The Solari Report

November 22, 2018

Solari Food Series
Poultry
with
Bill Niman & Harry Blazer

Bill Niman
Poultry

with Harry Blazer and Bill Niman

The Solari Food Series
Poultry
with
Bill Niman & Harry Blazer

November 22, 2018

Harry Blazer: Hello, Solari Subscribers. Here we are once again with the omnivore's friend, Bill Niman. We are going to complete our series of three with the animal category groups of poultry and sheep.

Hello, Bill.

Bill Niman: Hi, Harry. It's good to be with you again.

Blazer: Do you know anything about poultry? Have you had any experience with it?

Niman: A little bit, and gaining more quickly. I'm actually quite focused now in poultry. It's my second favorite endeavor on the farm.

Blazer: You were quite involved with what you might call 'heirloom turkeys' for a while, right?

Niman: I don't like the term 'heirloom'. That is a term that is being used to purposely confuse consumers. So what I am involved with is 'heritage' turkeys, which are the old breeds. In the eating experience, one might think that they are a completely different species.

'Heirloom' is really a modern white bird crossed with a heritage bird to give it colored feathers. It's a modern bird with dark feathers. It's a percentage of heritage breeding, and people feel good about buying it and think that they are supporting heritage genetics, and they aren't really doing that.

Blazer: That is very, very significant. Most people think of 'heirloom' as those original seeds and those original breeds like the heritage. What you are saying is that it is actually a technical term that is used by the industry that refers to something quite different.

Niman: Yes. The heirloom and heritage are quite different. The consumers are confused and believe that they are the same, as you stated.

Blazer: So if I was buying an heirloom tomato versus a heritage tomato, that has meaning in the tomato field, right?

Niman: Yes, to the best of my knowledge. I'm not that familiar with it, but it's not an analogous situation to the heirloom turkey or the heirloom chicken.

Blazer: That is a very, very significant point right off the bat. So tell us about those heritage breeds and why they are such a different experience – as an eating experience as well as your experience with them.

Niman: Actually, I remember it well. Eleven years ago Nicolette and I thought, "What are we going to do on our farm in addition to our grass-based beef cattle?"

We thought that the opportunity for us, both from an operational point of view on the farm as well as something that we had begun to see growing interest in the marketplace with our Northern California market, would be heritage turkeys – old breeds of turkeys.

We just happened to know the guy well who was the keeper of the genetics and the standard for the heritage breed of turkeys, Frank Reese in Linsberg, Kansas. So we determined that that would be a good fit for our farm, and we wanted to try it out. We called Frank and said, "Frank, we would like to get some of your turkeys. Would you be willing to sell us some day-olds?"

He said, "Yes, but you have to come and get them." So we literally rented a car, drove to Kansas, and came back with about 300 little turkeys chirping in the backseat of our car. We watched them hatch, loaded them up in the car in their carrying containers, and headed for California. That was the genesis of BN Ranch heritage turkeys, which we think are probably the best in the country from an eating point of view – or at least they were as evidenced by many side by side tests by some very well-tuned palates critiquing the eating experience.

One thing that was appealing to us also was the fact that heritage turkeys can actually survive outdoors, they breed naturally, and they can fly. So they exhibited all of the characteristics of their ancestors and the original turkeys.

For those who are living in areas where wild turkeys frequent, they are remarkably similar in appearance, albeit the heritage breeds that are being raised for human consumption as opposed to the wild ones have been selected for their ability to get a little fatter and develop a little more breast meat and a little more muscle as opposed to being wily in their own survival in the wild.

Blazer: Doesn't the meat tend to be a little bit darker than the Butterballs?

Niman: It's antithetical to that in terms of color, but what is really interesting about the meat quality is that even the part described as the white part (which is the front of the bird and includes the breast whereas the dark meat is the back of the bird and includes the leg and thigh) has the eating characteristics of dark meat. It's so wonderfully different. It's succulent because they store intermuscular fat because they need to survive in the winter, and they know that. That hasn't been bred out of them.

It's like the difference between lean beef and well-marbled beef. In terms of flavor, I can't imagine why anybody would want to eat white meat, but if you are a white meat lover, you are going to really, really enjoy the white meat on heritage breeds because it has the wonderful flavor characteristics but not as excessive as the dark meat.

Blazer: Are there some heritage breeds that you have found that are just better producers or better tasting? Which ones do you like the most?

Niman: Originally we had five different breeds. We did some taste tests, although the sample may not have been statistically valid, but we didn't notice any flavor difference. We currently breed three different breeds of maybe ten breeds that are out there. That was more driven by consumer preferences in terms of size and finish.

