

Speaker 1 ([00:03](#)):

It's Wednesday night and the Triple Rock Nightclub is packed with fans waiting to savor the latest trend. It's not the band or the beer, it's the bacon. The lowly pork belly product is suddenly riding high on the hog with bacon garnishing everything from cupcakes to donuts, even candy. Bacon popcorn, bacon brittle. People are pigging out on bacon like never before. In these tough times, it can take you away with just a sound and a smell.

Jerusha Klemperer ([00:37](#)):

There was a time when bacon was a sometimes food, occasionally paired with eggs at breakfast or in summer sandwiches with the season's freshest tomatoes. But then suddenly bacon was everywhere. From fast food burgers to ice cream to scented candles. While the peak might have passed, bacon has settled comfortably onto menus and into our home kitchens for much more than breakfast.

[\(00:59\)](#):

In this episode, we look at where bacon mania came from and dig a little deeper into this beloved food and the industry behind it. We look at the realities of industrial pork production and how the world's obsession with bacon on everything contributes to the environmental degradation and hollowing out of rural communities in pork producing powerhouse states like Iowa, Missouri and North Carolina. I'm Jerusha Klemperer and this is What You're Eating, a project of Foodprint.org.

[\(01:26\)](#):

We aim to help you understand how your food gets to your plate and see the full impact of the food system on animals, planet and people. We uncover the problems with the industrial food system and offer examples of more sustainable practices as well as practical advice for how you can help support a better system through the food that you buy and the system changes you push for.

[\(01:49\)](#):

If you're going to spend your entire life in the pork industry, you could scarcely hope for a better name than Joe Leathers. Leathers, who proudly inserts the nickname Bacon Belly between his first and last names is now a retiree in Kansas City, Missouri. But he's been a pig man since the beginning. "My whole career has revolved around the pork industry," says Leathers, who was born in Austin, a southern Minnesota town where the pork producing corporation, Hormel, has been based since 1891.

[\(02:18\)](#):

It's where spam was born. "If you didn't work for Hormel, you didn't work," he says. Leathers began at age 21 back in 1970, wielding a knife on the killing floor of Hormel's giant slaughterhouse for three and a half years, dispatching and dismembering hogs into the bellies, chops and loins Americans ate. Over his three and a half decades in the business. He sold pork, bought pork, marketed pork and managed the people and pigs at the core of the pork business.

David Sax ([02:45](#)):

In all that time, nothing prepared, Joe "Bacon Belly" Leathers for Bacon mania. I'm David Sax. I'm a journalist and author. I've written several books about food including Save the Deli and The Tastemakers: Why We're Crazy for Cupcakes but Fed Up with Fondue. The story of bacon manias rise is really the story of Bacon's decline over the 1980s. Prior to the 1980s, bacon and the commodity that bacon faced on, pork bellies, which is a publicly traded commodity in the Chicago Mercantile Exchange, was a relatively steady thing with seasonal price changes.

[\(03:20\)](#):

Bacon aside from as a accompaniment to eggs or pancakes, really coincided with tomato season, and that's when you would see a growth in bacon sales from BLTs and the other delicious tomato paired bake conditions that you could have. And it was relatively steady. And so farmers would sell their pork bellies, they would sit frozen in a warehouse until they were ready to be cured and smoked for that summer demand.

[\(03:47\)](#):

The price would fluctuate, but the future's market kept it kind of steady. And then what happened is that American tastes changed really in the late 1970s, in the mid 1980. That's when you had the rise of the low fat diet trend, which was based on what we now know is kind of false or erroneous data about the causes of congenital heart disease, which placed the blame entirely on saturated fats. And saturated fats, especially the saturated animal fats were seen as the devil. Everything shifted to this trend of the low fat diet.

[\(04:27\)](#):

You remembered, you grew up in the 1980s, egg whites, margarine, low fat, everything, the McLean. Low fat was the name of the game and low salt. So you have bacon, which is the fattiest saltiest meat, the demand for it all of a sudden starts going down. The pork board responding to this is saying, "Okay. Well, bacon it's fortunes are bad. We got to focus on the rest of the pig." That's where the slogan pork, the other white meat came from.

Speaker 4 [\(04:58\)](#):

It's where we're at, it's what you want, it's on your mind, it's in your mouth, it's pork and it's catching on. The other white meat. Taste what's next.

David Sax [\(05:07\)](#):

And it was successful in that the price of loins went up, but the price of bacon and pork bellies fell. And the reality is it's not a crop. A pork belly is part of the animal. You can't have the loin without the belly. And so for every pig that they would slaughter, they had these bellies and they were sitting in warehouse and the prices were dropping lower and lower and lower and lower.

[\(05:28\)](#):

It was getting to the point where the pork farmers were breeding pigs leaner. They were trying to get as little belly as possible on the weight of the animal and the pork marketing board and said, "We have to do something about these bellies." It was people like Joe Leathers among others who realized okay, we have to turn the fortunes of bacon. How can we do it? This was before Instagram and chef influencers.

[\(05:55\)](#):

And so the way they started doing it was creating this campaign which was really around fast food. It was saying, well, if the trend is kind of lean and we're having leaner burgers, the reality is those burgers are going to be kind of dry and tasteless. What if we could serve them some bacon with that burger and that would give it the juiciness and the crispiness and the flavor. And you could still have your lean burger.

[\(06:19\)](#):

And they work with food scientists at different universities to develop a way to have pre-cooked microwavable rounds of bacon because you can't have every McDonald's and Burger King throwing up slices of bacon in their back. It's messy. It's flammable, it's smelly. It was the pork board providing money with pork producers and processors to universities and researchers to come up with these

products and then providing seed money with those products to send them out to different restaurants, mostly fast food restaurants. I think Hardee's, a burger chain, they were the first one.

