

## show537.mp3 Town Hall Ohio

**Joe:** One of America's greatest assets is its ability to produce abundant, affordable, safe food. One of our greatest shortcomings is that we waste on the order of 40 percent of the food we produce. That's 34 million tons of food every year. Waste affects families, communities, industries and of course 49 million hungry Americans. Why do we waste so much? What are the consequences? What can be done about it? We'll dig into those whys and how's of food waste today on Town Hall Ohio.

**Intro:** This is town hall Ohio, home to interesting people, engaging issues and enlightening stories. Town hall Ohio was a production of the Ohio Farm Bureau Federation working to forge a partnership between farmers and consumers and is supported by Nationwide. Nationwide is on your side. Now, here's town hall Ohio host, Joe Cornely.

**Joe:** Last summer, the Ohio State University's Food Waste collaborative held a conference on the problem of food waste and ways to fix the challenge. Today two of the folks who participated in that meeting are with us to talk about the issue. Brian Rowe is an economist in Ohio State's College of Food Agricultural and Environmental Sciences and among many duty's, studies the issue of food waste. Mike Long is president of Resource 100 where he consults on a variety of waste mitigation options. He also formerly was the founding executive director of the Solid Waste Authority of central Ohio. Mike, Bryan, welcome to Town Hall Ohio.

**Mike:** Good to be here.

**Joe:** Brian, maybe we'll start with you. Food waste. I think intuitively we know what that means, but give us a broader picture when we reference the food waste problems we have in the United States.

**Brian:** Yeah food waste happens at every stage from the farm to the consumer from field loss to losses along the processing chain, losses in retailers and supermarkets and food service. And then at the consumer level as well in our homes while we're out eating all of that.

**Joe:** And it's also not just a national problem, a global problem too, Mike?

**Mike:** Yes absolutely. When you look at the number of people that are undernourished globally, there are some estimates that if we could save what we do throw away we could feed the majority of those people but we're not doing a very good job of it.

**Joe :** Something like, I mentioned 40 percent of US food wasted and a third of the global food supply wasted, 1.3 billion tons, how does this happen? How can we throw away this much food? What causes this problem?

**Brian:** So, I think there are different causes in different parts of the world. First thing to note is some food waste is quite logical going to zero waste will never happen, for a good reason. We need a little bit of slack in the system sometimes we are going to buy a little bit too much. Sometimes things are going to go bad no matter how much we try. So zero waste is probably unrealistic but if we look at developing countries most of the waste there happens very early on in the processing chain because of poor transportation and distribution systems. So there's a fair amount that goes bad right in the field or very early stages of distribution, probably less so in the consumer's hands in these developing situations. In developed countries like the US, much more of what happens at the consumer level, in fact when USDA crunches its numbers and looks at waste, after the farm gate, about two thirds of it is due to consumer oriented waste and only about one third of it is earlier in

the processing chain.

**Joe :** And by consumer waste and we're going to talk a little bit more in detail about this later but we buy too much, we let it just sit in the refrigerator too long; those are the kind of things we're talking about?

**Brian:** Yeah, it's interesting we had at our conference in August we had a researcher out from California and she talked about different mentalities of individuals when they're dealing with food in their own home. Some people have a siege mentality. They want enough food in the refrigerator to be able to feed the entire neighborhood if they should happen to drop by on any particular night. But a lot of it, we don't plan our meals nearly as much. Many of us have kids who come in and out. We don't know if they're going to be there for dinner at night and we want to make sure to have enough for those hungry teenagers that come flooding in the door. Others we've got a lot more availability to eat out now. So maybe what we're looking at and the fridge doesn't look so attractive or somebody wants us to go out for a night. So we leave some of that to sit in the freezer or the refrigerator we never get around to using it and end up wasting it.

**Joe:** There are a variety of consequences and again it's something we'll get into a little bit more. But Mike, you're well-qualified to talk about consequences at a community wide level. I mentioned earlier that you were the founding exec for the Solid Waste Authority of central Ohio. For those listening outside of Central Ohio what is SWACO?

