty, it's painful to want to get back to where they were but it's not as detrimental as if their sole livelihood relied on it. But definitely for the ranchers whose primary livelihood is cattle, it's devastating for sure.

I: And I definitely want to – oh sorry, did you have more to say?

R: What's that?

I: Did I interrupt you?

R: No, no. You're good.

I: I definitely want to come back to that because it's an important topic, but – oh no, I lost my train of thought, I'm so sorry. Well we did talk about how ranchers, these producers, they are so resilient and are going to make things work, but there can be some factors that make these challenges harder. For instance, you brought up COVID and the shock that that's had on these folks. Are there are factors that make drought even harder for people, or harder to cope with it?

R: Yeah, so the other side of it is the public land issue. Again, that's – what is it, 80 percent of the state is owned by the either the state or federal, it's either state-owned lands or federally-owned lands, and ranchers lease those lands by the feds or the state. So if they're leasing these lands, it's another layer of management that sort of impedes them – at times, not all of the time – that impedes them from doing normal business. So – let's see if I can give you an example – for example, we had a rancher in Socorro

[20:00]

... who, based on the Forest Service's view, needed to de-stock completely, like sell all of his cow, or get all of his cows off the lease. So, financially devastating, right? He was trying to comply with everything they asked him to do in terms of water and fencing and some of these issues, and that's where our [unclear] came in and said ok how bad is the situation. Do we need to remove these cows because of lack of forage? Or what's really going on here? And the reality was that the forage was not the issue. And so sometimes there's other challenges that land owners or even land leasees face in terms of how their cattle is managed that can impact them economically, so yeah.

I: Yeah, that really is devastating to be given an order like that.

R: Yeah, and it's fairly common. You know, it's recommended that producers have a Plan B if they are going to lease on state or federal lands because that can happen at any time. But at the same time, that Plan B can be hard to find. Like where do I take my cows if I get kicked off my lease.

I: Are those Plan B's just finding other places to put their cattle?

R: Yeah, in other pastures.

I: Gosh. Other than the problems with public lands, are there other factors that compound these issues?

R: Certainly, the market, and that's where the COVID reference came in. So when the meat packing plants started to close, it caused the value of the animals at the ranch to be cut almost in half. So when you have external things that are outside of your control, it affects the price of your animal. And if that price stays low then when these calves are getting ready to sell, his income is cut in half. So he's – they're *called price-takers*, which means they get what they get, they can't say I want, this is what I have to have for my calves to make money, to put food on my table. It's taking my calves to market and whatever price I get I get. So it's a gamble a lot of times, and if the prices are low, that's again out of their control, and has a huge impact on their livelihoods for sure.

I: What are the options for producers in this area to reduce or prevent threats from drought, or other things that compound drought for them?

R: I think if I had the answer to that question, I would be . . . wealthy. I don't know that there an answer to that question. I think – we really push for producers to keep good records, right? Whether it be rainfall – which most keep good rainfall records, they do that – but as far as like grass production, monitoring their range, we really want to help with their day-to-day management to help them get more production in terms of pounds of calf without having to have a bigger cow or utilize more resources so they can maximize the efficiency of the land use.

[25:00]

. . . That's our job is to give them ideas of how to do that. It's record-keeping, management, keeping their costs down, all of that, will help them stay in business. But if it doesn't rain for two or three years, there's nothing they can do.

I: Oh man. That certainly is tricky. What about other resources, like educational resources, that producers are using?

R: So they use - they rely on extension pretty heavily actually to gather information – well when we did meet, when we could meet in person, they'd come to our meetings, we'd provide them information, they have our publications that they can utilize. The NRCS is a source of information for them and what else? . . . So that would be the two big ones: the NRCS and ourselves. For management, land management stuff. Certainly financial, they hopefully work with an accountant on that end of it. But yeah, so we do our best to provide programming that can kind of help them with their day to day management.

I: Yeah! I've been chatting with folks around the state, and I didn't know much about New Mexico's Cooperative Extension – I just moved here in October – and it's been so cool to learn about the programs and resources that y'all have. It's awesome.

R: Where are you from?

I: I just moved from North Carolina.

R: Oh wow! A little different here!

I: You're telling me! But I've certainly enjoyed it. I got to do my Master's work with a project at the Jornada, so it's been a couple years of adjusting to the landscape, but now I'm finally here for good. It's been really great.

These producers, we know they're coming to y'all, but are there specific characteristics of those people who use extension or NRCS?

R: Yes. Now I can't speak to the folks who don't come, but I will say when we go to do programs, it's usually the same people in the audience. So what makes them want to come? To learn. And we hope that they get something out of it every time they attend one our seminars so yeah. And a lot of newer

people who are new to agriculture like to come because they are still learning and they tend to be the ones to ask the most questions and are really engaging, because they are new to it and want to learn. But you don't see a lot of the really bigger operations like the Bell Ranch, or some of these huge ranches because they have their own consultants. So we mainly service the smaller producers in the state.

I: Ok, what does, in terms of south-central New Mexico, is it mostly smaller ranches or the bigger producers like you mentioned?

R: Because the land need is so big here, they're actually – to have 200 cows here requires a lot of land, and so physically to manage 200 cows on 16 or 20 sections of land or more, it's hard to justify hiring a bunch of people to manage 200 cows right? So land mass need is kind of the limitation here to be really big, to manage thousands of cows.

[30:00]

... You'll see those kind of ranches as you go north, but here you need too much ground to justify that. So I would south of 40, 200 is going to be your biggest end on cows. There's a few if you go West, where there's a little more grass, you'll have 1200 cows, or 800 cows, something like that, but not too many are that big here.

I: I didn't put that together that needing more land for fewer cows and how you think of the size of the ranch, I'm seeing that now. Do you see a strain on those producers who have a lot of land, but because they have so few cows they can't justify hiring on people? Like driving long distances to check on water or cows?

R: Yeah, for sure. However many hours in the day are daylight. If it's just them or their kids, it's a lot to cover that many miles in a pickup on a dirt road or horse back. And so it's a challenge. And that's partly why some of them don't come to meetings, they don't have time. They're busy trying to just keep fences in tack and cows in place and fed. And for sure it's an all-day thing just to do that.

I: Wow. You talked about folks who have a job in town or a second income, and folks who might not buffer like that. How do you anticipate what producers will do when they can no longer deal with drought?

R: Ahh that's a tough question because it's a culture, it's a way of life, and that is why they do it, more so than the money, because the income on a 2-300 cow ranch is going to be maybe \$20,000 to \$30,000, maybe, on a good year. So it's not about the money it's about a way of life, so you can imagine what it would be like if all of sudden you had to move to town because you had to sell all of your cows. Sort of getting off topic but depression is a pretty serious deal in agriculture, and that's partly why, because of the pressures of trying to stay afloat and maintain that way of life. But at the end of the day the animals come first for them, and if they have to sell everything they will because that's the right thing to do. But that leaves them with having to buy back in which is just as challenging sometimes.

I: I think the ranching lifestyle and the heart and passion that people have behind it is one of the most motivating reasons why I'm interested in all of this, so I'm curious, if drought is such a big threat, what solutions or resources are there in line, like are people talking about depression or are they gearing up for that possible/ inevitable sell out?

R: Well, there's multi-generations and they've figured it out, they've adapted . . . and are we going to turn into a desert wasteland with just dirt and mesquite and no forage at all? I sure hope not

[35:00]

. . . because if they kind of stay focused on trying to save as much forage as they can or utilize technology somehow in innovative ways that take care of mesquite or creosote so that cows will eat it, that kind of thing. So hopefully there will be some research down the road to help them through it.

I: I hope so and I think – with the great minds of the ranchers and with the collaboration emerging, I feel hopeful about it. But I know it is such a scary topic when it does come up. Kind of going off that, are there solutions that you would put into practice, or maybe see others put into practice, but haven't or can't? And ya know, these could be things you've seen in other states or other counties that would be cool to be here in south-central but there are things we have to think about before it could be possible.

R: Right. I'd have to think on that a little bit, because like I said, every state sort of manages their animals differently, and they have a reason for it, it has to do with their climate more often than not. For example, up north, they feed hay. They put up hay in the summer, then they feed that to their cows in the winter because of snow cover, so they have to give them something. Here, they don't feed hay. They have the cows sort of rough through the winters, is what they call. So their goal is to have enough – what they do plan for is the winter. They try to have a winter pasture with enough feed for them to get through the winter. What they could incorporate in terms of technology or ideas, I do think water development is a lot of promise with, or water conservation somehow, to help get better pasture distribution. There's plenty of places that have a lot of grass, but cows don't go to because it's too far from water. So if you could kind of solve that problem, I think that land will last a lot longer. But innovative technologies out there right now for our system would be really hard to incorporate just because, again, the land mass is so big here. To run a drone across an entire ranch down here would run out of battery. It's just too – and there's no cell service, it's so remote, it would be really hard to adopt some modern technologies to help them at that point, I don't know, that's my opinion any way.

I: I understand. The cell service, yeah, that's a real challenge: Technologies that rely on a tower close by and not in space would be hard out here. You just have so much good information and lot of experience within the state, so if there is anything I didn't ask but you'd like to bring up, I'd love to hear it.

R: Oh! Well, I don't know. So is the goal of the survey to kind of see opinions about the environment or . . . how producers are adapting to that? I guess, I don't know. . .

I: I would say it's a little bit of both, right? Because how folks perceive things changing or going on is going to influence what decisions they are making. And of course there is the communication between producers and folks like yourself, and if people are seeing eye to eye, which is likely to happen if they are actively coming to you. So less tension means more productivity and flexibility in your networks and collaborations. So just getting a feel for what New Mexico looks like [in that sense] across the state.

[40:00]

R: So I kind of have the perception of a crow's nest looking out across the crowd or whatever. Because I deal with individuals occasionally on individual site visits where you can get a more personal perception. But my view is kind of looking over a broad scope of management styles I've come across, so I don't

know . . . so the perception I have is that they do see a changing climate, they deal with drought on a regular basis, and they've adapted by changing the animal they use, they'll go ahead and wean their calves early, they are fairly responsive from year to year. Ya know, if things are dry, the calves go. If they are on public lands, they have that to contend with and keep an eye on. The challenge I've found though is finding producers who keep good records of all of these, because like I said, they're just trying to make it day to day. And partly why I'm studying water is because that seems to be one of the areas of primary concern and has the most opportunity. So, that's hopefully going to help. My goal with our research there is we can help them do some better management with their water, understanding quality and where it is, and that kind of stuff to get them better use of their sources, their water sources. I think that's probably one of their biggest limitations too.

I: Yeah, and that's so interesting. You brought up – I think it was the pumps or irrigation systems – what other besides it just being a dry place, are there other barriers to water that you're seeing?

R: So quality is a big problem in New Mexico, in some parts, where sulfur is so high in the water it makes the animals sick. And so what do you do if you have water but they can't drink it healthy-wise? So we've had producers invest in ROI, filter systems that are very expensive, but they felt like it was worth that investment to provide clean water for their animals or they would have no water. A ranch's value is not just the feed but the water. That's one of the first assets they'll look at if they're going to buy property is where is the water and how good is it or how reliable it is. Because of that they will invest in things to help with that quality situation because like I said that's a big problem here.

I: That makes a lot of sense. Is there a way that I could follow what you're finding?

R: Sure! We're early. We're trying to build our system from scratch where we're measuring water intake – we're going to start research this summer, but our goal is to go around the state and measure it with producers and just see the differences between the north and the south and the east and west. We'll measure for cattle and wildlife too.

[45:00]

I: That's so exciting! Yeah, I'd love to learn about that. One, it's interesting and so important. But also I think both our topics have a lot of crossover.

Same with water, how do you think about soil and brush and all of that that is going on in Southwest New Mexico?

R: This is kind of a hot topic right now, soil quality and soil health. I think when you think of soil health you think of this nice, black, lot of organic matter, soil right? That's what a dream soil, what a healthy soil is. And in this part of New Mexico, that's not what we have. But it's still healthy for its environment, I think. It supports life, and it's just a matter of getting the proper definitions per zone of what soil health is. I think, right now, some of the scrutinies of soil health is well desert soils aren't healthy, but I think they're just different. And I'm certainly not versed in it, I'm no expert in soil, but I think that's some of the issues we see, and a lot of issues we face, is perception versus reality. The ideal is not necessarily fits every scenario. And it comes back to partly why you have nice black soil in North Dakota is you get a lot of moisture and it's the makeup of that soil, and we don't get that moisture, and we don't have that top soil, so our soil is different and supports different plants.

I: I feel like it's definitely coming up more in conversation: soil and that being where it all begins, and regenerative agriculture, and all of that. It's been interesting to hear more about. We're hoping to talk with folks from counties from each agricultural ecoregion of the state, and by talking with you we're covering some of the arid lowlands area. I'm curious if you knew any other technical service providers – NRCS, Extension – that you think I should talk to to round out the information I'm getting from this area of New Mexico?

R: So, I'm trying to think. I mean, I think you could even look at BLM. That's the bulk of – I think in the south, there's more BLM than there is Forest Service. One of those agencies would probably have a goof, and probably different, perception as they are monitoring it just as closely as you guys are. Because that's one thing I know BLM is charged with is how do we manage for climate change, meaning less rainfall, what's going to change in terms of habitat, forage, plants, how is all of that going to change and how is that going to change everything? Not just cattle, but wildlife, plant life, and all that. So I know for a fact that's kind of on their to-do list is to do all of that. So the state BLM office is here in Dona Ana, in Las Cruces. So they would be one to maybe reach out to, and it would be interesting to have kind of a different perception for sure. So they don't do a lot in terms of educating people, they're land managers, so they would have that perception.

[50:00]

I: Yeah, I'm curious how that would differ, not only being the agency that they are but without working directly with the producer. I imagine that a huge influence on how they perceive things or how they solidify certain ideas.

R: Yeah, it would be a different way of looking at it for sure. And I've met the guy, but I can't think of his name, who oversees the office here. But I think he's a nice guy.

I: Ha! That's good to know. Awesome, thanks. Do you have other ideas or even have names of producers for down the road when we're ready to engage with them, do you have ideas of people we should talk with?

R: So, ironically, even though I work out of here, I don't know a ton of producers in this area. Andrew Cox is the ranch manager next to you guys out of College Ranch, so he would be a good one. There's a guy out by – what would he be near? Gosh, it's in the middle of nowhere. Bebo Lee, he's kind of a cantankerous old guy, he's been in drought, he's been in one of those pockets that had not received appreciable rain for six years. But he's an excellent land manager. If you went out to his place, you would not think he'd been in a drought for six years. He's kind of grumpy. Well, I shouldn't say that, he's – I don't know. But anyway, he runs, I want to say, 2-300 cows out by Alamogordo, between – what's he between? Kind of between Alamogordo and El Paso, kind of in that area.

I: Do you know how I would reach him? Is he listed anywhere?

R: He is the T Hat ranch? I could send you an email. Hat Ranch! It's the Hat Ranch!

I: That helps, thank you! Down the line, I might reach out to you for an email, but right now this is super helpful.

R: I will say to be frank, some of these ranchers are . . . cautious. And he would be cautious of "why do you want to interview me?"

I: I don't blame him.

R: Others are fine, they just tend to be suspicious of everybody. That's just part of the culture.

I: That's something I was hoping that this summer – I was working with Dr. Bailey to work with some folks a couple days on their ranches, but then COVID happened and so I'm sad to have missed out on that. I was hoping it would help me get to know some people and for them to see me as not as threatening as I come off!

R: Oh no, no, you're good. And so most of the producers I know are either in the pueblos, or in the Navajo nation, or up north. But it's been so long since I've been up there because of COVID, so yeah.

I: Well, I really – thank you so much for chatting with me. I really appreciated how you explained a lot of things. I feel like I wouldn't have gotten most of those things because I'm new to this, but you explained it all so well. Your teaching style is excellent, I learned so much. So the next steps: I will transcribe our interview and send you back a copy of that transcription so you can make sure you got everything you wanted to say and that everything was captured accurately. And then after that, I would love to keep in touch with you whether it be with our results, or other things you might find interesting with your research that's happening, so please don't hesitate to reach out with any questions or neat information. I'd be happy to hear from you. So yeah! Do you have any last questions for me?

R: I don't think so, not off the top of my head.

I: I'll get back with you soon with these transcriptions and thank you again for your time!

R: You bet, good luck with everything.

I: Thanks, have a good one, and talk with you soon.

R: Alright, bye-bye!

[End; 55:39]

Interview: 4
6/18/20
Transcription: M. Dinan
6/22/2020

I: Interviewer
R: Respondent

I: To begin, can you tell me about your role with extension?

R: I am – [REDACTED]
[REDACTED] But really, about 75% of my job deals with the 4-H kids and the 4-H youth development program, and about 25% of my job deals with ranchers, homeowners, the general population calling and saying “I have a bug, what is it?” or “I have tree issues” – that sort of thing. But yeah, the bulk of my job is 4-H youth.

I: Wow! And you’re in Lincoln County, correct?

R: I’m in Lincoln, yes!

I: Are you focused specifically on folks in Lincoln County or do you work with all of the state, or just people in the central-eastern part of the state?

R: So we just serve Lincoln County. We’ll do somethings across the state if other agents ask or whatever, and this is kind of across the board, but we’re mainly focused on Lincoln County.

I: That sounds like a really fun job, I like the mix of getting to work with adults as well as 4-H, that’s gotta be fun.

R: It is, it’s fun. There’s something new every day. It never gets monotonous.

I: How long have you been in this position?

R: This position I’ve been in for two and half, almost three, years.

I: And are you from the New Mexico area?

R: I am! Born and raised here and never left.

I: Well how could you? New Mexico is wonderful! Can you tell me what ranch operations are like in Lincoln County?

R: So, we don’t – as rural as we are, we don’t have as many ranchers as you would think. We’ve probably got anywhere from 30 to 35. I could probably sit down and list them real quick. But most of them are

going to be larger areas of land. For example, the place that I live on is right at 100 sections and it is one of the bigger ones in the county, definitely not *the* biggest, but it is all just cow-calf operations. There are very few people doing yearlings or anything like that, and if they are it's just a few here and there, as far as the ranchers having a pasture for their yearlings. But it's pretty much just cow-calf operations, and I don't know how in-depth you want me to go into that, but it's very open, very - depending on where you are at within the county, you may take your cows in everyday and check on them, or some of these people, they're up in the mountains and you may not see them in the spring when you brand or in the fall when you ship. And we're kind of a mix of that, but it's pretty much all larger cow-calf operations.

I: That's really interesting, seeing your cows go off and then maybe not seeing them until later in the year!

R: Right, exactly! And ya know, it's not like they're just turning them loose and ya know whatever, but even where we're at, my husband's a ranch hand and there are times where it's like "ya, that's what was out today when I went by to check on water and put out liquid feed" so yeah.

I: That's so funny. And so yeah, you're working with 4H, do you see a lot of youth, kids, going into – are they coming from ranching families or a lot of people who have never ranched before coming to Lincoln County – what does that look like?

R: It's generation to generation. We have very few newbies, so to speak. The family ranches that have been here have been here for years and the families are still running them, so yeah. There's very few new guys coming into it.

[05:00]

I: Sure. Can you describe the changes that you've seen in Lincoln County related to climate or the landscape in the last twenty years? And if it doesn't go back that far, just as far back in your memory.

R: Right, and so I am – we've lived in Lincoln County for about ten years even though I've only been at this job for about three years, I've been back and forth. And just like I think about everywhere across the state, the drought is taking a toll on things. And of course, we've had some fires across the county, it seems like one big one every summer. Knock on wood, we haven't had that one yet this summer – hopefully we don't. But always kind of tends to change some things. We burn up a lot of grazing land it seems from those fires every year. But ya, mostly the drought, and especially now it's super dry, that's been one of the biggest things for sure.

I: How do you see things changing in the next twenty years?

R: I don't. I would love to see us come out of the drought, but as far as the general operations of cattle and livestock production in Lincoln County it hasn't changed. My husband's family is from here which is why we're here, and so I know a lot of the history here. And Lincoln County used to be really rich in sheep, we had lots of sheep in the county, but as predators have taken over, that has kind of caused a

problem. And so sheep numbers have declined drastically in the last twenty years. So I don't see – there's not that many left – I don't see them coming back. I just don't see a whole lot of change.

I: That's understandable. How do you talk about these changes in terms of drought and looking forward, how do you talk about this with your ranchers?

R: So, I think because everything has been in everyone's families for generations and generations, it's a lifestyle and it's a livelihood that they are passionate about, and so it's just one of those things that they're not talking about it and they're not asking for help because it's been there done that, their grandfather went through that. Their grandfather went through a drought. And so they just keep on keeping on, it's just one of those things where they think we're going to get out of this [drought] eventually, it's going to rain at some point. There isn't a whole lot of discussion amongst the ranchers. It's not a matter of well we may have to sell out and move to town. That's not even on their radar. They do – there were a few years ago, I can't even remember, where my husband's uncle, he kind of had his own D Day where he said if it doesn't rain by this day we're selling half our cows. And it ended up raining, God came through for him and it rained and things were good then. But selling down is always an option for these guys and they do, but selling out I don't think that's ever even an option. That's just not something they'll ever do I think.

I: Ranchers are so resilient and they find ways to make it work. I just fear those options get slimmer and slimmer as things change or don't get better.

R: Right. And I know some of the things, this county used to be, years and years ago, primarily Hereford cattle. I mean that's just what it was. But I think that's kind of what it was across the state too, ya know, years and years ago. They have diversified as far as different breeding. And I know there are some that are on – because ya know, we're such a diverse county in itself, ya know I'm driving through desert right now and you've got the Ruidoso area and up by Capitan, so it's very diverse. Some of these guys on the southern part of the county are adding some Brangus to their herd and doing some things like that to kind of help with this drought situation, and I know we've got one rancher who is using Corrientes bulls for his first year heifers for birth weight and then [connection breaks up] just to be able to survive. They are diversifying a little bit as far as like the breeds.

I: That's really exciting to hear! I know at the Jornada here, we do a lot of work with Criollo and other desert-bred cattle, and it's so fascinating. The more I talk with people the more that cattle genetics and cattle breed comes up, and that's just something I never even thought about!

R: Right! They are and I think that's something that's coming along with these ranchers here is they are starting to think about these sort of things.

[10:00]

I: That's exciting! Aside from those options, what other options are there for producers in Lincoln County in terms of preventing or reducing the effects of drought?

R: There's not. We don't have any kind of irrigated land at all in Lincoln County, not a drop. I say that, but there's a little through the Hondo Valley, but it is, we're all just relying on rain, and if it doesn't rain we're in trouble and we just go to buy feed. And so that's part of it, and there's nothing close in terms of going to buy hay from somebody, we're just 100% reliant on the weather.

I: Oh man. Now you mentioned people selling out or reducing their herd, how else do these changes threaten producers in Lincoln County?

R: I think that's one of the biggest things. Really, we've been very lucky here even though we do have the Ruidoso area, and some environmentalists in the area, we've been very lucky that they have kind of stayed away from the ranches – and that probably sounds really bad – but ya know, with drought and everything, they start thinking about that sort of thing, like with drought as bad as it is, are they going to start worrying about the desert tortoise being okay with the cattle out there grazing. So we've been very fortunate and there hadn't been a whole lot of that here. And we pray that that's how it continues and really it's just drought.

I: And ya know, that's no small thing either!

R: No! Exactly!

I: What other factors make drought worse? And ya know, this doesn't have to be just in the environment, but kind of like you mentioned, it could be economical, political, socio-cultural, there are so many things that go into it. What are you seeing in your area?

R: As far as just what makes general life worse on top of drought?

I: Yes! That's a better way to say it!

R: I'm simple, sorry. Right now, I think with this coronavirus deal, that plays a big part. Politics, that plays a *huge* part in just wondering where we're going to stand. As a whole, the ranching community, in Lincoln County – I shouldn't speak for the entire state, are conservative republicans. So there is always the fear, especially with the election coming up, is what happens if we don't have a conservative republican – and not just as president, but across the board – if we end up in a more democratic role where some of these people don't understand what we're doing or don't support what we're doing, the rules and regulations that come into place are going to make it impossible to continue raising beef for the general public. How is that going to look? So that's a big one as far as that goes, you just wonder what's coming down as far as just trying to do what you've always done.

I: Yeah, that is daunting, especially if your whole world is tied into running the ranch and taking care of it, you don't have time to, like, lobby or advocate, or any of that.

R: Exactly, and when there's grass, the cows are fat, things are good, you can deal with those things as they come. But when you're drowning in drought – that sounds funny – then you just pile that on top of it, it's stressful. It's hard. It causes a lot of emotional and mental strain.

[15:00]

I: I'm sure. Gosh, I can't even imagine. So, there isn't a lot to work with drought, but are there resources or programs or other things that you see ranchers looking into?

R: So a lot of our ranchers here are really utilizing the NRCS offices. In order to do some of those programming, we have what's called Upper Hondo Soil and Water Conservation. They work with them. But those are the two main programs in our area that they're working with. Most of them all have an NRCS project going on, almost constantly, to be able to do some things and reap the rewards of it.

I: What do these programs look like? What are you seeing?

R: Oh shoot, there's a bunch of them. And I don't know, the ranch we're on they started something but I'm not real sure what they're doing. A few of our ranches around here did, they put in – and I can't even remember what kind of bird it was, but it was some kind of bird that I don't want to say was protected, by they were getting in the stock tanks and drowning, so they put in these contraptions that basically was wire so the birds could get out and walk out. So something simple and then they reap some of the financial benefits from that. I'm not real sure as part of the major programs right now in NRCS.

I: And that's ok!

R: Alright!

I: Thank you! I'm curious about the birds – so the wiring keeps the protected bird from drowning, which would prevent them from having to pay a fee?

R: Right – well, see I don't know for sure how it works, I just know it's a bunch of stuff and I asked one time and they just said "oh it's so that the birds can climb out." That was about as far as I got with it!

I: That's totally ok! I'll have to look into that, it sounds super interesting! Are there other sources, like educational resources, that producers are using?

R: Ya know, for Lincoln County – and there are some, there are some of our ranchers that are utilizing something – but a lot of it unfortunately is not coming from the extension office. They just – I don't know what their aversion to the extension office is, but they are getting some stuff out there. I know we've got one set of ranchers who have gone out and have gotten trained and they're using, instead of traditional pregnancy tests, are doing the ultrasound. And so I know they're going out. They seem to be going more towards corporate agriculture to get some of these educational tools than they are the free resources through New Mexico State.

I: We've actually been seeing that a lot, and I can't remember if it was Utah or Colorado, but yeah! There are these folks who aren't with NRCS or extension but private folks that people are utilizing.

R: Right! And I'm not sure why, but I haven't helped, I honestly have not helped, many of our ranchers. I think part of it is just that whole generational thing: We've been doing it like this for years, and by God that's just how we're going to do it, type of thing, or attitude. And I think that is part of it and I think the ones that are really trying to get onto the technology side and do that type of thing are going straight to the source.

I: Those ranchers who do come to you, what are the characteristics of those folks?

R: Super laid back! They're just more picking your brain than they are looking for information – I don't know if that makes sense, but just more kind of seeing what everyone else is [breaks off]

I: I'm sorry, you're breaking up! . . . [REDACTED]? Rats. [connection lost]

[20:00]

[Phone Rings]

I: Hello!

R: Hi, this is [REDACTED] – I'm sorry, I knew I was going to lose you. There was that one hill that always gets me!

I: That's quite alright! I'm dealing with the same problem in my little home, and it is so funny when the connection just decides to quit!

R: It's done!

I: Before we dropped off, we were talking about what the people are like who actually work with you and you kind of mentioned that they're more just picking your brain and getting information.

R: Right, yep! And I mean that, they're just super laid back, I don't think they are super gung-ho to make changes, just more getting some general information, getting some general knowledge, getting some feelers for what else is going on in the county.

I: Sure. Do you think there would be anything to ever get them to change, ya know, from the status quo?

R: I would love to say "yes, this is what it would be:"! But no. Ya know, my hope – and I see this from a couple of different ranches where the next generation is starting to take over. And that next generation, ya know, I'm talking about they're anywhere from 30 to 40 years old where their parents are finally starting to phase out and turn things over to them. And they're coming in with some new, fresh ideas. And that's probably the audience

[25:00]

. . . to try to hit for some of this educational component because they have that idea of I think we can make it better if we make some changes here and there. I think that's more of the generation to try to hit are those that are just coming in and taking over. Ya know, they haven't been out of college too horribly long to where they still have some of those fresh ideas in their heads. But that's about the only place that I see that they're being able to see some change.

I: Do you see a lot of folks taking up that family business?

R: There are more so now than there were 20 years or so ago here, but I think it's more of that age and generation. There were a bunch of those ranchers that were, ya know, my parent's age and they're coming in and taking over. So ya, I'm seeing these generations come in but I'm also seeing some that aren't having much to do with it. And so there are a few ranches in the county where you wonder what's going to happen when they're dead and gone because their kids are not interested. They've gone to town, they're working in town, and they're happy in town. But for the most part, I would say 90% of the ranches here have that next generation to come in and take over.