Speaker 4 ([06:55](#)):

Introducing Hardee's Frisco burger, grilled sourdough bread top with a thick Hardee's quarter pound burger, melted Swiss, sizzling bacon and sliced tomatoes.

David Sax ([07:03](#)):

And it started taking off. And then you had Wendy's and Burger King, and all of a sudden it snowballed. The trend of bacon was born. And then you had from the other end of the spectrum and not pushed by the pork board, someone like Mario Batali or David Chang suddenly using pork belly in ways with vegetables and other dishes that changed its value and that really got it moving into the higher end world of food.

([07:30](#)):

And then with the internet and the growth of social media, like all these trends of the past 20 years, it just explodes. You have bacon shows on YouTube and bacon memes and bacon products and bacon T-shirts. My favorite is there was a company that made this thing called baconaise, which is bacon flavored mayonnaise, which actually has no bacon. It's like a vegan, a vegetarian kosher product.

([07:54](#)):

But it's so successful that the company starts making other products and they make like bacon flavored lip balm and a bacon clothing and a bacon coffin. My favorite was bacon flavored sexual lubricant where they sold tens of thousands of tubes of this stuff. And so you have this thing that again, starts off in the farm and you're talking about hog farmers in America in the middle of America, trying to get a better price on the belly so they don't lose money on their pigs that they're selling and they're more profitable in the market and the pork board is there to support the farmers. They do what they can to start it. And then like most food trends, it just grows and becomes own thing where you have this cultural phenomenon.

Jerusha Klemperer ([08:38](#)):

It's interesting to think about that alternate future that might have existed. If Joe Leathers and his cohort had not been successful with this push of bacon because instead what we have is an incredibly powerful and consolidated pork industry with 28 billion in annual sales selling 21 billion hogs per year. What we don't eat here, we're shipping overseas to other cultures, increasingly hungry to replicate our tastes, which it turns out have been shaped by the very industry itself.

Patty Lovera ([09:06](#)):

We learn about food through lots and lots of sources that may not be neutral. We learn about food through advertising. We learn about food from cooking shows that have sponsors. People recognize advertising when they see an ad and there's that and there's plenty of that, but there's also the public relations machine beyond what is explicitly an ad.

([09:31](#)):

I think people discount sometimes the reach of that in how we learn about food. My name's Patty Lovera. I've worked for a long time on various food policy issues and for a long time I've been really specifically spending a lot of time looking at how food animals are raised. If you talk to people who are

in this industry who are farmers, you're going to hear about something called a checkoff. It is not the playwright. You learned about literature class. It's like you're checking a box, you check off something.

[\(10:03\)](#):

Every time something pig, head of cattle, a hundred pounds of milk, a bushel of corn, when certain commodities are sold, there is a federal law and sometimes there's state versions of this that says X amount will be assessed on that. And so if you like these programs, you call it an assessment and if you don't like these programs, you call it a tax. And so there is something called the pork checkoff that every time a pig goes to market and money is transacted, some cut is going into the fund.

[\(10:38\)](#):

We think we need to dedicate funds to research and promotion. Promotion is marketing and the USDA is kind of the administrator of that money. They oversee it and they're supposed to watch the entities that spend it. The most famous of these checkoffs is Got Milk? that was paid for.

[\(11:00\)](#):

That ad campaign, which went on for how long. It was super iconic ad advertising campaign. That was paid for with money that was put in a pot by dairy farmers every time they sold milk. Beef. It's What's for Dinner. It's the checkoff, The Incredible, Edible Egg. And it used to be Pork. The Other White Meat, but it's also "partnerships" with a cooking show or partnerships with... I don't know about pork, but I think the milk checkoff was doing a partnership with the NFL at one point for kids get active, you do exercise and then you drink milk. It's just kind of insidious and it's everywhere.

[\(11:36\)](#):

From a consumer perspective, that might be one of the reasons it's like, "Why can't I turn around without running into someone telling me to eat bacon?" Money is also spent to do research and then it's a question of what kind of research are you doing? The research might be like, how do we convince people to buy more pork? It might be how do we solve a disease problem that happens on really, really big farms?

[\(11:58\)](#):

A lot of small farmers who are like, "You are researching problems with a solution that makes money for big meat packers and not me. You're researching problems on how we export more pork and I want to sell it to my neighbors." So there's a real divide in agriculture about why are you taxing me to put money in a pot to promote bacon, being on fast food hamburgers when I want to sell artisanal pastured pork to my neighbors and why am I funding this thing I don't want to participate in? One thing that really will get a lot of small farmers going is like, whose pork are you promoting? Because one of the things that happens with these checkoff programs, because it's a legal thing and you can't opt out.

Jerusha Klemperer [\(12:41\)](#):

With so many hogs being produced, those checkoff dollars really add up. It's a huge industry with a ton of money, tens of thousands of pigs on each factory farm. But not very long ago, it didn't used to be this way.

Patty Lovera [\(12:54\)](#):

People used to view raising hogs as a thing you did on a diversified farm and they were kind of a cash crop in a weird way. It was a pretty reliable way to know you were going to get some income, especially in the Midwest.

Tim Gibbons ([13:11](#)):

In 1985, Missouri had 23,000 hog producers. Huge economic drivers for our real communities. Hogs are really important too, because you didn't need a big piece of land. You could do it on small plots of land. So farmers could raise hogs on small plots of land and make a go at it. Also, hogs flipped fast so they grew up fast. So you could jump into hogs when the price was high, jump out of hogs when the price went low. It was a self-regulating marketplace and hogs were called mortgage lifters.