**Mike:** Well in the state of Ohio there are 52 solid waste districts. This goes back to 1988. For those listeners who may remember the famous garbage barge that went up and down the East Coast the United States for five or six months looking for a home. Well as a result of that incident, most states including Ohio instituted a whole suite of new laws to reduce and recycle more, improve landfill safety and environmental protection. And SWACO was born out of that. It is one of 52 solid waste districts in Ohio. Its litter is its own political subdivision. It has rule-making authority just like a city it can pass laws and they can enforce anything dealing with all the ways. They can tell you where everything goes. Where your recyclables go, where your waste goes and how you need to handle it.

**Joe:** So I typically think of as one of the primary ways of handling solid waste is putting it underground covering it up with clay and turning it into a golf course. The landfill route. How much is food waste a part of what someone managing waste on a regional level has to think about? Is that a big part of the problem?

**Mike:** It is. There are some estimates I've seen of 20 percent of what goes into a landfill is food waste, food scraps.

**Mike:** One of the problems with measurement is a lot of that would include what is in the food waste basket. If you think about a restaurant, the packaging material at a fast food restaurant for example, that gets categorized many times as part of the food waste stream. But it is biodegradable. For the greatest part a lot of paper stuff goes in there along with the food and the problem in a landfill is it degrades. It turns into a gas, primarily methane gas and carbon dioxide both greenhouse gases, and even this SWACO at their landfill and most landfills in the United States try to harness that and control that gas. There's still a significant amount that escapes into the atmosphere.

**Joe:** Mike Long has a company called Resource 100, formerly ran the solid waste authority of central Ohio. Brian Rose an economist at the Ohio State University. Let's walk through some of the consequences of wasting all of this. The first one that comes to mind, we have done unfortunately had felt compelled to do probably a dozen shows in the last ten years on hunger. That food that we're throwing away could be helping people.

**Brian:** Yeah, by some accounts it's about 12 to 1300 calories per person per day in the U.S.. That's about a big Mac, large fries and a medium Cokes worth of calories that's being thrown away per day. So, that's a large dent in the hunger problem given that most people need 2000 to 2500 calories per day. That could put a big dent in it even if we reduce that to the national goal of reducing it by 50 percent.

**Joe:** I would gather that groups like, Feeding America and the Ohio Association of Food Banks they weigh into this issue too?

**Brian:** Oh definitely. They see that there's a lot of potential to turn this into an opportunity for their clients who are indeed in hunger. U.S. Food Rescue, formerly Community Plates, in fact has a nice app right here in several communities in Ohio where you can log on to their website and find donors who have food that can be recovered and used immediately. Recipients who would like to use that food and then you can log in and volunteer to take the food from point A to Point B and make that connection right here in Ohio. I've done it myself. I know a lot of church groups and other groups do this as well. So it's a great way to start to make a dent in that issue.

**Joe:** Mike I can picture people go, wait a minute, this is stuff we're throwing away why would we use it to feed hungry people. There's a lot of this food that ends up in the landfill or the incinerator that it's perfectly fine that it may have gone past the use by date or it may be produce that has a blemish on it. Do you see a need for people to grasp that just because we're throwing it away doesn't mean it necessarily should have been thrown away?

**Mike:** Yeah, that's part of the problem. Let's talk about the hierarchy for a minute.

The EPA hierarchy and I don't want to get too far ahead of the discussion but we've been focusing on what's called the pyramid of how we manage food scraps and so we want to first reduce it don't create it in the first place and that's what Brian has been talking about. And then once you do that what can you do with it? Well, we can feed hungry people and instead of throwing away just because the date has passed for the use by or sell by, that doesn't mean that food is still edible. And so that's something I think we need to learn more about how to understand what you can eat and which you cannot eat because once it passes that stays and it turns into to the landfill then we start having a whole new set of problems for our society.