I: That's exciting!

R: It is! Yeah!

I: Now when – I kind of hate this question, because I think it's sad – but for those folks who don't have people come in next or say they can no longer cope with drought, what do you see happening there and are there resources to make those transitions?

R: Ya know, no resources that I'm aware of. And ya know, I think it's case by case as far as – and it's kind of morbid – but are they just going to die on their ranch, who knows what's going to happen to it. Are they going to make plans? Are they going to sell it ahead of time? Is there going to be some long-lost cousin that comes in and tries to scoop it up – and yeah, that's happened before. And so I don't know. I have no idea. But I know – to my knowledge – there aren't very many resources out there to help those people.

I: Sure. And I guess this next question is kind of a flip on that, but thinking as a visionary, what needs to change in Lincoln County or your community to see more stories of success given drought and other circumstances?

R: Ya know, I think – and this is probably going to sound cheesy to you – but I think we've got a bunch of success stories. We have very few ranches that have turned over. Like I said, they're resilient and passionate about what they do, and I think the success is that they've come through all these droughts and they're still here. And they're still going. And they're still doing. And they're still passionate about what they do. That's one of the reasons we are in Lincoln County, and that's one of the reasons my husband and I moved here, is because of that passion, that resiliency, that salt-of-the-earth kind of people. And that's why we chose to move here, because of those people in this county. And I don't know if anything could change because I think they are successes.

I: I love that, I don't think it's cheesy at all! I really do think that that's spirit provides so much momentum and it gives you the confidence to navigate uncertainty. Have you seen some cool innovations that people have utilized, or any ideas that you've never seen before?

R: I've never seen it done like that!

I: Yeah!

[30:00]

R: You know, I haven't. I'm quite sure on the other side of the mountain up by Capitan and stuff, I'm sure there have been cool stuff. And I'm sure if I talk with my husband because my husband goes and helps people and he's on several bull ranches – more than I am as an extension agent – but I'm sure he would have cool ideas. But nothing that I've seen that I've gone wow, that's cool. We are very old school ranchers here, and stuck in our ways so to speak. We've got some cool stuff happening with our younger guys, like I mentioned the ultrasound machine – you could go from a 90% guarantee to an almost 99% guarantee with the ultrasound machine as far as getting it right, so that's a pretty cool thing that I've seen come along. And it's not brand new technology but it is something they are starting to implement. I know one ranch is trying their hand, it's their first set of calves, but they're trying super-baldies – I don't know if you've heard anything about those. But anyway, it's their first set of super-baldies this year and we went out to help them brand and they were some cool, neat, hardy looking calves. But other than that nothing really stands out to me.

I: That's so exciting! I haven't heard of super baldies, so I'm really interested to look into that.

R: Right! And I'm not sure – I'd have to go back, I wrote it down on a piece of paper – but there's Hereford in there, there's a little bit of Brangus, there's some Charolais - I don't know it's a whole thing! It's one of those crosses!

I: Are there solutions that you would want to put into practice in Lincoln County, or maybe want to see others put into practice, but haven't or can't?

R: As far as solutions to the drought, or what do you mean?

I: Yeah! As far as solutions to drought, or coping with it, or just anything to help with rancher livelihoods.

R: I wish that – if we could get them connected with New Mexico State a little better here, and like I said that's been a battle I've been fighting, but with it just being a small part of my job, it kind of gets pushed to the side. 4-H mamas tend to bark a lot more, so I need to deal with them. I see a lot of ranches that could benefit from some new school education, so to speak, because they are so stuck in their ways. And it's hard because even the ranch that we live and my husband works on, there are so many things that I see that could be changed and you try to work it in conversations but it falls on deaf ears because "that's the way we've always done it." I mean I think there's good to that – the consistency, and the tradition, and whatever – but that's also a big hindrance. And that's just something that if we could

figure out how to reach out to some of these ranchers – we've got about half of the population that is trucking along and doing just great, but I think we have about half of our ranchers that are fifty years behind the times that need to catch up that won't, and so trying to reach them somehow.

I: That's hard, too - like you said, tradition means a lot and if that is so ingrained, it's like where can I bridge this gap between this new information and tradition?

[Phone beeps; call fails]

Interview: 5
9/8/2020
Transcription: M. Dinan
9/8/2020

I: Interviewer
R: Respondent

I: So my first question for you is can you tell me about your role with Extension in Colfax County?

R: So my role with Extension in Colfax County is I just have to – I work with all the producers and we work with farmers, we work with ranchers, we do everything from soil tests to sending plants off to the lab to be ID'ed, we send them off to check protein levels and those kind of things, I go around and do the grass-clippings in the fall to see how much production we did have that year or how much we didn't have. We work with them to do the continuing education units for the pesticide applicator license – the private pesticide applicator licenses – and we have been working with them to do some beef quality assurance stuff. So just kind of anything and everything they need our help with.

I: That's quite a list to do, y'all must be very busy! How long have you been working with Extension?

R: This is my thirteenth year.

I: Wow, very nice. This next question is a little tricky just because we know it's hard to summarize, but what are ranch operations like in Colfax County?

R: Most of them are family-ran, they're mostly generational ranches in Colfax County. We've gone through a phase now where the families, like the parents have passed away, and all their kids who are 50, 60, 70 years old, they have opted to sell some of them, so we do have a lot of out of state buyers who are coming in and buying up these ranches. But for the most part, they're still mostly family-ran ranches. And mostly here what they'll have is cow-calf operations, or they'll do a summer yearling operation, or some have big enough ranches that they'll run both cow-calf year-round and yearlings in the summer.

I: These folks that come in from out of state, are they also continuing the operation or do they use the land for something else?

R: No, usually they're still running cattle on the operations. Then of course we have, I don't know, 25 percent of the county farms, and that's just limited by what water's available. And just this year, a drought-y year, they didn't get their normal pro-rations, but they're still able to produce, ya know, some product. Maybe not their highest yielding product, but they did get something produced. It might be minimal, but they did get that. Even the out of state buyers, if it has farming land, most of them continue farming them. Then the ones, they might have changed from cow-calf to yearling, but they still run cattle on it.

I: Okay, wow! How about the land base – are a lot of these privately owned or a lot of public land?

R: No, no, Colfax is probably 75% deeded and private and then about 25% state land.

I: Great! Can you describe the changes you've seen related to climate in the last 20 years, or just as far back in your memory if you haven't been in that spot for that long?

[05:00]

R: Yeah, so every year's just seeming to have less and less moisture. And one year, we'll have quite a bit of snow and rain, and the next year we'll have no winter moisture but we'll have a lot of summer moisture. The next year we'll have maybe a lot of winter moisture and no summer moisture. This year was very little winter *and* summer moisture. So it's just been a different pattern. Like yesterday we were 96 degrees and today the high is forty and supposed to snow tonight. It's just been a very erratic weather pattern for the last, for sure the last ten years, it's just been really, all over the page, ya know?

I: Gosh, I guess it's kind of hard to find patterns in how erratic it is. Like when it's going to change or by how much it's going to change.

R: No, we have no idea. And we keep records of our rainfall and all that kind of stuff, it's just been really erratic when it comes, and sometimes when it comes it's just way late and too cold to grow some grass. So you have to look at the whole picture, you've got to look at your production, your moisture, because yeah on paper it can look like a normal year because say at the end of September you get 2 inches of rain. Well that makes it look like it was a normal rainfall year, but by then it's too late to grow grass ya know, so it didn't do anything for soil health and health of the land, ya know plants and stuff. But it's just, I guess we're kind of at the mercy of what goes on with Mother Nature.

I: Oh man, that's a hard spot to be in.

R: Oh for sure!

I: How about looking forward into the next 20 years – how do you see things changing?

R: I just personally think it's a normal pattern. Ya know, they had the Dust Bowl back in the day, they had drought, and then it comes back and it rains. I don't know, I don't just buy into all the Global Warming, I'm not saying it doesn't exist, I'm just saying I'm not sure it exists to the point they're telling us it is. It is something to be concerned with, and that's why we try to manage the grass here at our ranch the best we can in case it is drought a following year or whenever, that way we can buy time until we do get moisture.

I: Yeah, that's a good point, it's hard to tell when you think about time periods, like our comeback from the Dust Bowl.

R: Yeah, exactly!

I: So I completely understand that viewpoint. These erratic patterns in weather and climate, how do you see that challenging your producers?

R: So it's just been real – for the yearling guys, they brought in cattle normally at the first of May - or for the higher country, the first of June – and they are just hoping for some moisture. There are some that had to ship early, other ones did catch the rain so they were able to stay the whole grazing period they had contracted for. But overall I think they reduced the numbers that they've taken in than they normally would have, so it's probably down 25, 30, 40 percent cattle numbers. As far as the cow-calf guys they've had to ween early. Some have had to sell some of their herd, just a lot of downsizing.

I: Darn. When you're working with these folks or they call in to the office, do you have these conversations about weather and climate, what are those conversations like?

R: They're just always wondering when it's going to rain or if it's going to rain, or if it's going to be a good year. So far like farming, it's expensive - alfalfa seed and all that - to go buy it and then not have any water. But most of these ranchers have been going for fifty to a hundred years or longer. So most of them know more about it than I do pretty much, so it's good to visit with them and I learn from them what they're trying or doing or whatever, so it's really not much – I mean, we'll offer drought workshops and those type of things, but for these people, it's nothing they haven't seen at some point in their career with farming or ranching.

I: Sure, kind of like preaching to the choir at this point.

R: Yes!

I: What are the options for livestock producers in this region to reduce or prevent these threats that they're facing?

R: I mean, there's really none. Most of them, they just apply for grass insurance or they'll insure their crops, or things like that. A lot of them have worked on putting pipelines to water their cattle more efficiently so they can use the grass more effectively. The farmers, ya know, they'll put in pivots so they can better use their water to get it on the crops themselves. Just anything like that. Ya know, they're just trying to adapt to the times.

I: Yeah, I imagine there's only so much you can do when you don't know what to expect from these erratic patterns you mentioned.

R: And all of these things, they're all expensive. It's not cheap to change a half-million dollar pivot and get it installed and cutting back your numbers, that's the income they're going to live on. These are all big decisions that producers have to make.

I: Absolutely! In addition to the drought programs you provide, are there other resources or tools that you're using or other producers are using that have been helpful?

R: Yeah, like the healthy soils program. We have a lot of producers in Colfax use those types of programs, and they have a website with all different things about rotational grazing that maybe you can consider – or they can consider – for their individual operations.

I: It's really nice to have options and a diversity of options. Can you tell me about your drought programs?

R: The only programs that I know is we've done some early weening programs, we've done some programs on stocking rate for drought times. Just those kinds of things. I mean that's about the extent of the programming. There's just nothing you can do to compensate the drought. We've done grazing conferences to try to give them options for what to use but that's about it. Just trying to give them options of tools so they can see if they work for themselves.

I: Sure! Kind of back to the folks you work with, what are the characteristics of folks who are most likely to come to extension for help?

R: Most of them are middle-aged to later-aged producers, and ya know, they'll see something on the internet or on Facebook or they heard it on the radio or they heard it from someone over coffee

[15:00]

. . . then they'll come and ask us if we've heard anything about this product or that product or this grazing practice or whatever. So most of the time I'll do some research on it if I don't know about it and just give them back what I found out so they can make a decision for themselves.

I: It sounds like there's a lot of good conversation.

R: Yeah, there is!

I: Can you tell me a little but about this and the wider ranching community?

R: We go help our neighbors and they help us, everyone sets their schedules so we can be available to one another so we don't have to go hire someone to help. So it's just like an extended family. The neighbors treat us just like family. They'll help us in busy times, and we'll go help them. We'll help them ship cattle in the fall, weening them, the vaccinating, we just all go around and help each other and it's pretty good.

I: That's awesome, and I'm sure that keeps things lively and fun too. You chatted about family-owned operations, and sometimes out of state buyers come in, but are there other things that happen when producers can no longer cope with the challenges that come with drought and chaotic weather?

R: I mean yeah, some families will end up selling the land, but around here most of the kids or some of the family has come back or never left. They're keeping it going. It's just the ones who didn't have a real big family or they just got old, but most of those who didn't have a family, they've donated land to the

Boy Scouts or the Girl Scouts, they still keep them – ya know, one ranch is in a foundation, the Philmont uses it. So most of them have stayed the same.

I: Wow! That's so cool to hear. And I wish it was like that elsewhere, using the land as it had been but through other organizations. What solutions or strategies would you like to see implemented in Colfax County?

R: Just some way to get us water! I don't care if they have to pipeline it over here from Mississippi or wherever it's really wet and they're getting flooding. Louisiana and those types of places. I wish we could have some sort of pipeline infrastructure across this whole country, to an area that's dry from an area that's flooded and we can use it efficiently out here. Fill reservoirs, put it into creeks, whatever. Of course that would be an absurd amount of money to do that, but I think if I could do anything that would be a cool way to address drought concerns in the West.

I: I've had the same thought! Especially with hurricane season coming through, there's gotta be a way to redistribute that flood water to places over here that need it.

[20:00]

I think it would be a big cost, but certainly worth the investment.

R: Oh for sure! For all of these fires going, it would give them the option to have water to fight them with. I don't know, I just think it would be a good idea.

I: I totally agree! Through this talk, was there anything that came to mind that you didn't get to talk about?

R: No, not really.

I: Well this has been so helpful. Folks over in Union County said you'd be a wealth of knowledge and I certainly agree with that. I've gotten such good information from this chat! I appreciate the time you took to talk with me, especially with how busy things are. My next step is to transcribe this interview and put it in a Word Document. I'll share that with you for your review, just to make sure I captured everything correctly and make sure we're not missing anything! And then after that, I'd be happy to keep you updated with any findings that we get out of this study if you're interested.

R: Yeah, for sure! That would be a good thing to keep up with.

I: Wonderful! [REDACTED], thank you so much! If anything else comes to mind or you have questions, don't hesitate to reach out, and I'll be in touch with you soon!

R: Okay, sounds good! Well you have a good day and thank you for your time!

I: You as well! Bye!

[End; 21:50]

Interview: 6
6/26/20
Transcription: M. Dinan
7/9/20

I: Interviewer
R: Respondent

I: To begin, I'd like to hear about your role with Extension: what you do, what areas you oversee, all of that would be great.

R: Awesome, and in speaking to that, I'd like to speak on behalf of our office, and not me as an individual. [REDACTED], so with being so new and with operations being so different than your typical operations before COVID, then I think it is best we speak as an office. So what we do in McKinley County Cooperative Extension is we address like family and consumer science, agricultural and livestock, and youth development need, for those within and nearby McKinley County. And I say that because yes we serve McKinley County but we also serve part of the Navajo Nation. We're serving like the Eastern region of the Navajo Nation which is traditionally from the Pueblo Pintado to the Church Rock area, but we also take into liberty some of those gray areas, like the Chuska community area and Tohatchi and Windgate, so we're serving some of those areas within Navajo. And we do that through tribal extension agents, agricultural, and 4-H in that sense, and also through some of our other positions like our CES positions, and so forth. So we really cover a lot of things.

I: Wow, and welcome to Extension. I'm sure that's been exciting so far.

R: Yeah, thank you.

I: Given all the areas that you oversee – and this is kind of a tricky question because there's so much diversity within that, especially when you bring in the tribal territories – but what are ranch operations like in the area that you oversee?

R: So really what we're looking at in this geographic region of the state are a lot of cattle, sheep, goats, more so than anything. We're seeing those particular livestock in more abundance than we are in horse, farming, and agricultural stuff.

I: Interesting. And does that look pretty different across McKinley County versus the Navajo Nation?

R: No. Even though you have a lot of checkerboard land and specific – like, this is reservation - and they operate under different governing policies, we're not seeing a vast difference in the types of ranching in the area.

I: How about grazing management? For folks who are raising cattle, what does look like?

R: So that's where we see a little more difficulty, I guess. I'm trying to pull up – I just pulled up a blank paper. We had all typed in one paper – my ill-prepared self! Hold on, I just pulled up a blank paper. This is frustrating to me, just give me one moment.

I: Take your time!

R: So we do have a lot of people grazing on both private and tribal lands, like we have people with leases through the USFS, we have the private land people who don't necessarily need special permissions. And then on our tribal lands, they're governed – they do have grazing permits for an allotted amount of animals. If that makes sense. So there are some set regulations; however, the enforcement of those set regulations, on and off the Navajo Nation, are minimal. Completely minimal.

I: You broke up on that last part – do you mind repeating that? I'm so sorry.

R: No, you're ok. It's just that there are a lot of grazing rules and regulations in place, both on and off the Navajo Nation, but when it comes to enforcement of those grazing regulations, we don't see any, it's very minimal.

I: Interesting. Does that influence operations in any way?

R: Yes, to some degree it does.

I: Can you tell me about that?

R: Right. So for increasingly many years – and it's consistent across our geographic location – is we do see lands overgrazed and there's a number of factors contributing to those problems that we would classify as typical over-grazing.

[5:00]

. . . Drought conditions have been a consistent factor in addition to overgrazing, water rights, and number of allotted animals. And that's a huge issue typically with income and transportation, grazing is relied upon for livestock where – like supplemental feed is not as common, but due to drought, overgrazing, and land management issues as far as like whose land is it, who has right-away, we're seeing an increasing number of people having to supplement their animals' feed. And at some points, and this is going to roll-over to your other questions, we're seeing producers who are not willing to make those accommodations – like they're giving up.

I: Oh gosh! Yes, I definitely want to get into that. Have you lived in New Mexico a while or are you new to the area?

R: No, not at all. I was actually born and raised near Gallup, I moved to southern New Mexico, I've lived in other countries, and then back to the area.

I: Oh wow! Yeah, this next question gets tricky because I'll ask about how you've experienced changes in the last 20 years related to the landscape and climate, and you can go as far back as you remember if it hasn't been that long, or incorporate stories that you've heard. But yeah, tell me about that.

R: That's actually fine. So I'll start with three points there and then get into a little bit of detail. So consistently, for as long as I can remember, we've seen increased drought and overgrazing, hay prices have steadily increased since I was young, stricter grazing plan development – I see a larger amount of sage grass as opposed to other wild grasses. And another thing that I say I hear more of, but maybe it's also just awareness and comprehending those words now, but we're seeing increased competition between owned domestic animals and wild domestic animals. And that is a battle or barrier in production that I have witnessed my whole life, and it has not been solved or addressed and is continuously run around every year.

I: What's an example of a wild domestic animal?

R: We have unclaimed, or unowned, horses. They are often referred to as feral horses or feral livestock. So on the Navajo Nation, one of our sheep producers I know has a grazing permit for 122 individual goats and sheep. And they can be in compliance with that; however, due to these feral horses on the same land, the Navajo Nation is seeing that this individual producer is overgrazing and does not take into consideration the direct competition with these unowned livestock who also take water from these producers that they haul out because they don't all have running water. In fact, a very large amount of our producers are hauling that water and they do have to adapt. They then have to pen their livestock so that their livestock get priority to that water that may be minimal. That's a huge one, and I see that all over our county and area that is an issue that producers of all kinds are facing in all areas of the county.

I: Yeah, we hear about that too with other protected animals around that state that cause conflict as well. It's really interesting that dynamic, and it's really hard to hear about the challenges that it puts on these ranchers – I can't even imagine. And I apologize, I interrupted with that question. You can continue with your answer.

R: So that's the biggest one in stories that we see. And when we talk about drought, many of our producers do haul hay, and I think a lot of that has really been highlighted during the Coronavirus in McKinley County and the city of Gallup. Because the city of Gallup went under a Riot Act Lockdown where people were not allowed into town from any points unless you had like verification meeting very specific criteria, you were turned around. And many people – people within my own fire station – were turned around when they were trying to gain access to water. We have not in over 20 years seen any additional water stations put into place for our producers, or even our families who don't have running water.

[10:00]

. . . People are travelling great distances or paying for this, and as far as accessibility goes, even with increased drought, increased water prices, increased hay prices, we're not seeing any increase of potable or non-potable water availability throughout our area.

I: Why do you think that is?

R: I think that because of again the checkerboards, having multiple agencies, the Navajo Nation, and city of Gallup and McKinley County government involved, the diffusion of responsibility is a very real thing that we're seeing within this community – "that's not my job, everybody has their own money." Everyone's people benefit from this and everybody's people suffers from this, but no one agency has actually taken the initiative in moving forward and addressing that availability issue.

I: Wow. How do you see things changing in the next twenty years? Do you think that the water issue will change?

R: So yes and no because even during this there were- although it was recognized in moving forward, I don't think there were any long term positive ramifications that were going to come from that acknowledgement. It's been an issue, it's been acknowledged, it's going to continue to do so. I really don't feel hopeful that it's going to become more accessible. To say "oh well you can't have that many animals anyway" or "we're going to put this monetary amount on this new service to be provided" if that makes sense. People are concerned that attention on them is going to have negative ramifications.

I: That makes a lot of sense. Gosh, I want to ask more about that . . .

R: About the water?

I: Yeah! The water. It's such a hard topic.

R: It is so difficult! Because, I mean, to address it with County Fire, they had some non-potable water go out, but they set up two water stations along East and West I-40 of Gallup. Well, southern and northern producers were still shut out. I can speak for southern producers that there is no other fill station south of Gallup. They go into Gallup. They were re-routed through backroads to the west side to the port of entry to get water for their livestock. And it's incredibly unfortunate. I could really get into that, but the fact is that we don't see equality, we don't see everyone treated the same, we don't see everyone offered the same services, and the biggest thing is the lack of consistent information. That really threatens our people, because then it's not even misinformation, it's the lack of consistent or accurate information.

I: Where is that information coming from?

R: So for the water, in this one scenario, and it was during the Riot Act in Gallup, that was the City of Gallup to make the decision, because they supplied the two additional water stations because they denied access to their main water station. They requested the Riot Act, that was solely that agency [City

of Gallup]. But otherwise, I would say the information is coming from public information officers from a variety of agencies, from law enforcement to Forest Service to state, county, and city.

I: Do you think that with rising temperatures and drought that there will be more pressure to make changes that would kind of take the responsibility off the folks who are suffering from this?

R: I completely agree with that. It's really rational, and I think a very simple way to look at a lot of it, is we see these issues with drought and we can anticipate the consequences of those, so what can we do to address and potentially prevent that

[15:00]

. . . is with any interference or assistance or even the willingness to understand what current producers are facing is relatively nonexistent, but it's more about intervention than it is prevention, when really we should be thinking the opposite: we should be thinking prevention and not intervention.

I: Right, that's so much harder to fix things that have already happened in so many cases. In terms of drought and the issues with water, and all of these changes that you've talked about, how do you talk about it all with your livestock producers?

R: So, it really just depends. A lot of what we do is talking about it through targeted workshops and programs. We're going to be doing this through formal and informal settings. So really, it depends. Culturally, within our area, climate isn't a huge topic and some see it as a concern scientifically and others see it as it just is as it is. We're facing this one day at a time. So we really just talk about it through listening to our producers and their needs. So when we do an informal walk-about on their property, we watch our verbiage and our language, because in changing your language that can make a huge difference in being open and understanding to the producer if that makes sense. So there's one thing that's really great that we've done with producers and it's something that I'm a big fan of, is it's a walk-about. I would consider it informal but it really comes back to a great concept. So you arrive at the producer's property, and they have livestock typically – we're only doing this exercise with those who have livestock. We give them a paper bag and then say "Ok, here's your paper bag, now find food," as if they were one head of livestock themselves. And now they're responsible for walking around their property where their animals have access to and filling that bag with what they think is appropriate for animals to be grazing upon. And you can talk about the noxious weeds, the ratios of noxious weeds to other vegetation in the area, and see what really is available and can your cow realistically graze here all day, and can your sheep do the same. And that's one – it's to get them thinking and to get them to ask questions through activities and to understand.

I: That's such a neat exercise! Has it been really eye-opening for folks you have done this with?

R: As me, as an individual, I really can't speak to that, but from what I've heard – absolutely. And as an activity it's something we still perform today because of its effectiveness.

I: I think that's an incredible activity – I love it. Do you believe you and your producers see these changes and challenges the same way? I mean, obviously there are some folks that these activities are really catered to, but what does that look like across the area?

R: That's one that I don't think everyone sees the same way, and I think that comes down to culture. So succession plans, I know we get into that later on, but those are relatively nonexistent here and that's – like the end of life is not something that's talked about excessively or really in any capacity among those who are Navajo. So for me being a producer, I personally would speak to say that I am very concerned by some of these things and the longevity of my flock – what's going to happen, how I am going to not just adapt, but how am I going to overcome and continue this? Whereas other producers, because they aren't thinking of things in the same context of a succession plan and the longevity of that herd or those animals, they're just going to say "I'm done," or they're not going to think about those things. They may have concerns, but it might not be those same concerns. It might be more short-term than long-term, and can I sell X-amount of head? Or am I able to move to a different area, move my animals, supplement their feed?

I: Do you think there is a motivation for more of this short-term planning as opposed to really looking ahead?

[20:00]

R: I think so because in any time we are going to engage in behaviors or activities that have been reinforcing and in those – if we make short term changes for short term outcomes, we are going to be reinforced by those behaviors a lot sooner than we would those other ones where we're waiting to see have they or haven't they paid off. Did they play out as anticipated? So I think it's the timeline that people are more apt to see change now as opposed to waiting for later.

I: And that makes a lot of sense because you may not see changes for a couple of years and that makes it hard to make immediate decisions. How – you've mentioned a few things – but how do changes in your community threaten producers in this area?

R: I think the biggest few things are increased hay prices, resulting in less livestock. More noxious weeds resulting in less naturally-occurring foods. And hauling more water, resulting in higher fuel cost, additional wear-and-tear on the vehicles, and higher water cost as well. Those are some of the biggest three things. And if we look at long-term, if these are consistent, then they're threatening our producers – in the whole, we are going to see less producers because a lack of succession plans and higher costs people and producers are going to be downsizing. And that's a huge threat in regards to the cultural significance of some of our practices in the area.

I: Absolutely. And I want to talk about that too, just that turn-over and transition period that y'all face up there. But first, I want to hear about what factors make these threats worse for producers? And ya know, this could be environmental, economic, or ya know, those socio-cultural factors that kind of compound these issues.

R: So in a sense, with these being the changes, are you asking why they are threatening?

I: Given these changes, what makes those changes worse.

R: Oh! So what makes the changes worse? So, I'm trying to think. So for increased hay prices, I think that's pretty consistent. When we see that, what makes that worse is producers turning to alternative places to supplement their feed and then they're going to get stuff that might not be quality. So they might bring something to the animals that is not ideal for consumption, if that makes sense. If you can't afford 16 dollars per bale, you may turn to poor quality, which in turn affects the quality of your livestock. I think that that could make things a lot worse is exploring non-vetted alternate sources of feed. For noxious weed, what makes that worse is lack of knowledge or not talking with other producers to say "hey, my sheep was eating those purple flowers and that's what is making him sick" – just lack of communication would make any of these things worse. And in hauling more water, what would make that worse? I think what makes that worse is especially what we talked about earlier, is that competition between owned and unowned domestic animals.

I: That makes a lot of sense. In terms of producers talking to each other and keep that communication up, do you think there's a good social structure?

R: Yeah, somewhat!

I: And we talked about this a little bit, but what are the options for producers to reduce or prevent these threats? And you kind of talked about it being more intervention rather than prevention but –

[25:00]

R: Right, but for those that maybe younger people my age coming back to take care of their parents' animals, they might think more of prevention. So how can we look to do this? It's through fencing. We do see higher upfront costs that pay out long-term. Through secure fencing, you're going to see less competition for both feed and water between not even just owned and unowned domestic animals but between your own domestic animals and wild animals like large game. So that's a big thing. To take advantage of your local extension office, your USDA office, any of your forestry departments, and see, have them do a walkthrough and identify what type of vegetation is growing in the area that your livestock has access to, understand what food occurs there, whether that be noxious or non-noxious, whether you need to supplement feed, having that basic understanding of your own capacity for feed can be very beneficial. And water, although it is incredibly difficult, I'm big on advocating to our local governments or offices about these types of things. So to advocate to the local chapters for water for water assistance for the city or county, for additional water stations, to lower water costs, just to talk about availability and to ask questions like "why has this not already been done?"

I: Yeah, absolutely. What other resources, such as educational resources, are producers using? And you can talk more about those programs that you brought up earlier as well.

R: So with educational resources, we have a ton of agencies, and it's just a matter of reaching out to them or knowing they're there. We have people from agriculture to livestock, again like all of your extension offices, and the actual state and tribal departments themselves to call and ask. But it's a little difficult. I do feel there are a large number of producers who do take advantage of the services provided, but again, because of the fact that people don't want to bring attention to their production, they're really going to be humble and try to do it all themselves.

I: Yeah! Is that pretty common?

R: I'd say so yes.