We like not the huge birds, but not the small ones either. It seems like the magic number is either 8-12 pounds, which is a female, or 18-22 pounds, which is a male.

Blazer: Can you tell any difference in the eating experience between the two?

Niman: My preference is for the smaller birds, but the reason for that is that I like to have the dark meat – the leg and thighs. If you have two small birds, then everybody gets a piece of the thigh or the leg, and people are happy. So it's really driven by the ritual and ceremony at the table more than the actual eating quality differences.

Blazer: Also, you don't look like Cro-Magnon Man when you have this huge leg in your mouth, right?

Niman: Correct. And you don't have to eat it with your hands.

The other side of that is that in all animals raised for food, the females tend to mature and fatten sooner. One reason is because they don't grow as much and they don't get as big. Two, I believe that with all mammals as well as poultry, the females tend to mature more quickly than the males. So maturity is about flavor, and it is also about stopping the growth of bone and muscle and metabolizing what they eat into fat and storing that intermuscularly in the thoracic cavities.

Blazer: If you're knocking out eggs pretty regularly and you have to produce little chicks, it probably helps to have a nice store of fat.

Niman: That is a store of all nutrients and all important building blocks. It is a very difficult task, and it takes a lot out of the hens to lay eggs. It may be a different nutritional requirement than it is to make good flesh, but they need to be fully loaded.

Blazer: You mentioned that you use three of ten breeds. Are you saying that today there are only ten heritage breeds? How does that compare with 100 or 200 years ago?

Niman: I just picked that number out. It could be 12, or it could be eight. I imagine that there are some very rare breeds that would increase that number.

As in all poultry, there were lots of breeds and lots of backyard farmers in urban situations or in the urban fringe. I think that every family farm raised a flock of birds and took some to market while they ate some themselves, and had a bunch of laying hens so they could sell eggs alongside the road or to their neighbors. Because there are so many different areas, locations, and breed preferences based on irrational things – like the color of their feathers as opposed to how many eggs they laid. I think that everybody who has thought about chickens and who has done any research has seen the myriad of different breeds and their characteristics.

They are not quite as different as dogs are. There is a big difference between a Chihuahua and a Great Dane, but there is an incredible amount of variation in all poultry, whether it is ducks, geese, chickens, or turkeys. But I believe that chickens would trump all others for the number of breeds, and then turkeys would be close behind that.

Blazer: Although in the chicken world, we end up with very few breeds in commercial production.

Niman: That is true for turkeys as well. I mean, there are some people who are raising heritage chickens and heritage turkeys, but in terms of the percentage of the entire national flock, it wouldn't even register.

Blazer: The point is that for the commercial purposes, what are the primary breeds that they use for chicken and for turkey in the commercial world?

Niman: The most prevalent white broiler is a Cobb. That is a breed that is owned by three companies that control the genetics and sell eggs or newborn chicks to the industry. One of them is Tyson, which is called Cobb. It's a separate, wholly independent division of Tyson. The second one is Aviagen, and the third one is Hubbard. So these are the three companies throughout the world that control all of the modern genetics which are ubiquitous. Wherever you go in the world, in poultry operations you will see the same genetics.

Although there are some variations in different strains, to a lay person or even a casual chicken farmer, they all look the same.

Blazer: We have a huge vulnerability in the food system because we have almost no diversity in that area.

Niman: Yes. It is a system failure or a system collapse which would not be surprising. Fortunately there are enough people who are maintaining the older breeds – either because they are passionate about it, or they believe that it is a better eating experience when they are adapted better to their environment wherever they are. So there is probably enough genetic diversity still out there that we could maybe reinvigorate the chicken flocks around the world, but it would be a monumental undertaking.

Blazer: What is the primary commercial breed for turkeys?

Niman: It's the same breeders, Aviagen and Hubbard. They have numbers (to designate them rather than names). I actually don't know the answer to that, but the Nicholas white turkey was the first one. It was developed in Northern California. That is a really fast-growing bird with a large breast that converts feed to meat, muscle, and bone very efficiently. That particular turkey dominates the entire world of turkey. It's a key ancestor to every modern white turkey on the planet.

Blazer: But now the modern white turkeys have numbers – not even names. That is beautiful!

Niman: The Cobb 500 is the other one. That is the chicken. Then you hear about 'Cobb crosses'. There is a little bit of crossing between that and other modern white birds, but these are birds that are ready to eat. They live for 42 to 49 days, and they grow very fast. They grow so fast that their bones can't support the obscene breast meat. They can't breathe naturally, and they can't fly. So we have really created something that in nature could not survive.