**Brian:** I could chime in there. There's been federal level legislation introduced to clarify what those dates mean because very few of the dates that you see on food packages actually deal with safety even though most people think those dates have to do with safety. They generally deal with a quality issue rather than a safety issue. And so consumption after those dates for the vast array of items is all about quality and not about safety. And so for example, milk dates, label dates on milk, vary widely from state to state. So in some states is mandated to be 12 days after pasteurization. Other states it ranges up to 18 even 20 days, so fair amount of variation not necessarily tied to safety because it's a pasteurized product. It's all about quality and your taste preferences and not about safety for things like pasteurized milk.

**Joe :** So I don't know if you're an expert in this area, but on a follow up on this a little bit what the heck does "Use by," "best by," "sell by," what do what do I need to know about being smart about what I'm reading?

**Brian:** Yeah. So they aren't well-defined that's part of the issue. So last summer the Food Date Labeling Act was introduced into both houses. Bipartisan support tabled for the time being but I think there's energy to go back and get those passed to actually unify and educate people about and

simplify the language. "Best if used by" is now USDA's preferred language on labels so that people understand it's about quality, best if used by, not dangerous if used after date. And then there will be a small category for "expires on" for products that truly may have safety issues that people have to pay closer attention to. There was a suggested language to be used here forward.

**Joe :** So here's just getting maybe deeper than you know but if it says "best used by" does it then reach a point where at some point I shouldn't eat it? How do you tell when enough is enough?

**Brian:** Yeah there are resources online that can tell you product by product. Typically, there's a few classes of goods, for example baby food, baby formula. Those have "expires on" language which have some safety issues some pre-packaged deli meats that might be subject to Listeriosis or other types of pathogen growth will have issues with safety thereafter. Pasteurized products usually is not going to be an issue. But there are online resources that can help people verify those very specifically.

**Joe:** So you're telling me I have to take some personal responsibility, hate that. We're going to talk more about the problem of food waste and preventing it with Brian Rowe of Ohio State and Mike Long of Resource 100 when we continue.

**Joe:** "With Johnny," now that song brings back memories. Not because I knew the song but I don't know how many times mom and dad said, "there's starving kids in China." And when I was a youngster that was that was one of the rules in our house. You ate what was put in front of and you clean your plate. But maybe not such bad advice first followed today. Brian Rowe is an economist at Ohio State University. Mike Long owns company resource 100. Our subject today is food waste and how to mitigate that. Mike I've mentioned Resource 100 a couple of times, just tell folks what it is.

**Mike:** [00:14:44] Well it's a sustainability consultant that I formed after I left SWACO and I don't have a large client base. I'm pretty selective about what I do and that I enjoy and am passionate about it. And this idea of food waste recovery is what I am. So I help clients figure out strategies to reduce their waste perhaps, turn it in energy or fuel or products and keep it out of the landfill.

**Joe:** So we talked earlier about the consequences of wasting maybe on the order of 40 percent of the food that we produce here in the United States. Hungry people need those calories, we shouldn't be throwing the ones away that we don't have to throw away. There's another consequence on the economic side. I don't know if you have specific numbers Mike, but give us a sense of what a community like Columbus or you know a Circleville might be putting into handling food waste.

**Mike:** Well let's take Columbus and again this is just back of the envelope calculation. If they throw away as a city, and the thing about Columbus is the city pays for the garbage disposal on behalf of its citizens. Unlike where I live, I get a garbage man to go so we can take Columbus and say 350000 households and let's say they throw away at a year 350000 tons and take 20 percent of that 70000 times and take 50 dollars a ton and multiply that and you're looking at three and a half or four million dollars just on food scraps that goes into a landfill. Now that number may be plus or minus two hundred thousand which is a big number that comes out of a city's budget to pay not just for their disposal but then the city has to transport that to the landfill. So that might even be double the total cost. It's a very big number. And then there is a long term, here's what we fail to recognize, the long term impact on the community of having that degradable material in a landfill is producing gas which is escaping into the atmosphere and then filling up the landfill. What's going to happen when it is full? It will be full at some point. If we keep doing what we're doing. Never be driving longer distances to the next landfill or fuel more pollution.