I: What about the people who do accept help, who do reach out – what are the characteristics of those people?

R: So, I just need to think about that for a second. So, I wouldn't say there's really any set of characteristics for those who are more likely to accept our help. In our community, it's just that everyone is really pretty great at working together and are pretty accepting of the knowledge that others have to offer even if it doesn't lead to a behavior change. So I would listen to you even if I'm not willing to change my position. At least I am more informed in making a decision to change my behavior.

I: How about – oh go ahead?

R: No, that's alright, go ahead.

I: I was just about to ask another question, so if you have more to say, I'd love to hear it.

R: Yeah, I kind of wanted to go back to just a little bit more on the prevention thing and kind of what's going on for intervention.

I: Oh, please!

R: The biggest option is not necessarily prevention or intervention in our situation, but mitigation. A lot of what we're seeing – and when I'm say "a lot of," I don't literally mean a lot, it's a figure of speech for this is what we're seeing – we're seeing Navajo Nation horse round-ups, few and far from, but they are in existence in some form. **We're** seeing a little bit of brand enforcement in range riders, but they are not very successful because of minimal code enforcement or monitoring on tribal lands, and it's hard to monitor on private and state land due to increased capacity of producers, where we may only have one livestock agent if that makes sense. And then – what else do we have? We have a program, and this isn't just in McKinley County, I'm actually familiar with this all over the west side of New Mexico. It's a project called Investments in Resilience, and these guys focus more on sheep, but I know that in times of drought, they have been really great in providing assistance to ranchers through direct feed, like "I'm going to bring you a semi of hay" and they're directly helping producers who are struggling through drought.

[30:00]

... And then of course, the targeted education through the USDA like the NRCS. Cool, I just wanted to bring that up.

I: So cool! I don't think I have ever heard about the program that brings resources to producers, I think that's so neat. Who did you say that was operated by?

R: So it's a program called Investments in Resilience. I believe NiKyle is doing it. So they're a nonprofit, but I'm sure you've heard, there are politics involved in everything. But they are a Churro conservation group, so they've been really helping out producers who are specifically involved in raising Churro sheep of some kind. And they recognize Indigenous peoples and promote agricultural projects and practices, they really do a lot.

I: So cool, that's definitely something I need to look more into. I hadn't heard about them before. We kind of touched on this topic a little bit, but can you describe what you anticipate producers will do when they can no longer cope with these threats or these challenges?

R: More often than not, and it's incredibly unfortunate to say, but they are going to cut their losses.

I: And – what is it that leads to that being the predominant option as opposed to others?

R: So in the past 20 years, in talking as an office to people who have been here quite a while, we're seeing the same issues over and over again. So knowing that these issues are consistent and that they're not new barriers, a change hasn't been implemented – a successful change – there's not a lot of hope or a lot of trust in agencies that can make those changes for producers. So it's just the fact that they're not seeing change, they're not seeing hope, and they think it's more effective to cut their losses and continue in other practices as opposed to continuously try when there are limited options. I mean we can adapt, but if we have to haul water, and there's only these sites, and I'm already driving an hour and half, it's now 94 degrees and I have to haul water every two days, there's a lockdown – it's incredibly trying on people to continuously fight the system. The system should be serving the people, it should be working for the people and not against them. We all work with each other, but we really have to consider who we're working for in these sense, and I think that's just been forgotten.

I: Absolutely, and I think even if the community effort is there, there's a power dynamic that might outweigh even the best efforts by the community, and that needs to be reanalyzed. And you talked about succession plans, how about in terms of like children of these producers taking up these ranchers, are people moving out, what do you see people doing when they sell out or move on?

R: What I'm seeing oftentimes is there is no succession plan in place, the day comes and then the day's here. We see people moving home. And if children or family are unable to move home to take care of those animals, the family then is typically selling whatever the family was raising and they're cutting their losses, they're giving them up among other individuals, if someone is unable to come and figure it

out for themselves. But that's exactly what people are doing. It's younger people either within the community itself or within that family that are coming and just diving in headfirst.

I: You brought up this really important culture surrounding ranching and raising livestock and what these changes – how that affects that, can you tell me more about that?

[35:00]

R: How the changes affect ranching? Or the solutions – I'm sorry, can you repeat that?

I: I'm sorry, yeah! Just how these challenges really affect the ranching culture, and culture has a big part in how people make decisions, and I was just curious about that and wanted to hear more from you.

R: I think it's more difficult to answer because of individuality. I think when we look at this, because I'm so new to this I'm not totally sure, but these practices vary: new and old and far and few between. We see families that have been doing this and continue to do this and other people coming into to the family to continue those practices, but I feel that we see fewer newer producers starting, coming into the area, or already in the area and deciding to get into it. A lot of what we're seeing are ancestral flocks of sheep – they are established and they're not just starting. In some way or form, this has been a multigenerational flock of animals. So I think we see that a lot. And that really, when it comes to these threats, it's nothing that grandma didn't face, so it's nothing that I can't face. People coming into it, these might not necessarily be known. With these newer producers, that's where we're getting these call is – or maybe it might not be an issue or that might just be the standard is that you drive for water, you pay 16 dollars for one bale of hay, and that you don't free range your animals due to noxious weeds. And that just really varies what we're looking at, what producer we're talking to in regards to what policies they're governed by in addition to what are they producing?

I: That makes sense, thank you. I know we talked about this a little bit in terms of the challenges that McKinley County and the Navajo Nation faces, but what do you think needs to change in these communities to see more stories of success?

R: So, I think that brand enforcement would be a really great thing on both Navajo Nation and state lands, and same with grazing. Yes, we have this written, but let's actually get some enforcement in that so that action and words are matching. And water stations of course, in all parts of our county. We have people driving very far ways for water. Some land stewardship and shepherd courses would be phenomenal. Other countries have entire university programs designated to teaching people how to become good stewards of the lands. More education or increased capacity for land stewardship information and shepherding would be great – outside of the family, more formal education on the two of those.

I: Yeah! I really like that last one. I think when you can think about agriculture in terms of land stewardship, because that's what it really is, then it speaks to a wider audience, or at least different audiences not usually involved in agriculture.

R: You're completely right. And that's what we need for all of these things to be successful, whether it be the water station or stewardship or anything because it's applicable to all, is increased cultural competency of people coming in to talk about this. I talked about language earlier – the manner in which you're speaking, the words you're using makes a huge difference. So to have increased cultural competency would be great. For things to be true, they don't have to be verbalized. People are already aware of things, even if it hasn't been said.

I: Yes! Absolutely! I think you hit the nail right on the head. And I really like your term cultural competency. Are there solutions that you would put into practice, or other put into practice, but haven't or can't? And I think we're thinking more in terms of ranch management or solutions that producers think about in terms of coping with drought.

[40:00]

R: There are a couple things. One thing for us is to be competent in the resources available within our surrounding area so that we are able to relay that information to producers when they reach out or when we receive information of producers struggling, we're going to go ahead and directly pass those on and pass those on. But also just sharing those freely, focusing on information dissemination to a targeted audience on available resources. There's been courses like the Beef Quality Assurance program put into place in addition to like, wool grating. There's a program that is organized by the director of the McKinley County Extension office called Indian Livestock Days which is an annual 2-3 day event, where there are people from all over the country and specialists that come in to talk about topics like trich testing on the beef quality assurance or the wool grating, because a lot of our producers are really getting ripped off on their wool that is being bought commercially. In fact, there's been barns that've been shut down this year in the state of New Mexico due to low prices being offered on wool. As opposed to just selling it at all, entire auctions have been shut down. So yeah! It's focusing on what's happening commercially on all levels – nationally, state, locally. Focusing on what you're producers are raising so we are able to offer more targeted education and information on resources. And I think at New Mexico State University as a whole, their college of ACES, is doing really great in providing information for their producers, like schedules on vaccines, information on seed. They have large-scale commercial producers that are helping our smaller ones, like NAPI up north with hay. So, it's really just about being that link, that chain link between our producers and everyone else.

I: Yeah, that's so important to be the ones to bridge that gap.

R: That's what it is – it's a liaison. It's liaison work. To be culturally competent and able to liaison between other organizations to achieve a common goal.

I: Absolutely. And I really like your point about knowing what's out there and having good records with both the producers and the world. It keeps you informed with what you need to know to evaluate and change behaviors. I don't know what you were talking about – you had so much good information! Is there anything that I didn't ask or any information you wanted to share that we didn't get to talk about?

R: I guess one thing about a lot of our producers, about the majority of our producers, is they're not going to talk about their successes very often. There might be a lot of things that are working well for them in their adaptations or their new practices, but they're not going to voice them. Because they don't want to come across that they're better than you or in any other way. They're incredibly humble people, and so it's very easy to fall into, to see, or hear, all that people are struggling with, that were not seeing all the successes as often. And that doesn't mean they're not there. Like I said earlier, it doesn't need to be said to be true. There are many successes that we have no direct knowledge of because of humble producers.

I: I had a few other people who have talked about that. Ya know, it's not in their values to toot their own horn, and one person thought an answer to that would be more young folk coming in to shadow [producers] or making documentaries just to showcase their –

R: Their work? Their wonderful successes? And it's not just that we're trying to applaud you, but you have work to share that others can benefit from.

[45:00]

I: Exactly! Yeah, in that too, people learn from that and it could be another producer as well who can be like "Ok, I should try this out." So you talk about a lot of these successes being unknown. Can you talk about the ones you have seen or heard about?

R: Hm, that's a little difficult. I think just some producers working together to achieve larger, common goals. Whether that be getting feed in bulk at discount from places like NAPI or producers in other counties like Sandoval or Bernalillo County. I think that's a big thing – community and teamwork. People aren't going to say they rely on their neighbor for water, but they absolutely do. No, I can't think of any specific examples.

I: And that's ok! What about innovations on the ranch that you've seen? I know you talked about fencing and bringing in hay, and other things of that sort, but what about innovations?

R: A little bit! Because of animals travelling increased distances for the same amount of food or water, you see a lot of producers working in non-traditional ways. They're riding horses less, they're using four-wheelers and dirt bikes more, to handle the distance and terrain. I think that was something pretty creative. Obviously, coming up with good system routines for their animals to be confined to one feeding space to prevent that competition with other unowned domestic animals. A lot of producers have come up with different systems on how they're going to feed their animals and ensure that it's only those animals being fed. And I can't think of too much more. It's not totally related, but specific to McKinley County, we have one nearby in Window Rock that will see them, but we don't have a veterinarian that will see cattle. You can't even bring a cow to this vet. They don't do large animals, you can bring sheep to them and horses to them, but despite that not cattle, and that can make it hard for producers as well.

I: Oh my goodness, so where are they going?

R: They travel to either Window Rock, Arizona for a veterinarian – and I know a lot of us locally still travel to Cibola County to Grants, New Mexico for vet care. Due to hours just being so busy and due to their increased busy-ness, we might see sometimes see poor quality work from them, and that's hard for producers. The cost of that and just that they're not reliable.

I: Yeah, gosh, the extra work of just getting their cows seen to be treated that way. . .
Well. We're planning to talk from folks from elsewhere in the Colorado Plateau, and I'm wondering if you know of anyone from Extension or NRCS that would be interested in talking with us?

R: So, I think Chase Elkins would be a good person, because not only has he been with Extension for a long time in that county, but he also does angus farming, and he could really speak on behalf of both serving the producers and being a producer himself. I do believe you could reach out to the New Mexico Cattlegrower's Association for some people. When it's held, it would be great for you to attend Indian Livestock Days, because you could talk to a multitude of producers, and I think it's just a really great setting that would be really beneficial to you. I could reach out to a local individual – we have Ms. Capitan who has a sheep camp. Potentially Jennifer Douglas down by Lordsburg – she's not necessarily in Extension, but she's very familiar with the Investments in Resilience program, and she's a large producer of traditional Churro sheep for all over the state, all over the nation.

I: That would be fantastic. I would love to be connected with these people in any way, because I definitely am lacking in just knowledge of Tribal national and I want to be sure we understand and learn about.

[50:00]

R: Awesome! So you wrote them down, but I can also send you an email with the event information and emails of people I mentioned.

I: Thank you! That would be so great. I would love that. And then ya know, you mentioned some people who are producers, but are there people that are solely producers that you think I should talk to down the line?

R: I think Ms. Capitan is a really great one, because she is governed by a lot of the Navajo Nation policies, she's raised sheep, goat, cattle, and horses for a very long time, she's faced conflict not only hauling water but some of the conflict with the competition among animals. I think she's a very good person – humble and more than resilient. I'm going to reach out to another producer on the Navajo Nation that does cattle, that works with our Animal Control, actually, and see if he'd be willing to discuss.

I: That's great, this is already so helpful! I'm curious, do you know Helena Deswood?

R: I don't believe so!

I: She's the Southwest Climate Hub's Tribal Coordinator, and I think it would be great if y'all knew each other and I think does a lot of work up where you are. I'd be happy to pass on your name!

R: Yeah, please do! And if she's up here, I'd love to meet her. We can go out in the fields.

I: That sounds awesome! And so that's it from me, that's all my questions. And so I'll have our interview transcribed, and I'll send that on to you so that you can make sure I captured everything you said accurately or if there's anything you want to add, it can be added. And of course, I'll keep in touch with connections, and project results, and other things, if you're interested! I really – gosh – I really appreciate the time you took to talk with me today, I learned a whole lot. And I'm really excited to keep learning more about the items you brought up today.

R: Awesome, well I really appreciate you including McKinley County Cooperative Extension in this, and being so flexible, and pre-writing some interview questions for us to discuss. I feel like that was very advantageous.

I: Of course! Happy to do so. I will talk with you soon, and I hope you have a great weekend!

R: Thanks and same to you! Enjoy yourself!

I: Thanks! Bye-bye!

R: Bye!

[End, 53:46]

Interview: 7
 6/18/2021
 Transcription: M. Dinan
 6/18/2021

I: Interviewer
 R: Respondent

I: We're hoping to understand more about that Four Corners region of New Mexico – Farmington, Bloomfield – San Juan County – area. If you could just start out telling me a little about yourself, what you do, that would be great.

R: Okay. So my name is [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED] And, as you

probably know, like the rest of us, the last two years the focus has been on drought mitigation strategies to manage risk or production costs as well as environmental impact or production system impact. That's kind of me in a nutshell.

I: Fascinating! I think it's so cool the different scales that you've studied, ya know, going all the way down to the genome, and then all the way up to the whole ranch!

R: It has helped! Ya know, nothing is uniform. You know that probably better than anybody. There's no real cookie-cutter solution when it comes to resources or impact.

I: Exactly! And it does challenge things, but I'm hoping conversations like these will at least make it clear all these different nuances and how maybe we can organize them in different ways to be more efficient or effective.

R: Agreed, absolutely!

I: What can you tell me about ranch operations in that Four Corners area of New Mexico?

R: Well, I can tell you that – you can basically divide New Mexico by ranch strategies basically by drawing a line perpendicular through the middle, and you have northern and southern strategies, and I think the southern parts are more drought-resistant because of the nature of their system. But I would also say that Four Corners area in particular – that's an area that if you really look at it, they experienced these long-term droughts, and they've become very resilient in doing so. I mean, you still have irrigated

pastures and things like that, but you start looking at Shiprock, ya know, over in the Arizona Strip area, go a little north into San Juan County, or Cortez and southern Utah – those areas are very precipitation-variable. I think a lot of those ranchers up there, in particular, have implemented these long-term strategies to help them mitigate the risk because I think they've just experienced it so much, and I think they're kind of able to run operations with extremely limited and variable resources, that they are more resilient up there I would say.

I: Yeah, it's really interesting that you have to experience this certain threshold of disaster or hazard to know how to cope with it successfully.

R: I would even say those guys are very much more conservative in their agricultural practices, meaning they might have stocking rates that are much lower than what they probably could run with the concern that we're probably not going to get rain again this year or something like that.

[05:00]

I: Aside from conservative stocking and having this exposure to drought, what would you say – what else are they doing that contributes to their resilience?

R: I think they were on the front end of not necessarily following the cattle trends, and what I mean by that is selecting for these larger-bodied type cows or these cows that weren't going to essentially match their resources out there. Because in order to be successful out there, they need a very specific type of cow, ya know. They need a cow that is going to cover a good amount of ground – have a good structural component, but also a cow that doesn't have these huge nutrient demands associated with its body size or increased milking ability. So if you go out there and look at these cows, you might say these cows aren't body-beautiful, they're not something we're going to show. But they are extremely productive in that environment, and I would say very successful in identifying cattle that match that limited forage supplies out there.

I: That's really interesting. How – so ya know – given their resilience, how do challenges associated with drought manifest in that region? What is a concern for these folks?

R: Ya know out there - I think the concerns are similar across the board – but out there, I think they are operating in such limited margins in terms of resources and everything else that a multi-year drought like the one we're facing right now, the reality of it is you can only go so many years. With them, they're still having to buy hay, they're still having to locate water. And out there when that resource is already limited like it is, when it takes a detrimental effect like it has for the last couple of years, and takes it even further, I think they are more affected because one, they hardly don't have anywhere else to go a lot of time, ya know they have maximized their resources. But then they're also subjected to the market where everyone else is selling cattle to get out of the drought, and now they've selected cattle that – they're still really good cows – but may not be the market optimum that the market wants. So now they're affected by the huge supply influx of the cattle prices already going down, but now there's a more strict level of buying criteria placed on cattle, so they might be hit even a second time because

they're having to select a different type of cow out on that range. So they get hit every which direction if it gets bad. It's tough.

I: Aside from market forces, are there other off-ranch problems that kind of make these matters worse?

R: Oh absolutely. I think the big one we're seeing right now is that transition of succession of those ranches to the younger generation. Ya know, I think that the perfect storm – I'll use Utah right now as an example – it's a perfect storm right now because we have a huge influx of west coast and east coast people moving in right now. So housing prices, land prices, are through the roof. There's not enough houses or land, so land prices are going up, and you're having this succession to this younger generation, and this younger generation is going "we're in a drought, the market's horrible, and we could essentially turn this ranch around, or get rid of it, and we're set for the rest of our lives." So that dynamic right now is the big one. We have a lot of farmers and ranchers that are transitioning out of the system because they're almost 65, 70 years old. And the younger generation realizes that "hey, there is more money selling this land than keeping this ranch" a lot of the times. So that's the big off-ranch thing we're seeing right now.

[10:00]

I: Yeah, unfortunately I've heard quite a bit about that, and in some areas of New Mexico it's very much influenced by oil and gas. I find it so interesting that ya know, folks will come in and offer multiple millions of dollars for this land, and how could you resist that?

R: Ha! Even on our land – we're on ten acres here in Utah – and I've had probably fifteen people come up to our gate and offer to buy our house and land from us. And it's just like, "I don't need to move! I don't want to move! I want to live here, just leave me alone."

I: Haha!

R: I can see how that temptation can be there!

I: Exactly! And like with what you were saying, when those land prices go up, it's hard for people to get in, and even harder for young, female, immigrant, people of color, to enter into agriculture as well.

R: Absolutely, if we were buying today, there's no way we could live there. There'd be no chance. But it's the perfect storm right now: drought, market, people wanting to homestead, produce their own food. It's a weird market-production dynamic that we haven't seen, really, before.

I: What solutions, or what ways, have you seen people from that region respond to these challenges? What strategies have they put in place?

R: The only thing I've really seen people do – like I said, they're really resilient – but the only thing I can think of seeing people do in that area is they are very good at identifying their resources that are able to come through that drought, whether it is family labor, equipment, animals, specific land resources,

whatever, that are very resilient to come through that drought, and they'll actually reduce their resources to a point where they really just have a core of what makes their ranch or farm function. And the thing that is interesting that you see over and over again in that area is these guys will reduce herd numbers, you'd see them instead of baling hay they'll use that limited water that grew up that hay crop and they'll graze it instead of haying it. And then when they come out of that drought, they have that strong core of resources to start propagating and building again instead of having to start from scratch like a lot of other people do.

I: Why is that not something other people would be doing?

R: Well, I think in a lot of other places, the mentality is "okay, I'm in a difficult situation, so I'm going to sell out everything, and then when the situation gets better, I'll get back in." I think, specifically in New Mexico in general, there's a business aspect to agriculture, but there's also a strong family tradition in agriculture. So I think what a lot of it is, ya know, I'm not only going to sustain this for the business side of this, but I'm going to sustain this for my generational influence of this. And ya know, I'm not exempt from this, we still have the ranch in Torrance County. And ya know, I could probably be approached by someone and I would never sell it. We kind of operate similarly in the sense we will whittle down, whittle down, whittle down to keep us alive in the system, and then when we come out we're able to propagate again. So I think there's that cultural-traditional aspect of it, especially in that Four Corners area as well.

[15:00]

I: I really liked how you explained that, too.

R: Yeah, it's interesting!

I: It's so smart – because once you explained the alternative, I was thinking just how tempted I would I be to do that, like "Okay, I'm in a bad spot, I'm just going to get rid of it all." And then it's harder on the back end to get back in.

R: I think a lot of it, too, and I know this from my family and even some friends who are up in that area, that it's explained to you like you're almost part of something bigger. And if you get rid of it, you're not getting it back. I think that's part of the trying to hang onto it and really just trying to sustain through those hard times to come out and then build back stronger sometimes.

I: What do you know about ranchers' relationships with like Cooperative Extension and other service providers in that area?

R: I would say in that area, over the last probably 3 to 4 years, that relationship has really grown and become beneficial to both. I can tell you, before that – right now, they've got some county agents, they've got some state specialists in that area, that are fantastic and have really kind of brought a lot of those people into Cooperative Extension programs. Ya know, for the first time in a long time, I think some of those people actually see those Cooperative Extension and some of these other agencies as helpful and beneficial. Ya know, I've done three programs down there with New Mexico State and University of Arizona in that Shiprock area and it was amazing, actually. We probably had over 100 people show up, which isn't uncommon for a big extension program, but the interaction we got from

those people was absolutely amazing. I presented for thirty minutes, but I was there for almost four hours talking with people afterwards. So the desire to have that conversation was there, but for whatever reason hadn't happened in the last few years until recently. And that's really a credit to those guys [out] there.

I: Incredible! Can you speculate what caused the shift?

R: I think, honestly, I think it was effort. I think those new agents made it a priority to reach out to the Navajo Nation, to ranchers there in Farmington and Bloomfield, ya know, even Cortez or Dove Creek and say "hey, we're available, we're having this. Why don't you come and then tell us what *you* want and then we'll build a program around you." That's kind of what happened. I think they finally went out and said "hey we're here and we want to help."

I: That's so exciting to hear!

R: It is because I honestly think a lot of that area was neglected for years for whatever reason.

I: I think so too. When I talked with folks from McKinley County, they very much talked about bridging that cultural gap, and people in Extension can be nervous to do that and are afraid of doing it the wrong way, and yeah – you have to be very intentional and knowledgeable, but you've *just got* to do it, is the thing. You can't just let this diffusion of responsibility happen.

R: Yeah, and I think also – I can tell you from my experience growing up – Extension was not viewed positively on our ranch. And this happens a lot I think, ya know, you have people go out to these programs – and I'm not trying to be mean to nobody but – the Extension person will go out – and this is our experience on our ranch – and pretend they know more about your situation than you do. And they don't listen. So I think that's what made this group in the Four Corner's area successful, is they went out and they listened. And they said "okay, what are you dealing with, what are the issues, how can we help? If we can help!" And that's where that gap was bridged initially, and I think there's still some places in New Mexico and other places where there might be a little distrust between production agriculture and Extension because there's still the view that these are all university people, they have no idea what's going.

[20:00]

I: Haha! Oh my god, totally!

R: So ya know, I come from the production side of things, but I work for Extension, so I get it!

I: Haha! Yes, you can see both sides clearly!

R: Sometimes I go "am I actually useful here?"

I: Oh I love that checkpoint with yourself!

R: Am I actually doing anything good?

I: Haha! If only we all used that checkpoint! Do you know of other resources, programs, or tools that producers are using in that area?

R: I know a lot of them are with the USDA, a lot of them are looking to the drought programs – what is it? The hay supplementation programs, I think? Especially in drought, because I know they can get funds to go and buy forages to supplement them through drought or through winter. This year, even if the money is there, that's going to be a tough program because I was just talking with our economist today, and he was telling me that hay yields in the intermountain west are about 33% of normal right about now. So yeah, it's going to be a tough summer.

I: Oh my god! What do you think needs to change in that area to see more stories of success?

R: Like I said earlier, we're very much tied to tradition, and that's a good thing, but that's also something sometimes that if we don't open our minds outside of that a little bit, and what I mean by that is you hear a lot "my grandfather did it this way, my dad did it this way, now I'm going to do it this way." And don't get me wrong, there are a lot of really good things that come from that because once again you get that generational knowledge passed down of how we've stayed in business, but I think when you're just looking at it that way, you fail to look at those minor things, or management techniques, or technology, or knowledge that you could implement that might make you even more successful. And then the other thing I would say is that there is really a lack of knowledge of government programs out there or even Extension programs to really assist these farmers and ranchers. I just think that some of them want it, but I think they don't know where to get it from, or where to get that information from. And I'll be honest with you, I just found out about some resources yesterday that I never knew existed! So think that's a big thing – they don't know what's out there to help them. Whether it's knowledge, resources, any type of assistance. I don't think they understand that it's there, and if they do, I don't think they know how to get it.

I: Was there anything that came to mind during this conversation that we didn't get to talk about that you'd like to bring up, or talk about further?

R: I don't know – I'll probably think of a bunch when I'm driving home! No, this was good, I liked this. Ya know, this isn't a conversation that I think I've had with anyone.

I: Oh really??

R: Yeah, no, this was good! I liked this. This is definitely conversation that needs to happen on a wider level with more people.

[25:00]

I: Oh my god, I'm so glad you think so! And hopefully that could be a next step once we put all this information together. But thank you so much for this – I learned so much and really appreciated the perspective you brought to this too. Very unique and I – who does not come from an agricultural background at all – could make sense of it. So thank you!

R: No, thank you. If you get all of this together, I'd love to see what the outcome is because I think this would be something – I would love to have you, me, and whoever else just talk to producers, and have this conversation, because I think this ties into every aspect of the things we're facing right now, so I think it would be really cool to talk about it in a group.

I: Oh my gosh, I would be thrilled to do that! I will definitely keep you updated with the progress of this, and let's definitely plan something with whatever happens with this project.

R: That would be great. Just let me know how I can help, and I'll do whatever!

I: Thanks, [REDACTED]! You've already been a tremendous help, thank you so much. So yeah, I'll be in touch with you soon with your transcript and then definitely following up with anything after that. I'm looking forward to whatever that could be!

R: Excellent, well thank you!

I: Alright, have a great weekend!

R: You too. Bye!

[End, 26:31]

Interview: 8
8/27/2020
Transcription: M. Dinan
8/27/2020

I: Interviewer
R: Respondent

I: My first question for you – can you tell me about your role with Curry County Extension?

R: Yeah, I'm the extension agent here, so I work with the producers and providing programming to them that helps them in making decisions on their operation.

I: How long have you been in this position?

R: I start March 16th, so four days before this pandemic.

I: Oh my gosh! It didn't give you much time to adapt to the office space, huh?

R: Oh it's been a lot of fun.

I: Oh really? Haha!

R: That's the positive outlook on it.

I: There we go! We always gotta have that positive outlook! Well welcome to the Extension team! I'm sorry it came at such a rough time. Can you tell me what ranch operations are like in Curry County?

R: Yeah sure! I grew up – my family raises livestock over here. But there's a lot of different ranches around. A lot of it is we deal with drought management on a regular basis. We may have two years, and lately in the past 15 years it's been like this, but the last two really good years and we're trying to manage grassland, and rotate, and try to plan ahead the best we can to limit the damage we do like overgrazing. So planning really comes in handy when dealing with drought management because I think the climate lends its way to you're going to have to plan more.

I: Absolutely, and it's good to hear that too. I've chatted with a few folks who just take it day by day, and that's all they can do too, but it doesn't give a lot of flexibility to deal with what their facing.

R: Ya know, that's probably, definitely the case, and I think that's the majority. They plan very short-term and there's not a long-term plan implemented in their operations, so you see a lot of people scrambling to get rid of cows when they run out of grass, instead of maybe looking at other ways to rotate and maintain that grass longer.

I: Yeah! Are y'all mostly cow-calf up there?

R: For the most part. We have a few people that have some irrigated farmland, and they'll do stockers on wheat. I know a few people that run stockers on their ranch during spring and summer, but for the majority, it's cow-calf.

I: Interesting. Can you describe the changes that you've seen in this county related to climate in the last twenty years? Or as far back in your memory would be great.

R: Yeah! I think as long as I've been here it's become a drier climate. I don't think the rainfall is as predictable. I think there's been less rainfall in the last twenty years and fewer years where it's plentiful. And that may swing back around, you never know. That's just from my experience.

I: Yeah, that's something I'm curious about! How do you see things changing in the next twenty years? Get out your crystal ball!