Blazer: You are talking about the modern turkey now, right?

Niman: The turkey and the chicken are the same. They both are in that category. That is an interchangeable description of the modern white broiler chicken and the modern white turkey.

Blazer: Are you saying that both of them mature in that period of time – 42 to 49 days?

Niman: No, the chicken is 42 to 49 days, but mostly 42 to 43 days. That is the economic imperative to get them to town by that age because so much of the cost of raising them is the feed, and every day reduces the margin.

Turkeys are about 10 weeks for the modern turkeys because they get much larger and heavier. For heritage turkeys, it is 26 to 28 weeks. So it's more than twice the time to get to equal weight.

Blazer: And what about for a heritage chicken?

Niman: It's the same. I believe that there is more variation in the growth rates on the heritage chicken, primarily because there has been a lot of momentum and a lot of people focusing on how to get the heartiness of a heritage chicken and the flavor of a heritage chicken but have it grow fast.

Also, the current movement in the chicken world in terms of how to make a better chicken, the focus has shifted from antibiotic-free and hormone-free and GMO-free to slower growing because the birds suffer so much from the growth rate, growing so fast that their bones cannot support their weight, and they are living in pain for their last 10-15 days of their lives.

The animal welfare community consumers are now becoming aware of that, and you will begin to see people announcing that by the year 2024 we are only going to have slower growing birds. Some people are more ambitious, and they are aiming for the year 2020 for all of the chickens to be slower growing. That is the key paradigm shift in the consumer and in the marketing of people who are active in the chicken world.

Blazer: 'Slower growing' is how many days compared to the typical 43 days for commercial?

Niman: They are looking to extend the growth rate from seven weeks to maybe ten weeks at the outside. Ideally they would like to have a bird grow in seven weeks but not suffer the way that the birds that are growing in seven weeks today suffer. The chicken world is doing everything that they can to get the performance that they can now get in 42 days of these modern white birds as close to that 42 days as possible by introducing some heritage genetics as a crossbreed, or seeking the 'golden goose', which would be a pure heritage bird that reach maturity in six or eight weeks.

Blazer: Maybe we could tie some balloons to them to give them some support so that they don't collapse, and they can still grow really fast.

Niman: Yes, helium would be great!

Blazer: Are you saying that heritage chickens are also typically raised in 28 weeks like turkeys?

Niman: No. The heritage chickens are 12 to 20 weeks. Actually, it's a pretty long continuum. There are some that go ten to 12 weeks, even up to 20 weeks. They get bigger, and they have different eating characteristics, but the consumer has been so conditioned to having a soft, mushy white breast that as soon as they eat something that has texture and a little bit of pushback or a little bit of chew, even though greatly flavored, "It's not the way it's supposed to be," in the consumer's mind.

The industry has done a great job of convincing people that chicken should not have very much flavor and should be mushy and soft.

Blazer: Part of that mush is the water content, too, because the USDA allows them to have quite a bit of water content in them after slaughter when it hits the market.

Niman: Well, yes. What happens is that most chickens, unless they are clearly identified as 'air chilled', are chilled in water. Some are chilled in ice, but most of the birds in the marketplace today are chilled in a communal bath of water. That way they can come down to temperature very quickly to keep them at an internal food-safe temperature. In that process, they pick up some water weight.

It's not as if they are injected with water, but normally if you slaughter an animal and chill it in the air, hanging on a hook, it's going to lose moisture and it's going to lose 3-5% of its body weight. But if you chill it in water, it actually might pick up 2% of its green weight – the weight immediately after slaughter.

So you are buying possibly 10% more water with a water chilled bird than you would in a typical water air chilled bird.

Blazer: So that would contribute to the mushiness, and that would also contribute to purge – neither of which you have when you are eating a heritage variety.

Niman: A heritage variety, if it was water chilled, would also pick up moisture. So I'm not sure that it's the genetics as much as it is the chilling method.

Blazer: That communal bath has created quite a few problems for the industry, right? If you have some bacteria in there and the water is not treated properly, it could definitely spread much more easily than an air chilled process. Isn't that true?

Niman: That is correct, although there is chemical intervention as well. The water could be heavily chlorinated or bromides or have other disinfectants or anti-pathogens additions to the bath. Sometimes the air chilled birds are dipped in an anti-microbial before they begin their air chilling process. So they might come off the line ready to be chilled, and they would be dipped for a moment to reduced pathogen mode because salmonella is quite prevalent in all poultry, and then they would be dried.

