00;00;00;00 - 00;00;15;20

Alena Poulin

Welcome to FRE Lunch, the official podcast with the Food and Resource Economics Department at the University of Florida. I'm Alena Poulin, the Marketing and communications specialist for FRE.

00;00;15;25 - 00;00;30;29

Caleb Stair

And I'm Caleb Stair, assistant instructional professor of food and resource economics and coordinator for undergraduate research. From fillet to fungi, food is a vital resource for human beings. Therefore, studying how to efficiently produce and allocate it is necessary.

00;00;31;06 - 00;00;56;06

Alena Poulin

That's why we made this podcast! To showcase the many ways students and faculty are using economic research to understand and address the complex issues facing the agricultural and natural resource industries. In today's episode, I'll interview my co-host Caleb, along with Shelby Sumner, a recent Program alumni, about the research they conducted together on disease and the cattle industry for her undergraduate honors thesis.

00;00;56;13 - 00;01;06;18

Caleb Stair

The cattle industry today is a far cry from the cattle drives of yesteryear. It is the meat and potatoes of many area’s economies, creating jobs and income.

00;01;06;20 - 00;01;18;11

Alena Poulin

Beef is a major trade good. The United States is not just the world's largest consumer of beef. It's also the world's second largest importer and exporter. Clearly, beef is more than just what's for dinner.

00;01;18;12 - 00;01;44;27

Caleb Stair

And it's no different here in Florida. Did you know the state ranks ninth overall in cattle production? Now our state is mostly a cow calf state, meaning the cattle are born here but shipped elsewhere. Were a zoonotic disease to impact even a small portion of Florida's livestock, the cascading consequences on the industry could be catastrophic. Until Shelby came to me with this project, I had not heard the word zoonotic before.

00;01;45;03 - 00;01;52;15

Caleb Stair

But it means a disease that can be spread between people and animals. So thank you for that, Shelby, and thanks for joining us today.

00;01;52;17 - 00;01;54;00

Shelby Sumner

Hey, guys. Thanks for having me.

00;01;54;03 - 00;01;57;23

Alena Poulin

And so, Shelby, to start up with. What did you study for your honors thesis?

00;01;57;25 - 00;02;23;06

Shelby Sumner

Well, my honors thesis was essentially on the economic and legal implications of different disease outbreaks and the US cattle industry. We looked at several, including bovine spongiform encephalopathy, which is more commonly known as mad cow disease, foot and mouth disease, brucellosis, as well as some diseases that are transmitted by wildlife and ticks.

00;02;23;07 - 00;02;27;07

Alena Poulin

And so how did you choose which diseases were going to be included in the study?

00;02;27;09 - 00;02;49;27

Shelby Sumner

Well, we started off originally with some data on mad cow disease because I had done a project that was related to that for my data analysis class, and then it was just a process of elimination, really, with further research on other diseases, to see which ones had substantial impacts that would kind of be worth looking at.

00;02;50;01 - 00;02;53;01

Alena Poulin

And so you have a long background with cattle. Can you talk a little bit about that?

00;02;53;02 - 00;03;16;08

Shelby Sumner

So I am originally from Okeechobee, Florida, which is a huge cow town. We are, I think, number one in the state for head of cattle and number 11 in the country. So a lot of cattle in Okeechobee. And while my family doesn't ranch, I grew up getting to spend a lot of time on ranches. And I also showed dairy and beef cattle in middle and high school.

00;03;16;10 - 00;03;22;03

Alena Poulin

And then recently you were also the cattlemen's sweetheart. What exactly did that entail?

00;03;22;06 - 00;03;44;18

Shelby Sumner

Yes. So for the 2022, 2023 year, I got the opportunity to serve as the Florida Cattlemen's Association Sweetheart, which was such a great opportunity. I really loved it. I basically got to spend the year traveling around the state going to different events like different fairs. I got to go to a couple of classrooms and just talk to people about the Florida cattle industry.

00;03;44;18 - 00;03;46;07

Shelby Sumner

So that was a lot of fun.

00;03;46;08 - 00;03;51;09

Alena Poulin

And was there anything new you learned or that shaped your perspective on the industry from that experience?

00;03;51;10 - 00;04;17;00

Shelby Sumner

I definitely learned more about the industry. I think I went into it feeling like I already knew so much, but especially getting to connect with so many of the ranchers across the state. I got to hear a lot more about the struggles that they face with policies, diseases, storms, and development being really big things. So I definitely was able to get a better perspective on the industry as a whole.

00;04;17;00 - 00;04;24;13

Alena Poulin

And then you mentioned those challenges they faced being diseases. Is that part of what shaped your desire to take on this specific research question?