**Joe:** Covering up farm ground.

**Mike:** Covering up farm ground, absolutely hundreds of acres. So it really makes sense to take an economic look at not creating that stream to the landfill because there's other things we can do with it after we feed hungry people and deal with that issue. We can turn that into things like animal food. We can create energy and we've got to be looking at that.

**Joe:** So those are some of the macro looks at this issue. What about for my family, your family, Mike's family.

**Brian:** Yeah. Might just talk about the costs once it leaves the family or the retailer's back door and goes towards the landfill and by the way about 95 percent of all food scraps do end up in the landfill, only about 5 percent is composted or divert in some other way. So a long ways to go there but for the value of food scraps thrown away by most households comes to about five hundred dollars per person per year. So if you're a family of four we're looking at about two grand of food that's being wasted. So even if you cut down that down by about half. That's a cool thousand dollars per family right there. Then if we work it all the way back through the system we get down to the point. Look at all that additional farmland being used to grow food that ends up going into the landfill and landfills expand and dig up more farmland. So we've got a lot of pressure on land as well from this.

**Joe:** I would think if I was in the retail sector of food whether it's being a grocery store or a restaurant, I'd be putting a pencil to this.

**Brian:** And they are. I mean as an economist thinking about the overall system, I worry least about the processors and the retailers because they are very profit motivated. They're in a very competitive market and they think pretty carefully about lots of these things. Still room for improvement and still some industry norms evolving there, but they're thinking hard about this.

**Joe:** So Mike you started to talk about this a little bit more. Follow up, hungry people need the food. It cost our communities and us as individual's exorbitant amounts of money when we waste food. There are environmental aspects to this too. Tell us more about what you started to touch on there the environmental consequences of landfilling this much bio product

**Mike:** Right. Well again whenever this organic material degrades it goes primarily into two chemicals, methane and carbon dioxide and both are greenhouse gases. Methane being stronger than the CO<sub>2</sub> but both things we are trying to keep out of the atmosphere. So the landfill is controlled for the most part to try to stop that. But it's not perfect and there are other alternatives however that are that are better composting. For example, you can take that same food scrap and put it into a compost facility and recover it as a compost, which is very valuable. And also the gases that are emitted are much less than they would be in a landfill. So that's one major benefit to us. And the second benefit, well the economic value is great. You're taking something that has a negative value when it goes into the landfill you're paying money to do it, you're turning it into something very valuable. Compost or mulch, as many of these companies are now doing the mulch route. It's faster than the compost but if we can get a compost now we've got a great soil that we can improve the fertility of the soil moisture to reduce water consumption. There are so many benefits.

**Joe:** We'll be back to talk more about mitigating food waste when we continue.

**Joe:** As Americans, we waste an awful lot of food. There are costs in terms of helping the hungry. There are environmental costs. There are economic costs. Helping us understand those problems and some ideas on how to fix them, Mike Long who is retired as the exec of SWACO the solid

waste authority of central Ohio, now has a consulting firm, Resource 100. Brian Rowe is an economist at the Ohio State University. So we've just spent a half hour or so explaining how bad this is. Let's talk about how much of it we can fix. You said earlier, Brian will never get to zero waste. But what's a reasonable target to shoot for?

**Brian:** Well the goals that are put out by a lot of countries and in fact by the U.N. are to try to reduce food waste by 50 percent by 2030 and the U.S. adopted that as its official goal in the fall of 2015 as well. As a very ambitious goal. I'm not sure that we can quite get there but I think 20 to 30 percent might be a very reasonable goal and would have no non-trivial implications for the marketplace and for hungry people and for resources.

**Joe:** So Mike you've got experience in actually doing this on the on the disposal end of things. How much of a big hairy goal of 50 percent reduction do you think is doable?

