00;00;00;00 - 00;00;19;11

Alena Poulin

Welcome to a FRE lunch, the official podcast of the Food and Resource Economics Department at the University of Florida. I'm Alena Poulin, the marketing and communications specialist for the department.

00;00;19;16 - 00;00;34;05

Caleb Stair

I'm Caleb Stair, assistant instructional professor of food and resource economics and the coordinator for undergraduate research in the department. Meaning I get to interact regularly with the members of our FRE community and see all the cool and interesting topics being explored.

00;00;34;10 - 00;00;45;29

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 agricultural and natural resource industry.

00;00;46;01 - 00;00;53;16

Caleb Stair

From Valentines to vermiculture. That's right. Today we're talking about food waste. Again.

00;00;53;18 - 00;00;56;22

Alena Poulin

No, you didn't forget to hit the button for your next episode.

00;00;56;22 - 00;01;07;20

Caleb Stair

A lot of the background information for this episode was actually discussed in our previous episode, so you might want to go listen to that one first before continuing on with this one.

00;01;07;20 - 00;01;16;09

Alena Poulin

So why a two parter, you ask? Well, there's a couple of reasons. One, we had a lot of information to give you. The other, it's Valentine's Day.

00;01;16;09 - 00;01;26;07

Caleb Stair

And for a lot of us, we're planning on taking our significant other out to a meal or maybe cooking one at home. So food waste is certainly topical.

00;01;26;09 - 00;01;37;17

Alena Poulin

That's right. And a survey done by the National Retail Federation this year. It's estimated that $5.4 billion is going to be spent in the United States on an evening out.

00;01;37;20 - 00;01;47;04

Caleb Stair

And another $2.5 billion is going to be spent on candy for Valentine's Day. Speaking of which, Alena, what is your favorite kind of candy?

00;01;47;08 - 00;01;50;14

Alena Poulin

Well, Caleb, I run an economics podcast. It's 100 Grand.

00;01;50;15 - 00;02;01;11

Caleb Stair

Anyway, all that money that everybody plans on spending this Valentine's Day equates to about $189 per person being spent this February 14th.

00;02;01;13 - 00;02;05;14

Alena Poulin

Holidays like Valentine's Day can affect the economy in a lot of different ways.

00;02;05;14 - 00;02;14;02

Caleb Stair

In the week or so leading up to a major holiday, be that Valentine's or Christmas, you are making purchases that you wouldn't make otherwise.

00;02;14;03 - 00;02;18;13

Alena Poulin

These spikes in sales benefit the economy and earn businesses more money.

00;02;18;18 - 00;02;23;01

Caleb Stair

And as businesses and workers earn more money, they tend to spend that money.

00;02;23;01 - 00;02;30;24

Alena Poulin

And thus the cycle continues as those businesses use that money as their income, reinvesting into the economy through their own purchases.

00;02;30;24 - 00;02;34;18

Caleb Stair

So what does all of this have to do with food waste?

00;02;34;20 - 00;02;38;05

Alena Poulin

Well, Caleb, how do you normally celebrate Valentine's Day?

00;02;38;07 - 00;02;53;22

Caleb Stair

Oh, well, typically I like to make, a fancy meal at home. Cook a lot of things that I don't normally get to cook for my partner. And sadly, I tend to get a little carried away. So there's a lot of food. Maybe like three fourths of the plate gets eaten.

00;02;53;27 - 00;02;58;11

Alena Poulin

And so how would you refer to that one for the plate that's left?

00;02;58;13 - 00;02;59;24

Caleb Stair

Food waste?

00;02;59;26 - 00;03;07;14

Alena Poulin

Exactly. While, well intentioned. Caleb's choices that led to that food being wasted are what we would refer to as a consumer behavior.

00;03;07;17 - 00;03;16;09

Caleb Stair

The good news is, consumer behavior is something that we can probably measure, potentially understand, and hopefully improve.

00;03;16;11 - 00;03;23;05

Alena Poulin

And so to talk more about that, we're joined today by assistant professor of food and resource economics, Dr. Oleysa Savchenko.

00;03;23;08 - 00;03;28;19

Caleb Stair

Her research tends to focus on aspects of human behavior and agricultural policy.

00;03;28;20 - 00;03;36;16

Alena Poulin

We're here today to talk about a specific study she's done that looked at food waste in dining halls. Thanks for joining us today, Oleysa.

00;03;36;16- 00;03;36;20

Oleysa Savchenko

Thanks for having me.

00;03;36;20 - 00;03;46;15

Caleb Stair

So just how big of a problem is food waste generally? And why is this important from like an economic lens and maybe a societal perspective.

00;03;46;20 - 00;04;11;19

Oleysa Savchenko

So food waste is really a massive problem. Just to give you some statistics, globally, one third of all food produced never gets eaten. That's roughly 1.3 billion tons of food wasted every single year. In the U.S. the problem alone is also huge. The waste is about 40% of our entire food supply, and this is equivalent to throwing away about 400 billion worth of food annually.