R: The hope is we get a ton of rainfall, ha! Nah, I think in the next twenty years we have a – we should start planning better for the years we don't meet our average rainfall. And back to the what's changing, we don't get the rainfall when we used to. We used to get more summer rainfall than we do, and now we're getting it later in the Fall, like September. And a lot of winter moisture. More so than we used to.

[05:00]

And so there's a lot of ways you can handle that. Winter grasses are going to become a lot more viable I think in keeping – ya know having a few pastures for those winter grasses are going to be key in maintaining your cow herd throughout the years.

I: Yeah, as opposed to just having that summer grass?

R: Yeah, your summer grasses are going to take the hit. If that's the case. It just depends on when we get rainfall and how much we get. Which is what this conversation is about, ha! Ya know, on really good years, we average about 16-17 inches a year. It's hard to think off the top of my head when we've met that average. Some years we get more than that. Some years we'll get twenty inches, and some years we'll get eight. It just depends on the year.

I: Dang! That's a huge difference I would think.

R: It is. And so the average doesn't quite tell you the picture.

I: Right, that's a great point.

R: The data is great to have, but I think on a year-to-year basis, we should plan – planning for the worst, I think, is the best way to go and be prepared to implement some drought management strategies no matter what they be. I think having a plan in the first place is going to lend you to a greater opportunity to maintain your cow herds. And at least you have a plan when push comes to shove.

I: I agree. I think it gives you a little peace of mind too to know you aren't making decisions off the fly.

R: Mhm, and it keeps your mind thinking about it constantly. You can implement a different plan if you already have a plan in place because you've already thought about where you can take your cattle during drought or how you're going to implement destocking. That's not a fun word around here for anybody, but it's reality.

I: Yeah, for sure. I think you bring up really great points. How does a drier climate and then having the shifting rain patters, how do these changes threaten producers in your area?

R: I think it's going to take some time to know what it really does, but when they have to start looking at different ways to manage our cows – I know that's a broad term, but I think that maybe coming up with new strategies or maybe trying to implement some rotational strategies might help us save a little grass when we need it, help us not overstock something on a dry year and it hurting us in the long run. Having a short-term view all the time I think is going to lead to a lot of stress on the cattle and a lot of stress on the producer. I think planning and if we need to find a way to make it work, we will, because that's what agriculture is about.

I: For sure. That's a really great way to tie planning into agriculture. I really like that perspective a lot. Do you find yourself talking about drought or these changes with the producers that you work with? Is that something that you're talking about?

R: I think in this area we talk about it quite a bit.

I: Oh yeah, you mentioned that!

R: Oh that's okay, I'll repeat. It doesn't bother me. We talk about it quite a bit just because the weather patterns have come quite unpredictable. Ya know, we'll look at the USDA predications and any other predications we can find, but I think it comes down to the financial incentives to keep cattle. I think that's where people fall in a hole.

[10:00]

They want to wait until the last possible minute because they're hoping for rain. They don't expect it because the predictions don't tell them that, but I think that's where you get your over-grazing. People want to keep their cattle because they want to make a little money or make a land payment here of there. And I think that's where people get in trouble because the financial incentive is greater than the environmental incentive.

I: Yeah, and that's hard to blame too because you've got folks to feed and payments to make. And kind of like what you said earlier, is you're not going to see those environmental effects right away so it's like let's see how far we can push our limits because we're looking good now in terms of grass.

R: Yeah, and some of that you don't see for a very long time. Those long terms effects you'll have on your property.

I: Yeah, absolutely! So you've mentioned some forecasts and predictions, are there other tools that y'all are using in your area to help make decisions?

R: Ya know, in the Extension world, we're putting up plots and doing range monitoring sites. I've been doing a little bit of that this year just to try to get it set up. I know, I'm just now getting started, but that's one tool I'm using to help producers see how much forage we have after the growing season, and hopefully the producers want to listen to what is being analyzed and make decisions based on that as well. But I think anytime you're talking about tools, I think if you present it to them in the right way, they're going to want to at least look at it and hopefully use. Because any data you put in front of them is going to influence their decision-making.

I: That's so cool that you're doing that! And yeah, I can understand that you can do all of these things but it still may not change behaviors. So that's a barrier, but I think you're right that just having it there as an option and constantly bringing light to it will do something in their heads about what they should be considering.

R: Yeah, and at least it's a talking point. If you can get a producer talking, they're thinking. At least that's been my experience. If you can present them some sort of data and ask them their opinion about it, they're going to tell you their experience. And sometimes the experience outweighs the data, and sometimes vice-versa.

I: Yeah, that makes a lot of sense! In addition to the tools y'all are using, are you putting out resources or programs to amplify the educational component of all of this?

R: Ya know, this year's been a little difficult to do that. Ya know, Craig Gifford, we've used a lot of his programs and put them out there to my producers. It being online, I don't know, I think age has an effect. My producers are in an older generation and sometimes it's hard to present them with an online tool that they are willing to use. I know a lot of his programs, like the drought management program, was really good. I attended it. It's very hard to get it across to – I think there's a generational gap. They don't want anything to do with an online program. And maybe it was just the way it was presented to them. I don't know. I hope we can bridge that gap somehow because I think in the future there's going to be a lot more of that. And maybe when we get a new generation of younger ranchers, it will swing the other way.

[15:00]

But I know that there have been tools that I've been really excited about, it's just difficult to implement sometimes.

I: Yeah, I'm sorry about that. I'm sure the current situation doesn't help with that at all. But heck, sometimes I don't blame those people who don't want to figure out the technology because I can't figure it out half the time.

R: Yeah, it's hard to get them on Zoom sometimes. In the summer months, they're working sun up to sun down and sometimes the timing messes with it. I think in a normal year we would have programming on drought management and make it accessible as we possibly can. I think in-person, we'll have some more attendants, I just don't have the year's prior to know what they did in the past.

I: Sure. And that's a lot to take on – you are so new in this position, and you're already doing great things. So I feel really good about the trajectory of things. I know you are new, so this question might be something you might now know, but what are the characteristics of those producers who are most likely to come to Extension and ask for help or advice?

R: Well, from my experience this year, it has been a range of different age groups and different operations, so I think as long as you're providing useful information to them, they'll come find you. If you can get some awareness, they'll come to you. It's just finding out what they want is the kicker, is the difficult part. Something that has been rehashed over and over and they've seen it a bunch, it's hard to get them engaged in that. There may be new information, but they don't see it that way. But from my experience, it ranges. It crosses age gaps and it crosses different operations. It's very broad.

I: Now, you've talked about this drier climate and shifting rain, but it's hard to see how this has taken a toll on ranchers just yet, but what do you think the options are for folks when those challenges do become hard to deal with? What do you see them doing strategies or planning-wise?

R: I think the main thing is to have a plan before-hand. I don't know if they did - the problem is getting them to plan before-hand. I think that's the biggest hurdle that we face is just start planning before we have drought and start figuring out what you can do on your operation. That's the biggest hurdle. Now, when you've got a plan, I think different rotational strategies, different grazing plans, can be good on some operations. Some operations are too spread out to do that, so you'll start looking at destocking. Maybe we can get some that'll start analyzing their forage before the year starts and seeing what they have to start with, and maybe they can minimize or maximize their numbers based on that. There's a lot of different tools they can use, but I think the main thing is planning. And if you haven't started planning, start. Because it's a little late now.

I: Yeah, do you see Extension being a big part in that process, or do you see NRCS or other entities helping them implement that, or do you see that on the rancher to do on their own?

R: Ya know, every agency's a little different, and I think we need to start advertising to the producers themselves. I think in the past, and maybe this is me being new, but in the past we waited for them to come to us, but I think the way to get them is to go to them.

[20:00]

Create a personal relationship with your producers so you build some trust and start giving them information personally. I think that's the route to take.

I: I think that's a really good point. It's hard to take part in these daunting tasks in changing your operation or putting together a plan, and having that trusted relationship to be there for you as a guide or soundboard is really important.

R: I think the personal relationship will overcome. Ya know, they've done the same thing over and over again because it's worked well for them thus far. And I think that change is very scary to producers. It doesn't affect us on the extension side, it affects their bottom line as the producer.

I: Definitely, there's a lot more weight on the producer. If you could do anything in Curry County, what would you do to help prevent or adapt to the effects of drought?

R: When we have droughts, I think the main thing is to think about reducing your herd. Maybe some early weaning practices. When you wean cattle early it can sometimes save a little grass. Rotational pasture management when you can. If you have some pastures close, you can rotate and it really helps that grass out, **but I think** the dream is that we're going to get rain and I don't think that's a reasonable thought every year. I think it's coming to the reality that we're going to have to plan for this on a very occasional basis.

I: Yeah, I really resonated with your thought earlier about planning for worst case scenario, and this case it's definitely not getting rain.

R: Yeah, this is not the year that we wanted to begin with. And it's on a drought year, we've had some decent rain, it's been spotty in this county, but ya know, it's kind of a double whammy with the pandemic and managing a drought.

I: Do you mind telling me a little bit about what the pandemic has done for producers there?

R: Ya know, operational-wise it hasn't done much, but prices on cattle have been so – ya know, when the pandemic started the prices just dropped out from under the ceiling. It's starting to make a come-back. And this is across the country, I don't think it's just Curry County. There's not a lot of dates that you can set any more on custom beef for sending them to the packer. So I think it's kind of a stint of the whole process in a way.

I: It's wild that we tend to plan for disaster in separate bins. Like drought is one thing, a pandemic is another thing, a fire another. But that's unrealistic, so adding flexibility and planning into drought that can make other risks more manageable as well would be great.

[25:00]

R: I agree, if you solve the problem and then the next problem should be a bit more manageable.

I: Do you see a lot of these ranches as family operated and do you see younger folks taking up those ranches from their family?

R: I think most of them in my county are family-owned. We have a lot dairy. There's a lot of dairy in this county, but ranch-wise, it's family work. And that's in my experience, I can't speak for every ranch. Ya know I think everyone in the family is involved in trying to meet the bottom line.

I: Did anything come to mind that you didn't get to talk about?

R: I don't think so. There may be something I'm missing that came up, but I really enjoyed this conversation. I enjoyed talking about it because it makes me think about the situation, so I really appreciate this and just me as an extension agent I like information that I can present to my producers, and maybe something come out of it and someone changes their mind or their operation for the better. So I think this was really beneficial.

I: I'm so glad to hear that, [REDACTED]! Thank you so much for taking the time to chat with me. Likewise, it has been so beneficial! I'm just learning so much about this state and how differently drought affects people from place to place, and I hope this will all be helpful to informing plans and things of that sort. So when I get some results from these efforts, I'm excited to share them with you if you are interested?

R: Yeah!

I: Great! And then if anything comes to mind or – anything! You have my email so definitely reach out with ideas or questions. My next step is to transcribe our interview into a Word Document that I'll send your way for you to review for anything I might have incorrect. Then we'll go from there.

R: Well that sounds perfect. If you need anything, just give me a call!

I: Thanks so, so much! I enjoyed this and hope you have a good rest of your day!

R: Alright, you as well. Thank you.

[End, 28:55]

Interview: 9
 7/15/20
 Transcription: M. Dinan
 7/21/20

I: Interviewer
 R: Respondent

I: To be begin, can you tell me about your role as an agricultural agent with Roosevelt County?

R: [REDACTED]
 [REDACTED] A general sundry of things that come through the door that you have to deal with or answer. I don't know exactly what else to say other than you serving in a variety of capacities to assist producers in whatever situations arise.

I: And that's perfect. Thanks! This next question is a little tricky, and it might be hard to classify, but what are ranch operations like in your county?

R: We're unique. I guess if I had to say, the western part of the county the operations are a lot larger, so there's typically more acreage and more cattle in the western and southwestern part of the county. Even southern. I guess I should say that the southern, southwestern, and western parts of the county are typically the larger cattle operations. But we also have a fair number of smaller operators that run on smaller acreages and smaller numbers of cow. So like I said, we're kind of a unique blend of the two – so you've got some folks that are large enough to sell in load lots and sell direct, and then you got a lot of folks that are very dependent on sell barns or other mechanisms like that to market their cattle.

I: Are the differences in the size kind of indicative of the owners? Like do you see a lot of Mom-and-Pop-type ranchers, or more of the corporate or big business kind? I don't even know what to call it.

R: Ya know, it gets down to how you define it. There is one operator in the county – there's a couple operators in the county, actually – that are extremely large and they're corporations, but they're family-owned operations. And so I think when that negative connotation of corporation is thrown around, I think everybody's thinking behemoth monstrosity of a company that's based in Chicago or New York, ya know with no actual connection. One of the outfits here is locally owned and another is an out-of-state owner, and like I said they are extremely large and they own a lot of county and are corporations but they are still owned by a family at the top of the corporation. But ya know, on the other side of that, there are a lot of smaller producers that work here. I think a lot more of what explains why the county is the way it is has a lot to do with topography. The more farmable country is through the central and northeastern part of the county. A lot more of the country is better suited to grazing in the southern and western part of the county, and so I think that's why you see a lot more cattle production there is to make use of the land. The option you have is to run cows there.

I: Oh, I see! So the size isn't necessarily about the business structure but what land they have available to put cows out there.

R: Yeah, that's true.

I: Neat! With the topography and differences in size, do you see a lot of differences in management from ranch to ranch?

[05:00]

R: Oh very much so. Very much so. And a lot of it depends on – what I observe – a lot of it depends on where the income is. If the sole income is from ranching, then the management is often different than if ranching, or running cows, is just a supplemental income or sideline income.

I: Can you tell me a little more about that?

R: Yeah, well, I don't know what to say. If folks' sole income is from ranching – people equate ranching and cattle, but ranching is honestly is grazing management. If you don't have any grass, you can't raise any cattle. So a lot of the larger operations probably are a little more conservative with their stocking rate. It allows them a little more cushion should things go bad for them like this year when things got so bad dry. You've got more country to spread those cows out on. And some of those operations may even be diversified within their operations where they run some yearlings, they run some cow-calf pairs, so they are a lot more flexible with what they can do depending on the year. Whereas, a lot of these smaller operators are working with a lot less land mass; and so sometimes, they're in a predicament where they don't have any place else to go, they can't reduce stocking rate without depopulating the cow herd, and that might be half their income in that herd. And so I often see the smaller operators – and it's probably a gross representation, I'm probably painting too broad a stroke – there's a proportion within there that probably aren't as good of managers as they need to be, but part of that is because for their livelihood they don't have any other options. It's do what I do or not have any cows to support my family.

I: Is the size of the rangeland pretty much the limiting factor that reduces their options, or are there other ones that come into play?

R: I would say for the most part. Because I don't think anyone purposely wants to abuse their country or manage it poorly. Like I say, I think a lot of it is, if you're a middle income kind of individual, or lower income individual, and you're trying to support your family, your lifestyle with cows, you do the best you can do with what you have and land is kind of the limiting resource. The challenge of it is the old adage of "rain makes anyone look like a good manager." So kind of my observation that I've seen over time here, is people often stock for the good years so they get in trouble in the bad years because they overstock. And like I say, I don't – I'm sure not trying to throw anyone under the bus, it's just observation over time, is kind of what seems to happen.

I: Oh sure, I understand. And it's so hard to understand in that moment of overstocking if you don't know what the next year is going to be like – a lot of these actions are completely understandable considering the circumstances.

[10:00]

I: Can you describe the changes you've seen in this county related to like rain, or heat, or even the landscape, in the last 20 years? And ya know, if you haven't been there for that long, just as far back in your memory.

R: I've been here 17 and a half years, so almost to 20!

I: Almost!

R: Interesting enough, the man I followed in this position was a life-long resident of the county and because he had grown up here and lived his entire life here, he was extremely interested in rainfall. So he had kept historical rainfall patterns for this county for over a hundred years. So we have rainfall data for this county for over a hundred years.

I: Wow! Oh my gosh!

R: And the interesting thing of it, because I've looked back through it before just playing with the numbers and just kind of estimating and wondering about it – what's always fascinated me about it is, you've seen 40 inch variation rainfalls from year to year. The most they ever got here was in 1941, they got 44 inches. But the least they ever got was like 5 or something, and that wasn't but two or three years later – or before, I don't remember exactly, but it wasn't too far from that. And so the fascinating thing to me is, you can see huge variation within a decade, but if you look at – if you average – these decades, and look from 1900 to 2000, there's not but an inch and a half of variation. The lowest they ever had was 15.8 and the most they ever had was 17.1 as a decade average. But within that was huge variation. But most of people I talk to here, ya know what I seem to observe, is we don't have rainfall like we used to. They often talk about they used to get winter precipitation, and they don't really get that anymore. And the rainfall used to start in the spring, and they'd get a pretty good rain, and any more we don't get a lot of spring rain, and oftentimes, we don't even get summer rain. And it seems like a rainfall pattern is pushed back to August. If it's going to rain, it's going to be pushed back to August. And again, ya know you probably know this as someone who studies science, the numbers lie a little bit if you just look at the numbers. Like last year, for example, it ended up being 16-17 inches total. Well, that's an average year. But if you look at when that rain fell, it was five inches in October. Well, that doesn't do you in the growing season. It doesn't do anything to help the grass, help the country. It did help a little with the spring green-up. We got a little winter moisture, things did start to green up in the Spring, but then we got that freeze in April and it just killed everything. Then it got hot and dry, and it's just been bad since. And the people I talk to – sorry, I'm rambling a little bit – the people I talk to, it's not like it used to be, and the variation has gotten more so, and the variability has gotten more so from what they remember years ago.

I: I think you bring up excellent points, especially when you think about the variation that happens over decades-long. And when you think about planning on the day to day, or even month to month, it makes that kind of information especially tricky. When you look forward to the next 20 years, how do you see things changing?

[15:00]

R: Well, that's a really interesting question because here we are running out of ground water. Our ground water quantity and quality both have decreased precipitously. I guess stepping back to history for just a second, my predecessor told me that when his grandfather homesteaded here at the turn of the century, they could grow dryland corn because it rained so much. And he talked about how good the grass was back then. And in learning more about this country the longer I've been here, ya know we used to have a lot of underground water. When they first drilled water wells here, they thought it was Artesian. They thought it was Artesian wells because when you dug a post hole here, water would seep into that hole and you'd have to bail water out to put a post in the ground because there was that much

water underground. And we pumped it out – they didn't know, and when they started pumping, they didn't know what they were doing. And the way they managed it, they didn't understand. And so, I've got to believe just the changing pattern of even – moisture begets moisture. And so if you don't have any moisture here for the atmosphere to draw from to then fill up and lay it back down – I guess what I'm rambling around to is that I'm not real optimistic about where we're headed. I think in this particular area right here, I think we're just going to get drier. I think you can watch that in the last twenty years, the extremes have gotten more so. And like I said, when we do get rain, it seems to be stupid amounts in a short period of time and doesn't do you any good because it comes so fast and hard that it just runs off. Now the other side of that, I guess there is some benefits when it refills playas – playas really do help replenish groundwater, then that's probably a good thing that you fill those playas. But like I say, I'm just not super optimistic about where we're headed in the long-term.

I: Yeah, you wonder how these new patterns are going to change things too. It might not be for what we had intended, but we might be working with a new ecosystem in a couple of decades, which is wild to think about. How do you see these changes threatening livestock producers in your area?

R: Well, I think it goes back to agriculture being such a complicated business in itself. Land ownership is dominated by an extremely senior group of folks. You look at average age of producers in the country, and it's just ever-elevating. And so most of this country is owned by an older generation. One, the younger generation, part of them aren't even interested in coming back to production, agriculture. The other ones, it's so hard to get in because of the cost of buy-in. Cost of everything has elevated, cost of land has increased. And the problem is back to where we've been, productivity is so marginal, and it requires so much to generate a profit from. It's cost-prohibitive to be able to gather up that much to function with. So, I don't know what the right answer is, but a challenging problem we face.

I: Oh, I understand. When you're chatting with these producers – when you're chatting about these challenges – what are these conversations like?

R: Well, ya know, I think most of the guys I work with are probably 55 to 70, and most of them are just trying to survive to maintain a livelihood for their family and survive. Ya know, I'm not real sure what their plans are for the future.

[20:00]

. . . The bigger ranches become very popular for guys trying to bury money in land, so you see ranches get bought up for people trying to invest money, to bury money. We've had an anomaly around here lately, oil and natural gas has bought out people out south that are in an oil and gas patch. They can sell their ranch for a bucket of money and then have moved up and bought other places that they can afford and get them away from the oil and natural gas down there. And then like I said, we've had some outside investors coming in and investing in land. What I'm trying to say is, I don't know how many of these folks are trying to transition their children back into this and allow another generation to go forward. Ya know, we see a lot around here that a lot of folks will sell out as kind of their last – I mean so many people hold onto land as kind of their investment option, and older folks, they're not going to produce anymore, they've been leasing that to other people, and then the only other option after that is to sell it. Well, land values have gotten so elevated that they'll want to see to the highest bidder and capitalize on the most profit they can to maintain their lives for the rest of their lives. And I totally understand that, but it pushes anyone else to be able to buy in who is out of the picture. And so as these

producers try to figure out what to do, in this part of the world, a lot of it is just survival. Ya know, what can I do to survive one more year, one more day, one more season?

I: Dang, that is so interesting what you talked about in terms of burying money in the land and investing – that's not something I had heard about before. And it seems like a pretty slick strategy too! It kind of sounds like that for a majority of these folks survival is the main things that they're working towards. But are there options for producers, or adaption strategies that they are employing, or thinking about putting, on the ground?

R: Well, ya know, I work with a younger, more progressive producer. He has really hustled to gather up as much country as he can, and it's not all in one contingent block, he's kind of gathered up where he can get it. He has been a lot more progressive in his mindset in willing to move cows and rotate and rest country. Giving it a chance to recuperate. Never abuse anything if he can help it. So there are some folks who are really thinking the long term and thinking about range health. Because when you do that, it's not just about the range, but it's about you and your livelihood and if the range is healthy it's going to allow you to stay in business. There are folks that are doing things like that to try and stretch things out. There's been a lot of interest in a lot of the CRP around here that's been planted with grass. There's been a lot of interest in putting that back into grazing instead of farming. And so again, it's when of those things if you can take it and add more acreage to your operation, allow you to spread out, decrease your stocking rate, spread out, and move around more, in the long run, and just allow your country to be as healthy as you can. But part of it just depends on the rain. It's not just this county – I've got a good friend a couple hundred miles north of here, they've been on that ranch for more than a hundred years,

[25:00]

... and they're very cognizant of taking care of it and when it doesn't rain, there's just nothing you can do. You destock cows to the point where you can't destock anymore. That's kind of the same thing here – the rains have to come or you find some way of stretching things out to allow you to stay in business.

I: Sure, absolutely. Now these folks who might not be stretching things out or using adaptive strategies, do you think that they might perceive these changes that might come in the next 20 years in the same way that you or some other folks might?

R: Ya know, I don't know. Because the other thing that happens is I think – and this is so in my perception, I never talked to anyone who knows this but – I think it's the same as the glass half full, half empty kind of mentality. You and I might not see something the same that representatively is the same, but you don't view it as I view it. And so I think there are some folks who don't have a problem with how they manage things, because their father and their grandfather did it that way before them, and so they grew up and that's all they've ever seen is to manage it that way. And so they don't have an issue with it. And so I think it takes a real – I mean I think you can provide as much education as you want, and you can even provide an economic incentive to try to change things, but it takes that epiphany moment where they change their mindset about how they're going to approach it and want to do something different. And I don't know if we can get everybody to ever go that way. Ya know, I know with the USDA programs that are out there and the different options they provide, that has gotten some people to do some different things management-wise in order to qualify for those programs they've maybe

implemented some stuff, so that has helped. But there's still a group out there that views that as government welfare and government interference and they're not going to participate.

I: Yeah, that's very interesting. I recently talked to someone who had a few terms for the people who are ya know, go-getters, who are willing to try anything new, and the fence-sitters, who wait and kind of see how things go, and then the no-way-ers, who like you commented on, there's just a diversity of reasons why they're set on the management practices they are using. And these factors make a lot of sense, or it comes down to tradition, which is awesome, unless it's hurting them in the long run. You kind of talked about some of these resources – what tools or educational programs are people using to either learn about drought or track it on their own properties, things like that – what's going on in Roosevelt County?

I: Ya know, I don't know. I'm really am not sure. There are some folks – I think because we live in a high desert and rain is so critical, there are a lot of people who keep their rainfall records so they can see year to year what happened. I don't know that there's very many who are progressive enough to actually go out and take a transect and figuring out production and photo'ing that and looking to see what production has done year to year. And I know that happens a little bit. The Nature Conservancy has a ranch in the southern part of the county, so I know they do all that stuff, and they're very progressive in monitoring and watching what's going on.

[30:00]

. . . And I know the guy who is managing that and that's all on his mind and he's very conscious of that, but ya know, forgive me but I'm judging you a little bit on your age and gonna guess . . . you're a little younger by listening to your voice – there used to be a cartoon by a fella named Ace Reid. And the Ace Reid cartoons, he was a guy who grew up in south Texas, in drought, and the cartoons he drew were of these really thin, rough, mangy-looking cows because that's all he'd ever seen. And there's a cartoon where one of the guys, the cowboy, is on one side with his cow chewing a prickly pear, and the guy on the other side his cows have got a lot of grass and he makes a comment, he said "you've built your fences so tight you can't even get any grass to come across." And it's that dichotomy of - some folks you're just not going to change them, they're just going to do what they're going to do, and they're not interested in doing anything different. And maybe I'm a glass half empty kind of guy, I just don't know how much education you could ever provide them and get them to buy in because I think they fall into your no-way-er group and your fence-sitter group, just it isn't worth the trouble for them. But I say that and I had a discussion with a producer the other day that I found interesting and it gave me some hope. So the other thing you find is you take the whole environment we live in out of the picture for a second and you just look at the animals living in that environment – in American agriculture, our mindset has always been bigger, more, better, more faster, more efficient. Everything we do has always been about more. Ya know, production. More of everything. And there's a group that I'm associated that their mindset on their cattle is much more moderate and efficient cattle that are better-suited to the environment, and they've always been looked at as a fluke or anomaly and people make fun of them because their cows are little and they're just too small and they don't work – all of that kind of stuff is what you hear. And most of these guys here in reality their cows are too big and they don't match the environment. And so it takes so much more to maintain those cows, but people just don't recognize how inefficient their cows really are. But anyway, I was having a discussion with a guy the other day that has changed his mind-set and gone to using more efficient bulls, more moderate bulls, and actually

starting to moderate his cow herd a little bit and recognizing the need to have more an efficient cow that fits the environment a little better. And it just kind of surprised me. He's been more of a bigger-is-better-kind-of-guy for a long time. And so, I guess I say all that to say that maybe I'm not giving them enough credit and with proper education, and incentive, and opportunity you might get some people to change how they approach things.

I: That's so exciting to hear that, and I'm sure it was sure it was surprising! Ya know maybe, you mentioned this survivor mode that people are in, maybe they just – is there a possibility they can't even think about anything new because they're just trying to make it to the next day?

R: Ya I think so! Because like I say, anybody in Ag, if they didn't love what they do, if they didn't find pleasure in what they're doing, they wouldn't stay with it. And so they enjoy doing things that produces, and I don't know a farmer or rancher, one, that doesn't like to go see fat cows grazing on a pasture or see a really healthy field of something growing. And it just gives them pride and joy to see that. And so I know they want to do right, but I think there is. Some of them are just trying to get from today to tomorrow and some of them are trying to connect the dots and make it work.

[35:00]

I: Yeah, absolutely. These producers in your county, do you see a lot of them taking advantage of extension resources? Or maybe working with NRCS, or possibly other technical assistance?

R: Ya know, to some degree. When we offer educational programming, there's a fair number that do. Ya know, the thing I'm learning as we go into this is it's a generational thing. The guys that come to me more for more input and help are the older generation. The generation that kind of grew up I guess with extension being the point of resource. Younger guys today are far more likely to just turn their phone on and google something. Or far more likely to call a consultant and get direct input on something as opposed to – I mean people still come to us when they've exhausted every other resource. We still get the Hail Mary, weird, questions where they go "I've called everybody else and everyone says to call you." We still get those questions because no one else can answer them. But a lot of the day-to-day stuff – and I guess I don't mean to ramble, I ramble a lot so I'm sorry – but I guess I tell you this story because it helped me learn. I was doing a program this winter, was providing resources to producers. The older guys wanted a face-to-face meeting to convey this information. There was a younger guy there, and it was mentioned you could access this same information online. So he asked me "well, what's the website?" So he wanted to go to the website and study that stuff on his own time and on his own platform, but the older guys wanted a face-to-face meeting for that information to be conveyed. So there's that disconnect in order to be relevant to that younger generation, is we're going to have to make extension relevant and timely in being in front of folks in that arena they want to use.

I: Wow, have y'all come up with solutions or strategized that yet?