([13:41](#)):

They were used to pay off the mortgage on the farm. My name is Tim Gibbons, I'm with the Missouri Rural Crisis Center as a statewide farm in rural organization. We're a membership organization. We started in 1985, sort of ad hoc out of the farm crisis of the '80s. So farmers were organizing in the '80s to stay on their farms during a really bad economic time for farmers and rural economies.

([14:09](#)):

Organizing not only on the ground, direct actions, stopping sales of farms on the courtyard steps, but also working for policy. That's one thing that we know is important. Policies are the things that sort of dictate how industries work and how safeguards work. Missouri had 23,000 hog producers through 1985. As of the 2017 census, just over 2,600 hog producers in Missouri. That is nearly 90% put out of business.

([14:39](#)):

Not because people don't want to raise hogs, but it's because corporations intentionally overproduce. They vertically integrate the marketplace. They know how to make money at all different parts of the food supply chain. They drive the price down at the production side and when you drive the price down below cost of production for farmers, it kicks them all out of the marketplace, puts them all out of business.

Patty Lovera ([15:00](#)):

Meanwhile, the amount of animals, the number of animals has ballooned by a huge, huge factor. So what that is kind of on the ground example of get bigger, get out so many farms that used to have 500 head, 700 head, if they're still farming, they're not raising these animals anymore. They're doing something else.

([15:23](#)):

Those that remained in the hog business got really, really big or new operations that came in are really, really big and they're raising thousands or tens of thousands of hogs and that's a different system. It's a different economic system.

Jerusha Klemperer ([15:36](#)):

So what does a factory farm with tens of thousands of hogs look like.

Patty Lovera ([15:39](#)):

You have thousands of animals, they're not getting outside most likely. They spend their life in a barn.

Urvashi Rangan ([15:45](#)):

When you have especially confinement systems which a lot of our industrial animals are in, they are physically altered. Pigs might have their tail docked, for example, so that they can cram more together

more closely and the pigs don't hit each other with their tails causing yet another disease that is very common in industrial pork production.

[\(16:11\)](#):

I'm Urvashi Rangan and I'm the Chief Science Advisor for the GRACE Communications Foundation. I'm also part of Funders for Regenerative Agriculture and also true cost accounting accelerator with the Global Alliance for the Future of Food.

[\(16:25\)](#):

The feed of these animals and what they're fed and what they are allowed to eat, so spent waste from various different processed food industries would go into animal feed here. We'd also see chicken manure again used in animal feed for pigs. The quality of the feed is another huge area that is quite cheapened when it comes to industrial agriculture. Drug use is the other major category of concern around industrial animal production and especially with pigs. So many drugs going into the daily feeding of healthy animals, which makes absolutely no sense from a public health basis but also causes a number of different problems and then masks a lot of different problems.

[\(17:19\)](#):

Antibiotics for example, are used to feed pigs on a daily basis to keep them quasi clean and reduce the need, I suppose, for hygiene standards to actually be applied. It's really a crutch unfortunately that the industrial system has fallen on again to be able to sort of cram as many animals as possible inside. Drug use is also used to increase the rate of growth for animals as a growth promoter and even things like beta agonists for example, which are maybe people who take asthma drugs are more familiar, that inhaler you take is a beta agonist. It turns out we feed a lot of beta agonists to pigs and other livestock again on a daily basis to promote growth.

[\(18:16\)](#):

It's a bit of an insane policy. There's been a lot of examples, especially in animals who are even more vulnerable to the side effects, like turkeys of killing entire flocks of turkeys for example, because they've literally asphyxiated them by using these things. They're fairly dangerous drugs on a lot of levels.

[\(18:41\)](#):

Carbadox is also another antimicrobial that's actually the current subject of an FDA withdrawal proposal. The Center for Veterinary Medicine actually proposed to withdraw the approval of Carbadox, which is an antimicrobial but also a carcinogen. FDA to their credit, finally took up whether or not this should even be approved and has, I think, just concluded holding public hearings around that. But hopefully we will see some action on Carbadox in the future.

[\(19:16\)](#):

Provided you have adequate withdrawal periods, you should expect residues of any of these drugs to be low. However, what are the effects of eating low levels of either Carbadox or antibiotics over time? We do not know all of those answers. In fact, the more we start to understand that we have systems like our microbiome in our gut that are far more sensitive to effects well before you would get to something like cancerous effects, we know that even eating low levels of these things can affect the health of our biome. It's unclear how far the harm goes, but all to say that the acute harm is likely to the animals themselves and possibly to the workers who are mixing this into feed and actually providing it to the animals.

[\(20:13\)](#):

And again, as often is the case, workers are on these front lines of exposure to many of these things. Those drugs, especially the antimicrobials lead to the next biggest area of concern, which is manure management in these systems. Pig farms in particular, the manure is very liquid and so you end up with these manure lakes or lagoons that are literally dug out of the ground and manure is collected there over time because there's just so much manure piling up essentially.

[\(20:51\)](#):

When they're in these big liquid pools, it's actually a very good proving ground for creating antibiotic resistant bacteria. And then these lagoons run off into the environment, sending that antibiotic resistance into the environment itself. What that means for humans is down the line, when we get exposed to these bacteria, it can be harder to treat in humans and we are indeed seeing antibiotics becoming less effective in treating diseases and diseases becoming more virulent and more resistant to being killed by antibiotics.

