

VOL. 1 ISSUE 4 · JUNE 2021

CATTLECAL NEWSLETTER

ANNOUNCEMENTS

Welcome to the CattleCal newsletter for June 2021! In this issue we have exciting information on using feed additives in feedlot diets, the career and research (perscribed burning in California) of UCCE fire advisor Lenya Quinn-Davidson, and a look at a study substituting distillers grains for steam flaked corn in the diet of calf-fed Holsteins in the feedlot. If you would like to hear more detailed conversations about the articles in this issue look for our CattleCal podcast on Spotify. Descriptions of this month's episodes and a link to the podcast can be found on page 3. If you have any questions, comments, or would like to submit a question for our Quiz Zinn segment, feel free to contact us. Our contact information can be found on the last page of the newsletter.



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THIS MONTH IN RESEARCH

This month was an exciting month as we finished our DDGs trial and started those 100 steers on a new trial. That meant a long day of weighing, implanting, and sorting. The 100 steers on the essential oils study continue to perform well. Below you will find performance data for these calves. In May we saw average maximum temperatures of 94° F and average minimum temperature of 59° F, though several of those days did get above 100° F.

PERFORMANCE SUMMARY

Body weight (d 55)	555 lbs
Body weight (d 84)	645 lbs
ADG	3.35 lbs/d
DMI	14.4 lbs/d
F:G	4.29

May 2021



June 2021





CATTLECAL PODCAST MAY EPISODES

Quiz Zinn - CCP#012

In this episode, we asked Dr. Richard Zinn a question from our listeners related to the use of feed additives in feedlot cattle diets.

Career Call - CCP#013

In the career call of the month, Brooke Latack and Pedro Carvalho call Lenya Quinn-Davidson. Lenya is an area fire advisor at Humboldt county and shared a lot of nice stories on how she ended up working with this "hot topic".

Research Call - CCP#014

Brooke Latack and Pedro Carvalho call Lenya Quinn-Davidson. Lenya is an area fire advisor at Humboldt county. In this episode, she shared information about the use of prescribed fire in California and how this practice is helping to bring people together and preserve nature in our state.

Feedlot Research Call - CCP#015

In this episode, join Pedro Carvalho and Brooke Latack as they discuss a study looking at substituting distillers grains for steam flaked corn in the diet of calf-fed Holsteins in the feedlot.

Listen on Spotify at this link:

<https://open.spotify.com/show/6PR02gPnmTSHEgsv09ghjY?si=2zV59nGbSE2mf8DiOqZLhw>

Have any questions, comments, or suggestions? Want to send in a Quiz Zinn question? Contact the creators through the below email or through their social media profiles.

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QUIZ ZINN



Considering a production type without the restriction of ionophores and feed additives utilization. Are there cases where it is not worth using any feed additive, cases where a “perfect” feed bunk management is applied, for example? Could you give up the use of feed additives? Or should we always think about having some type of feed additive in cattle diets as an insurance policy?

One of the generalizations that we make is that the response to feed additives is usually greatest when the response to the non-supplemented diet is less than expected. When we have conditions that would result in less than expected animal performance, that's when we see a greater benefit from the feed additive. The number one concern with respect animal performance is feeding management. Feeding management includes a lot of things like mill operation, consistency of feed preparation, timely feed delivery, and diet formulation. It also included the step up program of how cattle are brought up onto feed. All of these things combine into we call feeding management. All of these things will of course have an impact on long term performance of feedlot cattle. As we do a better and better job of feeding management, then the risks associated with other stressors is minimized, so the response to feed additives becomes smaller and smaller than the expected response. There are other factors that we have to consider as well. In addition to feeding management there are other elements that can effect the response to feed additives, including weather changes. Specifically in the High Plains this would be talking about a weather event that would make the delivery very difficult and might cause big fluctuations in day-to-day feed intake. This is not uncommon in those regions, but also in areas like the desert southwest we have the summer months where we have extreme of weather conditions with very high ambient conditions. These are things that will definitely impact stress and animal performance itself. We also have really obvious things like pen space, shade space, shade structure, bunk space, bunk orientation, abundant water supply, and drinker space. All of these things are also critical. In fact, when we evaluate feedlot performance in commercial feedlots we can see that there's all of these things things that I just mentioned that will have an impact on animal performance. These additives do provide, to some extent, protection against the risks associated with these changes.