**Mike:** Well I think we can get further than that quite frankly because of improvements in technology that are coming on.

So we need to talk about reducing or managing it if we were trying to keep it out of a landfill if that's our goal and we follow that hierarchy, reduce, reuse, feed animals feed hungry people. If we do that we can get very far down the line and keep it out of landfills. And technology is going to help us on that. But one of our biggest obstacles currently after we've done everything at the front end to try to reduce it and we use it. One of our biggest problems is logistics of how do you get it from the thrower to the processor. Let's say a compost facility, a garbage truck stops at every house, very efficiently, very low cost but the food waste recovery truck drives across town to make its stops it goes from one very street to another and very few restaurants. So part of this is to figure out the logistics of how to get more route density more collection points more companies participating, whether it be a restaurant or a grocery store or a household or Ohio State University.

**Joe:** Speaking of Ohio State you folks held a conference on this subject earlier this year. I wanted to attend. I didn't make it but I tried to go back and look at some of the proceedings and one of the things that I couldn't help but notice there was discussion, Brian, about in terms of fixing this problem. One of the first things we have to do is just simply raise awareness. People know to be frank I live in working this farm space and I about fell out of my chair when I was researching just how bad the waste problem is.

**Brian:** Yeah.

**Brian:** We conducted a study nationally and 2015 and only about half of the people recognize food waste as a problem by name. So there's a fair amount of awareness that still needs to take place. Once we talk with those folks and talked about it made them agree that they felt guilty about it, about 75 to 80 percent admitted they felt guilty about it but not all of them were connecting it to the environmental issues and they were somewhat pessimistic about whether they could actually change the amount of food waste they were generating. Only about half thought that they could actually reduce food waste in their own life.

**Joe:** Talk a little bit more about that connection between awareness and willingness to do something. Did you have to spell out some of these consequences that we've been talking about before the said wow how to stop this..

**Brian:** Yeah I think awareness is an important first step particularly when people become aware of not only their the societal impacts but the fact that it's about 500 dollars per person per year that is being thrown out of their own household. You know they could give themselves a nice little benefit

if they could figure out a way to reduce that in their own homes. So we are talking about food waste and ways to resolve the issue. That was Brian Rowe from Ohio State, Mike Long is with us from Resource 100. We've heard you mention Mike a couple of times this hierarchy and it's in my words it's sort of a government and I know EPA has got his fingers in it, the U.S. Department of Agriculture has its fingers in it but it's a way that sort of looks at from most to least preferred ways to deal with the system. We've mentioned source reduction a couple of times, is that simply just not buying any more food than I need.

**Mike:** That would be one of the strategies is to plan your meals and so you plan not to have waste for example. Things that you can do at your home or your business to cut down on it at the source is a terrific strategy. It doesn't create any environmental problems it doesn't create any economic issues.

**Joe:** But we spent a lot of time earlier talking about feeding hungry people that would be the second preferred method besides reducing the source. Brian, talk a little bit about the third level of this feeding animals that folks may not know. I mean we threw the dog scraps and today you've got to have this high powered specially designed diet to make the puppy happy no matter what. But using human food in animal feed not necessarily pet food. But yeah but even livestock feed.

**Brian:** No it's been happening for a long time. I remember I grew up on a dairy farm in Wisconsin and we talked about out in California but here in Ohio in fact there are hog farmers and others who are using food from major sources for their own livestock.

**Joe:** We're going to follow up on that as we continue talking about mitigating food waste right after this.

**Commercial:** Now let me blow from another line. But it's just part of my routine because nobody got it.

**Joe:** Welcome back to town hall Ohio we're talking about the food we waste as Americans and why we shouldn't and what we can do about it. Helping us tell the story, Mike Long who owns a company called Resource 100. They are into bio waste handling consulting. Brian Rowe is with Ohio State University, I had to cut you off because it was time for the break there Brian. But feeding human excess human food to animals is not new.