[\(21:31\)](#):

The other major issue in pork production is the use of gestation crates for pregnant sows. Female pigs that are pregnant are in conventional industrial pork production put into crates where these animals cannot even turn around. You can imagine a huge several hundred pound animal, an 800 pound animal literally in a wooden crate waiting to give birth. It's completely unnatural.

[\(22:03\)](#):

It is completely stressful for an animal to be put into that position, especially while pregnant. This is what Proposition 12 in California was trying to get at where gestation crates were used. But it is a serious animal welfare concern when it comes to pork production.

Ryan Nebeker [\(22:24\)](#):

Prop 12 was a California ballot initiative that made its way onto the ballot back in 2018 and it essentially established some really bare minimum guidelines for animal confinement. Mainly focusing on pork, eggs and veal. California's taken action in the past about eggs and as a result, they've actually moved the needle quite a bit on the kind of number of cage-free eggs that are sold in the United States. The hope here was that they would be able to do a similar thing with pork.

[\(22:55\)](#):

Essentially this doesn't do a lot. It bans gestation crates and just ensures that pregnant sows have enough room to move around, which is again, really not asking a lot, not fundamentally changing the system.

[\(23:10\)](#):

My name is Ryan Nebeker and I am the Research and Policy Analyst for FoodPrint. California is a giant market. It eats about 15% of the nation's pork. So in practice, it's pretty hard to separate out exactly what pork is going to California and what pork isn't. Immediately, it was apparent that this was actually a kind of clever way to get national pork standards to change as opposed to just focusing on California. Pork producers obviously were very unhappy with this and as soon as it passed, began just this barrage of lawsuits trying to get the law overturned.

[\(23:49\)](#):

The other thing that's kind of important to point out here is that while this would ban gestation crates, it doesn't ban farrowing crates, which after birth they use to make sure that the sow stays in place and she can nurse the piglets, in that the piglets don't get crushed, but it's a similar confinement and this doesn't



even ban that. The pork industry has essentially, rather than spending the money it would need to comply with these regulations, it's spent millions suing California.

[\(24:20\)](#):

There's been a variety of lawsuits, but the one that gained the most traction was one from the National Pork Producers Council and the American Farm Bureau of Federation that went before the Ninth Circuit, which covers California. The court actually upheld Prop 12, citing that it was a ballot initiative. Now, the other thing that's going to happen is that the Supreme Court is going to be taking up this case. If they do strike this down, it would just be a kind of overwhelming shutdown of something that the public approved of, which is a big deal given that when the public was given the choice between this, even knowing that this would likely raise prices, they overwhelmingly said yes.

[\(25:05\)](#):

When people are kind of shown the horrors of the factory farm system, they're more than willing to do a little to eliminate the worst amount.

[\(25:13\)](#):

The critical thing to note here is that these groups don't represent every pork producer. They tend to mainly represent kind of conventional factory farmed pork. This matters when we're talking about something like Prop 12. Obviously, the industry spent a lot of time and energy fighting this measure and very little adapting to it, but that's not universally true, particularly when you look at small farms.

[\(25:38\)](#):

One of the issues that we've seen of late is that there were a number of small pork producers who nimbly decided that it would be a great time to start producing pork to California standards and they were ready to fill this market that mainstream pork was ignoring. They were anticipating these rules would go into effect January 1st and that they would have this competitive advantage where they were kind of the only pork producers able to sell to the California market.

[\(26:09\)](#):

Given the delays imposed by groups like the Port Producers Council, it's just another example of this wedge between small producers trying to do things the right way and these industry groups that are theoretically advocating for them, but ultimately just end up kind of defending the established interests of conventional producers.

Patty Lovera [\(26:33\)](#):

If you use Smithfield as an example, Smithfield Ham, Smithfield Virginia, it's a thing that's been around for a very long time, but it is not the same company that it was a hundred years ago, 50 years ago, or even 20 years ago. It has grown through acquisition. That is a story in the industry.

[\(26:50\)](#):

Meat and poultry industry is just smaller companies get bought, then they get bought just kind of the fish eating the little fish and getting bigger and bigger and bigger. That has absolutely happened in the pork industry. So Smithfield is now very large, very dominant and actually Smithfield itself got acquired and it is now owned by a Chinese company called the WH Group.

[\(27:12\)](#):

So now it is no longer just a big company based here, it is a big multinational company and there's a lot of talk about what does that mean. In Missouri, there's big fights about who can own farmland. Before it was Smithfield, there was a company called Premium Standard Farms. They owned a lot of farmland,



they ran factory farms and those pigs were destined to go to their slaughter houses, so they owned a lot of farmland.

[\(27:37\)](#):

They got bought by Smithfield. Smithfield got bought by a Chinese company. So now farmland in the state of Missouri is owned by a Chinese entity, and that doesn't sit real well with a lot of folks in that particular state and other states.

Tim Gibbons [\(27:50\)](#):

We don't disparage Chinese people at all. This is about our food system, this is about corporate control of our food system and corporations that have close connections with their governments. Shuanghui or WH Group has a close connection with the Chinese government. So it not only is a disadvantage for farmers, but it's a disadvantage for consumers too.

[\(28:09\)](#):

That's really something that I think we're seeing right now with increased costs in our grocery store shelves. We're actually having a town hall tonight about rising costs and who's behind them and who's benefiting. But it's actually an interesting story in 2013 too, because in the legislature that year, there was a piece of legislation that got slipped into an omnibus bill over the last few weeks of the legislative session, an omnibus Ag bill, and we wondered, we were like, "What is that?"

[\(28:39\)](#):

We were fighting it, but we didn't know what it was for. And what it did is it changed our law from 0% of Missouri farmland being allowed to be owned by foreign corporations to 1% of Missouri farmland to be owned by foreign corporations.