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QUIZ ZINN



Adding and removing additives from the diet

I want to also give a reminder specifically with respect to feed additives Monensin or ionophores. If we decided take that out of the diet, we need to do that very carefully. If we were to do an abrupt removal from the diet, it could cause unusual changes in animal performance that could result in some problems. When we make diet changes, we need to make sure that not just the formulation changes, but even be additive changes should be done carefully. When we looked at, for example, the most common additive that's used in feedlot cattle in the Northern Hemisphere, Monensin or ionophores. The average response ionophores is probably around 2-2.5% improvement in feed efficiency. That improvement, although small, is quite significant when you compare that to the cost of putting Monensin in the diet, which is about 1% of that risk. You can see that there's some logic to why almost every feedlot in the country uses an ionophore. Another thing to remember is that it's very, very difficult to expect in a commercial feedlot that you can have perfect feeding management. Even though feedlots will do routine standard operation reviews so that everybody else understands the importance you can see that it's still just a real big problem. In the end, for most large commercial yards, the very biggest concerns to the feedmill is just to get the cattle fed, so oftentimes what we're talking about in terms of ideal management, it isn't given priority that just getting the animals fed gets.

My conclusion for this is that it's not a wise thing to remove the additives from the diet and it would be a relatively minor cost. Some additives are very expensive and we need to really think about those, but the ones that we typically use, the ionophores, are less expensive in terms of the potential benefit that we can get from using the additives.

Additive research

A lot of people don't realize this, but the research that we conduct (Pedro, Brooke, and I, and other researchers), we design experiments to protect us against what we call a Type 1 error (the probability of a false positive). We design research so that we wouldn't say that something is beneficial when it truly is not beneficial. We try to control everything we can in order to not make that mistake. However, in the process of controlling everything as best we can so that we reduce all the sources of variations so we're just looking at that specific issue in research trials, sometimes we eliminate the very thing that the feed additive is supposed to protect against.

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QUIZ ZINN



Additive research continued

We have to understand dilemma there. An important point, though, is that we want a number of experiments to confirm the benefits of an additive. This is something that research journals have made difficult as they want novel studies. They don't like to publish a study that's been done before, and yet with all this meta analysis we see nowadays, we need every study that's been done. Even the studies that aren't supportive and studies that aren't novel, we need that work out there.



CAREER CALL WITH LENYA QUINN-DAVIDSON



We had the pleasure of talking with Lenya Quinn-Davidson. Lenya is an area fire advisor with the University of California Cooperative Extension Humboldt County, California and director of the Northern California Prescribed Fire Council. We spoke with her about her career.

Where are you from and what do you do?

I am originally from Trinity County, which is one of the more rural counties in the state of California. It's just East of where I live now. I'm from a little tiny town called Hayfork which has about 2000 people and is in the middle of Trinity County surrounded by National Forest that burns up a lot, so it's part of the reason I do what I do. I am the fire advisor for the University of California Cooperative Extension. I'm based in Humboldt County, but really functionally I work all over the state and even the country on fire related issues. My main passion is prescribed fire, or using fire as a tool.

When and why did you choose to work in natural resources and specifically with fire, which is such a big topic right now?

It's funny. You were asking me how to pronounce my name before we started this podcast and my name actually means firewood in Spanish, it's spelled a little differently than the Spanish word, but that was the intent that my hippie parents had when they named me. So, I like to think I came into this field at birth. Firewood, but really, you know, screwing up in that rural community that had so much impact from wildfire, even back in the 80s when I was a little kid and my mom worked as a caterer on fires. And fire is just a big part of my childhood, so when I went to my undergrad at UC Berkeley, I really became interested in the idea of restoring fire and learning about fire science ecology and really trying to understand the role of fire in California. How I had grown up, I always thought of it as really kind of scary and bad. But what I started learning was how beneficial and how natural fire actually is. That really led me to focusing on fire and prescribed fire in particular because it's the way that we can restore fire to our ecosystems that are actually so fire dependent.

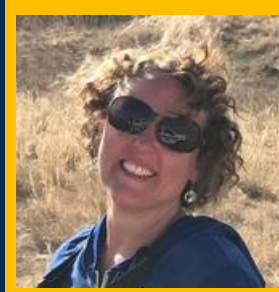
You received your Bachelor's degree from UC Berkeley correct?