**Brian:** No but I think it's picking up to some extent. I think there are good sources and again this is where it has to be the logistics issue is key here. So sourcing from large manufacturers or retailers very consistent product that can be then used. There are some examples of Ohio hog farmers for example, who are taking products in bulk to their facilities D-packaging them and mixing them into the feed rations.

**Joe :** And this is things like Ohio State, something that Ohio State would be studying that is how to make that work. I mean it's one thing to give a certain animal a certain kind of human food but the animal has to be able to gain weight properly and perform for the farmer. Brian mentioned the packaging.

**Mike:** There's a technological innovation that's come in within the last five years and it's going to come on even stronger the ability to take apart a cereal box and recycle the cardboard and take the food out of it and feed it to an animal for example is something that is now available.

**Joe:** Does it get the baseball card off the bat, i'm showing my age there.

**Mike:** Hasn't got there yet. They can take a jelly jar and take out the jelly and the glass and recycle both.

**Mike:** So those are innovations and by the way will how companies are manufacturing that kind of equipment. So there's job creation in that and that innovation in that business of the packaging and that's been a big obstacle in the past to food. A lot of food waste recycling that box would go directly to the landfill in the past. Now it can be redirected back into the recycling business into feeding animals and we should.

**Joe:** We should mention in this hierarchy from the Federal Government of most favorable and least favorable ways to mitigate food risk. There are things besides landfilling it incinerating it composting it and as we were talking about how we could feed this to animals are also industrial uses for some of these products. I want to get to some policy issues Brian if we could. And one of those has to do with liability protection. People who might want to give food to the needy or donate it to a food bank right now. The bump up against laws that could get them in trouble if something goes wrong.

**Brian:** Although in 1996 the Good Samaritan Act was passed in Congress which extended liability protection to anybody who was providing food in good faith to agency or other group that was trying to feed those in need. Marcia Fudge here in Ohio, has just introduced legislation that would expand that even further. So that's that liability protection would be given if people were trying to donate that to an individual in need as well.

**Joe:** How about tax policies? Could we make some tweaks do you think to how we incentivize behaviors that that might help us in this whole process.

**Mike:** Well I am not an expert at all and that in that regard are there and I pay a lot. But besides that I'm aware that some of these food, the animal feed when they accept that material to manufacture feed there are tax benefits of doing that. And I don't know about that tweaks other than just educating people on what the tax implications are of doing that. But I'm sure Brian can talk more about this specific tax issue.

**Brian:** I know a little bit about that but I think there would be a range to even sweeten those deals more so to bring it to the forefront and to get industry and individuals to think more critically about how they can take advantage of those benefits and just get that into their into their mental space.

**Joe:** Any more in this area, we talked about liability protection earlier talked about changing the dates. What about the food safety law area or are there things there that might be might be helpful?

**Brian:** I think there's always a tension there in trying to understand how "when in doubt throw it out" was always the phrase that we had heard before but a lot of that was prefaced on that date on the label. So I think in terms of food safety law I think that's still an evolving area to understand how food waste reduction efforts and food safety interact. So I think there's good scope for research there.

**Joe:** Mike told us a little earlier about his company. Just real quick a little bit about Ohio State's role in this whole I mean they have a food pool of food waste collaborative

**Brian:** Yeah. Ohio State has been very innovative.

**Brian:** We've got a new model down there the discovery theme is one of those focuses on transforming the food system. They were kind enough to give us some seed funding at OSU to

develop this food waste collaborative where we've brought together people like Mike Long from industry, Ohio State researchers, and people from federal agencies to try to get that conversation going about food waste in Ohio and in the region.

**Joe:** We will be back to wrap up our conversation with Brian Roe from the Ohio State University and Mike Long from Resource 100, more on mitigating food waste when we come back.