[\(28:57\)](#):

1% of the farmland we have in our country was 289,000 acres at the time. Two weeks after that, Smithfield got bought by China and they also bought over 40,000 acres of Missouri farmland, which they would not have been able to do unless that piece of legislation passed.

[\(29:13\)](#):

Big deal. It just shows the draconian nature of corporate interest and lobbying interests in our state capitals and in our federal government as well. It's not democracy, it's really an old boys club and it's a special interest club. The important thing about absentee ownership of our land and of our food system, what we find is the farther that control gets away from that land in particular, the less they care about the people that live there, the less they care about the economies, the communities, the less they care about the water and air. They don't know what's going on in Mercer, Putnam and Sullivan counties. They really don't care because all they care about is making money off of the investment that they made.

Jerusha Klemperer [\(30:00\)](#):

Missouri is not alone in its fight to keep factory farms from ruining life for local farmers in the environment. Iowa is the top producer of swine in the country. Water quality is terrible there as a result of industrial corn, soy, and hog production. This past summer, swimming was not recommended on 11 Iowa beaches due to high bacteria levels. The Raccoon River has been called essentially unusable for drinking water due to toxic algae blooms.

[\(30:28\)](#):

This is because the cycle of farming, of using crops to feed animals and using the manure from the animals to fertilize the crops, it has been sort of dismantled.

Silvia Secchi ([30:38](#)):

When you drive across Iowa, you don't see animals on the landscape. Animals are completely separate from the crop production landscape. My name is Silvia Secchi and I am a professor in the Department of Geographical and Sustainability Sciences at the University of Iowa.

([30:55](#)):

Essentially, starting in the second World War period, we swapped a system in which animals were integral to crop production by providing manure, therefore a form of fertilizer. And because we have now artificial fertilizer which is produced using fossil fuels, what we've done is we have created a system in which farmers prefer and the whole system is geared for them to prefer to have artificial fertilizer. And so manure has become a waste product.

([31:31](#)):

What you want to do is you want to maximize the amount of land where you use artificial fertilizer. And so you don't want animals on the landscape. The land grant system, which I call the research arm of this industrial agricultural process, has worked for decades to optimize this separation.

([31:53](#)):

So what it has meant is we use this artificial fertilizer in ways to ensure against extreme weather events. So farmers tend to over apply it, and so we get fertilizer in our streams and in our lakes. In terms of air quality, you can't imagine living near these CAFO facilities is not fun.

([32:14](#)):

Again, we get the whiffs of those when the wind blows the right way. Even here in Iowa City, even though our county where I live doesn't have a lot of hog operations. In terms of greenhouse gas emissions, this is the mother load because the animals emit greenhouse gases, particularly cattle, but not just cattle. The crop production system is very fossil fuel intensive, and so there is a lot of greenhouse gas emissions there as well. We have created like a pinnacle of unsustainable production here in this part of the world.

Jerusha Klempner ([32:55](#)):

Can you talk about water impacts and what it means for things like drinking water, recreation? How is this impacting Iowans?

Silvia Secchi ([33:04](#)):

I think this is a great question because when people talk about the impact on water, a lot of the attention has been paid, for example, to hypoxia in the Gulf of Mexico. The dead zone in the Gulf of Mexico is due to these excess nutrients that are transported into the Gulf. And essentially, the processes whereby marine critters handle this, excess nutrients create an excessive demand for oxygen and so then there isn't any, and we have these dead zones.

([33:38](#)):

But I think a better story to tell is what it does for us who live here. People in Iowa are not going to be moved by a Gulf of Mexico, Louisiana, shrimpers [inaudible 00:33:50]. And so the consequences for us here in Iowa of this system are manyfold.

[\(33:56\)](#):

First of all, the one that is right now at the forefront of our minds is what it does for our drinking water supply because we're being hit by both a drought, which means less water quantity and also water quality problems.

[\(34:12\)](#):

We have to treat that water to bring it to acceptable levels in terms of nitrates in particular. Even when we do, again, another thing that people aren't talking about enough, the science is emerging that's telling us that even if the water meets water quality standards, current water quality standards in terms of nitrates, being exposed to high level of nitrates below the standard, but still high, which is happening a lot in Iowa because they treat to the standard, they don't get rid of all the nitrates, it's going to cause problems in terms of cancer rates and other long-term health effects.

Jerusha Klemperer [\(34:54\)](#):

What we've done is we've broken it all apart. We've taken all this holistic system that was meant to work in one circle. We've broken apart the pieces and this has been pretty amazing for food production. It's so efficient.

Silvia Secchi [\(35:09\)](#):

Well, I get a lot from my colleagues in the land grant system. They say this is efficient. Well, who cares if it's efficient? Is it equitable? This whole focus on efficiency and what it actually means. One example I use in my classes is, okay, this project is going to cost \$1 and generate a billion dollars. Should we do it? And the students are like, "Yeah, this is a great idea."

[\(35:35\)](#):

And I'm like, "What about if the billion dollar goes to Jeff Bezos? Should we still do it?" It's efficient for whom? Who are the beneficiaries of this system? In terms of the food dollar, the portion of the food dollar that goes to farming is very, very low because we have a system that favors highly processed food and is also very fossil fuel intensive. I questioned first of all the validity of using efficiency as a metric to establish things because this is a way to get communities of color, native Americans, Black farmers screwed over again and again and again because we're doing this in name of efficiency.

[\(36:25\)](#):

Secondly, I would say that this is... I do have a PhD in economics and so let's look at what the parameters of this efficiency are. If you are starting from the assumption that we have to produce this amount of beef or this amount of pigs and we're doing it at the least cost possible, but who says that that's what we have to do? In the US we eat so much meat and we don't even meet dietary guidelines.