So the risk of getting cross-contamination is far greater in the water in that communal bath than it is in the air, as you pointed out.

Blazer: By the same token, we've got a situation where we are eating a little chlorine, bromides, or antiseptic undoubtedly.

Niman: That is correct. Depending on the company and an outfit's willingness to assume risk, the dial gets turned up on the chemicals to prevent a foodborne illness event.

Blazer: Some of that obviously gets absorbed into the meat also as part of the water is being absorbed.

Niman: I could not argue with that. I assume that that is exactly the case. If not, it is certainly on the surface if it's not absorbed.

Blazer: When you bring your turkeys to slaughter, is there a different process than the typical commercial process? Are there guys who will cater and are available to cater to a specific and better way of slaughter?

Niman: We have been on both sides of that. As we scaled the company, there are so few options that we were forced to ultimately go to the water chilling with our birds. Right now we are in the process of rebrooding our turkey operation, and perhaps chickens as well. We are going to go back to our original method where we killed the birds and air chilled them on racks in a cooler. I believe that it makes a better eating experience, and I am confident – per our discussion – that it is a safer product.

In terms of value, there is a 10% weight gain by chilling, and what you are buying is 10% extra water. It's going to purge, and you're not going to eat that. So in terms of the value equation for the consumer, air chilled at first glance seems more expensive, but for the amount of edible meat and digestible nutrients that you get, it could be cheaper. I haven't done that calculation yet.

Blazer: I was very happy that you got to that point because that was the point that I was trying to get to with this whole water bath and the absorption of water. That 10% number has been the one that I was familiar with. Thank you for getting us there. That is excellent.

What did you feed your turkeys? By the way, when you say, "We are getting back into it," that is with your relationship with Blue Apron, right?

Niman: They exited the turkey business, but my farm is independent of Blue Apron. So we maintain the breeding flock, and now we have our own breeding flock. That is really the family jewels, if you will.

We are growing that, and we will be strongly back in the market for the holidays in 2019.

Blazer: And that is Bill Niman, independent of anybody else.

Niman: Yes.

Blazer: And what is that brand going to be? What brand are you going to sell it under?

Niman: I'm not sure yet. We are talking to people. We talked to some poultry people here today. That is in the works.

Blazer: But you are restricted because of previous sales of using the Bill Niman name itself, correct?

Niman: That is unclear, but it is probably so. Bill Niman is my name, and there can only be a few restrictions on that, but in terms of BN Ranch, that name probably won't be revived.

Blazer: What did you feed your turkeys when you were in your prime, and what are you planning to feed these new ones as opposed to what commercial people do?

Niman: You know that we are very driven by GMO-free more than anything else. We think that there are unknown and undiscovered horror stories out there as well as the discovered horror stories and warnings that we have to stop using genetically modified corn and soybean. It's compelling from a spreadsheet to use that, but my test is always that if I don't want to eat it myself, I don't want to sell it, and I don't want to feed it to animals. If I'm not willing to feed it to my children, which is an even higher test, then it shouldn't be sold.

We are currently opposed to raising animals to be consumed using genetically modified feeds. Fortunately we have some choices in California, in the West, to use wheat and barley and sunflower meal and safflower and other crops and concentrates that were grown and are excellent feeds. At this time they are not genetically modified. So that is an important thing to us.

I believe that right now there is a battle in the marketplace. It's early, but it's coming, and it will peak soon. There is a battle over what is more important to the consumer: GMO-free in poultry, or slower growing? So the organic moniker and antibiotic-free are not as compelling anymore with consumers.

We are responding to it because it's the right thing to do to be GMO-free and slower growing humane raising of birds, but it is also a compelling part of our story and it differentiates us and anybody who is doing that from the maddening crowd.

Blazer: Organic would be GMO-free, but people are not associating GMO-free with organic? Is that what you are saying?

Niman: I think that they are willing to pay a significant premium for GMO-free, and that is a net better to farmers than the organic premium and the cross of organic inputs.

Blazer: Because it can be non-GMO but still not organic. So there could be synthetic pesticides and fertilizers used in the growth of those grains.

Niman: That is correct.

Blazer: Aren't poultry really carnivores at heart? And yet we always see this, "Fed 100% vegetarian diet." Is that really what they want to eat? Is that grain, or would they really prefer that succulent insect?