Yes, I did my bachelors at UC Berkeley in the College of Natural Resources and focused on ecological restoration. It was a little bit more on watershed restoration than on forestry and fire at that time. Then I worked in watershed restoration for several years out of undergrad in Mendocino County and in Napa County, doing a lot of stream restoration projects. But I ultimately decided I really wanted to get more into the fire world. I came up to Humboldt State in 2007 and did my masters here, focusing on prescribed fire in a program called Environment and Community. I actually have a Master's of Social Science to compliment my Bachelor of Science from Berkeley.

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CAREER CALL WITH LENYA QUINN-DAVIDSON



Why did you select UC Berkeley as the place to go?

I had always wanted to go to Berkeley, and part of that is because my entire dad side of the family went to UC Berkeley. My grandparents on my dad's side both went and all of their siblings went. My grandma was born in 1910 and she even went to UC Berkeley. I always think of her as a young woman, 18 years old in 1928, and going to UC Berkeley and then meeting my grandfather. My dad and his brother went to Berkeley, so it was kind of just a big part of my life growing up. So, of course I'm going try to go to Berkeley. My uncle on my dad's side actually played basketball. I just love Berkeley. It's an awesome place.

Once you finished your Master's in Humbolt, did you go straight to your position with Cooperative Extension?

Right after I finished my Master's, I actually didn't. I was involved in some research projects. I spent four months in Florida working on a fire science research project for one of my professors at Humbolt and then I had a job for about a year and a half with California State Parks as a field tech doing various projects in natural resources. A lot of watershed related monitoring and then some prescribed fire. Finally in 2011 I got a job with Cooperative Extension as a staff research associate and I was working on issues like sudden oak death and fire science delivery. Ultimately my position changed and I was able to have this advisor position. That was about six years ago so this this year will mark a decade that I've been with Cooperative Extension.

Did you always want to do a Master's. Were you involved in research during undergrad?

I can't say that I did always want to do a masters. I really enjoyed my undergraduate work at Berkeley. I was not involved in in research as an undergrad, but I was really involved in on-the-ground work. The whole time that I was in undergrad I was working summers doing stream restoration work. I was really fascinated with the idea of restoration. When I finished my bachelors and went to work full time in watershed restoration I just started realizing that I had more academic interests around this and I didn't see myself just working in that same job forever. I was becoming more curious about other aspects in this, especially about fire, which I had dabbled in in undergrad but hadn't really gone deep with. My husband and I both decided that we wanted to go to grad school because we had all these things we wanted to explore and questions and really wanted to learn more about fire. That's when we moved up to Humbolt county and we both went back to grad school. My husband is also a fire ecologist, so we're big fire people.

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CAREER CALL WITH LENYA QUINN-DAVIDSON



Could you tell us more about your job? What do you do on a regular basis?

You know, I absolutely love my job with Cooperative Extension. I can't imagine a better job. Our jobs are so dynamic and so unique and we get to do so many cool things. I couldn't even speak to what a normal day looks like. For me in a normal month would include a handful of days where I'm out doing field work on incredible ranches and with amazing people, and hiking around some of the most beautiful parts my county. And then there would be other days where I'm on zoom or hosting workshops and giving a ton of talks. I feel like I give so many presentations and just talk with so many people and I love that part. I'm really social person so I love that. It's all about relationships and networks and being a good communicator and building trust with land owners and land managers. Those are all the pieces that I just love about my job. It also involves a lot of media work, especially with the recent fire seasons that we've had. I feel like I'm spending a ton of time talking with reporters and trying to share successes and paint a brighter future for California around fire this year. I've also been doing a lot of work in policy. I've been working on some legislation and getting a glimpse into that legislative process and really find that fascinating too. So as advisers we just do so much. It's just a really cool job.

One thing that you mentioned is that you do a lot of communication. How did you prepare for that and how did you develop those skills?

We aren't really trained in that, especially in a natural resources. I don't think we received that kind of training on communications and relationship building. I will say that my Master's program, like I mentioned, was a Master's of Arts and Social Science. A lot of the conversations in classes were focused on environmental issues. So, it did have like that natural resource lens, but a lot of the classes and a lot of the work that we did was around the politics of natural resource work and the social elements. I always remind people that natural resource issues are human issues. If you can't be relatable, if you're not a good listener, and if you're not there to really understand what's driving people and what motivates them, you're not going to have success in the natural resources. I think for me, the communication piece comes naturally because I am a total extrovert and I just love people and I like hearing people's stories and understanding where they're coming from and having compassion for them. People are good. People are trying to do the right thing and you just have to listen to them and understand where they're coming from.