R: No and the challenge is – well there's lot of challenges – they get kicked around a lot and discussed a lot, but I've never sat in on a discussion on how to tackle that. Because the next challenge comes in – for example, as an educator myself – technology is not a strong suit of mine. It's not one that I'm overly comfortable in and it's not my go-to answer to try to solve something with. And so, ya know, if you're younger and willing to embrace it, I think a lot of folks will go there. But like I say, it's a challenge finding the right folks to want to tackle that and take it on in order to teach and convey that.

I: I think that's so interesting, and I can't help but feel that I would have done exactly like that younger producer and say "Oh! I'm going to look it up online." Mostly, because I'm an introvert. But on the flipside of that it kind of diminishes the social aspect or the community-building that those events or programs might instill in these ranching communities. So yeah, I imagine that's another layer to that too. You mentioned these folks you work with are in the older generation, but are there other characteristics of producers who are most likely to accept your help?

[40:00]

R: [Pause] I'm just sitting here trying to think through it. I don't know – I don't know that maybe I can draw a correlation or line there of commonalities. You know, it's funny you mention that because when I host a program, you serve coffee and cookies at the break. There's a lot of those guys who just want to have coffee and visit with their neighbors, or associates, or friends. Part of an educational event is the social aspect of it, of getting together and visiting. Like you said, the community. I think there's a bit of a disconnect with the younger generations of having that same sense of engagement and community. Ya know, I can speak for myself, people here if you serve them whole-heartedly, you do your best to be honest and upfront with everything you do, you're timely with your actions, and you're able to assist them in solving a problem or providing information to make a decision with – those are the kinds of things that those folks will come back to you again and seek assistance from you again because there was a trusting relationship there, and I would say – I guess I answered my own question or own comment – but I think relationships would be a commonality in the folks I work with. They are far more likely to go back to a trusted relationship time and time again.

I: Yeah that makes a lot of sense. I can see with those younger folks if you're not given that opportunity, it's like when you said moisture begets moisture, well relationships beget relationships. I'm excited though for what approaches y'all come up with to reach that group, whether it be through technology or some other styles of events, I think it's going to be really cool. The Hub works with a group called the Drought Learning Network, and one of the cohorts that are in it is devoted to new farmers and ranchers and so we do a lot with Quivira Coalition and their New Agrarian program, so I might be reaching out to you soon for ideas once we have more information! So you've kind of talked about this a little bit before, but what do you anticipate producers will do when they can longer cope with these challenges? You've mentioned things like selling in and going out of business, but what else is going on out there?

R: That's an interesting question, and I'm not sure. I'm not sure in twenty years what some of this country will look like just from a land ownership standpoint and productivity standpoint, because consolidation keeps happening. It's classic economics, it's economies of scale the way you manage expenses is you diversify it across more production. So to deal with loss of income is to try to get bigger and cover more country and do more and produce, and so I don't know what's going to happen going forward. As folks retire or sell-out, I picture a limited group of folks who can gather up more county.

[45:00]

. . . The big get bigger and the small get smaller. There are some folks that have gotten very interested in some kind of niche deal where you're trying to create some specialty or some novelty that gives you an edge or advantage to be able to market or produce, but I don't think there's enough opportunity there for everybody. I don't know. I don't have a good answer for that one because I don't where it's headed or what it's going to look like, but I would envision it being grossly different than what it is today.

I: Yeah, that's kind of what I'm hearing a lot of and it's really interesting thinking about transitioning into that unknown. Like are there tools or resources for these folks to make that transition, and I think that's an area that definitely should not be put on extension exclusively but needs to be thought about. My last question, are there solutions that you would like to see livestock producers, or even managers, put into place but haven't or can't?

R: I think there's a whole host of things that if you could see folks embrace, you could see them improve their operation. But part of it's money, part of it is rain. It takes money to make money, and if you're barely surviving as it is, it's really hard to invest in anything to make improvements. And then the other side of it if it doesn't rain consistently to have that opportunity to – like I said, they're far more willing to think about things that might benefit them in situations like right now because they're hurting and they're looking for options, so they look at this and think okay this might help. When things are good, and they're not really in a pinch, it's a lot harder to sell them on something because "I'm not really into buying right now, things are looking pretty good right now, and I don't really want to change." It taught me an opportune time to try to implement or encourage some changes or management decisions simply because if they survive this thing, maybe it'll make a difference for them long-term. But the biggest thing here is just – and not like any of them wouldn't fix it if they didn't have more country to spread their cows out where they can graze more country and take better care of their country, I imagine a lot of them would do it. But without the help from above, it just isn't going to happen.

I: Isn't that the truth! Well, [REDACTED] we plan to talk with other folks from each county around the state, but is there anyone else from Roosevelt County you think I should talk to?

R: A large operator, I think he was president of the Cattle Grower's and he's been here a long time and is a good manager, is Pat Boone. I think he would be a good person to visit with. And if I could just give a tick of advice, and I don't know how to help, but my hearing is failing so I'm struggling at times to hear you, and so going forward, especially knowing the guys I work, with if there's a way to increase your volume of voice so that when you speak and ask questions it's louder, it will go further for you. Because most of these guys I deal with are deafer than I am, just so they don't get frustrated in not being able to hear what you're asking. And I don't know how to help there, just something I noticed and I wanted to share that so you were able to get your questions asked and get good answers. But anyway!

[50:00]

... Pat would be one that I would encourage you to call because, like I say, with being former president of Cattle Grower's he's very aware of the state. He's made his life here and raised a family here, so he's very conscious of ranching and production here in Roosevelt County.

I: Great, that's awesome! Do you think I can find his information online?

R: I can – I'm pretty sure he's in the phonebook. That's another funny thing between your age and mine. You're going to go to the internet and I'm going to go to a phonebook to look it up. But his home phone number is 575-274-6223.

I: Thank you so much! And thank you for the volume advice, I definitely need to work on that. Because I don't want people to not be able to hear me.

R: Well, I just know my hearing is bad and it gets my children angry at me because I can't hear. And I know the guys I work with that a lot of the older men, their hearing is just not good. But like I say Pat is a great place to start.

I: Awesome! Was there anything else that came to mind that you'd like to talk about and share?

R: No, not really. I am curious to see what kind of things y'all find and what common themes come out in discussion and dialogue with folks. That's one of the things about people in agriculture, and especially people in the High Plains, is you've got to be pretty tough, you've got to be pretty adaptive, because there's just not a whole lot of choice. If you're going to live here, you've got to deal with the environment you've been dealt, the circumstances you're dealt. You figure out how to survive or you move on. And most of the folks here are tougher than boot leather and they've figured out how to survive. And mostly that being from they've learned how to squeeze things down and not spend money. In other places in the country, you see what people are able to do, they invest money in this or they do that, and ya know, rainfall covers a lot of fence, and you can do some things you can manage some things, and have some opportunity when you have moisture to stretch it and make it work. And I've had to learn that over time, watching folks and getting frustrated in why they won't do this or spend money on that. And they don't spend money on it because you can't survive doing that, you've got to make this pay and sometimes it means not investing anything into it and getting what you can out of it, and it's not good management, but it's survival.

I: Yeah, that makes a lot of sense and that's definitely something I'm hearing across the state, and I'm sure is a problem across the West. But I would love to share results with you when we get them in a few weeks. But in the meantime, I'll transcribe this interview into a Word Doc and get it back to you for your review, just to make sure I captured everything correctly. And then after that, I'd be happy to stay in touch with things going on in our project and there in the ranching community. But thank you so, so much for your time today! I learned so much and had a really enjoyable time.

R: Well, I appreciate it. And if anything else comes up, let me know. My kids will tell you I'm not afraid to talk. Just let me know when you get back in the notes and you need some clarification, feel free reach out.

[55:00]

I: Well thank you, that means so much! And yeah! I hope you have a great rest of your day, and I'll follow up with you soon! Thanks [REDACTED]!

R: Thank you, ma'am. You too! Bye.

[55:39]

Interview: 10
8/27/2020
Transcription: M. Dinan
8/27/2020

I: Interviewer
R: Respondent

I: My first question for you is can you tell us about your role with Extension in Union County?

R: [REDACTED]
[REDACTED]. So a lot of the counties have several different agents, one or two or have program assistants that cover areas, but I'm a single-agent county, so I'm responsible for covering it all. We do anything from school enrichment, ag. awareness, ag. producers' programming, also along with our health fair. We run that once a year. So I have a broad job. It's very difficult at times to be able to cover everything, but I'm doing the best I can to cover the side of the county that I have.

I: Yeah, that's a huge task for how big your county is.

R: Yes. And it's hard to cover a lot of it just because we're so widespread. I mean, I don't have a lot of community members or I guess I should say our population isn't very high, but I have more 4-H members than some of the counties that are actually higher population-wise because we're more of a rural community.

I: How long have you worked in this position?

R: So, I was a program assistant for three years in Union County, and then have been working as an agent – we had to finish our Master's at that time before they would hire you on as an agent. So I worked for like a year as a program assistant and was doing the agent position was receiving the program assistant pay. Now they've changed that around, which is frustrating to me, but it is what it is, so I've been an agent for two years now, but I've been in Extension for five.

I: Have you always lived in New Mexico?

R: [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

I: That is so cool, a matriarchy of Extension women. That's incredible! What are ranch operations like in Union County?

R: So most of them run calf-calf pairs, or you're going to have stocker cattle that run on wheat pastures. Our cattle production is huge over here. And then we also have two big feedlots that take in cattle, so the stockers are a big thing during winter. They run winter wheat or summer pasture. It kind of just depends on those ranchers, what they're wanting. Some of them just have the land where they lease out to other people to run those stocker cattle or even those cow-calf pairs. So for example, my parents

run cow-calf pairs, but years and years and years ago, they used to lease land to run stocker cattle on. So that's the majority of it, is going to be cow-calf, stocker, winter wheat, ya know they run cattle on that also in the winter.

I: Interesting. What are the sizes and land bases of these ranches? Like do you see a lot of public and private, and then are they really big or dispersed or . . .

R: It kind of just depends. [REDACTED] have three thousand acres and they run a hundred head on it. But then you look at [REDACTED] have 75 hundred acres north of town, and [REDACTED] can only run 200 head on it, even though it's a little bit more than the other. It kind of just depends. I mean, [REDACTED] worked for a rancher who

[05:00]

Had 45 thousand acres so it's just from little to big all around here.

I: I see. Can you describe the changes you've seen in Union County related to climate in the last twenty years? And ya know, if you haven't been there that long, just as far back in your memory is great.

R: I guess you could say that I've seen ups and downs. I think back in 2011 when we first moved back here, my husband managed a ranch north of town, that 45 thousand acre ranch, but we were in severe, severe drought, so that and then we go from severe drought to the next year or the next two years, we receive rain. But I know that a lot of people lost cattle during that time because they couldn't just keep – I mean hay gets expensive and then you run out of hay so what do you feed these animals? So I've seen an up and down trend with the drought, just making sure that we as ranchers prepared no matter what, that we stock up on a lot more feed than we did back then to make sure we are feeding these cattle if we do go through another drought. So I've seen that. I've seen ranchers sell out completely because they can't sustain it anymore, and it's very scary for our world because once we're all gone who is going to feed all of us? Because there's not going to be the land, there's not going to be the grass, there's not going to be those types of things. And as ranchers, I think they have really started adapting to make sure that they do continue their livelihoods.

I: I definitely want to hear more about those strategies. Before, I want to know how you see things changing looking forward in the next 20 years?

R: Ugh. . . I can only pray we receive more rain. I don't know, and it's a scary situation. It's so different to me because we can't really predict what's going to happen then. And I'm scared for that, and I pray for rain, and that's all we can do as producers is hope that it gets better.

I: How do these changes, so the frequent drought and lack of rain, how does that threat producers specifically in Union County?

R: For sure the grass production – ya know, if we don't have that, how are we supposed to feed? And then water. Our producers have been hauling different places because usually they have their dirt tanks full and creeks are running, so they usually don't have to haul water, but with the drought the way it is, I know a lot of producers are having to haul water to make sure their cattle have it.

I: What factors make these threats worse for producers? So you talked about hay being really expensive and hauling water – maybe water sources aren't very close – ya know, what issues make these existing issues worse for producers?

R: Well, just like you said. When you're having to haul water, and like I said, these ranches aren't very small, when you're having to haul fifty miles back and forth and dumping 6 to 7 loads a day, that gets expensive too. Wear and tear on your vehicles, the gas prices, all those type of things get expensive. And that's another thing, having to feed your cattle haul water, anything, costs money. The feed cost money, the wear and tear cost money, the gas cost money, so I think that's where the world doesn't understand those types of things. They just think they drop a bale of hay in the middle of the pasture and that it didn't cost them anything to get that bale of hay there. And these ranchers are losing money when they have to feed, having to water, those types of things. So it's costing more for ranchers to survive, to be able to feed these cattle. It's just putting more money into it everyday.

[10:00]

I: Yeah, it's really hard to hear the stories people tell in terms of reducing costs, like not getting a tractor replaced, or just letting other areas in their life slide because it would be an additional cost, but in reality just makes running a ranch a little harder. When you and your office meet with livestock producers, do y'all talk about drought? And if so, how is it talked about?

R: Yeah, ya know, we haven't been able to meet. In general, we have had a couple of programs through Zoom that like Craig and them did, and there was talk about drought and the climate change. I mean it's kind of like a broken record. We all know it's going to happen, we just have to be prepared for it. Last year, they came down, I think we were in a D4 or something, and a lot of the ranchers were like "Hold out, it's early, it's going to come." And I think a lot of them have a lot of hope. That was this year too. It was dry, I mean it was bad. And then we got a couple weeks of rain and it really turned around for us. And that was the talk with ranchers like, "it's coming." And we grew a lot of grass. But now, we've had several weeks of hot weather and wind, and I mean it just takes the green out completely to brown. It's heartbreaking but at least we got some growth to it too. Those cattle can still go out and graze and stuff even though it's not as green as we'd like it to be. But we are turning brown again, it's turning again. And I think a lot of it too is that, especially up in our area, we're used to a lot more snow in the winter, and the last few years I've seen that. I mean we haven't gotten much winter precipitation, so we're already coming into the spring with no moisture in the ground, so that's been taking a toll on us is we haven't been getting the winter precipitation that we need also.

I: Yeah, I guess I hadn't thought about that but it makes perfect sense where y'all are located, that winter precipitation is so important. So we know that producers are just so resilient and definitely innovative when it comes to facing challenges and living in this harsh landscape. What are those options that producers are using to adapt or cope with these really hard circumstances around drought? You talked a little bit about stocking up on feed, but if you could expand on all of that it would be great.

R: Well, one of the things that we've done as a producer, and I'm not speaking for everyone – I'm sure there are a lot more coping mechanisms out there that I'm just not aware of. And I think just like you said "do you guys talk about drought," like that's a good point, I don't think I've ever just sat around with my producers – which I probably should be – and be like "what are you guys thinking? What are you guys using" and types of things like that, and I just haven't. You brought up a good point with that.

But I know we're feeding molasses, using molasses tubs, and that just puts a lot more fat on our cattle to help sustain things along with the grass that we have. And also just feeding more to the cattle by means of hay. We take it out there at least once a week.

[15:00]

And we haven't been for the last two months because we've gotten precipitation, you know. But I really can't answer – the only thing I know is that people like [REDACTED] and others are making sure that they purchase hay no matter what the outlook is. And that way if we don't get rain, we have the hay to feed. Ya know, caking, making sure we're caking those cattle at least two to three times a week, making sure they get the protein that they need for the fat content for these cattle. And like I said, I don't know of any other thing that ranchers are doing. I'm sure there's more, but I'm just saying what we're doing to ensure we sustain.

I: Yeah, those all sound really good! And these questions are definitely not meant to interrogate or call-out because these problems are just so complex, and when you think about making decisions or changing things up, it's like a years-long decision. So yeah this is just meant to understand barriers to what could be potential solutions.

R: Well, I think a lot of the ranchers are understocking the ranches to make sure they aren't over-grazing. So I think that is one of the ways they are surviving is understocking to make sure that they have the grass for their cattle and they're not having to go out and buy hay. I went to like a healthy soils deal, and what they had to say was great, but I don't think it would necessarily be best for every county. And why I am saying this is terrain and ranches are so different. We go from small to big, we go from rough deep barrel canyons to cliffs to trees to flat land. And they talked about dividing pastures and they moved cattle around every day – that's not feasible for ranchers over here. I'm lucky if we get our head count when we gather each year, because the country that we have north of town is so rough, and those cows to where they're like – they know the routine. They hide up in trees and you're not going to find them until next year. I think with this healthy soils movement that they're pushing can work for some regions, but they're not going to work for my whole county. And I think we all try to put ranchers into a uniform box, and that is so untrue because things that are so feasible for places like Alabama or Arkansas where they have these plains of rolling canyons and trees. They'll work and you can rotate cow because you can see all of your cattle! On your ranches over here, you can ride ten miles and not see a cow for a while, ya know what I mean? And they're brushed up in trees, ya know, it could've been right there but it's up in a tree. So I just think that we need to make sure that we don't just put our ranchers in a one size fits all. We need to understand where they are coming from and what type of terrain we have. Because like I said, [REDACTED] have got some rolling hills, and you could find all the cattle, and you can rotate and stuff like that. But if you drive ten miles north from them where we have our cattle, it's completely different terrain. And it's funny because my husband guides hunts for different antelope, deer, elk, and he takes them to hunt antelope at my mom and dad's but then he takes them up to where we are and he goes "this is our elk country" and it's ten miles away but it's night and day from each other.

I: Wow, yeah you bring up a good point in that there's a lot of danger in pushing these solutions as solutions because it definitely leaves out a lot of ranchers and then you've just moved forward with this checked box without really understanding all the other complexities that haven't been accounted for.

[20:00]

R: Right. And you ask how these ranchers are coping and transitioning and a lot of them are actually understocking and selling more hunts, because they can get a big revenue from elk hunt, deer hunt, ya know people who want to come hunt prairie dogs, coyotes. So even though those some ranchers have cut their numbers, they figured out ways to sell tags for hunts to try to recoup some of the revenue that they might have lost from those other cows.

I: Wow, that's really interesting these alternative incomes that seem like they wouldn't take too much extra time like getting a job in the city would.

R: Right, and I think a lot of that too is these farmers and ranchers, their wives are working in town as school teachers or at the bank so that they can survive. I don't think there's very many ranchers that still exist where both people are at home. It's not like that anymore. Which is sad and it's scary, and it's scary thinking about what's going to happen in the future, and I kind of don't want to look that way because I'm scared of it, but I think it's going to continue to look that way. And a lot of it too, is that these kids they went off to college and they saw how hard their parents have had to work on the ranch to survive, and a lot of those kids are very turned off by that, because even though their parents provided for them, they saw how hard it was. And I don't think that our world understands how hard farming and ranching is and what it takes to feed our country.

I: No, I don't think they know either. Do you – are there a lot of ranchers who have that family dynamic set up where it would be expected for the kids to come back? And ya know, how often do you see them coming back?

R: Yeah, it's going out the window. I haven't seen that many kids coming back to our community to work on the farm and ranch. Our numbers in our community are dwindling, and it's sad. Ya know, there aren't that many young families here, and if they are coming back it's to work for the bank or the school, they're not really coming back to the family ranch or farm.

I: Have you met or heard of Wes Medlock?

R: No.

I: I think he's working through NMSU Extension and has a project that seeks to set folks up with people who have existing farms and ranches who don't have their kids or family coming back to take on the ranch. So it helps both sides, like the younger people who can't afford to buy their own properties and older generations who don't have people to take over the ranch. And I don't know where he works in the state, but just wondering if his work has reached over here and if it could.

[Lost Connection, a few attempts to connect again]

[25:00]

I: Hi, can you hear me?

R: Yes!

I: I don't know what's going on, but I'm pretty positive it's something going on with my phone. I apologize!

R: No, no problem.

I: But before we left off, I was going to ask if there are resources such as tools that folks are using in your county to make decisions? Or what are they using?

R: So I know they're using – oh what are they called, those little helicopter things? Drones! They're using drones to monitor some of that and I think to detect invasive species, like noxious weeds and stuff like that. And then a lot of people I know went to CoCoRaHS – do you know what I'm talking about with those?

I: Yeah, like the rain gauges?

R: Yeah, for monitoring drought. I know a lot of people have started using those because I think that's like how we've talked because we get rain in the north and no rain in the south. And when they make a decision for say, like finances with FSA – they'll ask if this county needs money, and I think they're basing it off of general, Union county, instead of the northern part of the county or the southern part of the county or middle-part of the county. So if they based the decision off of rainfall in Folsom, well my people in Amistad haven't gotten any, but they based it off of Folsom so now they're not going to receive any of that money. So I know a lot of people use that money for those types of things. And like I said, there could be more, I'm just not aware of.

I: Yeah, and that's okay! I didn't know about the drones! What are the characteristics of producers who are most likely to accept your help?

R: I guess I'm kind of confused by that. . . Can you give a little broader –

I: Yeah! Who are the folks who are most consistently coming to Extension to get advice on drought? Ya know, some folks have said "It's typically our older bunch" while other folks will say "well, it's the people who are more willing to break from tradition," and things of that sort.

[30:00]

R: Oh okay, I have a mix. I have a mix of different clientele. Some are older some are younger, so it's kind of hard to say. For example, a guy we worked for, Todd Campbell, he had taken some weeds to the vet clinic to get IDed. Well then they called me and said "██████ come get these ID'ed" and then Todd was like – and so I got the train moving because he had had a bunch of cattle die, so I got the train moving, I had to get the samples to Albuquerque and all those types of things. He didn't realize I – it's hard because I'm a woman, do you understand what I'm saying? Like he was like "I didn't know you did this ██████." And I was like "well you could have called and asked, we've been friends for like forever." A lot of people still don't understand what Extension can do for them, because they're very set in their ways. The older generation is set in their ways. Like beef quality insurance, even though it's mandatory and everyone has to go through it, they're still set in their ways because they think their practices are better. And you know, I think it's really hard for me because like I said, I'm a woman in my County. And I do have some who respect me, but I do have others that it doesn't matter if I told them one hundred times or proved something was right, they're not going to believe me.

I: Yeah, I just read an article on that, about women in agriculture, and just how hard it is for folks to take women seriously because of the role they believe women should be playing.

R: Yeah, it's hard and I just keep doing my best and keep doing quality programs that these ranchers can attend if they want to. And it's hard, it's just hard to get through people's heads when they're stuck in their complete way.

I: Gosh, don't I know it. But you're the person in charge in Union County, they better listen!

R: Right? I would hope so, but sometimes it's not the case.

I: I'm so sorry about that. I know that's so frustrating. Are there solutions that you would put into practice or like to see others put into practice to help with drought? What would you like to see done in your community?

R: That's a good question that I have no answer for! I don't know what we can do. And I'm sure you guys know a little more than I do to ensure better practices but I just don't know.

I: And that's totally okay. That answer is more common than you think.

R: I feel like if we had a solution, that would be great, but every farm and every ranch is different. I don't feel like we can make a solution that fits for everyone. I just don't see it that way.

I: I agree, I definitely think we need more folks, when it's possible, sitting at kitchen tables and going through a list of options that would work for that specific ranch.

R: Absolutely, I agree. I think also is getting these ranchers to come together and to sit at the table to have these discussions, these hard discussions, because I don't think we like to talk about them. And it's inevitable and I don't know what our world is going to look like in ten to twenty years, but if we don't have those kinds of discussions, I don't know if we're ever going to get any better. Because one rancher can do something on their ranch and their neighbor doesn't, will it make a difference?

I: That's a good point, and when you think about how many people to, like you said earlier, feed the country, it takes everyone being on board and trying to sustain.

[35:00]

R: Right.

I: This has been really helpful, and I've learned a lot! Did anything come to mind that we didn't get to talk about that you'd like to share?

R: I don't think so, no.

I: Okay. Well my next step with this is listening to the recording and transcribing it into a Word Document. And I'll pass that onto you when it's done, just so you can make sure I captured everything accurately and if there's anything that we didn't get the chance to talk about we'd have the opportunity to catch up on that. And after that, I'd be so happy to keep you updated with any results that come from this, outputs, or opportunities like workshops, if you're interested.

R: Yeah, no problem. Have you gotten to talk to a lot of agents?

I: Yeah! Cooperative Extension has been so helpful! I had also wanted to talk with folks from NRCS, but that's been a different story. I'm curious if you have anyone else in mind, like ag agents, that I should talk to, whether it be in your county or that corner of that state? That would be great.

R: Have you talked to [REDACTED]? From Colfax County? He would be a good one, he's very innovative. Also Courtney Mitchell from Harding.

I: Oh that is awesome! I haven't talked to either of those counties.

R: Yeah, and Colfax is also a big ranching community. And ya know, [REDACTED] is involved as an agent and also a producer. I know he runs a bunch of stocker cattle along with cow-calf pairs.

I: Yeah! That would be awesome. I haven't really talked to many folks who work with stocker cattle or work with people who do, so that would be a good perspective to learn from. And in a few weeks, I might reach out again in terms of ranchers to chat with, and hopefully by then it might be a little safer to stop by or whatever. But if you're okay with it, I'd appreciate if I can reach out about that.

R: Yeah, no problem.

I: Great! Well thanks so much for chatting with me! If you have any questions or any ideas pop up, don't hesitate to reach out!

R: Sounds good, thank you!

I: Thank you, have a good day.

R: You too, bye.

[End, 38:23]

Interview: 11

7/20/20

Transcription: M. Dinan

7/24/20

I: Interviewer

R: Respondent

I: My first question for you is I'd like to hear about your role as an extension ag agent for Santa Fe County.

R: My role as an extension agent – so, mainly for Santa Fe County there's quite a bit of diversity. You know for extension, our work is providing education to the growers, to the public. And Santa Fe County is diverse in terms of we have agriculture at each end of the spectrum, so we have small acreage fruit and vegetable producers in the Northern part of the county. And then also have in the southern end of the county about 65 miles south in the Edgewood/ Stanley area, we have large, commercial producers. So mainly grain crops, cattle, rangeland, and really the grain crops are for feeding cattle. Anyway, that's Santa Fe County in a nutshell.

I: Nice! Yeah, it's really interesting to hear the diversity that happens within county lines. You've kind of hinted at this, but what are ranch operations like in this county?

R: What was that again, I'm sorry?

I: What are ranch operations like in this county?

R: Oh, okay so cow-calf is mainly the operation. Cow-calf producers.

I: Are there other details like grazing management, or maybe what these households are like, are they families? Things of that sort. Do you have comments on that?

R: Yes, families. So mainly they are family operations. We do have probably a handful of more corporate-owned, I guess I should say, or partnerships, corporations, things like that. There's probably a handful of those, but mainly family operations, correct.

I: Can you describe the changes you've seen in Santa Fe County related to climate or landscape in the last 20 years? And ya know, if you haven't been there that long, just as far back in your memory would be great.

R: Changes in terms of what now?

I: Changes in term of climate or weather. Or even on the ground!

R: Oh I see. So in terms of weather – a large part of my work is urban horticulture, and I guess we probably see a lot more changes in terms of the weather getting warmer because there's trees in the

landscape area that used to do well and thrive, but aren't necessarily doing as well as they used to. A lot of talk in the ranching industry with folks who have been here all of their lives, they certainly remember the times when winters had a lot more snow, monsoons came around the first part of June/ July. It seems like now they are coming in later and shorter. Ya know, the end of July and August, so definitely there has been some changes I guess while I have been here and in talking to the folks who have been here a lifetime, hearing their stories.

I: Yeah! How do you see things changing into the next 20 years?

[05:00]

R: Ahh, I don't know. It's always a shot in the dark to predict anything, and I don't like to make predictions because I'm usually wrong. But if things continue to warm up, ya know, there's going to be a change in landscape. I can see probably less cooler season grasses and shift to more warm season grasses, on the rangeland situation. So things like that I would suspect.

I: How do these changes threaten livestock producers in the county?

R: So they'll have to take into account those changes, whether it's shifting to a warmer-type season, a longer-type season. Less snow pack up in the mountains, less water. So it's going to definitely – it all equates to less water, less moisture, so they'll have to account for that. The small farm producers, they'll have to make better use of their water when they get it because it's in an acequia open-ditch system. It flood irrigates, so maybe they'll have to switch from flood irrigation to something that's more efficient, maybe. In the rangeland type situation, I think folks will maybe have to shift their cattle operation in terms of weening, birth, breeding, those seasons. Shift that to accommodate the weather and grass availability, right?

I: Right. Are there factors in these producers' lives that might make these threats worse? And ya know, this could be anything from the environment or maybe have to do with policy, management, whatever comes to mind.

R: So, I've always said, everybody has always said, that ranchers and that population are getting older, 50s and 60s and there's not really any younger folks coming in taking over the operation. I don't know. That may be part of the situation, but a big part of it is ag lending. Policy, loans, and things like that, it's just hard for someone coming out of college or in their 20s and 30s to get a big loan at the bank. The bank is not going to make that loan to them. So I think that's a problem – has been a problem – and will probably continue to be a problem. There's just no lending. It's very restricted.