[\(36:57\)](#):

If you define efficiency to get the answer you want, that's efficient but that's not a really meaningful definition of efficiency. You ask the question the right way, you get the answer the industry wants. That's what a lot of research actually is about. It's what I call small science, not big sites.

Jerusha Klemperer [\(37:18\)](#):

When it comes to those environmental externalities that Silvia and Tim have described in Missouri and Iowa, they really cannot be understated, and those states are not alone in their plight. There's another place in this country with a major Smithfield presence and therefore, a major heir and water quality problem. And that's Eastern North Carolina.

[\(37:36\)](#):

For many years until her death in 2021, local resident and activist Elsie Herring dedicated herself to telling the story of living near a hog CAFO in Duplin County. This is from FoodPrint's report on the pork industry. "Her family's home where her mother lived for 99 years is within smelling distance of several CAFOs. When the lagoons are full, the CAFO operator sprays the waste as fertilizer onto farm fields creating a mist that drifts onto nearby homes. Herring's mother who died in 2001, became a prisoner in her own home, unable to sit on the porch because of the stench and flies.

[\(38:13\)](#):

'After the spraying,' she said, 'you can see the manure glistening on the screens.' The stench is accompanied by noxious gases and dangerous bacteria. Researchers have found hog feces on the inside of Herring's refrigerator and on and inside the houses of other community residents. Her family, like many living near hog operations, suffers from respiratory issues, headaches, nausea and other health problems."

[\(38:37\)](#):

North Carolina is home to the top two hog producing counties in the country, Duplin, where Herring lives and Sampson, both of which are almost 50% non-white. This environmental racism, this situating of their facilities and communities of color. It's just part of the pork industry's playbook.

Pork Ryan [\(39:01\)](#):

I got interested in pigs because when I used to manage a couple of operations, the first one that I managed, I had every enterprise figured out. I had the cattle figured out at, I had the dairy goats figured out. And goats are hard to figure out. So the fact I had that figured out was an accomplishment.

[\(39:20\)](#):

I had the laying hens and the meat birds figured out. But the one thing that I could not quite figure out were the pigs. My name is Ryan, but most people call me Pork Ryan. If you don't know how to pronounce it, just hold out the Y and say, Ryan. If you've got a Southern accent, and I promise you, you will not forget.

Jerusha Klemperer [\(39:43\)](#):

I really wanted to talk to Ryan because he loves pigs. He calls himself a pork evangelist. I first found him on Instagram where he's been sweetly and joyfully posting about pigs and pastured pork production for several years. Now, when he talks about pigs, he just grins from ear to ear.

Pork Ryan [\(40:00\)](#):

My whole mission in life is to make sure that people know that they are loved and that there's hope for them. And the way that I do that is by training and educating experienced as well as new beginning farmers across the country, as well as around the world overseas in East Africa on best practices as it relates to livestock production.

[\(40:19\)](#):

While I was doing regenerative livestock integration where we have livestock rotating through paddocks and pastures and so I did the same thing with pigs. My issue was pigs kept breaking out. They kept destroying infrastructure. They kept being very ornery. And so I had a lot of trouble with them because I always blamed them as an issue. I had an encounter with a sow. Her name was Louis. And she broke out

of four infrastructures. One day they had to call me back to the farm to come save the day and I thought I'd save the day by putting her in this luscious isolation pen.

[\(40:59\)](#):

She had plenty of pasture, plenty of space, plenty of food, plenty of water, plenty of shelter. And so as a walking away, I hear kind of a little rustle in the back and I was like, I guess I should check that out and looked at her. I could see her looking at me and I was like, "Things are fine. Let me just keep going. Keep going." So then I walk away, walk away, and something just didn't feel right.

[\(41:23\)](#):

So I turned around one more time and I turned around at the exact moment where she started to just bellow this horrific screech. She went down at the fence gate, lifted it up off with her nose off its hinges and flung it about 20 feet in the air. 20 feet in the air. I watched that gate fly like a rocket, fall down, wobble while it was falling down, and you can see literally a triangular dance where her nose met the bottom frame of that gate.

[\(41:58\)](#):

At that moment, I gave up hope. I was like, "You know what? I'm done. I hate pigs. I just hate them out." I've tried everything. I've done everything. I don't understand why I keep failing in this area. But I think that was really a way for God to show me that I needed to be humbled. I remember getting down on my knees. Louise was trotting over to me in victory. She was trotting in victory and she came up to me grinning and I grabbed her by the big fat jaws and I just said, "I'm going to love you so hard that just maybe I'll understand you."

[\(42:36\)](#):

That took me on this huge journey of being able to see that all the issues that I was experiencing with pigs were my problems. It was a lack of attention to detail, a lack of animal stewardship on my part.

[\(42:49\)](#):

And so the more I just observed them, watched them, played with them, the more I began to appreciate their natural behaviors in the natural ecosystem. I often tell people that as much as I appreciate all livestock producers, mostly the CAFO model divorces animals from the land.

[\(43:09\)](#):

I remember growing up watching a National Geographic, Animal Planet Jack Johanna, Steve Irwin, and you could see animals playing dynamic role in dynamic ecosystems. I wanted to be able to express that through regenerative agriculture and I got to do that with pigs. The more I observed them, the more I was able to understand how I could best serve the pigs rather than the pigs best serving me.