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CAREER CALL WITH LENYA QUINN-DAVIDSON



What is something that is difficult within your job or that you had to teach yourself how to get past?

Managing budgets. I am just horrible at it. I really like writing and I think I'm pretty decent at writing grants and securing funding for research and for projects, but I am a terrible grant manager and I don't like dealing with it. We have really complicated systems within our job trying to remember what your password is or 20 different passwords for different budget areas. I struggle with that and it's something I have to work on all the time. It really helps team up with people who are better at that. I work a lot with my local livestock advisor, Jeff Stackhouse. We are good buddies and we get all of this funding and we'll have this supply money. I hate shopping so he's always in charge of the shopping. I can get the money, but he needs to spend it. I think that that partnership is important. During your Master's you don't necessarily take some kind of administration class or class on budget management. We're just kind of thrown into the fire and it's a lot to keep track of.

Did you have mentors when you are coming into this position and in grad school? What advice would you give younger people as far as finding mentors?

I think this is such an important aspect. Mentorship is huge even if it's not a formal mentorship. I have mentors that are just amazing people and I just look up to them and I aspire to be like them. Even though we're just friends or we're just colleagues and we don't have a formal mentorship relationship. And then I have other people who are actually a little more of a formal mentor who are there for me and are advocating for me and always trying to think of how to improve my access to opportunities like that. I think my advice to young people coming up is really to not be afraid. Ask people for that kind of support or even to ask for a formal mentorship relationship. Be willing to go out on a limb and request that kind of help because people are usually honored to give it and you'll feel special to be recognized in that way.

How is it been working with cattle producers?

It's been so, so lovely. When I started my position in working in fire science and fire management I didn't necessarily think of the ranching community as one of your big producer groups. Here in Humboldt County, Jeff is our livestock advisor and so he works a lot with the ranchers. My early days in my program were really focused more on public land, so I have pretty strong relationships with local national forests and National Park Service, but I hadn't really gotten into that private sector. It was really working with Jeff that brought me into that fold and help me understand that there was such a strong interest and desire in prescribed fire from the ranching community and that they could really be the bold leaders that we needed to advance our work in that area. Partnering with Jeff and really building a shared program around prescribed fire and getting to know those leaders in the ranching community was essential to the success of my program. I really count some of the some of the producers in the ranching community that we work with as some of my best friends.

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CAREER CALL WITH LENYA QUINN-DAVIDSON



Could you tell us just something fun that happened your during your career or maybe during grad school or undergrad that you just think back in and laugh when you think about it?

I would just say like one of the most fun things I've done in my job was in 2017. Jeff Stackhouse and I went out to Nebraska to learn more about prescribed burn Associations, and we brought one of our favorite ranchers here in Humboldt County with us. We flew out to Denver, and we rented a car and did this road trip with another guy, too. There are four of us out to Nebraska and we spent like a whole week just burning with these different groups and hanging out with these lovely people out there. A corn farmer and then a cattle rancher and it was the most fun trip ever. But it was such a motley crew. It's like these Extension advisors, and this rancher, and then our local NRCS forester, and we're cruising around Nebraska together. We had some funny moments on that trip with them.

What is your favorite food?

Tacos. Any kind of tacos.

What type of music is usually playing on your radio or on your Spotify?

I would say folk country. I grew up in in Hayfork listening to country. Old country like Merle Haggard and Waylon Jennings, and stuff like that. That's what my family listened to you. Now that I'm an adult, I find that I just really like listening to acoustic music and still country but not pop country.

If you could go back in time and tell your younger self something, what would you like to tell yourself?

I always reflect back on my time in undergrad and I feel like I didn't take advantage of all the opportunities that I had a Berkeley. I was really kind of aloof in that period of my life. I obviously did my work and enjoyed being there but I never went to a single office hours when I was in undergrad. I was that kind of student. When I went to grad school I told myself "Now when you're in grad school, you should like take on more opportunities and really seek out new things and say yes to things instead of instead of just kind of skating by like I didn't undergrad." I really tried to be more involved and that really paid off. I think saying yes when you have opportunities, really grab them and try them out because you never know where they may lead. In my case, the kinds of opportunities that I sought out in grad school really led me to this job and this career and to all of the great relationships and partnerships I have now. It's easy to be someone who says no or can think of excuses why you shouldn't do something or why you can't do something, but it's harder to be a yes person. And those are the people who changed the world.