I: Yeah, I've definitely been hearing a lot about that! And it's scary to think there's all this paperwork and there's still everything you have to do on the ranch, and it's a lot to juggle. When you are meeting with these livestock producers, and these challenges and changes come up in conversation, how do you talk about it with each other?

R: You know it's just a matter of how we – it's usually in group meetings, workshops, meetings, chatting in the back of the room – things like that. It's always a topic that comes up, and everyone has an opinion on it. It's just, ya know, conversation.

I: Yeah, that's something I'm kind of curious about, is if you and your producers see these changes and challenges the same way.

R: Do they see it the same way as. . . ?

I: Are y'all's opinions about these changes similar?

R: Oh yeah, yeah. And these are things I pick up listening to producers talk, so yeah.

I: The only reason I ask that, is I've chatted with some folks who work with producers who don't see these things the same way, and understandably so, so that can kind of cause a riff in how they can provide help and things of that sort.

[10:00]

. . . What are the options for livestock producers in Santa Fe County to reduce or prevent these threats?

R: To reduce or prevent these issues?

I: Yes sir.

R: What options? Hmm. Ya know, I don't really know. There are a lot of non-profit organizations that try to address some of these issues, so that's certainly an avenue for folks. Yeah, there are a lot of non-profit organizations developed for that purpose to help farmers and ranchers with those issues. And same respect, trying to get people into agriculture.

I: Yeah! That's so important. Have you found ways or avenues to make that happen?

R: Yeah, there are some programs that allow for some of that. Ya know, some young people leasing farm land to get into the industry. There's also beginning farmer/rancher type things that try to help by offering some financial backing as well. So yeah, there are some things that are happening.

I: What about the programs that Extension does – you've mentioned some programs and classes, what are those like?

R: So yeah, we offer a lot of those! We offer a lot of those beginner farmer/ rancher-type instructional workshops, so those folks with very limited or beginner experiences can come in. We also are available as a resource, so getting out there and letting people know extension and land grant universities are a resource for them. And a lot of one-on-one work and consultation with folks as well.

I: What are the characteristics of producers who are most likely to come to these workshops or ask for one-on-one consultation?

R: Characteristic's? Like in terms of demographics or are you just talking about . . . ? Well, just any one, it's all over the board, so young folks, older folks. We'll even have some beginners and less experienced and we'll also have some more experienced folks who need refreshers and attendance. So yeah, the characteristics are all over the board.

[15:00]

I: That's awesome! Yeah, I was just talking with somebody who was only getting folks from the older generations and that the younger folks preferred to do their learning online or learn on their own, and I thought that was really interesting.

R: Who was that now?

I: That was somebody over in Roosevelt County, so I'm wondering what it is that would make that different from place to place.

R: Yeah, I don't know. A lot of the places up here in the mountain area have pretty shaky internet and bad quality. And a lot of places that don't have internet as well.

I: Oh yeah, that makes total sense. Not having another option other than to come in. And I'm sure the programs are really great too, brining in the crowds! This is kind of a tough question, and it kind of has to deal with when challenges posed by drought and a variable climate become too big. But what do you anticipate producers will do when they can no longer cope with these threats?

R: Ya know, they'll go out of business if they can't cope with it or can't deal with it. But first of all, I should say that population, those folks, they're the most resilient and apt to change before they would really give up. So they're willing to accept or incorporate newer technologies into their operations and adapt to meet the change, whether it's changing a crop or incorporating an irrigation technology, a lot of folks are doing that now kind of making that shift. But I think they'd do that before they threw in the towel so to speak. But if you do, what do you do? Then you go out of business or get out of it, I guess.

I: What kind of technologies are you seeing people adapting?

R: So drip irrigation technologies are probably the first ones they adapt to. Finding and changing to new varieties that do better to the climate that we're facing now, things like that.

I: Have you seen anything specific to people who are grazing?

R: To grazing? Hm, not really. Let me think for a minute. So some brush management? Ya know, accepting and incorporating some of those brush management techniques, using clearing or chaining or even herbicide to increase their grass to fight back the juniper and whatever encroaching brush species.

I: Yeah, that's really neat. Have you seen any success with those techniques or is that a longer process before you see results?

R: Oh no, there's been success. Of course when you handle brush, manage brush, it increases your usable acres. So yeah, we've seen some success with that. There's some big ranches that are doing it as we speak.

I: Woah, that's exciting! Now in addition to these irrigation techniques and brush management, are there other solutions that you would want to see put into practice on these rangelands to help address drought?

R: Yeah, I would like there to be more brush management. I would like to see more people adopt that, whether it's mechanical or biological or chemical. I would like to see more folks adopt that and see that for this country it does make a difference. Especially maybe even reseeding some rangelands with grasses that are more apt to thrive in this climate or changing climate.

I: Yeah, I think that would be so great. It's so hard to see the grasses and encroachment out here where I am, especially as it gets hotter and dryer and the landscape change. We're reaching the end of my questions – I really appreciate all that you've shared and can tell you I've learned a lot! Is there anything else that came to mind that we didn't get to talk about that you'd want to share?

[20:00]

R: No, I think we're good, Maude. I think you covered it all well.

I: And we're going to chat with folks from all over the state, but I'm curious if you know producers in your region – the southern Rockies area – who might be willing to talk to us in a few months?

R: Yeah, I probably got some ideas. Send me an email because I'd like to talk to them first and let them know when you're coming or when you're going to call and see if they'd be willing to, but yeah I've got a few you could talk to who'd probably be willing to share some information with you.

I: That sounds great. I'll definitely do that. And I'll also follow-up with you when we have some results from our work if you're interested. My next step will be to transcribe our interview into a Word Document, and I'll send it your way so you can keep for your memoir or just to make sure we captured everything you said accurately and if there was anything else you wanted to add. And that's pretty much the game plan on my end, and I really appreciate you taking the time to talk. I know it's a really busy time.

R: Yep, I appreciate it. Good luck with your work.

I: Thank you so much! I hope you have a good day, and I'll talk with you soon.

R: Thank you, Maude. You too. Bye-bye.

[End; 22:25]

Interview: 12
8/04/20
Transcription: M. Dinan
8/11/20

I: Interviewer
R: Respondent

I: My first question for you: can you tell me a little bit about your role with Extension?

R: [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

R: Did I drop you?

I: I might have dropped you, there's no telling in this house of mine! I'm so sorry, the last I heard though is that you and your wife have your own operation and you've worked with sheep and goats.

R: That's correct. I used to run a few sheep but don't anymore. My dad and I have kind of a partnership on some goats. We try to raise a few show goats.

[05:00]

My background is in dairy. Do a lot of artificial insemination. I used to do embryo transfer, but it's been 15 years since I did embryo transfers in cattle. But I do teach cattle pregnancy check and artificial insemination schools. Both locally and statewide with the state specialists. So that's kind of a background to do what I do.

I: That's awesome! And congratulations on your new operation. How long has that been going?

R: We've been doing it for quite a while now, but things are always changing, ya know?

I: Certainly! What are ranch operations like in your county? And I realize there are so many different ways to talk about this, so whatever information you can share would be great.

R: So, I would say 95 percent of the operations here are cow-calf operations. Most of them are small herds, we're talking about 25-head herds. We have some that are a thousand. Several of those are a thousand head herd operations. Those that are tribal work off of the reservation. The others are BLM permits, Forest Service permits, and private land deals.

I: Do you get to work with folks out on the reservation or do they have separate offices for that?

R: I didn't catch the first part of the question.

I: Oh, I'm sorry! Are you working with folks out on the reservation or do they have separate offices?

R: So we're fortunate we also have a tribal extension agent who does a lot of programming with them, and I help with a lot of programs here. My role here is in vaccination programs, beef quality assurance programs, anything related to health and some management. I kind of help a lot with the marketing of livestock. We've done some contracts with the order buyers to help out those folks in the past. So we do kind of a little of everything. The actual management of their operations, they pretty much do it themselves. Each tribe has their own associations, if you will – yeah, I guess they're grazing associations – so they all kind of manage them as a group in those areas.

I: Interesting. The size of these ranches – is that dictated by the topography of the region, or are there other things affecting that like public land allotments or things of that sort?

R: Yeah, I think some of it is topography, availability of BLM. There's a BLM piece that comes up, there's a scramble of who is going to get it, because everybody wants to expand. There's no more land, we're just trying to get what's available. On the reservations, it's pretty much by family and it's – there can be producers who are 100-head producers or producers who are just 10-head producers. And how they decide that, I'm not totally sure.

I: Thanks! Can you describe the changes you've seen related to climate in the last twenty years? And if you haven't been there that long, just as far back in your memory would be great.

R: Oh my gosh, I've been here pretty much a lifetime! I grew up here, left to go to college, I was down in Cruces to get my degree, and then I was back. So pretty much spent my whole life here. In the last twenty years, I would say the climate definitely has changed. We used to have 18 to 20 inches of snow, and that was very common in January and February. Now if we get 2 inches of snow, that's more common than anything else. We've seen a big change in the amount of moisture we're getting in the winter. And as a producer, we depend a lot on that moisture for our spring run-off or our spring growth.

[10:00]

We still see a lot of our cool season grasses, they're doing pretty good. But due to the drought, the number of years that we've had drought, our warm season grasses have diminished and we start to see more forbs, and weeds if you will, taking their place. The change in the amount of moisture we're getting has changed the amount of forage availability in our areas.

I: The cool season grasses, are those helpful in anyway – I mean besides their general role in the ecosystem? Is that anything the cows are eating?

R: So the cool season grasses are good grasses. We've never had much problem with them. Our cattle do really well with them. And any of our grasses, whether they are warm season or cool season – we're in an area that does not grow 6, 10, 12 inch grass. We grow short grass, but it's a high-protein grass, and our cattle do really well here. But on the other side, I want to tell you that on the cooler times our grasses, we in the northern part from the Cuba-Rio Arriba area, we do have a lot of competition with the elk herds. They tend to stay in lower elevations for longer than they used to. It used to when it got a little warm they would move up to the mountain country. They tend to stay even longer, even now – I saw an elk this morning on the ranch and we're down in the lower elevation. They've changed a little bit in a sense that they're not moving up to the higher country like they used to.

I: That's so interesting. How do you see things changing into the next 20 years?

R: Boy, I hope we change back to where we can get a lot of snow. 2018 was a terrible year. A lot of producers had to cull cow. This year, a lot of producers had to shrink their herds down some. It's made it very difficult to operate. The drought, the shortage of moisture – we might get grass, but we don't have water in our tanks, and so there has been a lot of water hauling. Particularly this year again. And that kind of stuff takes a lot of time and money. The operations have changed in that we have to adapt to the drought and make water available for our cattle, make water available for the wildlife because they're going to take their share of it, and then hope that we can keep enough forage in front of them.

I: Absolutely. Gosh, that is really hard. Aside from having to reduce herds and cull cows and things of that sort, how do these changes threaten producers in your area?

R: I'm sorry, can you repeat that one more time?

I: Yeah! How do these changes in climate threaten producers in your area?

R: How does it threaten them? Is that what you said?

I: Yes sir.

R: Well, I think more than anything it's a threat on their livelihood. It's definitely a cost, an input, that we now have to adjust for, and if cattle prices are not real strong we have to tighten our belts more and we see that a lot in our producers. Producers are not going out and buying a whole lot of new equipment. We weld that trailer before we go and buy a new one, that kind of thing. Doing that kind of maintenance so we don't have another bill to take care of. So, I think that's a big change that I've seen. People are being frugile with their money to try and save their operations.

[15:00]

I: So you've talked about these people reducing their herds and hauling in water – what are other strategies that these producers are using to cope with these things or cope with less rain and snow?

R: I think as any producer whether you're here in northern New Mexico or southern New Mexico, I think we all think about grass first, right? We grow grass and then we harvest it with the cattle. So I think grass management is probably the number one thing we think about more often than anything. How much grass is available for today's cows that are out there and how much is going to be available 4 or 5 or 6 months from now or into the winter with what's available. And you may have some forage out there that looks pretty good, but it may not be as palatable or nutrient-dense as you like. So our producers are checking how much is out there and what kind of grass is out there for them. It doesn't matter, you can have a lot of grass out there but it's like straw, not having a whole lot of nutrients or all it does is just fills the cows up. So our producers are definitely watching for that kind of stuff and I think they gear up a little more so for keeping on hand some supplemental feeds, whether it's molasses tubs, range cubes, any kind of protein that they can get a hold of. And it's a tough deal here in our part of the country. There's tubs and some of that stuff readily available; however, if you're doing any kind of ration of concentrated stuff, that's not a very easy thing to do. There's no ingredients, if you will, for a ration available here. Everything here has to be transported, and so as a producer we're always thinking also about freight. How much freight is it going to cost me to haul corn, how much is it going to cost for soybean? All of those products, there's a lot of freight that goes into those things and sometimes it's just not a doable thing.

I: Where are these folks travelling to, either for water or feed?

R: So for water, they can get it from the municipality. They have an agreement with the municipality. Sometimes, different associations will let them draw out of their acequia. It's kind of wherever they can get water, they'll get it. The feed though is a little different. The most available feed we have in our area would probably be corn and alfalfa. And that would come out of NAPPI. And from where I live, that's a 150 to 160 mile trip, one way. That's a one-way trip. And if I wanted any kind of soy bean or product like that, I have to go to Clovis pretty much to get those products. I've hauled corn from Texline, Texas, I've hauled it from NAPPI, and I've hauled some other feeds from Portales, out that direction, Clovis. We have to feed them and we have NAPPI and Albuquerque, but the unfortunate thing is it's a sack fee, and you're looking at ten dollars a sack. Where if you can buy in bulk, it spreads it out quite a bit more.

I: What is that you are saying? FAQ?

R: I'm sorry?

I: What is that word you're using?

R: I still can't hear you.

I: Oh, I'm sorry. Can you hear me now?

R: I can yes.

I: I'm curious what that word is you're using, I can't quite understand. Did you say sack?

R: [broken connection]

I: Oh no [REDACTED], I'm losing you!

R: You're breaking up.

I: Oh gosh! How about now?

R: Yes, that's a little better!

[20:00]

I: Were you saying a "sack" of feed?

R: Yes, they sell it by 50 pound bags. And that's only out there in Albuquerque. And they have good products! But you pay for that bag.

I: Darn, that sounds really hard. And like you said just another thing on folks' minds when they're managing costs and cattle. That's a lot to juggle.

R: Right! I want to go back a little bit though – you mentioned talking about some strategies producers might follow?

I: Yes, please!

R: The other thing I wanted to talk a little bit about are the early weening. So some of the producers do the early weening. It's very expensive. They don't look at what it's going to generate in terms of added

value, they just look at what is their break-even dollar going to be. What's their break-even point? And they shoot for that. That's what they try to best base their rations, their whole management schemes, on. Because freight, it's just part of that. The cost of the rations here, and then the cost of moving your calf from here to a market place, is pretty expensive. And you always have to be thinking about those two things if you're going to do an early weaning program. Many of our producers, they contract calf in the fall. There's several producers that come from Colorado, or I should say contract buyers, we get some out of Oklahoma, we even get some from southern New Mexico but I think they're buying for Texas folks. And so some of our calves from here in this area do move into Colorado, into Oklahoma, and then into the panhandle of Texas. Our cattle are angus-based, Hereford-based kind of cattle. Brangus cattle work real well in our country here but we don't raise them or use them. Mostly because we don't have the market. If you have Brangus cattle, you have to shift them off to the Roswell area to compete with those calves there. There's definitely a difference in price between an eared cattle versus a regular cattle here.

I: And that's something I'm hearing a lot of and learning about is how much the market dictates what ranchers do. It can be so finicky from what I can tell.

R: Yeah, I can say in the last ten years I've seen a change in the cattle type. Our reservation cattle, are plain calves, if you will, but we're seeing more good genetics coming in. They're being more selective in their bulls. I don't know if it's the educational programs that have helped them or maybe more bulls available for them? There's been a change in the body of cows. We have a much thicker, meatier calf, not a long-legged, lanky kind of calf. So I think that's really helpful in terms of getting a better calf for the grass we are using, just a better batch.

I: That's awesome. You talked about the possibility of education on these things, do you see a lot of folks or are there a lot of educational resources that talk about how to adapt or cope with drought and the circumstances that y'all are under up there?

R: There are a lot of resources, whether you're Googling on the internet or sitting in audience watching a PowerPoint. There are those kind of deals.

[25:00]

The problem is I think people tend to hesitate – for instance, an early weaning program. It's kind of scary. You take those calves off of mama, you see them shrinking before they start gaining again, you get a little scared. It's also scary when you have a lot of feed on hand, you don't know if you're going to run out of feed or find feed at a decent price. So those things tend to hold people back from applying those practices, if you will. On my reservations, there's a lot of tradition. Ya know, grandpa did it this way, so that's how we're going to do it. They're slow to adapt to a lot of new practices. Not to say they haven't learned it, it's just not the way grandpa did, so they're a little hesitant to apply it.

I: Yeah, it's interesting to hear about some of the things preventing folks from trying out new strategies – tradition or the daunting task of early-weaning, those are no joke. Not to mention the time it takes to see results. It's very scary.

R: It is. Ya know, the younger generations, I see them adapting or kind of bringing the new stuff to the ranches. Even on the reservations, I see some of the younger beginning farmers, if you will, that are

doing a good job of trying to adapt new methods and practices. Even when the elders kind of just look at them with an evil eye! But I'm encouraged they're moving in the right direction.

I: Yeah, that's great to hear. Maybe it's a shift in things with this new generation. So we talked about weatherman not exactly being our best friends in terms of forecasting and how that affects planning. Are there other tools that are being used in your county to either track rain or drought or other things on their ranch that gives them information?

R: No, I have not heard of any other. Everyone just watches the news and kind of goes with that. Whether it's the county, US news, or local, they just keep an eye on that and take it with a grain of salt, if you will, knowing that it's not going to pan out quite like that. Other than that, old, old folks still talk about the Farmer's Almanac, but not much else.

I: Oh gosh, gotta love the Farmer's Almanac!

R: Ha! They believe in it! More so than the weatherman, so that's fine by my book.

I: That's amazing! What are the characteristics of livestock producers who are most likely to come to y'all's office and ask for help?

R: Can I get the first part again?

I: What are the characteristics of livestock producers who are most likely to accept y'all's help?

R: I think there's several things. There's urgent things that come up that have people asking for help. One is disease. They start seeing a few abortions or sick calf and they don't know exactly what to do. We're in an area where we have very few large animal veterinarians, so a lot of times they come to ask us as agents for help. Help us diagnose things.

[30:00]

So I work with a couple of veterinarians. I used to work for a veterinarian a long time ago. I have a lot of experience. I also have a good relationship with the state veterinarian, Dr. Zimmerman, and so we can talk about the different diseases that are on the radar, that we can tell our producers to keep an eye out for. But also, I've been able to take some samples and take them straight to the lab where maybe we don't have a veterinarian to run them and get a diagnosis. So that's kind of a nice thing to be able to do, be kind of a middle man, when there's no veterinarian to be there for the producers. So health issues is one thing. Marketing is another thing. Sometimes we're able to get a contractor and order buyers to them. We take ten calves from one producer, twenty calves from another producer, and put them together and get a load, and we can save ourselves money shipping that load and saved ourselves commission and maybe some other costs associated with that. I've been very fortunate in that I can help producers in that sense to contract cattle out. I used to contact order buyers from Jemez Pueblo, and we shipped 3 or 5 semi-loads out of there, and it was a great set-up that we had. The only hard part about that is there is not very many scales available, so you still might have to transfer cattle to a scale where you can actually load semi from there. But marketing in that sense is kind of another thing we get called on. The other thing we get is noxious weeds. Maybe they're seeing something different out in the fields or they're seeing something growing, or something like that, and then they want help figuring out how to get rid of it. Eradicate it. So again, we have a specialist that we can rely on, we can work with NRCS,

we can work with Soil and Water Conservation, and get everybody on the same page and maybe help those producers in that sense.

I: Wow, I bet the producers in your area sure feel lucky to have y'all there. That's some awesome work that you're doing.

R: Well thank you! I just love livestock production. I told you that my responsibility is 4-H and that's selling livestock. It's way different to produce than it is to show. And I've done a number of programs in different parts of the state and they say "would you consider moving to our county?" And I go "No, you have a pretty good agent there." And they'll say "Well, he's good at showing livestock, but he doesn't know how to *produce* them." So, I guess I'm blessed in that my background is in production!

I: Yes! I guess I never really thought about how starkly different those are! And you're right, it really would take that drive and experience to do what you do. [REDACTED]
[REDACTED]

R: [REDACTED] had a small cow-calf operation and we grew up on it. I went to college and came back only because my parents were aging, and my mom was getting sick at that point, and it wasn't a very big operation. It got sold out, my dad decided to just go ahead and sell it. It wasn't big enough for the family, and that's when my wife and I decided to start our own little deal. And we haven't bought a whole lot of land, we lease a lot of ranching land, and that's how we've been able to keep our little herd going.

I: Wow, that is just so cool! I didn't grow up around agriculture at all, and the more I learn about it and the lifestyle and just like working the land and connecting with the animals, I just think "Shoot! Maybe I should go to a new farmer's program and get started on this way."

[35:00]

I don't know! It's just very cool to hear the stories from people like you across the state. So, thank you.

R: Ya know, I really see the younger generation coming on, I see a lot of kids who want to learn and apply things. You've probably heard of the New Mexico Youth Ranch Management Program that we do with schools? I'm one of the presenters for that, coordinators for that program, and the reason I'm there is because yeah, whatever those kids want to learn about reproduction – because that's my background – or any kind of production question, whatever knowledge I have, I want to share it with them and get them enthused about going back to home and taking it with them. Every once and a while, I run into somebody and they'll tell me how they're using their new skills and knowledge at their place. It's fun.

I: Yes, and I bet that's so nice to hear. That is what drives this industry, I feel like, is that knowledge transfer from generation to generation. And I'm excited, too, for the new ways that people are thinking about sharing their knowledge. Whether it be through programs like y'all are doing or documentaries and stuff, and it's just really cool.

R: I agree, the sharing of knowledge is key for sustainability and encouraging youth to continue with their family operation.

I: Absolutely, and that's something I'm curious about. Are there generally a lot of folks who come back and take over the family ranch, or are you seeing more of a need to fill those places? What do you see going on with those older ranches?

R: I see a lot of youth coming back. With the 4-H program, I know a number of the kids went to college, took ag-business or animal science, but they come back and they're applying that skill to the ranch. They're still operating. I know a number of those kids! You won't believe this, but this weekend we had our 4-H sale – it was an online sale – but one of our producers called us and said "I can't get on the computer but I want to donate." And so he did. He said "my grandkids have joined 4-H, they have learned so much and are so appreciative of agriculture. They are the fifth generation of our ranch, and they are learning and will be ready to come back to the ranch." Fifth generation, I thought man, I got chills!

I: That's amazing!

R: And those kind of things, that's what makes you want to do more.

I: Absolutely. And those virtual shows, how did that go?

R: They went okay. It was not as strong as we thought, and we're in an area where we have a lot of elderly and older producers that help us out with the sale, and I think they were either at the ranch working cattle, or we have really poor internet service in Sandoval County. Outside the Rio Grande Valley, it's get really bad. Cuba and Jemez has one of the worst internet services. And so, I think they get discouraged trying to get on and stuff like that. But we've had several calls this week, or today, and they say "hey, we couldn't get on but we're going to add onto the sale, we're going to help you guys." So, that's good!

I: That's awesome, they didn't even have to see it! Yeah, I've chatted with a few folks who have gone the virtual route for these shows, and I'm glad to know they're still happening and that y'all will work through the hiccups!

[40:00]

Now, the folks who say drought or the hardships from it just get to be too much, and they can't cope with those problems anymore, what do you see happening to those livestock producers?

R: I can tell you that I've heard of producers being so depressed or upset about having to sell cattle trying to make ends meet, suicide is kind of an option for them. I have been very fortunate in that I have never had a producer in our area do that. A number of them have had to sell their cattle or downsize their herd to the bare minimum, but they continue and keep rebuilding. But these are operations that maybe don't have a heavy debt load, because a lot of these operations are family-owned. Ya know, they were handed down in a lot of senses, so there wasn't that big mortgage attached to them. When we start seeing the suicidal problems is when we have that debt load. Got too much mortgage and just can't meet that obligation, so that may be their only alternative. It's sad and unfortunate, but it does happen.

I: That's heartbreaking. I guess an upside would be that people are starting to talk about it more and maybe think about other programs and resources to help with that. So yeah, I hope that taskforce

begins to grow and people are supported in ways that they might have not been before just because it was such an unknown thing.

R: Yeah, when you look at our county just outside of the Rio Grande Valley, more urban if you will – we're rural. And rural folks tend to be more family-oriented, if you will. They take care of their own and they take care of their neighbors, so everybody helps everybody. If a neighbor's tractor goes down, here comes the tractor from next door to help out. Or if he can't haul water, my neighbor hauls water for me on the days I have to do something else. He just steps up and does it for me. If he's short on hay, I'll step up and share some of mine with him. So we share resources and kind of as a group do what we can to survive.

I: That community is so heartwarming and reassuring, and definitely needed to get through times like this. And moreover, you just know these folks are so dang resilient too. They have that grit, but sometimes you just need help from others. Kind of wrapping this interview up, are there solutions that you would put into practice or have others put into practice to help with drought – whether for coping or preventing the harmful effects? And ya know, this could be anything. Don't hold back.

R: I think if I could put something together to help my producers, it would be maybe some kind of mini co-op, if you will. Where maybe we could buy several semi-loads of feed, and then have it in area where people can come and buy

[45:00]

10-15 bails – whatever they need – but because we bought it in bulk, we've cheapened down the price, taken care of the transportation and cheapened that down, and maybe we could make feed available at a reasonable price for those producers. I think a co-op in our area would help a lot. The other thing I think, marketing. I mentioned to you freight: hauling our livestock from our area to an auction is pretty expensive. If you go up to Albuquerque, that's fine, but then it drops in the price because they're gonna take the cost of shipping so you're not getting the top dollar for your calf. You're losing a little bit of revenue on that calf compared to going to Portales, La Junta, Roswell, but those are long trips. And so I think working together and getting contract order buyers to come in who are responsible for their own travel and transportation. Having more scales available where you can transport and have a semi show up, I think those things would help our producers a lot. So two things: a co-op for cheaper feed and marketing strategies.

I: I think those are great ideas! Especially the co-op, and that ties in that whole looking out for each other in your community and an easier avenue for purchasing those much needed items. Awesome. That's the last of my questions, was there anything that came to mind that you wanted to talk about that we didn't get to?

R: I just want to say that I admire the older folks who are still in livestock production. There are so many grey-haired folks that I know that are still doing the day-in, day-out. They might complain about the weather being bad, but they never complain about the work. And that resiliency that they have, if they can just pass it on to the next generation, I think we're in for the long haul.

I: That's great. Thank you so, so much for all of your input. I learned so much and it's always so wonderful to have these kind of conversations with folks like yourself.

R: Thank you for calling – anytime I can help – I know I’m a little difficult to get a hold of, but just keep after me.

I: I think we all are now! Don’t you worry. But I’ll keep up with you – my next step is transcribing this interview and send it back to you to make sure I captured everything correctly. And then I’d love to keep you updated with any findings we get down the road if you are interested.

R: Perfect, I’d be curious to know if the southern part of the state is any different from the northern part of the state, or if my Indian country is way different that maybe our eastern folks out in Black Mountain or the Plains.

I: It’s been interesting so far! I haven’t made any conclusions, but I’m definitely seeing some differences and similarities. I’m excited to show you!

R: Good luck with your project, I’m looking forward to it.

I: Thank you so much, [REDACTED]! I’ll talk with you soon. Bye-bye!

[End, 49:46]

Interview: 13
6/9/20
Transcription: M. Dinan
6/16/20

I: Interviewer
R: Respondent

I: My first question is, can you tell me about your role as Extension Ag Agent for Rio Arriba County?

R: [REDACTED]. I work with producers, ranchers, and farmers of all sizes. Ya know, I work with farmers and ranchers from an acre to, ya know, 5000 acres to 25,000 acres so ya know, size of operation doesn't matter. I work with all of that clientele. What makes it a little better for me is that I was born and raised in this county and its communities, so I know them, and I know the area, I know the people, I know the land, fairly well. And then I can incorporate what I learn from our specialists and what we learn from the university. Ya know, whether it be an innovative concept of any sort, I can relate that back to my clientele with some ease. I can break it down, I can break down a little bit of that terminology, to their lingo, to their kind of – one-on-one talks. I can help out in that way. That's what makes me feel a little bit more unique than a lot of other extension agents.

I: Yeah! That's so interesting and cool. I just had a friend start a job with extension but had to move from another state, so they are completely learning the landscape and the communities. So you are definitely bringing a unique and helpful aspect to that.