[\(43:35\)](#):

The more time I spent with pigs, the more I realized how smart they were. They were very intelligent. Part of the reasons why I had trouble managing them initially was because they were highly intelligent. They have about the IQ between a 3-5-year-old, so we can say a four-year-old. And if a four-year-old does not have enrichment in scientific community, we talk about enrichment. How does an animal play? How does an animal engage with their environment.

[\(44:06\)](#):

When there's no enrichment, and in this case with pigs, then they start figuring out how to play in other ways, which means they're breaking out the fencing, they're destroying infrastructure as a way of enrichment. So it's important for pasture management that a pig is constantly rotated so that way their enrichment is towards nature, towards the environment in a healthy way, not in a destructive way

towards the environment and towards the infrastructure that you built around them. So they're very intelligent. They're actually very hygienic.

[\(44:39\)](#):

If you give them enough space, they will pick a spot to defecate in, and that's very true, whether it's breeding stock or whether it's a group. And it's a really good way for a farmer to be able to capture that manure if they want it and utilize it off of that enterprise.

Jerusha Klemperer [\(44:59\)](#):

I asked him what he wished consumers knew when they made choices about what pork to buy.

Pork Ryan [\(45:04\)](#):

I wish that a lot of consumers and maybe potential consumers would consider buying from a local farmer, especially a pasture pork farmer because I love pigs and I love pork because the quality of pork on average is so much better. So there's the actual quality of that pig. This pig is not just simply getting a generic ration corn soy ration. In a lot of cases, many of the pasture rays producers are not using corn and soy. They'll use a non GMO feed. So they might be eating pearl millet, barley, wheat, field peas. These are crops that are an alternative, small grains that are an alternative to the big two when it comes to corn and soy.

[\(45:57\)](#):

A lot of people are happy about that because they're tired of eating GMO corn and GMO soy. The other reason is exercise. Again, when we talked earlier about enrichment. When you have pigs in a CAFO operation, they don't get a lot of exercise. They're just stuck in the pen for all their days, with your pasture pork producer. Or even if it's not pasture, maybe they're being raised in the forest, they're getting so much exercise, they're running around, they're digging through the earth, they love to root and so they're being able to actually enjoy themselves and express themselves in their fullest possibility.

[\(46:37\)](#):

A pig in a confinement operation cannot do that. They cannot root on concrete. You're getting pigs who are more healthier exercise-wise, and you can see the difference because their meat is a lot more redder. It's not Pork, The Other White Meat. It's a lot redder.

Urvashi Rangan [\(46:58\)](#):

There have been a lot of attempts and a lot of different ways people have started to farm pork in a better way. There has sort of been multiple different entry points to that in, as you can see from even what's sold on the market. The one issue with pigs for everyone to keep in mind is that they eat a lot of food more than a cow, more than chickens.

[\(47:28\)](#):

When the organic industry was sort of just sort of getting up and running with the National Organic program, pork was one of the last of the meats to get to the market and that was because of the challenges with producing these vast quantities of organic feed to be fed to these animals. It truly is a challenge to raise pigs in a much more sustainable way with sustainable feed. If you're making that feed sustainable, you're making a lot of it.

[\(47:59\)](#):

And so the cost is quite significant for sustainable pork. When it comes to welfare, there's probably been the most, I would say, headway made in the sustainable space. There are an animal welfare labels on pork that you might see certified humane or animal welfare approved, which are truly trying to get at some of those welfare issues in industrial agriculture that we were talking about. And again, striving to provide pigs a more natural habitat, even while raised on the farm, providing them with more space to live so that disease does not transfer.

[\(48:43\)](#):

Providing lactating sows with space to wean their piglets and also even providing a little more time for piglets to wean. That's another issue in welfare where when piglets are removed very early on, they actually don't fare very well health-wise. And so having piglets wean longer with their mother's on their mother's milk actually again helps contribute to a healthier and better welfare system.

[\(49:18\)](#):

We do see a couple of labels specifically addressing that. Organic, unfortunately, did not capture the animal welfare component of sustainable pig production very well in the beginning. It is hopeful that we will help to increase these animal welfare standards for all the animals, but including pork in the organic standards.

[\(49:44\)](#):

But what the organic standards do do that really very few are doing is being able to provide quality feed to these animals that is truly organically produced. That means grown without pesticides, for example, or corn produced without glyphosate. While pasture is not required, inorganic production for pigs, there are farmers that are going above and beyond to provide pasture to pigs. Just to remind everybody, there's a little bit of a split in organic where livestock have requirements to be on pasture for at least a minimum amount of time a year, but poultry and pigs are only required to have access to the outdoors.

[\(50:36\)](#):

This is where you get into sometimes the industrial side of organic and whether it can allow for some of these more industrial practices to be used, despite the fact that the feed does have to be organic and that they may not receive any drugs as healthy animals. No matter what, when you see the organic label on pork, it definitely means more than what is the industrial baseline, but there can be even more done in that space.

[\(51:07\)](#):

So people should just keep that in mind. And when you see labels added to organic on pork, like certified humane or animal welfare approved, you are really starting to get a lot of value add in there in terms of addressing this constellation of issues that we've been talking about.

Jerusha Klemperer [\(51:25\)](#):

That word, pasture, came up a lot when I spoke to people about best practices for pigs. And if you've looked for better bacon or other pork products at the supermarket or online or at a farmer's market, you have definitely seen that label pasture-raised. So I asked Urvashi what that phrase tells us when we see it on a package.

Urvashi Rangan [\(51:43\)](#):

The pasture-raised claim a little like the free-range claim does not have a whole lot of teeth behind it in terms of what the federal government mandates or requires if you use that label. So if somebody wants to use that label on a meat product, they submit an affidavit to USDA and sort of tell them what they



want to do. Whether that means they were raised on pasture one month out of the year or a year out of the year is unclear and probably that is not differentiated in terms of allowing that claim to be used.