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CAREER CALL WITH LENYA QUINN-DAVIDSON



What is your top tip for listeners? It can be a book or podcast, something that you like or a movie that you enjoy.

A book called A Field guide to Climate Anxiety. This is a book that was actually written by one of my really good friends. She's a professor here at Humboldt State and her work focuses on climate anxiety. All the anxiety that we have about all of these unknowns in the in the world that's changing. When I read it, I read it just as her friend because I want to support her and see what's going on inside her brain. She's one of the smartest people I know and when I read the book I just saw so many parallels with fire. Her book came out just after all of those crazy fires in Australia and leading into the 2020 fire season. I actually ended up partnering with her and hosting a webinar focusing on her book through a fire lens. I write a regular blog and I wrote a blog post on her book as well because I think there's so much there that we can learn and it really relates to our extension careers, too. She talks about finding reasons to have shared values and work together, and we're not going to be able to overcome issues like climate change or these catastrophic fire seasons without really trying to understand where people are coming from and work together. So yeah, I love that book.

How can I listeners follow your work?

Email: lquinndavidson@ucanr.edu

Twitter: @lenyaqd

Northern California Prescribed Fire Council Facebook: <https://www.facebook.com/norcalrxfirecouncil/>

Humboldt County Prescribed Burn Association Facebook: <https://www.facebook.com/hcpba/>



RESEARCH CALL WITH LENYA QUINN-DAVIDSON



To give people a little bit of a background about your program, what is the issue surrounding fire in California?

After last year's fire season, probably everyone who's listening knows what the problem is. One part of the problem is that we continue to have these really catastrophic and damaging fire seasons, and we're suffering huge amounts of loss every year because of wildfire, both in homes and fatalities, and cattle for the ranching community. One of the things that we don't often think about is the losses that we're suffering from keeping fire out of our system as well. We know that California is highly fire adapted and many parts of California are actually fire dependent in that they require fire in order to persist and to be resilient. The big thing that I try to do with my program is bring fire back to California's landscapes in a way that's healthy and safe and something we can all live with because we can't continue to live with these wildfires the way that they've been. My focus is really on prescribed fire and using fire as a tool under conditions that work for us in order to achieve ecological benefits and improve our range management and control invasive species. I'm really into fire from a beneficial standpoint.

What have you done to sort of spearhead these efforts on prescribed burning?

There are three facets of my program related to prescribed fire. One of them is really at a statewide scale working on policy and really trying to affect change at a statewide level. I'm the director of the Northern California Prescribed Fire Council, which is a collaborative group of all the federal and state agencies and timber companies and tribes and all of the people who use prescribed fire and want to see more prescribed fire in California. I've been working with that group since we formed in 2009. Now it's 12 years later and we really work on legislation, and we really try to change the conversation around fire to open up more opportunities. I also do a lot nationally and statewide to provide prescribed fire training. I work and partner really closely with The Nature Conservancy and the Fire Learning Network. We put on prescribed fire training exchange events, which are typically two weeks of in depth, hands on fire trainings. Those are open to fire professionals, students, landowners, and to anyone who's interested in getting an intensive experience around prescribed fire. I specifically host one of those events for women in fire and for underrepresented groups because we have a lot of people who want to get into fire management or work in fire careers but they just don't really fit the mold. Fire has typically been very male dominated and just has not created a lot of space for anyone who's different. That event is inclusive to everyone. Men are invited to, but it really has to focus on how do we elevate diversity in fire and make space for everyone who wants to be a part of it. The third part that I work on is at the local level. I'm trying to create an opportunity for land owners to bring fire back into their tool boxes. I do a lot of work around this state and here in my county to form Prescribed Burn Associations, which are community cooperatives for prescribed fire to really empower landowners to use more fire.

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RESEARCH CALL WITH LENYA QUINN-DAVIDSON



Can you explain what prescribed fire is?