Are you. . . you're simultaneously a producer, as well?

[5:00]

R: [REDACTED]. Ya know, operations are different no matter where you go, but there's some of those common things as far as soil types, fertilizing seed, all that kind of stuff is pretty similar, so that we can relate to. And ya know, it varies from region to region, but I know this area quite well.

I: Wow. In that sense, and this is kind of a really hard question because of all the diversity, but what are ranch operations like in this county?

R: In our county, farms and ranches – it's a combination of farm and ranch. It's not truly, solely ranches. The farming part is for hay production. In this region, we can have some pretty rough winters. These are cow-calf operations where a lot of the people are raising their own feed, so that's where the farming component comes in. So we're hay producers so we can feed the cattle through the winter months. That's what - well, that's not only unique, but that's the whole concept behind a cow-calf operation here, is trying to raise your own feed to keep the cows going, and sheep, through the winter months.

I: Yeah, I can imagine being right up next to Colorado that winters are hard! And that brings a lot of challenges.

R: Yeah, we are basically a high-mountain desert, is really what we are. It can be some brutal winters, not only the cold, but the wind has been blowing, the last decade or so, a lot more than it used to. So that brings that chill factor into these valleys a little bit more than before.

I: I can imagine! Can you tell me about other changes that you've seen here related to climate and landscape?

R: Yeah, we've seen more, ya know, drier conditions. Ya know, hearing from my grandpa how dry some spells were, and talking to my father, hearing about the drought of the fifties. Droughts in 1996 and 2018 were tough, we've seen a lot drier spells lately. I can honestly say that 2002 and 2018 were some of the driest years on record. But of course, we don't feel them as much, or as hard, as a couple generations back. We have a way to pump and carry water, [ways] to store water, and all that kind of stuff. Some innovative ways are here for water conservation. Back then, when a drought hit, there wasn't water-hauling trucks, or it was difficult to get your wells dug deeper. If a drought came through, you almost had to sell all of your livestock to make some changes to somehow stay in operation.

I: Yeah, the portable water tanks, or water tanks in general, I've been seeing them pop up more frequently and it's interesting the flexibility and relief that they bring to a lot of folks. How do you see things changing into the next 20 years?

[10:00]

R: Well, looking forward, as a visionary, we're going to have to figure out how we can store more water, we're going to have to make more earthen dams off our little tributaries, we're going to have to store water, like in metal storage tanks or poly-tanks, rain collection. We're going to have to find a way to slow our water down – I'm talking little tributaries and little creeks, mountain creeks, how to slow that water down, not to see it all rush down. I know there are large dams we need to fill up, and all that kind of stuff. There's water rules that we have to follow as far as letting some go down into these dams and stuff; uh water log is what I'm trying to say. I think we have to get a lot better as far as water conservation and try to find some resources to help out these producers or these ranchers because building earthen dams is not too expensive, but any other structures for holding water can be very expensive.

I: Are there currently programs or other ways to fund these things?

R: Yeah, there's more and more programs, federal programs, that are available. I think what we need to do, is, uh, the process needs to be a little easier or shortened as far as the process of applications and I think more and more applications need to be approved than denied, ya know, because it's all for conservation practices. So I think we need to see more of them resurrected and get funded. And also one thing we need to do is join forces with other organizations to help us out with, ya know, because

we're not only watering our livestock, we're watering the wildlife and birds; there are parts of wildlife that come in to share the water or use the water.

I: Yeah, absolutely! You're providing for the whole system.

R: Correct, we're just trying to improve the ecosystem all the way around.

I: Now when you talk about things getting drier, and other changes that you've seen, how do you talk about these changes with your clients or other livestock producers?

R: Well, that conversation arises quite a bit actually. We talk about how we can invest in some equipment to build these little dams or find a better way to flood irrigate, because in this area we do a little bit more flood irrigation than in most parts of the state just because we're so close to the mountains, but you're starting to see sprinkler systems come into the valleys here now for water conservation but infrastructure takes a lot of money. So that conversation arises. Well, ya know, who do I visit with? There's NRCS, there's our Soil and Water Conservation Districts. We're always trying to find some way to allocate some money to improve our irrigation practices. So those programs are available, it's just a matter of applying and getting approved and getting these projects up and running.

[15:00]

I: Absolutely. Have you seen that you and producers, or these other organizations that you're talking with, perceive these changes and challenges in the same way?

R: Pretty much, yes. I think all of us now realize that water conservation is priority and that the next thing is seed selection. There's a lot of new types of grasses that we can plant and broadcast out on our ranges to improve our ranges with a little bit of water. And so that comes into conversation with my producers. I've got six plots around Rio Arriba County where we're trying to introduce Forage Kochia into some of these rangelands. So we're hoping that that can be another avenue for improving our forages on the rangelands. So with these plots, we have a range gauge out there and then we them on GPS. And we have the rancher out there monitoring how much water or rainfall we're getting and seeing if we can get germination going. And hopefully, we can get a seed source if everything works great, or good, so that we can broadcast more of this seed out on the ranges.

I: Wow! That's incredible. How far along is this effort?

R: Well, interesting enough, when I first started this project in 2018 not knowing I had a seed source, so I got these ranchers to take me up on these trial plots and we broadcasted seed out in Spring of 2018, March of 2018. And not knowing, we went into the driest year on record. We had zero precipitation on some of those plots all the way into the Fall – it was September/ October. So we had very, very little germination. So in 2019, we went out there and re-identified the plots, and now in Spring of 2020, we went out there and re-broadcasted some forage kochia seed. So we're getting close. We did have some germination, believe it or not, in 2018 as dry as it was, so there's hope. If 2019 just passes by, try to get some seed source. We kept the same plots as 2020 now, rebroadcasted the seed so hopefully we get

some good germination. We've been getting a little bit of moisture just recently so we're hoping to get some germination and get something going. It's been a process, but it's been great. With the producers that I do have, they haven't given up just yet.

I: That's really great to hear! Now, this might be my Alabama talking, but can you tell me what forage kochia is?

R: Forage kochia is relatively new to the West. They've been doing a lot of trials in Utah. It's actually a, perennial shrub like plant and grows back every year from its woody base, and can survive with very little rainfall. And they've planted it in some very, very arid places like Utah, and those desert places, and it's done quite well. And that's where we got our seed source, and we went and planted, or broadcasted, the seed in some very remote non-irrigated plots – these are some rough areas where we wanted to reintroduce a different type of forage that would survive and that was very palatable

[20:00]

. . . to our livestock for range improvement. So the native grasses we have here are not enough and we wanted to add another forage to our native grasses. It's called Range Changer. The first year, it was a mixture of grasses with the forage kochia. This year, we broadcasted just kochia, we didn't do any grasses. If you get a chance, look up Range Changer. It's a combination of grass seeds and forage kochia from Utah.

I: I will! That's fascinating!

R: I hope that answered your question.

I: It definitely did, and I'm probably going to circle back to that a few times because I think it's really interesting. You talked about way back then when people didn't have these tanks or water sources when they came across drought and people had to go out of business. How does drought threaten producers in this day and age?

R: Well, the threat is it could put you out of business. If ya have a severe drought and some livestock priced are not there and daily operation costs go up, like if you have to haul water, all that stuff. Rising cost can put an operation out of business a lot quicker now than it did then because then you didn't really have the infrastructure or equipment, ya know I'm thinking some of these people have equipment loans, operation costs just getting the water, hauling water, pumping water digging the wells a little deeper plays an important role, but is hard on the pocket book. That can just really devastate an operation.

I: Yeah, that's hard to hear. You talk about prices and the costs, are there other factors that might make a drought worse for producers?

R: Well the drought, what's difficult to operate in, is you have to start buying feed, ya know, supplemental feed, to keep your livestock healthy and growing, so those are those added costs that you can project. And then there's maybe extra labor involved that you don't factor in, and that takes a toll.

I: Yeah, that's also hard to hear. You brought up some really good points about the options for producers to reduce or prevent the effects of drought. Did you want to talk more about that or bring up other ideas that come to mind?

R: Yeah, ya know, we talk about as cow-calf operators you have to really go through your herd and look at your better genetics, and keep your best genetics, keep your best cows. If you can afford to keep a few of your heifers, replace your heifers and keep the better ones. Work with your local veterinarian to help you with a proper vaccination program. Genetics, ya know, you kind of want to try to keep the genetics that you have and kind of adapt to your environment, you know you want to keep that strain. There's feed availability now, we can truck feed from different areas.

[25:00]

That's one thing we have going for us now but it can be expensive. We can work through the university with our specialists to find some rations if we have to make some kind rations to feed our livestock through the winter months or through the dry period. We have that availability now. Access of technology: we have our cellphones, our computers, our iPads, all that kind of stuff now, ya know, to help us out make contact with specialists and people that have some knowledge in regards to how to survive a drought.

I: It's good to hear how numerous the options are and sources for help, and I hope that allows some flexibility to folks up there. Are there other resources, like educational resources, that you see a lot of producers using?

R: Yes! Actually now, it took a pandemic, or this COVID-19, to open up some eyes in regards to our producers to get on to some virtual programming through New Mexico State University and some other entities, like New Mexico Farm and Livestock Bureau has been doing some proactive approaches as far as finding help and resources for farmers and ranchers. Farm Service Agency has done some really good webinars and virtual programming, so there's that availability, or accessibility, to programs or hearing from specialists from across the country that can help.

I: Wow, that's incredible. It's interesting that there are some upsides to the pandemic, and that's that it's created more virtual resources that are more accessible.

R: Yeah! Ya know, as a producer you kind of say hey what's going on, ya can't go now to a livestock meeting because of the social distancing and stuff but you can log on and see a program. Like just a couple of nights ago, I was watching something that came through the beef magazine but it was virtual, it came on the computer here, that was showing some tools as far as heifer selection. I thought that was pretty cool. So those – ya know, I'll go ahead and share that link with my producers so that they have that opportunity. The one thing that we are seeing is that some of our producers just don't have the

broadband, the rural broadband, like – ya know, I’m pretty fortunate here in that I’ve got some pretty good internet access, but there are some people a little north, and east, and west of us that are a little deficient in that. So I think once rural broadband comes in to play, it will help out our producers quite a bit, a lot more actually.

I: Wow. That’s something that can be. . . the broadband thing, ya know, we’re just gonna continue to grow in our technology in our society, and I’m wondering are there resources to help producers who lack internet or service capabilities to bring that to their communities?

R: Yeah, there’s talk actually! I got to go with some state and board directors from New Mexico Farm and Livestock Bureau to Washington, DC, las year to advocate for that to our elected officials. So it’s basically on our elected officials’ hands now to find a way to bring rural broadband to our rural communities.

[30:00]

. . . We’re hearing some stories that some of our high school students who are doing their homework in the parking lot of a rural library or business because they didn’t have internet access at home so they had to drive to some places to do some research. I think here in the near future we can get rural broadband expanded into our little rural communities, and it will definitely help our ag communities.

I: I sure hope that moves forward. I think it will help everyone involved.

R: Oh yeah for sure, it’s not only agriculture, but it’s going to help people stay connected with innovative ideas or something that can help your program, your outfit, or your farm.

I: Absolutely! Speaking of innovation, have you seen any innovation resulting from drought? Do you have some neat examples that you’d like to share?

R: Well innovation, I guess, as a result of drought, I think it makes a rancher a lot more resilient, a lot more progressive actually. You have to take some drastic measures sometimes, so that it makes you more diverse and you learn to plan better, you learn to improve, whether it’s your irrigation systems to maybe a rotational grazing system, ya know improving genetics, ya know all that kind of stuff. You make those moves for improvement, and that’s the only good thing I see out of a drought is that it makes you – you just have to make some adjustments in order to stay in business. If not you’re just going to have to sell out completely.

I: What are the characteristics of producers who are most likely to accept your help?

R: Well the characteristics are those true producers that really want to stay in business, that their heart’s in it, they’ll sit back and they’ll listen or they’ll be opt to receiving new information. Of course, you’ll meet some of those older producers who have a little resistance: “Oh that ain’t gonna work.” Some of them that don’t want to try something new, but then there’s quite a few who really want to move in a progressive way.

I: Yeah, I talked to someone who had a fun name for those folks [who are progressive], and then you have the *fence-sitters*, and then you have the *no-wayers*, and I thought that was funny.

R: Oh yeah! I have a couple of those who are “nuh uh!” “That ain’t gonna work” or “no way, I’m not going to do it.” So that kind of thing. It’s just like with that forage kochia, going back there, telling them it’s like a little perennial shrub and it’s almost like salt bush or winter fat and it’s going to improve your range and they go “Oh no, we’re not Utah” and so on. And then you see some producers who go “Oh forage kochia? I’m willing to give it a try.” And they say “Can it survive on some of our ranges that get up to 8 inches of precipitation a year?” And I go, “yeah” and they say “Okay! Let’s give it a try, I need something to improve my range.” So those are some of the clientele that I do see.

[35:00]

I: What about those “no-wayers,” do you ever see them changing from that to be more accepting or willing, and what causes that?

R: Well yeah, I have seen them change. I can honestly say I have seen them change. If I can get them to a program or a workshop where they can see or hear from people who have had some struggles or been in their same position. Ya know, changing that perception helps a bunch. Trying to get them to engage into one or two workshops you can make them see some change. They’ll kind of come over and feel a little bit more at ease to come over and ask you “Well oh ok, it worked over there, maybe we can give it a try here” Or “It worked for my neighbor, maybe I can too.” Ya know, that kind of thing.

I: Yes, and it must be so nice to hear, too, like a breath of fresh air to know people can change and are moving in cool directions.

R: Yeah! So you know, I think they’re starting to realize that changing up a few thing ain’t all that bad. It’s just that – well that’s in everything, change is difficult. As a county extension agent, we tell them it’s worth a try, let’s give it a try, I’ll help you, or I’ll find you some help. That kind of stuff.

I: On the same line as people changing, say there are some folks who do have to go out of business because of drought, are there resources or is there conversation about how they transition out of that lifestyle, or cope with the hardship of going out of business as a farmer or rancher?

R: No, ya know, I don’t really know of any type of programing. Ya know, I’ve seen a couple of producers selling out completely, and it wasn’t a total disaster. They made some money selling off their ranch. They decided – a few of them decided – to stay in the area. A few of them decided to go out of state or into some urban areas, but that’s basically about all that I’ve had to deal. I’ve really never had to deal with someone who’s said it’s completely over, I don’t recommend anyone going into to it, none of that stuff, they just had to deal with what they had to do and moved on. Of course a good portion of these producers were up in age and their families weren’t wanting to continue in the ag production.

I: So you come from a really interesting position where you have so many generations before you who have been working in [ranching]. Is that common in Rio Arriba, or is it a lot of newcomers? What is going on there?

R: Well, it's pretty common, Maude! A lot of these ranchers, there's some that have been here a lot longer than my family, believe it or not. Some of these families have been here up to little over 400 years. They'll go a little south of here from where I am now, and go into the pueblos, and they've been here for a *long* time. You see – you know it's not uncommon to hear a ten, twelve, generation rancher here. And yet, I'll see some newcomers, not engaging solely on agriculture for income. Ya know, they'll come over and buy a small ranch to try to the Western lifestyle.

[40:00]

In Rio Arriba County, I haven't seen anyone that goes "I'm going to come up there, buy a ranch, and that's all I'll do, and that's going to be my sole income." I haven't seen one person yet. That kind of thing. Ranches and farms that are here are passed down for generations. And sadly to say, some are being sold and subdivided, but as far as seeing someone young, innovative, and wanting to say "look I want to buy this ranch and make a living off of it," I haven't seen one yet.

I: Interesting. Do you see that as common in just Rio Arriba [County] or in all of New Mexico?

R: I think it's common in northern New Mexico, I don't think it's as common down in the southeastern part or the southern part where ranches are bigger and carrying capacity as far as livestock. . . here the ranches are not as big and you have to diversity. Plus, real estate costs. Land values have really gone up here, so if a young rancher or a young person wanted to ranch here, you'd have to have won the lottery or something like that, because it just wouldn't pencil out as far as buying a place and raising cattle. It wouldn't pencil out.

I: Wow, yeah, that's hard to hear. Yeah I think about just people I know just trying to buy houses, let alone giant parcels of land, and that's where it's so helpful to have someone you know pass that land down. That I think is really key.

R: Yeah! And another attribute to grazing cattle or raising livestock here in Rio Arriba County, is that a good portion of these farmers and ranchers have to have forest allotments or government allotments, because 87% of our land in Rio Arriba County is federally owned. So a lot of the cattle not only graze on private lands, but a good majority graze on public lands.

I: Interesting. And that definitely poses some interesting things to navigate.

R: Oh yeah! I tell people the whole ball game changes when you have to graze on public lands and private lands combo. It's definitely something that's different and just the whole ballgame changes.

I: Can you tell me a little about that?

R: Well, you have of course regulations, so you're regulated – once you go onto public lands, you're regulated as far as how many head you can graze, how many months you can graze, where you can graze, all that kind of stuff comes into play. And of course you have to pay. You have to pay a fee. And there's some restrictions. You can't go out there and do just about anything like you would do on a private ranch, you have to ask permission to fence, you have to ask permission to get some funding for us to do – you know I've been talking about water, but in order to work on a structure you need to have some guidelines followed. There's a lot to it besides just paying for some grazing and turning your cattle out, your livestock out.

[45:00]

I: Gosh! This sort of brings me to my last question for you. You bring up so many great points about water and all of these resources, but are there other solutions you would like to put into practice or see other producers put into practice, but haven't or can't?

R: Well what we haven't seen in a long time and what we could see is starting co-ops and alliances. I think that's going to be the way of the future. Farmers and ranchers are going to have to learn how to work with one another and stay tight-knit, we're going to have to form these little co-ops because –like in this little region here, we have quality no doubt but we don't have quantity, and if we ever wanted to do like any marketing campaign and really promote what we got, we can promote quality but we need to have quantity, and if we can work with one another we can really build those numbers up so that we can market something of a very good product out to our consumer. I think it's just going to take some unity here, and these families are going to have to learn to work with one another. And ya know, there's more power in numbers, and if we can get everybody to work with another we can see some real positive outcomes.

I: I'm sure! And there are so many positive things that come with a sense of togetherness too, you're building that social net and people to confide in, talk with, and learn from.

R: For sure! Most definitely. And then you get a whole group of people with some vision and different skill and you can put them together so that the outcome can be phenomenal.

I: That's so exciting to hear and I hope those things happen. You said that you've talked to a bunch of people about these kinds of questions before, so is there anything that might have come to mind or that you want to talk about that I didn't ask about?

R: Well, I think we pretty much covered everything, I think what we need to do is find a way to engage young people into ag production. Ya know, you hear this clear across the country, but it's crucial now that we find a way for these young people to be successful in producing food. Ya know, a very small percentage of us produce food for the consumer and that percentage of people is up there in age so we're needing some young people to resurrect this industry and its gotta be here soon, we can't wait any longer. We've got to find a find, and find programs, and find any possible way to help these young people to be successful.

I: I think you've convinced me, I want to be a rancher.

R: Well great! We need more of you like this. It's a good lifestyle, it takes a lot of hard work, but it's rewarding, it's healthy, and just seeing where your product is going is awesome.

[50:00]

I: Oh gosh, I can imagine. And to work hard, and work hard with that landscape and the animals there within that ecosystem, is just so neat and gosh I just respect all of the work you do and the time you took out of your busy schedule to talk with me about all of this.

R: Well sure, I'm glad to share what I see and hear and what I do. I think we need to visit with more people so that we can tell our story. Ya know, I tell these ranchers we need to toot our own horn, we don't toot our own horns, we really don't promote ourselves enough, I think because that's the type of people we are. But we need to get the real story out to the general public so they can realize where their food comes from.

I: I agree. And if you have ideas for how I can help share these stories or help with that, I think that's definitely something that we at the Jornada can collaborate on.

R: Yeah, I think we need to tie in with you young folk and use your technology and your skills. We can get you to follow us or shadow us and show the real deal. Documentaries need to come out too so that urban people and people clear across the world can see what people on the ground are doing.

I: Yes! I think that's spot on and I think we can make that happen for sure. Are there other people from extension or livestock producers that you think would be interested in chatting with us about this project?

R: Sure! I'd be glad to share some phone numbers with you or send you an email you later on this evening, it's up to you.

I: Ok! I plan to check in later this afternoon, so why don't we use that email opportunity to swap some contacts?

R: Hey, that sounds like a plan! That'd be great.

I: Thanks! Well, I'll do that. And I'll also follow-up with you in a couple weeks – probably days actually – when I get your interview transcribed to make sure it fits what you were saying how you want. If that sounds good. But gosh, thank you so much! It was so nice to chat with you.

R: Sure thing! Glad to help and look forward to hearing what I had to say. Ya know, I tell people I am fairly young, but I can't remember what I did five minutes ago.

I: You and me both!

R: Yeah! Well very good Maude, I sure appreciate it. Again, let's stay in contact and I'll get you some producer names and contacts, and we'll go from there!

I: That sounds great. Well I hope you have a great rest of the day.

R: You too, take care of yourself, stay healthy.

I: Thank you, you too! Bye!

R: Bye.

[End, 54:40]

Interview: 14

7/20/20

Transcription: M. Dinan

7/28/20

I: Interviewer

R: Respondent

I: Okay! So my first question: can you tell me about your role with Sierra County Extension?

R: [REDACTED]
[REDACTED]
[REDACTED].

I: Great. How long have you been working in this role?

R: I have been in this position a year and half.

I: Okay, very nice! What can you tell me about ranch operations in Sierra County?

R: Well, as with a lot of places in New Mexico, it includes a very diverse ranching dynamic. Oftentimes, when I write drought reports or whatnot for the USDA, I sort of think of the county as divided in half: the eastern part of the county and the western side of the county, with regards to climate, terrain, environment, etcetera. So the western portion of the county gets to be in the Gila National Forest with a lot more forested and mountain climate, which tends to be definitely on the higher rainfall side and whatnot. And the eastern side of the county, which is similar to like Jornada desert, Chihuahuan Desert environment. So as far as operations, that's a lot of times how I answer that. I don't know what to say without starting a five-hour conversation.

I: And that's okay, I won't make you do that! But maybe you can tell me a little bit about how those differences might affect range management?

R: On the western side of the county, as I mentioned it's a lot more of the forested and mountainous climate, and the majority of those producers and ranchers have United States Forest Service allotments, so obviously that's a whole other dynamic when it comes to management decisions. Ya know, oftentimes that's determined by the Forest Service's allotment management plan and how that's laid out for the year. And then also whether it's with Forest Service land or private land, a lot of the decisions are based on accessibility to water and accessibility to cattle. Ya know, I have some good friends who ranch right next to us that they're lucky if they see their cows once a year because the terrain is so tough. So you may or may not move cows from one pasture to another because you may or may not see them more than one time a year. And so that definitely has a lot to do with it. Oh also predation on the western side of the county plays a very, very big role. Like for example, with it being as dry as it is, still waiting on rainfall, bears and lions tend to hunker down on watering locations and can't have cattle in a certain location getting water if that's where all the bears are hanging out. So that goes on a lot, especially right now, this time of the year. And then on the eastern side, that also tends to

contain a lot of public management lands through the BLM, and so a lot of the same things apply, ya know, depending on what your management plan consists of to the BLM might determine how you manage.

[05:00]

But then I know that within our county specifically on the east side of the state, water quality is a big issue. Water quantity is a big issue as well, but the water quality on the east side of the state is very, very, very high in a lot of minerals and a lot salt, and even if a lot of ranchers and producers do have wells or pipelines or drinking facilities, they oftentimes get corroded or eaten away or don't work because the water quality is so poor. And most of the water on the east side of the state is actually not even good for drinking water, or not state – county.

I: Oh my god, how are folks dealing with that? Are they hauling water from elsewhere or have sort of a cleaning system?

R: So for cattle-drinking, it's fine, it doesn't affect the cow itself. But for human-drinking purposes, yes. They haul water from town, at least some of the producers I know who ranch on the very eastern side of the county up against the Missile Range.

I: Wow. Goodness, yeah I had a conversation with Dr. Ward recently and all of the work she is doing to study not only water availability but quality too, and I just did not know that that was as big of an issue as it is in some parts of the state. I definitely learned a lot. Can you describe the changes that you've seen in Sierra County related to climate and landscape in the last 20 years, and if you haven't been there that long, just as far back in your memory would be awesome.

R: Just as far as how things are changing, is that what you're asking?

I: Yes!

R: So I've lived here that long, and I would say - probably similar to a lot of places - that the annual snowfall is a lot less than normal. Ya know, I can specifically remember multiple times flooding as a kid, but now you're lucky to ever get that much snow on the ground. And then I would say as far as our monsoonal systems coming in, they just typically, the last few years especially compared to like when twenty years or so, they've been bumped back a lot. Typically they start July first or July fourth and now we're lucky if they start middle of August or beginning of September which drastically has affected our amount of growing season. Ya know, we kind of – with the exception of the spotty places over the county – the majority of our producers over the last couple of years really have not had a growing season because the rains come so late there really isn't enough time before it gets cold. There's no time left to have a growing season. But I guess that's probably the summary of how it's changed.

I: Sure! And in looking forward to the next 20 years, what do you envision happening in terms of things changing? Or what do you see happening?

R: Um, I really don't know, and I'm probably going to leave my answer to that. And I wish we did know, but they'll basically either revert back to how they've been or continue to change and maybe get no snow. I really don't know. I just have no idea what the answer would be.

I: Oh that's okay – if we knew, I think we'd be a lot better off.

R: Yep, exactly.

I: How do these changes threaten producers? You've talked about not having a growing season, maybe you can talk more on that as well as other challenges that you see arise.

R: I think those changes affect most of our county's producers partly because – ya know, Sierra County is primarily made up of cattle ranching producers, and of course there are some farmers as well, but I'm going to mostly talk ranching for now.

[10:00]

Some counties have a lot of sheep industry. We do not, we have only cattle industry other than the few hobby sheep farms. And any time you're dealing with cattle, the turn-around time for making decisions is so long. Ya know, it's not like you can make a decision tomorrow and three days later it affects you. When you're talking cattle, you make a decision tomorrow so that nine months from now you maybe have a calf. The time it takes for decisions to affect things that you're doing is just so lengthy when you're talking management decisions. If you're going to change a bull on an operation, it takes two full years for it to cycle through your cattle. So I think that plays a big role if you're starting to see trends in rainfall changing or timing of rainfall, well by the time you notice those trends then it's going to take two years to change how you rotate your pastures, and then it's going to take two more years to maybe change the type of cattle you're going to raise, and then maybe two more years putting in new watering facilities or two more years to put fencing in, so that by the time that's all over, it's been six years, twenty years and the trends have changed again. I think that's probably one of the things that greatly affects especially the ranching operations in our county is the length of time that all those management decisions play a role in how everything is affected by those trends.

I: Absolutely! Are there other factors that might maybe make those challenges worse? Whether that's on the ranch or possibly dealing with BLM or Forest Service – anything that kind of compounds that issue?

R: Yes, that is a very large list. I would say financial-type, economic challenges are of course a massive factor. Ya know, say you are going to make a management decision to change, I don't know, the type of cattle you're running or something. Well then all of a sudden the market tanks and those type of cows – the red cows – aren't worth anything and black cows are worth more. And the next year, white cows are worth more than red cows just because it all boils down to what the market wants. And if you think a black cow tastes better than a white cow or a red cow, then that completely affects how the market perceives the worth of your cows, and that greatly affects your management decisions. So, market is a huge, huge factor that unfortunately we have no control over whatsoever. And of course, regulatory-

type – well just any regulations play a very big role especially when you're dealing with public lands. Ya know, I would say 98% of most producers in the county, and I would say over the state, have been there for quite a long time and have a good idea about how to manage properly but are oftentimes limited or restricted to how they actually can do that due to regulations associated with a particular public land that they're on. An example, a neighboring ranch has an NRCS contract where they need to put a new trick tank in that will serve as water for wildlife – primarily wildlife – wildlife and cattle, but mostly wildlife. And they're not allowed to go put an 8000 foot mountain until November first because it may affect owl habitat. Well that's a pretty hard feat to accomplish when there might be two feet of snow on the ground, and ya know, etcetera, etcetera. So regulations associated with public lands is massive when it comes to management decisions.

I: Thanks for talking about those. When you have folks in your office or staff out working with livestock producers, and you're talking about these changes in your environment and the challenges that they pose, how do these conversations go?

[15:00]

And do you and your clientele usually see eye-to-eye, or is it a lot of convincing of sorts? What does that look like?

R: I think we definitely typically see eye-to-eye for the most part, and I think there definitely is some convincing that goes on. And I think it is a lot easier to convince if you have a good relationship. Ya know, if I can sit down and have a cup of coffee or cold beer with a producer one day and then the next day convince them to use a new monitoring technique on their rangeland, then it will be a lot easier to do so. We're talking – the type of people and industry we're looking at – we're talking people who are stuck in their ways in a lot of ways. But like I said, there's definitely an easy way to convince them of different things or newer ways of doing things as long as you have spent time building that relationship.