(52:19):

So for the consumer who's seeing those claims, you have to do a little more digging to make sure that you're really getting what you want, because a truly pasture-raised system is a great system. The question is how much integrity does that claim have on the particular product that you're seeing?

(52:39):

There's a couple of ways to go about this. One is, are there any other labels on that package? Is there an organic claim? Is there a certified humane claim? So I think looking for additional certifications can be very important. The next thing is jumping onto the website of any of those producers and starting to check for yourself, how do those pigs live? Is it required or are those optional? Those types of things.

(53:05):

I think maybe the surest way to know is if you're buying pork from your local farmer's market or a local CSA distribution system to find out what practices are being done, how often pasture is being provided. There's also a really great website called the Good Meat Project that can link people directly in their area to better produced pasture-raised meat products.

(53:34):

The other issue with being on pasture when it comes to animals is the direct building of soil health that you're going to do underneath that pasture. While animals may not be eating all of that pasture per se, they're foraging, they're stepping on that pasture. That's causing roots to deepen in that pasture. It is proliferating the biodiversity in that pasture. All of those things have huge environmental benefits. They have huge carbon sequestration benefits, they have nutrient density benefits, and often in multi-livestock systems, you will have multiple animals going through the same pasture because they all sort of eat something different or provide something different for that pasture. That's how nature is built to thrive on that kind of biodiversity that is put on the land.

Jerusha Klempner (54:40):

The pork industry's pushed to make people go gaga for bacon worked because bacon is delicious, right? It seemed like a good idea to dig into the flavor of pork. I reached out to Andrea Reusing, who is the chef and owner of Lantern Restaurant in Chapel Hill, North Carolina.

Andrea Reusing (54:56):

Before I moved here. I don't know that I'd ever tasted really great pork, except maybe when I was in another country. You might have a pork chop that you're like, "That tastes like something different. I don't know what that is. That's not pork." That's not this dry thing that my dad grilled, that he put dried oregano on or salad dressing on to marinate. That is something real. And the flavor is coming from the fat and the working muscles. And it's complicated and complex and a journey of flavor and experience and you want to gnaw that bone.

(55:29):

The first time I cooked a whole hog that was an outdoor hog, I did it at this barbecue festival that's annual in a town near me where they served like 50,000 pounds of snowfield pork. It was so moving because I had never cooked a hog before and I was with a friend who raised the hog and we cooked it together and we had lots of people coming up to our stand and just not even talking to us, just kind of zeroing in on the pig that was the skin was crispy and there was a lot of cracklings and the ribs were

exposed and it was at that pulling kind of state and people would just walk up and just put their hands right on the animal, right on the meat that was on the cooker and just start eating it and having these kind of crazy sensory flashbacks, mostly older folks over 60.

[\(56:28\)](#):

It was like a real education for me because I didn't come from a barbecue culture. You can taste the difference. You can taste the cruelty in pork and whether it's that industry term, PSE.

Jerusha Klempere ( [56:42](#) ):

PSE stands for pale, soft and exudative.

Andrea Reusing ( [56:44](#) ):

An industry term for what happens biologically during slaughter. It is about emotion. It is about fear. It is about the way an animal dies. It can be anyway. I don't know. Supermarket pork's not really worth eating to me. Though, it's like that is a flavor moment where when you taste that difference, you can't taste it in everything.

[\(57:13\)](#):

But when you taste it, that's the beginning of a shift, of a real shift personally and it's got to come from a shift personally. It can't come from a feeling of like, "I'm a bad person because I'm buying inexpensive pork."

Jerusha Klempere ( [57:30](#) ):

That's part of the brilliance of the pork industry's move. Taking the lowly underbelly of the pig and making it such a hit. You can take a fatty slab and cure it and smoke it and put maple and sugar on it and it can absolutely hide that industrial pork has become less flavorful thanks to genetics and feed and terrible living conditions for the animals. They knew that yes, you can absolutely put lipstick on a pig.

Andrea Reusing ( [57:54](#) ):

It's like extracting the thing that is the most easily modifiable, that's a durable good practically, and kind of playing a trick on people to accept something that otherwise we wouldn't have accepted two generations ago. It does a lot of work to hide the production practices. It does a lot of work to hide the labor practices,

Jerusha Klempere ( [58:19](#) ):

The pork industry, if left un-bothered by government or consumers, would like to keep pregnant sows and sows who've recently given birth in inhumane crates and they'll fight it all the way to the Supreme Court. It's an indication of how little they're willing to give to animals, to the farmers who raise their product for them to the communities around their factory farms who suffer from poor quality air and undrinkable water.

[\(58:42\)](#):

They fought to keep their processing facilities open during the early peak of the Coronavirus Pandemic, even though it was later made clear that we had plenty of meat. They've been credibly accused of price fixing. They have a lot of money and a lot of power. They're even shaping what you want and how badly you want it.

This transcript was exported on Mar 21, 2023 - view latest version [here](#).

Tim Gibbons ([58:59](#)):

It's really a question of who does our democratic process represent? Does it represent people and the vast majority of voters out here? Or does it represent special interests and a small subset of millionaires and billionaires and corporations?

Jerusha Klemperer ([59:19](#)):

What You're Eating is produced by Nathan Dalton and foodprint.org, which is a project of the GRACE Communications Foundation. Special thanks to David Sax, Patty Lovera, Urvashi Rangan, Silvia Secchi, Tim Gibbons, Ryan [inaudible 00:59:31], Ryan Nebeker and Andrea Reusing.

([59:33](#)):

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