At the really basic level it's just using fire as a tool under really specific conditions to meet objectives that you've determined ahead of time. So, you have a goal for managing your land in some way, and you're going to use fire to fulfill that goal. In the ranching context we use prescribed fire to manage invasive grasses that are taking over the rangeland. For things like Medusahead and Goatgrass or Starthistle, we're able to use prescribed fire at really specific times of year to knock those back or to decrease brush that's invading our grasslands and prairies or to restore habitat. We use prescribed fire a lot in the North Coast in our deciduous oak woodlands to try to beat back some of the conifers that are growing in and out competing our oaks. We also use it as a means for fuels reduction. We can use fire to actually consume the leaves and the sticks and branches on the ground and that'll prevent future wildfire hazard. It's really art. The tribes and cultural practitioners use it for basket weaving materials and for promoting deer habitat and food resources. Fire is like the ultimate human tool and people have been using it from millennia.

What are some of the positive outcomes you've seen from the existence of these fire related groups and collaborations?

For so long in California the only people who were really using prescribed fire to actively manage their lands were agency folks like people who work for the Forest Service, the Park Service, Calfire, land owners, and tribes. Local community members were really left out of that and didn't have access to that tool. It's been so important for so long in California, so one of the things that motivates me in my program is really trying to open that up and give them access to this tool and to empower them to bring fire back to their lands. These prescribed burn associations are a way for us to get the community together. We liken it to like a branding or something. Everyone gets together, they implement a project, and if you help me on your place I'll come help you on yours. One of the really beautiful things about it is that people just love fire. People are just stunned because there's something so innately human about using fire and it just feels good and it feels right. It's fun and it's not as scary as you think. It's been really neat to see that evolution and people just blowing their minds. That part's been fun. The other really cool part is that prescribed fire brings people together from all sides of the community. In Humboldt County, which is a pretty unique county in that we have people involved in the environmentalist movement like Earth firsters and super hardcore environmentalists. And we have this ranching community and it's pretty conservative. And then we have like all these hippies who moved up here from the city in the 1970s and are growing pot. And that's their way of life. And then we have students and academics that are at Humboldt State. These people are all getting together and implementing burns together and really enjoying each other's company. How often would you see timber companies, environmentalists, ranchers, and Old hippies burning together. It's really cool and so it's really brought the community together it's like a way of beating back all the divisiveness of our current time and saying let's get back to fundamentals. Let's just light some stuff on fire together.

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RESEARCH CALL WITH LENYA QUINN-DAVIDSON



Have you found any good methods in bringing people together and sort of matching perspectives so they can do this collaborative effort?

I think it all comes down to people having shared values, and I think that's where the importance of this prescribed fire stuff comes into play. For instance, we were burning on a ranch and we're burning for Oakland restoration to enhance the oak woodlands and everyone who's there in that burn, whether they voted for Trump or voted for Biden, or whether they you know were protesting logging in the 80s or whether they were logging in the 80s. They're all there because they care about the oak woodlands. They're all there to help each other out. And it's like none of the other stuff matters. It's like we're giving them the venue to have some shared values and they're all wonderful people so they can all see that. They would have never really had that opportunity otherwise. When would they be involved in working together on a project? For many of them it's the first time that they've had a shared project with people who are totally different than they are, and I think that it's just providing that human connection and it'd reminding ourselves that we're all in the same community and we're all really good people. Beer helps, too. After our burns we always do a barbeque on whoever's property it is. They provide lunch and beer and we all sit around and talk. People bring their kids. We're all just people. It's great. Our mission is for people to enjoy themselves and have a good time and leave wanting more.

Have you seen any increase in interest in all this stuff as you do your programming? Have you seen more people wanting to get involved?

Yes. I've been working on prescribed fire related stuff for 12 to 14 years and the interest and the momentum is just on constant increase. Last year and last fall was the most media attention that I've ever had. I probably had 70 media interviews from September to November last year. The amount of interest in this work is just exploding and then likewise the amount of work is exploding on the ground. All of these different counties are starting up organizations. When we started the Humboldt County Prescribed Burn Association in 2018, it was the first one in the western US. In these few short years, we now have 13 different counties that have Prescribed Burn Associations across California. The momentum is almost unbelievable.

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RESEARCH CALL WITH LENYA QUINN-DAVIDSON



What do you see in the future for prescribed burning?