00;04;24;18 - 00;04;48;03

Shelby Sumner

It is. I also am really interested in trade issues, and obviously with food safety being a big impacting factor with trade, I thought I would look at disease outbreaks and see how it impacts not just international trade, but also the ability to move cattle across state lines. Florida is a cow calf state, so we don't usually raise beef cattle up to market weight.

00;04;48;04 - 00;04;57;18

Shelby Sumner

We send them out West where they can put on weight a little bit easier. So if there was a disease outbreak, we'd be a little stuck here because we'd have nowhere to send them.

00;04;57;20 - 00;05;07;15

Alena Poulin

And then so you mentioned at the beginning that you'd had, some of those data already from a previous project on that cow disease. Where do you go to find data to use in this study?

00;05;07;17 - 00;05;24;26

Shelby Sumner

Well, particularly for that set of data that I had started with, with my original project, it was from the Food and Agriculture Organization of the United Nations. we also got a lot of data from the Department of Ag as well as…. where did you get the….

00;05;24;29 - 00;05;39;01

Caleb Stair

Bureau of Labor Statistics has a lot of the, industry level data for, say, the counties in Florida or across the US. And we also use the Bureau of Economic Analysis to get, some of the employment data too

00;05;39;03 - 00;05;44;03

Alena Poulin

And so, with this study, what were your findings?

00;05;44;06 - 00;06;14;24

Shelby Sumner

We had all kinds of findings. I think one of the big ones that we saw was when we were doing the breakdown of the importance of different cattle industries and each state. That was a really interesting thing to look at. We did a comparison of the importance of just the dairy industry versus the beef industry versus as a whole for each state in terms of cash receipts and how much each state relies on those industries for their income.

00;06;14;24 - 00;06;31;19

Shelby Sumner

So that was a really interesting thing to look at and get to see it laid out on a map. And I'd say another big finding was the difference in the impacts between the mad cow outbreak in the United Kingdom compared to here in the US.

00;06;31;21 - 00;06;52;09

Caleb Stair

The other cool thing that I think we discovered as we were doing this particular, project is that there are diseases that are transferred from wildlife to cattle, particularly the ticks, I believe. And Shelby will correct me if I am wrong. there is a decline in the number of hunters in the United States right now, so it's becoming more difficult to manage those species.

00;06;52;09 - 00;07;20;24

Caleb Stair

So their numbers in some cases are increasing. That implies that the likelihood of, say, a spread of ticks from deer to cattle is more likely in the future. And that was one of the reasons that Shelby was so interested in doing these particular sets of diseases. These are the diseases that either are the biggest concern for the cattle industry right now, across the board in the US or in Florida, or it's most likely to become a big issue in the near future.

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00;07;21;00 - 00;07;45;15

Shelby Sumner

Yeah. And to add on to that a little, it was interesting to look at it from the viewpoint of, well, there are already exemptions in place for accounting for predation issues with wildlife harming the cattle, and it would be really interesting to see in the future if they put similar restrictions in place to try and address the transmission of diseases from the wildlife.

00;07;45;22 - 00;07;48;17

Alena Poulin

And were there any findings that surprised you?

00;07;48;17 - 00;08;24;24

Shelby Sumner

I'm not sure that any of them really necessarily surprised me in terms of the general impact, it was definitely a big reminder of how strict our food safety policies here in the US are compared to other places. When we did the side-by-side comparison of the US and the UK for the BSE outbreak, we had one case of BSE here in the US and our exports basically completely dropped off for the rest of that year because we had to go through all these processes to make sure that it was clear and we didn't have any other cases.

00;08;24;24 - 00;08;42;06

Shelby Sumner

Whereas for the exports in the UK to stop, they got up to like 300,000 cases of BSE before they cut off exporting to other countries. So ,it was definitely interesting to see that kind of side by side. Our impact on our exporting was greater than the UK was and we had one case.

00;08;42;11 - 00;08;48;16

Alena Poulin

And so with that greater impact, what does that mean for what stakeholders can take from this research?

00;08;48;19 - 00;09;20;11

Shelby Sumner

It definitely really emphasizes the need for electronic identification and really good monitoring of the, relocating and transferring of cattle from one place to another. It's really important to keep those good records and keep track of where they've been, especially because with the increased efficiency of cattle transportation, steer could be from Florida to Oklahoma in less than a day, and it would be really, really hard to keep that from spreading really quickly.

00;09;20;11 - 00;09;28;10

Shelby Sumner

So by having that better monitoring system in place, that can help prevent a really, really bad outcome for the entire cattle industry.

00;09;28;13 - 00;09;50;12

Caleb Stair

So I think the other thing that the stakeholders need to be aware of is there's so many issues that you have to be paying attention to. If you're in the cattle industry right now, you've got, maybe increasing, awareness of how much the industry can impact local economies. There's this demand for local products, there's concern about environmental issues.