**Joe:** We've got on the order of 49 million hungry Americans and yet we throw away approximately 40 percent of the food we grow in America. It's not right. And we're trying to figure out how to fix it and helping us to talk about and understand the issue better. Mike Long of resource 100, Brian Rowe of the Ohio State University. As we start to wrap things up here we've talked about some 30000 foot things that communities can do, the federal government can do. Might maybe start with you. What can us as individuals do? We talked about the fact which say four hundred bucks a head. Five hundred yeah five hundred dollars for each family member on average in wasted food. So that's couple of grand in a family of four. What are some things we can do at home that saves us and helps food waste problem.

**Mike:** Well I think this fits into the bigger issue of reducing waste. I mean this is part of what's going to the landfill so that reduce reuse recycle.

**Mike:** We've learned you know for the last 20 years applies to food waste and what we've seen is that the food waste issue is coming to the forefront because it is such a big part of the waste stream and has economic consequences, health consequences and environmental consequences. So again it comes back to learn about what's going on in your community. It's always this reason. Streets are excellent things that individuals can actually have a relationship with. They are a local government institution. They're not the county. They're not a city. They have experts on this subject. And I would urge the listeners to learn more about SWACO and the other 51 in the state of Ohio because they have terrific educational programs a grant programs and it's a real opportunity for people to learn about this problem.

**Joe:** So we need to become more aware and more concerned that some practical ideas, Brian on steps that the people can take it might just begin with making sure you've got a good grocery list.

**Brian:** Definitely a lot of this is it's going back to Home-Ec 101, home economics thinking about planning the meals buying the appropriate size when you get it home. Take the time to wash and dry specifically dry produce so it doesn't mold. Chop it up slice it put a nice clear container so you can use it. Becoming friends with your leftovers having a shelf set aside in your fridge where you put things that need to be used quickly or else that expiration date might go bad. All of that can help you know reclaim some of that. Five hundred dollars per person per year that's going in the garbage can.

**Brian:** And then for that waste that you are going to inevitably create think about some home composting if that's something that you can do in your own space. You can use it in your garden or give it to a neighborhood school for their garden. Lots of opportunities there.

**Joe:** I suppose Ohio State Extension has some how-to's on composting up on his website.

**Brian:** There's a lot of good resources out there and there's availability Ohio EPA has some excellent information about composting nationally. There's a great new website out called Further with Food that's put together with some money from the Carnegie Foundation. U.S EPA and USDA and we've got our own website at OSU for the food waste collaborative that's got information about what's going on in Ohio about food waste.

**Joe:** Mike you mentioned the solid waste districts I guess just google and you'll find the ones around Ohio.

**Mike:** Absolutely. EPA and they have every Web site for each of the solid waste districts.

**Joe:** And on the outside chance that there might be a business or local government that is interested in maybe tapping into some of your expertise. What's your Web site?

**Mike:** Well you won't find much information on my Web site like I said I'm semiretired but if you go to a Resource100.com you'll find me.

**Joe:** And maybe all we need is your phone number yeah. So as we as we wrap this up Brian how hope hopeful are you that the more we talk about this the more we're going to fix the problem.

**Brian:** I am quite hopeful. It's a great opportunity. There's money to be had by individuals.

**Brian:** There's hunger to be reduced for society there are resources to be conserved all up and down the supply chain and there's environmental benefits to be had. There are so many good motivations to do this. I think it will happen.

**Joe:** I think we're going to get there.

**Mike:** I absolutely do for the reasons Brian just stated. I mean the money is a big driver on all of this and we're wasting it. And so let's put it to use for our community and our globe.

**Joe:** Very well said. Gentlemen thank you both for being here. Mike Long of Resource 100, Brian Roe of the College of Food Agricultural and Environmental Sciences at Ohio State University helping us look at the problem of food waste in America and what we as individuals can do about it. Thanks to all of you to for tuning in this week on Town Hall Ohio. Town hall Ohio is a project of the Ohio Farm Bureau Federation. It is brought to you with the support of nationwide. Nationwide is on your side. Join us again next week for town hall Ohio.