We're just going to continue to see more interest. What I'm working on right now is really trying to provide the structural and policy changes that can unleash that interest in real ways. I've been working for the last couple years on helping to develop a new state certified Burn Boss program that is a state certification for experienced prescribed burners so they can lead prescribed fire projects and have some protections either for insurance liability protections or access to different sources of funding. Just last week here in Humboldt County, we hosted the very first course of that state certified Burn Boss program. We had a cohort of 18 people who are going to be certified by the state who are able to go back to their communities and start leading this work and planning new projects. The policy stuff I'm working on is also really important to incentivizing and supporting more prescribed fire work in California. I'm working on a bill right now with Senator Dodd, our state senator out of the North Bay area, and it's going to provide liability protections for prescribed burners. There's also a bill that would help create a claims fund for insurance claims spun for prescribed fire. Into the future we're trying to target these specific gaps that we know exist and that we need to address if we want to really unleash all of this interest and momentum.

If I'm a producer and I want to get to know more about this course that you just mentioned and more about your work, how can we do that? How can we contact people to know more about prescribed fire?

If you're a producer and you're interested in finding out if there is a Prescribed Burn Association in your area I recommend going to the Prescribed Burn Association website: <https://calpba.org/>. It will link you to like the nearest Prescribed Burn Association. Some parts of the state don't have one yet, so you may be in a position where you're going to want to reach out to me and say, "Hey, do you know of anyone else in my area that is looking into this?" You can definitely email me at lquinndavidson@ucanr.edu. I can help try to give you information about trainings or invite you up here to learn more about what we're doing.



FEEDLOT RESEARCH BRIEF



Substituting distillers dried grains plus solubles for steam flaked corn in the diet of calf-fed Holstein steers in the feedlot

Introduction

The value of substituting distillers dried grains plus solubles (DDGS) for corn in feedlot diets has been well studied in yearling cattle, but little is known about it's value for calf-fed Holstein steers. Previous estimates of the undegradable intake protein value (the fraction of crude protein that is not degraded by microbes) of DDGS are highly variable. This study aimed to evaluate the comparative feeding value of DDGS as a partial replacement for steam-flaked corn in the growing-finishing diet of calf-fed Holstein steers in the feedlot.

Methods

144 Holstein steers (112 ± 6 kg) were blocked by body weight into 24 pens (6 steers/pen). Four treatments were developed to substitute distillers dried grains plus solubles (DDGS) in place of steam-flaked corn (DM basis) in the diet:

- Control - 0% DDGS
- 10% DDGS
- 20% DDGS
- 30% DDGS

Results

- Effect of increased DDGS inclusion days 1-126 on feed
 - No effect on DMI
 - Increase in ADG, feed efficiency, and dietary NE
 - Responses were maximized at 20% (DM basis) DDGS inclusion
 - This is the period that metabolizable amino acid supply is expected to be limited. The increase may be at least partially attributed to the metabolizable amino acid supply provided by DDGS
- No effect of DDGS inclusion on performance overall (305 days on feed) or days 127-305 on feed.
- Hot carcass weight was greatest for cattle fed 20% DDGS

Table 1. Ingredients and composition of diets fed to steers (Exp. 1 and 2¹)

Item	Dried distillers grains plus solubles level, %			
	0	10	20	30
Ingredient composition, % DM basis				
Steam-flaked corn	77.40	67.84	58.28	48.74
Dried distillers grains	0	10	20	30
Sudan grass hay	12	12	12	12
Tallow	2.0	2.0	2.0	2.0
Molasses	5.0	5.0	5.0	5.0
Magnesium oxide	0.20	0.16	0.12	0.09
Limestone	1.60	1.53	1.45	1.37
Urea	1.40	1.07	0.75	0.40
Trace mineral salt ²	0.40	0.40	0.40	0.40
Monensin, mg/kg ³	25.0	25.0	25.0	25.0
NE concentration, ⁴ Mcal/kg of DM basis				
Maintenance	2.19	2.18	2.17	2.16
Gain	1.53	1.51	1.50	1.49

Implications

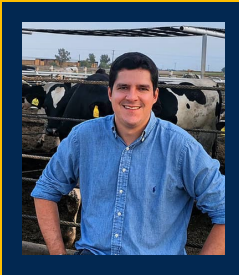
Inclusion of DDGS at 20% of the diet (DM basis) as a substitution for steam flaked corn can improve ADG, feed efficiency, and dietary NE during the first 126 days on feed by supplying metabolizable amino acids that may be limited during this feeding period.

CONTACT

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