00;04;11;20 - 00;04;40;17

Oleysa Savchenko

So it's really big. So from the economic perspective, of course, this is a huge inefficiency, right? Imagine running a business where about half of your product actually never get used. So that's exactly what's happening in our food supply today. And of course food waste drives up costs for producers, for consumers, for retailers. And of course, that means our waste, you know, we waste resources, land, water, energy, labor, all of which are used to produce food that ends up in the trash.

00;04;40;18 - 00;05;07;04

Oleysa Savchenko

But the food goes beyond economics, right? So it's also a societal issue. While we're wasting food, we know that millions of people actually don't have enough food to eat. And here in the US, it's also a really big problem. So 34 million people experience food insecurity and this includes about 9 million children. So reducing food waste is not just about saving money, but it's also about making sure that food gets to those who actually need it.

00;05;07;05 - 00;05;29;27

Oleysa Savchenko

And of course, let's not forget about the environment. So wasted food is a major and leading contributor to climate change, and that's because when we waste food, we put it in our landfills and in our landfills. It releases methane, which is a greenhouse gas. And it is much, much more potent than carbon dioxide, actually 25 times as potent as carbon dioxide.

00;05;29;27 - 00;05;49;26

Oleysa Savchenko

So tracking food and understanding the problem of food waste and solving it is a real win win. You know, economically, societally, and also from the environmental perspective. The good news there are solutions. So while it is a big problem, we can look at policy changes. We can use business innovations. And we can also use shifts in consumer behavior.

00;05;49;26 - 00;05;53;21

Oleysa Savchenko

And all of those can make a really big impact on this problem.

00;05;53;23 - 00;06;07;18

Caleb Stair

So we're sitting here at a relatively large university, and you did discuss some of the subcategories of how food waste can impact different groups in different ways. How does the nature of food waste change if we're talking about a college campus?

00;06;07;25 - 00;06;29;21

Oleysa Savchenko

So it's a great question. Absolutely, food waste is a really big problem on college campuses. And that's because it's happening on multiple levels, right? So first of all, think about all you can eat dining halls. Students often go in there. They piled their plates very high. Sometimes their eyes are bigger than their stomachs. And so a lot of that food ends up being wasted.

00;06;29;22 - 00;06;49;15

Oleysa Savchenko

On top of this, a lot of the dining halls operate on a fixed meal plan, so students prepay for this plan. And then, of course, there is no direct financial incentive to understand that you are actually paying for the food that you are wasting. Another big source of food waste also comes from grab and go meals. Again, students are often on the move.

00;06;49;15 - 00;07;11;27

Oleysa Savchenko

Students are busy so they grab something. They may end up not eating it later and that just goes straight in the trash. Another problem is catering of events. Oftentimes we have clubs that cater the food, and the food almost never gets fully consumed, and a lot of that gets into the trash. And there's also lack of awareness, right, about what we can save and what we can donate.

00;07;11;29 - 00;07;32;01

Oleysa Savchenko

Right. And so the good news is that the universities are really good places to test out solutions to the food waste problem. And, you know, many campuses are already introducing different programs to reduce food waste, trying to track food waste and dining halls, etc.. Look at the nation programs to help food insecure students. So there is definitely work on the way.

00;07;32;01 – 00;07;36;02

Oleysa Savchenko

And it's a perfect sort of lab to test out some of the solutions to this food waste issue.

00;07;36;03- 00;07;56;19

Alena Poulin

Yeah, I think that's a really good point when we met with Florida Fresh Dining. They actually talked about trayless dining, which it seems like such a simple concept of, oh, if you can carry less food, you're taking less food. But one of the things they brought up is what they believe to be the most effective type of campaign is ones that are encouraging behavioral change on the part of the consumer.

00;07;56;21 - 00;08;04;12

Alena Poulin

And then I believe that's pretty related to what you do. So can you tell us just a little bit about your area of research expertise and how you got involved in the topic of food waste?

00;08;04;13-00;08;24;14

Oleysa Savchenk0

Absolutely. I am an applied environmental economist. Also, as you said, assistant professor here at Food and Resource Economics Department. And my work is really all about understanding how people interact with the environment and how we can use policy interventions, behavioral change interventions to achieve better environmental outcomes.

00;08;24;15 - 00;08;42;11

Oleysa Savchenko

And so even though a lot of my research does focus on water and how we manage and how it protected, I am interested in other ways how we can make more sustainable and environmentally conscious choices. And that's kind of how I got into the topic of food waste. And, you know, think about it. Food waste isn't just about tossing out leftovers.