00;09;50;12 - 00;10;09;13

Caleb Stair

On top of all that, the industry has to be aware of the potential issues that come from these diseases. We see evidence of what happened in the UK. We all want to avoid that here in the US. And like Shelby said, these electronic, tags are one way that we could really help everybody across the board in the United States.

00;10;09;17 - 00;10;19;07

Alena Poulin

So, Shelby, your graduate school…you're going to be starting soon at Oklahoma State University. What plans do you have for future research on cattle? Or you can expand on this project at all?

00;10;19;09 - 00;10;49;07

Shelby Sumner

I would really like to be able to expand on this project, or at least stay in something related. Definitely staying in cattle economics, hopefully staying down the path of trade implications for the industry. The world has changed a lot, it seems, in the last few years, and that probably won't stop anytime soon. So I think it's important to know what the threats and opportunities are for cattle producers when they're looking to export and for consumers looking to import.

00;10;49;07 - 00;10;56;00

Shelby Sumner

So hopefully I can stay in something having to do with cattle and beef and dairy trade issues.

00;10;56;02 - 00;11;01;04

Alena Poulin

And two more questions. What was the most fun part for you of doing this project?

00;11;01;04 - 00;11;22;15

Shelby Sumner

The writing was fun, but my favorite part was definitely getting to play with all the data in Excel. I got to make some maps using the data, which I had a lot of fun with. That was actually not planned. I was able to use them in my thesis, but I actually came into Caleb's office after making them and was like, hey, look at how cool these maps are!

00;11;22;15 - 00;11;34;00

Shelby Sumner

And he said, oh, are we using those? And I said, I mean, we can, but just look at how cool they are. And I'm still very proud of those maps. So that was probably my favorite part.

00;11;34;03 - 00;11;48;04

Caleb Stair

There would be various times where Shelby would…. we'd say like, okay, here's our plan for the next week. Let's come back next week and see what we all did. And I would do what I said I was going to do to the letter, and Shelby would cut back it and be like, I did all these other cool things.

00;11;48;06 - 00;11;55;12

Caleb Stair

Isn't this amazing? And let's have another disease to this particular research. And I was like, we have one month left to finish...

00;11;55;18 - 00;11;57;03

Shelby Sumner

We got it done tough

00;11;57;03 - 00;12;07;23

Caleb Stair

We got it all done. It was great. CALS seemed to absolutely love her thesis. I hope the industry ends up loving your thesis if they get a chance to read it here in the near future.

00;12;07;25 - 00;12;08;27

Shelby Sumner

Fingers crossed.

00;12;08;27 - 00;12;11;27

Alena Poulin

And then is there anything else you want to add as we wrap up?

00;12;11;28 - 00;12;32;06

Shelby Sumner

I would just like to say that I'm really, really grateful that I was able to get to do this project. And a really big thank you to Caleb for being so flexible. I probably came to his office at least 3 or 4 times a week working on this project, and we've been working on it for two years, so he's definitely put up with a lot during this process.

00;12;32;06 - 00;12;46;10

Shelby Sumner

I've had a lot of, big ideas that maybe weren't the best ideas, and he's been a really big help with that. But I definitely think that this was a great experience to have, especially leading into going to grad school next. year.

00;12;46;10 - 00;13;06;26

Caleb Stair

And getting to work with Shelby has been an absolutely wonderful experience. She is one of my favorite, people to work with. She is consistent. She's always pushing forward. She's pushing me to learn new things. I grew up on an Angus beef farm, so I, you know, potentially somewhat related to the industry. She knows way more than I do about this industry.

00;13;06;26 - 00;13;08;18

Caleb Stair

So it's been a learning experience for me, too.

00;13;08;19 - 00;13;11;18

Alena Poulin

Well, thanks again, Shelby, so much for joining us here today.

00;13;11;21 - 00;13;28;23

Caleb Stair

Yes, thank you for everything, Shelby. And if you're a student in the Food and Resource Economics program or in any program within the College of Agriculture and Life Sciences, who's thinking about doing an honors project of their own feel free to reach out to me with any questions that you might have, and we'll link to a website with more info for you in this episode's description.

00;13;28;29 - 00;13;42;19

Alena Poulin

For those of you who are interested in learning more about this work, Shelby's methodology, and the results of her study. That thesis has been published by the University of Florida Library and is now available to read online. We'll include that link in the episode description below as well.

00;13;42;24 - 00;14;04;06

Caleb Stair

If you've made it this far, you've finished the entire episode and we thank you for that. Tune in next time for more food for thought. Thanks again for joining us on this episode of Free Lunch. We hope you'll come back again for a second.