I: Yeah, I completely agree and really admire that strategy. What are the options for livestock producers in Sierra County to reduce or prevent these threats? And you brought up monitoring, and I'm wondering if that ties into any of this? But anything along those lines, whether it be tools, or resources, or programs, which they're taking advantage of.

R: So, programs in general – definitely. I worked for NRCS before I worked for Extension, and so the programs available through NRCS have definitely been huge within the county and definitely played a large role in allowing for different opportunities - and the list goes on and on. **And** especially just having folks like an Extension specialist or someone within the different agencies that they do have good relationships with, ya know I think that plays a big role as well.

I: I really appreciate this role of relationships and community that you bring up. I'm wondering if that also exists within the ranching community – is there a lot of. . . hmm, how do I say this? Do you see a lot of ranchers going to other ranchers for advice or help, and things of that sort?

R: Yes. And I think probably more so now than historically. I think part of that is just people in the production/ ag world being more progressive and thinking – having all of these producers reach out into different areas that they are not used to, for example, maybe if they are in an NRCS program or contract, and if they know their neighbor is also in the same program or contract then they might say “hey, how did you use the chemical on that tree? I would really like to know.” Or “hey, I noticed all of your juniper trees are dying. How in the heck did you make that happen? I want to do that too,” And so I think more so now than historically, yes, I think you’re seeing a lot of our producers sharing information and just wanting to help each other out. For an example, with all of this COVID-19 relief funding and stuff going around for the ag industry, I specifically know handfuls of ranchers who we might be sitting around a campfire and one ranchers says to another rancher “hey, did you know of this funding opportunity? You need to visit the USDA service center to visit about it.” Ya know, they’re offering up this information and making sure their fellow ranchers, and farmers, and friends know about these opportunities.

[20:00]

I: I love to hear that, that’s incredible. And I kind of sidlined your answer, I’m sorry. But we were talking about the resources, programs, and tools, to mitigate or prevent the challenges posed by drought and a changing climate, and I didn’t know if you have more to say. I’m sorry, I just diverted the question.

R: No, that’s fine. No I think just – I really think just having - and I’m going to beat this horse very dead - I think having those strong relationships with just key players to make those connections with and within the industry is very important. I would 99% of the time probably say I don’t have the answer, but I can say “ya know what, this is who you need to talk to,” or “this is the guy at the Forest Service you need to talk to,” or “this is the book you probably need to read.” And I’m definitely not the only person doing that, but I think just having that relationship within counties whether it’s Forest Service, an NRCS range specialist, or USDA service center person, or the guy at the front desk at the Forest Service, I think that makes a really big difference in being able to mitigate challenges.

I: Absolutely, I agree with you a hundred percent there. Earlier you brought up a lack of a growing season – I’m curious what folks do when that happens and other things that people might be doing on the ground or on their ranch to either adapt or cope with the challenges you’ve brought up.

R: So the least desirable option is simply feeding cattle. Which happens and is happening now just because of last year’s lack of growing season. So that definitely goes on, but that’s definitely the least desirable option because of the cost associated with that. And then another one is – I’m going to go back to NRCS programs – folks have had to reach out for ways to improve their rangelands to the best of its ability and so if that is brush removal, if that means expanding the scope of your pasture in areas where there was no water before, ya know, whatever the case may be, that’s pushing them to reach out for opportunities to hopefully financially allow them to do some of those things. Ya know, a rancher may not be able to do a hundred fifty thousand water system, but if NRCS can possibly cover 65% of that, then maybe the rancher can afford do that. And then therefore, there might not have been a growing season at all, but at least there’s five thousand acres of a certain pasture that hasn’t been used over the course of so many years that now you can use because you have that opportunity. And I know also – so

you see unfortunately, I am anti-this, but a lot of big oil money coming into the county buying up ranches and so then one owner owns a lot of ranches. And with that, they oftentimes don't stock them with any cattle or are very lightly stocked. So we've had some producers beg, barter, and plead with some of these folks to "hey, will you let me put my cattle on your operations even if it's just for two months," and so lease agreements are worked out and that kind of thing. So feeding, programs, and moving cattle into leased county are probably the three main things.

I: Yeah, I've heard about that happening in southern New Mexico these folks essentially – someone called it burying money in the land, where they . . .

R: Mhmm!

I: Yeah! And is that pretty common, like is there a lot of land where that's happening and taking away from other producers?

[25:00]

R: Oh one hundred percent, definitely. Especially in our county – it might be happening in other counties that I don't know about – but in our county, especially over the last two years, there's been, oh gosh, probably hundreds of thousands of acres that have been compiled into one operation.

I: Wow! Is there anything that can be done to minimize that? Is that like a matter of legislation or policy – how do you even address that?

R: No, and I would hate for it to get to the level where there would even be legislation or policy because that's just one more rule or regulation. But it's just pretty hard for a producer to turn down millions of dollars just being dangled in their face, ya know, it's essentially what it comes down to. A place may be worth a million dollars, but if a guy comes up to you and says "I'll give you 11 [million]," that's pretty hard to turn down. But I really don't know the answer to that other than just making the lifestyle easier in order to pay bills, so when that offer comes along, it doesn't go that way. But that I think just comes down to marketing and marketability of livestock and produce. Same thing, that onion might be worth a dollar, you're only getting two cents.

I: That makes a lot of sense. I'm thinking right now that it would be a tough thing to turn down if someone came to me with that offer, and you really have to assess the tradeoff of quality of life and the pressures you get from finances and things of that sort. So yeah, that makes a lot of sense that this would be the case, with a solution largely reliant on how marketing works and the paybacks that people are getting. You talked about building relationships with producers – with that aside, is there a specific characteristic of folks who come to you for help or to extension?

R: Hm, I guess I'm not exactly sure what you're asking.

I: I know, I got all twisted up, I'm so sorry. I'm wondering if there are characteristics of producers who are most likely to accept your help?

R: Oh I see. I would probably say ones that can relate to me a little better. I probably get a lot more ranchers than I do farmers asking me questions. Ya know, I'm a rancher, my family's ranchers, I'm not a farmer. So I have a lot of ranchers, cattle producers, livestock producers, that come to me with questions. Especially on – I'm a range management specialist by degree, I guess you would say, and so when it comes to range questions or management questions, ya know, I get a lot of that. Whereas I probably would not get nearly as many onion farmers asking "■", how would I rotate my onion crops differently?" That's probably I guess the best way to sum that up.

I: Yeah, that makes a lot of sense. Can you describe what you anticipate producers will do when they can no longer cope with these threats? I mean besides taking a multi-million dollar buy-in that is a possibility, what else do you see happening for producers?

R: Can you say that again? You kind of cut out.

[30:00]

I: Oh, I'm sorry! Can you describe what you anticipate producers will do when they can no longer cope with these challenges?

R: So yeah, besides the buy-in, I see a few people turning over some places as like conservation easements and what not, I've seen that type of thing a little bit. I'm seeing a lot more producers spend a lot more time getting very knowledgeable about succession planning. So we're doing a lot more succession planning, and we're seeing a lot more interest in succession planning because I think they know that in order to set them up, of their kids up, or their grandkids up in a way that allows them to continue successfully, then they better have all their damn T's crossed and I's dotted.

I: Are there programs or – I guess I'm thinking about the folks who might have kids who are interesting in coming back to work on the ranch – what kind of solutions do you have for folks there, if any?

R: Ya know, if it's an older generation-type family, or couple, or person, I really don't know. It probably just depends on the operation or the individual themselves. If it's a younger generation, or individual, or family, I guess I would just try to just, whether it's through the Extension agent or whatever, encourage them to visit with other younger people about opportunities that may allow them to purchase a ranch or purchase a farm. My husband and I purchased a place through FSA Beginning Farmer and Rancher loan program. There was just no way we would have ever been able to afford what we did if it wasn't for that opportunity. And a lot of people may not even know about those programs, so just sharing that information might be helpful.

I: Yeah, that's awesome. Congratulations on your ranch – I know that must be so exciting.

R: Oh, thank you.

I: So this is nearing my last question. Are there solutions that you would put into practice or wish that other people would put into practice to help prevent or mitigate the effect of all the things that we talked about?

R: So my answer is probably going to be a little different than someone who is older. I'm young and so obviously the younger generation feels a lot different than the younger generation when it comes to a lot of this stuff so, my answer would probably just be the paperwork side of the ag industry anymore is just crucial. Ya know, twenty years ago, fifty years ago, especially one hundred years ago, really all you had to do was just brand your calf, milk your cow, pick your onion, and the rest just kind of worked itself out. But anymore, you better be in the office doing paperwork, or in Santa Fe lobbying, or visiting with your commissioners, or visiting with your legislators, making sure your will is situated, just all the paperwork associated with the ag industry anymore is just way more critical, I think, than the in the field, on the ground, work.

[35:00]

And like I said, if you were to talk to my grandpa, he would completely disagree. I think in this ever-changing world, the more you can be prepared financially, legally, paperwork-wise, and educated, the better off you'll be able to handle marketing issues, legislative issues, regulatory issues, and all of the things we talked about.

I: Yeah, I definitely agree. And it's interesting to think about the difference between the generations and where the focus lies. This has been so informative, and I have learned so much! Is there anything else that came to mind that you'd like to talk about but we haven't had a chance to?

R: I don't think so. I talk a lot so, I did that! If you have other questions, please let me know.

I: Ok thank you. And no, I think it was the perfect amount of information, and I learned so much! Talking to you, you're kind of serving as ambassador for this [Transition Mountain] region, but if you think there's anyone else I should talk to, either from Extension or NRCS – and I've chatted with folks from Otero and Dona Ana County – but if you have other suggestions, I'd love your input. And then we hope to talk with producers down the road, and if you have ideas of folks who might be interested in chatting I'd love to get your suggestions for that as well.

R: Yes, definitely. I definitely have a few in mind specifically that would be really good, so just let me know.

I: Awesome, thank you so much! Ok, so my next step is I'm going to transcribe this interview into a Word Document and send it over to you, just to make sure I heard everything you said correctly. And then of course, I'm happy to keep you updated with results and other things related to our project if you're interested.

R: Perfect.

I: Awesome! Thank you so much, [REDACTED]. I really appreciate your time and information.

R: Yes ma'am, no problem.

I: I hope you have a good rest of the day, and I'll talk with you soon.

R: Okay, thank you! You too.

Interview: 15
7/20/20
Transcription: M. Dinan
8/4/20

I: Interviewer
R: Respondent

I: So my first question for you is can you tell me about your role with Extension in Grant County?

R: [REDACTED]
[REDACTED] So I do all of the 4-H youth development stuff and also all the house calls for anything from what is this plant, what is this bug, ya know, why are my plants dying? All the way to cattle production questions, beef quality assurance trainings, all that kind of stuff.

I: Dang! You're busy I imagine!

R: Haha! Yeah!

I: And y'all will be having fairs come up with 4-H too, is that right?

R: Mhm! Yep! Coming up through September.

I: Wow, how is that working with everything going on with the pandemic?

R: Well, we're kind of in a holding pattern right now to see what exactly is going to happen. But there are several plans in place to be able to have some livestock shows. We may not have a traditional fair, but we'll be able to have some livestock shows so that the kids can finish out their projects and stuff.

I: Aw, that's good to hear. I know they've worked so hard!

R: Yeah, a lot of time and a lot of money.

I: Gosh, I can imagine! Well you seem like the expert for this, can you tell me what livestock operations are like in Grant County? I understand this might be hard to answer.

R: Okay, so ranch operations in the county are typically, I'll say this, they're usually pretty large in terms of land size and then fairly large in cow size, ya know, herd size. Got to have a lot of land to run probably not as many cattle as they probably do on the east side of the state. This is a really kind of mountainous area that is very rocky, lots of mesquite, very dry other than right now. We're getting a little bit of rain right now which I hope that continues. But last year, this area was incredibly dry so by now, or usually in the spring, you'd see a little bit of spring green-up. But it was so dry last summer and over the winter that everything was still dead up until – well I should say yellow-brown – until probably about a week ago. So most of our producers are men, probably over the age of fifty, all raising beef cattle. There's no dairy. Or no sizable amount anyway here in Grant County. So most of them are beef cattle producers in

the cow-calf sector, and we may have a few that have some seed stock-type stuff, but there's not really any feedlots or stocker operations here at all. It's most just your cow-calf-type thing.

I: That's perfect. Are the ranches on private land or do you see a lot of public land allotments?

R: A little bit of both. Some are on private, and then there are some that are leasing from like the copper mines from their property that they have, and then there are some that they have forest allotments. But I would say the amount of people running on allotments are probably the smallest group of people here.

I: Okay! And then aside from some differences among cows or cow-calf pair operations, do you see any other – or do you see difference in management from ranch to ranch, or are people using similar strategies?

[05:00]

R: Yeah, I mean there's always similarities, but then there's differences. For me, what I see is the very innovative group that kind of stays up with the BQA standards, kind of doing things in the modern way, and then there's kind of a middle group there that they want to, they know they probably should, but they're just not quite sure how to implement changes into their operation. And then there's another category, I call them the "Daddy-dids" because they do what daddy did. Because these ranches are typically passed down through generations by families, and so the people running them now got them from their fathers or their grandfathers and so. So they're kind of doing things the same ways that's been done by generations of people. So, I'll say the larger operations are definitely more with it. Those producers are definitely staying up with their BQA stuff, always gaining education, staying up with the latest technologies, all those types of things.

I: I love that term. I had been hearing all types of names to describe these categories, like "fence-sitters" and "no-ways," but I hadn't heard "daddy-did-ers" before and I think it encapsulates a lot of the tradition that's driving that. What do these proportions look like? Is it a small group of the innovative folks or is it mostly the other ones?

R: I would say the smallest group is probably those innovators, and then the middle group would probably be the biggest where they're right in between the innovators and, I guess, you call them "laggards" technically by research terms, so that middle group is probably the biggest. And that group that are the "daddy-did-ers" are another small group.

I: Okay, interesting! And I definitely want to come back to these innovative folks and hear about that, but I'm curious how you would describe the changes you've seen in Grant County, either related to weather or landscape, in the last twenty years. And ya know, if you haven't been there that long, just as far back in your memory.

R: Hmm. The biggest changes that I have seen. . . Well I've only been this position for five years, but I did grow up around here, so I think some of the bigger things that I've seen is as some of these families start to pass these ranches onto the younger group, they are the type of people that are going into that

innovator-type of category. So they're the ones that I'm starting to see more attendance from in a normal year at workshops and different kind of cattle-associated-type of meetings for organizations and stuff like that. That would probably be the biggest change that's probably happened over the years. But on the other side of that though is actually seeing where ranchers are having trouble passing these ranches down at the same time because their kids – well number one, ranching is hard. Number two, it don't pay. So, unless they've got something really successful going already or as the saying goes a wife that works in town, or something like that, a lot of these kids leave and go into something else and they don't come back to these ranches to work. And so it's kind of two different scenarios there. I would say the scenario

[10:00]

. . . where the kids leave and go off to do something else is probably the largest group.

I: Yeah, unfortunately I've been hearing that quite a lot, and I'm sure it's daunting for those families as well. So you've talked about the rain a little, how have you seen things changing in terms of drought or dryness? Have you noticed that in the last couple of decades?

R: Yes. I mean when I was growing up around here, it rained back then. And now it really only rains if we're lucky during the monsoons. So we're continually getting drier and drier and drier. Places that used to have water, now they don't. Streams and creeks and stuff like that that used to run, they're not running all year like they used to. So that's been a big change. That's probably the biggest challenge I see my producers having to work with is the drought conditions.

I: How do you see that affecting your producers?

R: Well I know last year alone there were several producers who either had to sell off their calves early because they could not afford to feed, or keep feeding them, through the summer, so they actually sold them kind of early summer. And then there were a lot of people who downsized their entire herds because of the drought. There just wasn't a lot of grass to feed them through the summer and the fall and going into winter, because ya know in the winter they're going to have to try to supplement with some kind of feed block or hay or something like that, and there was just no way they were going to be able to financially do that so. The drought has really caused a lot of issues. Yeah, them having to downsize was one of the biggest things I heard last year, and we may still see residual effects of that this year. People who held out and held on to some of their stuff depending on how the monsoon goes, they may end up having to downsize again, because we've still been pretty dry up until this point so.

I: How do you see things changing looking forward into the next twenty years? Do you see things getting drier or what are your thoughts?

R: I honestly don't know. I had a professor once tell me that the only people who get paid to be wrong are weathermen and economists, so I have no idea. Hopefully not. Hopefully we start to swing into a wet pattern over the next few years, but I think the drought conditions are always going to be kind of hard. But I think there's going to be a lot of challenges in general too just ranching here, whether that be regulatory-type of things, ya know it's harder and harder to produce a product here, especially if you're going to be using allotments or lease land from different organizations. I see that being – that continuing to get more and more difficult. As well as probably a little bit more government – well, I don't know if

you want to call it government – more of a regulated-type of industry. Especially when talking about food safety. I don't think that's going to go away, I think that's going to increase. I think that's all I can think of. Trying to think, changes in the next twenty years. . .

[10:00]

I think it's probably going to get harder and harder for ranchers to survive, and I think there's probably going to be a decline in ranchers here and across the state, and probably the US, over the next twenty years. So, there will probably be a significant decline in terms of people who are actually cattle ranching in the future.

I: When you have these producers in your office or you're out in the field, how do y'all talk about these challenges? How do those conversations go?

R: They can be a little depressing, honestly. Whenever we're talking it's a lot of times it's kind of a helpless feeling, really, honestly, from my standpoint. I can't make it right, ya know. Mostly what I try to do is provide education – ya know, research-based education and information – to help them try to get through these tough times. So we'll always bring in cattle nutrition specialists to talk about some ways that they can get their cows through these drought-type situations, to keep them going, what they can do and what they can eliminate from those diets that may be costing them money that they're not getting anything out of, while still maintaining all the nutritional basics that they need to keep those cows healthy throughout the year, to have healthy calves, so that's pretty much my standpoint when I'm talking to them. Ya know, I want to hear some of their problems because then I know what I need to do to try to help them. They're depressing though, but I get through it I guess!

I: And they're lucky to have you though it sounds like, to have someone walk through this with them and too to listen to their problems as well. I really like that strategy as well as addressing other areas in production that make navigating drought a little easier.

R: And another topic that's starting to come up is actually the mental health of these individuals. That's not something that was talked about even a year ago. But now what's starting to come to the forefront of the ag industry in general is the mental health of these producers, whether it be cattle ranching or corn farming. They're under a lot of stress and they're starting to notice the suicide rate is going up. And so Extension as a whole is starting to see that as a problem and we're trying to figure out ways to help combat that. Sometimes we're kind of therapists too. Untrained therapists!

I: And that's awesome too, I mean I'm sure there was a time when people thought about ranch health and mental health as two separate buckets, but I think Extension is taking on that perspective that no you can't really separate it like that. I'm sure that's a daunting task to take on, but it's so important. What strategies or programs or resources have y'all come up with, or is it early in discussion?

R: Well it was really coming - there was a really big push at the beginning of the year, January-, February-ish, and then once COVID-19 happened, I'm not saying it got pushed like it wasn't important, but the plan that they had in place didn't see us all having to go to virtual-type programming.

[20:00]

. . . There's been a little bit of adjustment in terms of every agent in the state trying to figure out how they can still reach clientele with their programming, so that's kind of been difficult this year to actually

try to do some of those things. The only thing that I've done, because again I can't meet with any groups or anything like that – I do kind of individual things as long as they follow the rules – but I do have a monthly newsletter that I do send out. I have an email blast of like 400 people. So anyways, I put in some kind of agricultural mental health-type publications in there that they can read and they don't have to, ya know – there's still a stigma especially with this group there's always probably going to be a stigma there, but that way they can read it if they want to, or don't if they don't want to, and maybe get something out of it. And they can get it online, through their email. And then I also put out a few hard copies out at the local little stores in these ranching communities, and they can pick them up if they want.

I: Yeah! I love that. I think that's a great way to navigate the stigma, making it accessible but also on folks' own time.

R: Yeah, I think it goes a little better than trying to have, let's say, a workshop. Because, I can tell you, if I had a mental health workshop for cattle ranchers, I'd have nobody there. They're not going to show up for that. The only way that you could probably sneak that in if is you baited them in with another program, and then snuck five minutes of that at the end.

I: Yeah, you got to be sneaky with it! I've been looking up resources as well, and it's really interesting how other folks market these programs. Like I see a lot of them called "Man Therapy," and that's just the title!

R: Yeah, definitely. They're all trying to get these groups of people to admit you can still be a real tough guy and still battle these really tough mental health issues and it doesn't make you less of a man.

I: Exactly! It's very interesting, and I'm learning a lot. It's really good to hear the conversation around the issue is coming up more.

R: Yeah, I know they were really pushing it at the beginning of the year, but then it took a hard left because of COVID-19. But they're still offering some virtual webinars about mental health. So it's still there and it's going to be there especially after all of this comes to an end at some point.

I: Absolutely! What are the options in your area for producers to reduce or prevent these threats from getting worse?

R: I don't really know this for sure, but there's probably some grant money out there through USDA, NRCS, those type of entities that can probably help bridge the gap on some of these things, like when we go through droughts like these, I know there are some assistance-type programs that help them kind of get through.

I: Are they like offering money to make up for destocking or losses they would accrue, or is this money for like changing up fencing or putting in water tanks?

[25:00]

R: I don't know about the destocking stuff, but I do know when there is a big drought there is a payment that is made by I want to say NRCS, but that could be a lie, I'm not really sure, or USDA? There's kind of a little bit of an insurance payment, but it's not really insurance. There's a payment that comes in to these producers depending on the different entities that report to them, to whoever's making the decisions

on these payments, if there's enough evidence to say that they can send out a check to help some of these ranchers to cover some of the costs that this drought has caused them. I don't think there's any types of payments of anything for destocking. I'm trying to think of some of the other ways. They get grant money from NRCS for those projects that kind of benefit everything, they benefit the environment, they benefit wildlife, they benefit ranchers by putting in water, cleaning out tanks, habitat, environmental-type products.

I: Neat! Are there other resources like educational resources or maybe tools that people are using as well?

R: Probably. I'm trying to think, there probably are. I guess they're getting them probably from Extension but also from these other agencies. NRCS has stuff they put out, USDA, all those, they produce some informational stuff that you can pick up from their office or stuff they'll email to you that has information on the grants that are available.

I: How about this innovative group that you were talking about earlier, do they have some drought adaptation strategies that they're employing?

R: Yeah, I would say probably, but I don't know for sure exactly what that plan is. Yeah, they are. They know when - they're moving from pasture to pasture, especially when they're able to control their own rotation, they're going to rotate to where it's best for the cattle at that particular point in time in terms of the drought. If you've got something that's pretty dry, hasn't had any moisture on it whatsoever, nothing on there, it's probably best not to put anything on it again because it's just going to get worse. So when they're able to control their own rotation, I know they're using a lot of rotational grazing to kind of manage things.

I: Interesting! What are the characteristics of producers who are most likely to accept your help?

R: Hm, gosh. That's kind of a hard one. Probably that the younger group, I would say, which is a very small group. I don't know, it's hard to say, because you have some that are older, they've been doing it for a very long time, but they still listen to my advice. They might not use it, but they listen to it. And then you have the group that - and the other thing that doesn't really help me out is that I'm female. I couldn't possibly know anything that somebody else doesn't know! You probably don't want to put that in your research, just FYI.

I: I know what you're talking about, haha!

[30:00]

R: I figured you would! There's a very small group of the younger producers or that innovative group that's kind of with it, I guess, that is willing to take my advice and education and stuff like that. Typically, the "daddy-dad" group, they're not interested at all.

I: That makes a lot of sense, and that's what I'm hearing in a lot of other places as well. I did just talk to someone who said it's kind of the reverse of what you had talked about. He sees more of the older generation coming in and the younger folks are like "is there a website I can go to" or "tell me what I can Google." And I thought that was interesting, but also recognized myself in that too.

R: Yeah me too, I think "Oh let me just look it up."

I: Haha! So I thought it was interesting there's this flip flop and wondered if there's a reason for this flip flop.

R: I don't know, but that's interesting though!

I: Can you describe what you anticipate producers will do when they can no longer cope with these threats and challenges? And this can kind of be a scary question, I kind of hate it.

R: Well, I guess, they'll sell off their land, sell off their cows, maybe subdivide their property, whatever they own of their private land that is. If they're leasing stuff, they'll let their leases go, they're definitely going to downsize. I would say those would be the ideal, I mean in a particular scenario, that would be the ideal choices they would have. Hopefully, they don't go down the suicide road, but that's where some of them do. When those are kind of the two options, I would hope they just sell off. And the heritages of those families are really going to end in terms of the cattle that's being run around here. Once they sell off that property and the cows and everything, I don't see that coming back for future generations and those families.

I: Kind of going off bringing mental health resources into these communities, are there other resources or conversation kind of related to this transition phase for folks?

R: Can you ask me that again?

I: Are there resources or conversations related to transitioning out of ranching?

R: I haven't heard of anyone really going down that road. Thankfully, these people are pretty dang tough. They'll dig their heels in as long as they possibly can. So at this particular point, I haven't heard of anyone making that transition out yet. I'm sure they exist out there, I just don't know about it. I haven't heard anything.

I: Are there solutions that you would put into practice, or would like to see your producers put into practice, that haven't been done before?

R: That have or haven't?

I: That haven't.

[35:00]

R: Oh, yeah I would. Of all the producers in the county, probably maybe not even half of them can't come to the beef quality assurance-type practices that we have. If they went to that training and saw the value in it, that would make a big difference. Just because they don't understand the product that they are producing is now so driven by the consumer. And the consumers are driving the packing plants, and the packing plants are driving the feeders, and the feeders are now driving the ranching industry, the cow-calf operations. And I would say the cow-calf operation is probably the most behind and so I wish that more people would kind of jump in to these types of programs where – there's a value-added program, I know NMSU they've had like an ACES High-type program that's aimed at trying to sell cattle as a higher-end product, a value-added product, through a protocol that they've put together. I wish more people would take advantage in that type of stuff. I think they'd see a difference in their bottom-line. I wish they'd take advantage of basically the free education that's out there through Extension, workshops, what's out there. I wish they'd participate in that a little more.

I: That's such an interesting point you bring up, this bigger picture of this system that they're ultimately apart of and their success that's dictated by it. Is there anything else that you thought of?

R: No, not really no, I think that's probably about it.

I: Well great, that's the end of my questions. I'm wondering if there was anything that came to mind that we didn't get to cover yet?

R: I don't think so, I think I covered a lot of it. I can't think of anything right now, but I'm sure at two in the morning I will.

I: Don't hesitate to reach out then!

R: Haha! How bout I send an email?

I: It's always interesting the things that come to mind in the middle of the night. But I've learned so much and you provided such great information. I really appreciate the time you've taken to go through it all with me. We're talking to other folks in this Transition Mountain area. Do you have other people in mind, whether Extension or NRCS, that you think I should talk to?

R: There's probably – I don't know how many county agents you've talked to, but you could probably reach out to the Catron County agent that's just north of here. He's been there quite a few years, and that's actually where I grew up. My family has a ranch there. And they have similar but different problems, if that makes sense.

I: Yes, that does make sense and I'm definitely interested in learning more.

R: His name is Tracy.

I: Oh, Tracy Drummond?

R: Yeah, Tracy Drummond! Have you talked to him?

I: I've tried to, but I realize it's such a busy time. Maybe I'll try again.

R: Try calling their office and send him an email. Try to do both and see if you can get him that way. Another good one would be Sara Marta. She's in Sierra County. She would offer a different perspective just in that she, number one, has been in that position maybe a year and a half, also another female, but did grow up in that area, so she's been there a while. That would be another good one to talk to if you haven't talked to her yet.

[40:00]

I: Awesome. Thank you! Down the line when we're prepared and I've looked through all of this stuff, we hope to talk with producers as well. Do you know folks who might be interested in chatting with me?

R: Yeah! I think so! And when you get to that point, just give me a heads up so that I can reach out to them first, and I think that will be much more successful for you to get connected with them.

I: I agree, I definitely don't want to catch them off guard.

R: Yeah, because they would be like "You're what?"

I: Haha! "Why?"

R: Yeah, remember what I told you about them being fifty-plus men.

I: I had someone tell me that I need to talk louder too especially if I need to be talking to some of the people they had in mind, and I was like, got it.

R: Haha! That's funny!

I: So that would be really helpful, thank you! And what I'll do next is get this interview transcribed for you to look over and make sure I caught everything correctly. And then other than that I would love to keep you updated with findings we have or other workshops we host associated with this project if you are interested.

R: Yes, please do. I would really like that.

I: Great! Well thanks again! And if anything else comes to mind, I'd be happy to take an email or phone call to take more questions or information you have.

R: Sounds good!

I: Have a good day.

R: You too.

[End, 42:10]