00;08;42;11 - 00;09;08;11

Oleysa Savchenko

It's a big environmental and economic issue. And wasting food means wasting water, right. And other resources. And so, you know, this kind of realization got me involved in this topic when I was a PhD student at the University of Illinois. And I got involved into this project where we studied the problem of food waste at college campuses. And I worked with a faculty there, Dr. Brenna Ellison, who's actually one of the big and leading experts on food waste currently.

00;09;08;13 - 00;09;18;17

Caleb Stair

Which one of the articles that came out from that research was, I'm a sucker for really good titles, by the way. So your paper called Every Plate Counts. Can you tell me more about that?

00;09;18;17 - 00;09;39;24

Oleysa Savchenko

Yes. So this was really fun project. And we did it at the University of Illinois. And we wanted to basically understand whether an educational campaign could help us reduce food waste and all you can care to eat university dining hall. And so this is again, the university is a perfect setting to study food waste because students can take as much as they want, right?

00;09;39;26 - 00;10;05;12

Oleysa Savchenko

Without a direct financial cost, which often leads to over selection, overeating and food waste at the end. And so what we did, we decided to design an educational campaign that included posters, infographics, and real time food waste display to make students more aware about how much food they're actually wasting. And this ended up being a field experiment implemented in two dining halls at the University of Illinois and one dining hall.

00;10;05;12 - 00;10;23;01

Oleysa Savchenko

We posted the educational campaign and another one was without, and we did it for the entire semester. And then we surveyed students before and after the campaign to kind of understand their perceptions and attitudes, and see whether there was any impact from the educational campaign on their attitudes and perceptions about food waste.

00;10;23;04 - 00;10;37;03

Caleb Stair

So I was definitely one of those students in undergrad who was guilty of all of this. I was on the swim team. I'd go to the dining hall, the all you can eat version, and I'd stack everything up with as much food as I could put on there, and then end up eating maybe half of it if I was lucky.

00;10;37;03 - 00;10;46;06

Caleb Stair

I don't remember having to fill out any paperwork about that. So how did you go about collecting this data? What data did you have to collect for this research?

00;10;46;09 - 00;11;09;14

Oleysa Savchenko

So this was a very hands on experience for me as a researcher on this team. And so what we did, we collected real world data to measure food waste accurately. And over an entire semester, we collected and weighed students plate waste three days a week at lunch in both treatment and comparison dining halls. So we would get students to come and bring us their plate, whatever they weren't going to finish.

00;11;09;14 - 00;11;33;01

Oleysa Savchenko

And then we sorted that into three bins. And these three bins were categories. You know, we looked at proteins, you know, things such as chicken meat, etc. we had a fruits and vegetable bin. And then we had other. And so then at the end of that time at lunchtime, we would collect all of that sort, the food waste, and then we would wait and we would demonstrate to students how much food waste was wasted at that time.

00;11;33;01 – 00;11;44;00

Oleysa Savchenko

And as I said before, at the same time, we conducted pre and post campaign surveys where students reflected on their attitudes and knowledge about food waste so that we can see whether the campaign influenced those perceptions.

00;11;44;01-00;11;47;58

Alena Poulin

What were kind of the end findings of that project?

00;11;47;59-00;11;56;02

Oleysa Savchenko

So the results were mixed, The campaign did lead to a small reduction in food waste, but we did not find that reduction be statistically significant.

00;11;56;03 - 00;12;18;17

Oleysa Savchenko

However, we did see a notable shift in students perspectives, and that's where the exciting part is, right? So what we saw is that more students believed that they could make a difference by reducing their food waste. More students recognized that the dining halls were trying to minimize food waste, and almost 90% of the students noticed the campaign and over half of them talked about it with others.

00;12;18;17 - 00;12;34;26

Oleysa Savchenko

So while food waste behavior did not necessarily change due to their campaign in the short term, we certainly saw a big shift in awareness and attitudes toward food waste. And this could be, you know, campaigns like this, educational campaigns could be like a stepping stone for long term behavioral change.

00;12;34;26 - 00;12;46;05

Caleb Stair

So based on that research and other knowledge that you have, your expertise, what do you think universities could do to try to curb food waste on campuses?

00;12;46;05 - 00;13;09;18

Oleysa Savchenko

Yeah, absolutely. This is a really great question. And the study that we did and other research in this area, what we know is that education or educational campaigns alone are just not enough, right? It needs to be some sort of combined policy that includes structural changes and behavioral nudges. And some of the things that universities could do include things such as smaller plates and trayless signing.

00;13;09;18 - 00;13;30;15

Oleysa Savchenko

So research shows that removing trays leads to less over selection and waste. Another thing that universities could do is portion adjustments and sampling stations, so that would allow students to sample some of the food and decide whether they like it or not before they loaded on their plate, and then don't eat it and wasted. Universities could look at pay per plate weight pricing models, right?

00;13;30;15 - 00;13;49;07

Oleysa Savchenko

Instead of using a fixed entry fee, they could charge by weight, and that could provide a direct incentive to students to take only the foods they will actually eat. Real time feedback also works. You know, digital displays showing how much food is wasted each day could make a real impact on the issue, because some students may just not be aware at all.

00;13;49;07 – 00;14;10;03

Oleysa Savchenko

And food donation programs, I think, are also very important because many students are food insecure. And so if we could figure out how we can redistribute uneaten food, that could be a real win-win. So to sum up, there is no single solution, as you can tell. But if we can combine things such as education, incentives, and smart policy changes, I think that could make real impact.

00;14;10;03-00;14;17;12

Alena Poulin

In general, why are our perceptions of things like food was important when it comes to encouraging behavioral change?

00;14;17;12 - 00;14;44;27

Oleysa Savchenko

So perceptions in general are really important in behavioral change. Just because as human beings, if we perceive that there is a problem, we are more likely to engage in behavior that will change that problem, right? Understanding human perception allows us economists and policymakers design behavioral interventions that are nudges that may change the architecture around consumer choice without forcing that choice onto consumer, kind of nudging them to make the right decision.

00;14;44;27 - 00;15;05;14

Oleysa Savchenko

And that goes not just in the context of food waste, but all other contexts where there are proven ways where we can incentivize individuals, make smart choices by just changing sort of the choice architecture around them. So those are called nudges and really very effective and oftentimes not very costly interventions.

00;15;05;14 - 00;15;24;04

Caleb Stair

I love that what you talked about earlier maybe gamifying the behavior by having the digital display with the goal that says, Dining Hall West, our goal is to waste less than X number of pounds of food per day with a little digital goal that moves up and up and up so that the students have some kind of concrete representation of it to change their behavior.

00;15;24;04 - 00;15;24;20

Oleysa Savhcenko

Yeah

00;15;24;20 - 00;15;25;01

Caleb Stair

Such a cool idea

00;15;25;01 – 00;15;44;00

Oleysa Savchenko

Absolutely, absolutely. And that would be kind of like a nudge, right? Like, can we play up those competitive sort of feelings in students, maybe make competition between dining halls. And so that could be really fun ways to intervene and help with the food waste problem, while really not having to spend that much on the solution.

00;15;44;01-00;15;51;03

Alena Poulin

But last but not least, do you have any final key takeaways or things that you feel are important for our audience to know as we wrap up?

00;15;51;03 - 00;16;11;28

Oleysa Savchenko

So I think that perceptions are everything, to be honest. And you can’t change behavior without first changing how people think about a problem. And, you know, in my experience with the research that I've been involved in, even though educational campaign did not significantly reduce waste, it did change student perceptions about food waste and about their role in wasting the food.

00;16;11;28 - 00;16;39;08

Oleysa Savchenko

And so more students believed that their actions mattered. And that shift in mindset is essential for a step towards any type of long term behavioral solutions. And so, you know, think about it this way. If you think that wasting food is no big deal, there's no way you're going to change your habits, right? But if you start seeing how food waste affects the environment, how it has negative economic consequences, and it's a big social issue, you're much more likely to change your behavior.

00;16;39;08 - 00;16;51;20

Oleysa Savchenko

And so I think that together, consistent messaging visibility and reinforcement are really key. And so the more people see food waste is a serious issue, the more likely they are to adjust their behavior, especially over time.

00;16;51;20 - 00;17;02;21

Caleb Stair

Well, we want to thank you for joining us today. And for those of our listeners who are interested in learning more about what Doctor Savchenko does, in addition to the food waste study, we'll have a link to her bio in the description.

00;17;02;21 – 00;17;05;14

Alena Poulin

And she'll be back on again later in season two.

00;17;05;14- 00;17;07;34

Oleysa Savchenko

I'm very excited. Thank you very much, guys.

00;17;07;34-00;17;09;29

Alena Poulin

And with that, we've reached the end of today's episode.

00;17;09;29 - 00;17;15;11

Caleb Stair

So whether you are planning your Valentine's Day feast or just meal planning for the week.

00;17;15;13 - 00;17;19;14

Alena Poulin

Remember the food that you waste is just as important as what you eat.

00;17;19;16 - 00;17;46;06

Caleb Stair

And I think one of the takeaways from this particular episode, in addition to all the valuable information about food waste, is that Dr. Savchenko took an active role in this research. Economists don't simply sit behind their desks and read spreadsheets. Many of them are actively involved in the collection of data to try to answer these very important societal questions.

00;17;46;06 - 00;17;51;16

Alena Poulin

And so we want you to think about what issue it is that you care about, whether that's food waste or something else.

00;17;51;16 - 00;18;30;20

Caleb Stair

We want our listeners to get curious, take an active role and be part of the solution. 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 FRE Lunch. We hope you'll come back again for seconds.