Niman: I think that 'omnivores' better describes them. They certainly would eat both carrion and any flesh and any insect that they could ferret out of their environment, and they would thrive on that. The unfortunate situation is: Where do you get clean meat and bone mill or slaughterhouse waste or blood meal? And how could you identify an industrial supply of meat and animal byproducts that you could safely feed to any animals? It's just not out there.

The genesis of a vegetarian diet was really a marketing gimmick for people to feel better about the chickens that they are eating, and that the chickens were not eating meat (in particular chicken by product). It really took hold. But the more compelling reason for not using meat byproducts and meat in poultry raising is that it's just that the supply is so contaminated. It's all the animals that were condemned and went to rendering and were not fit for human consumption, whether they had lead poisoning or they were *radioactive* from too much antibiotics or —-

— beta agonists or whatever (beta agonists are a family of drugs that relax the muscles of the airways and promote easier breathing).

Blazer: That is the stuff that ends up in dog food, right?

Niman: A lot of it ends up in chicken feed. Right now, it's not that easy to qualify for pet food. It's a lot easier to qualify for meat and bone meal that could be fed to pigs or chickens. The standards are lower.

There is so much sentimentality around what people feed their pets. It's either not good marketing or it's not good science and nutrition to feed lower quality meat products to your pets.

Blazer: So you have two major problems with commercial poultry, and maybe even commercial meat in general, but certainly poultry and pigs. They get GMO feed, and they also get a feed from a waste stream that is often times highly contaminated.

Niman: Yes.

Blazer: Delightful! Up in Montana I had somebody who was helping me raise some sheep, goats, and some pigs and chickens and so on. Every year, especially when winter came along, we would slaughter a fair amount of the chickens and then repopulate them the next season. So you go buy eggs or chicks, just like you did. They even ship the chicks through the mail.

I said to him, "What I'm interested in is having a chick that comes from layers that are fed either only organic grain or only non-GMO grain." We couldn't find anybody.

There is actually a little bit of a kink in this whole system that you can't find the 'root stock' which is the little chicks. You can't find any that haven't come from a stock that has basically been fed contaminated feed.

Niman: That has been completely industrialized. Grandparent stock and great-grandparents are kept in total confinement because those are the family jewels. Their eggs are hatched, and they become parent stock. Then the parents will lay 300 and up to 400 eggs over 18 months or two egg seasons. Their offspring are the broilers. Those are the offspring, the terminal eggs.

None of those breeders are kept outdoors. They never get outdoors. 99% of the chickens never get outdoors. That is not a differentiator, but the breeders are kept in really close confinement – often in cages – because the eggs are the cash crop. You want to get every egg that you possibly can. So you have a capital investment set up with an infrastructure that the bird lays the egg, the egg goes down a chute, and you keep them fertile. They don't get to set on them and they don't begin cell division.

Those birds are living the ultimate industrial agriculture. As bad as their offspring have it, they have it worse.

Blazer: So there you have it. Because the whole humane movement is about the chickens that we eat, it hasn't come on the radar at all about the whole breeding stock and how they are basically imprisoned their whole lives.

Niman: It may be because the large organizations focused on animal welfare, Compassionate World Farming and the other big ones, know what is going on, and they know that they can't change that. They are just trying to put enhancements and enrichments into the buildings. They made a big fight to have windows in the building, and finally the industry put a couple of windows in the building so that there will be natural light coming in, which is considered an 'enrichment'.

Then they put a bale of straw in there or something so that they can jump up on it. There are 15,000 to 30,000 birds in the building with a few bales of straw and a window the size of the windshield on your car, and those are considered giant steps forward for animal welfare. Come on!

If the public had any idea what was really going on inside these buildings – if they were able to get inside of them or even see a video – I think that they would stop eating this stuff. It's really scandalous that we can't get into the buildings and see all this stuff being done behind closed doors and solid walls, but that is a whole other subject.

Blazer: How were your turkeys raised? Describe their life.

Niman: Well, our breeding flock goes outside every day. That is a huge thing. They can roam over 100 acres if they want to, but they don't. They know where they live, and they have a partially symbiotic relationship with guardian dogs that the turkeys live with 24/7. The turkeys know that the dogs protect them from predators. Poultry is quite vulnerable to predators, especially in our geography.

Even so, they go outside, and they could fly away if they want to. They can easily fly over the fence. The fences are really designed to keep the dogs in, not the turkeys because the turkeys can fly to the roof of the barn or the trees – and they do.

So the turkeys are outside with lots of room, and the turkeys that we raise for meat have unfettered access to the outdoors and tons of area – acres and acres – to move around on. They take advantage of it.

That in itself is fairly unique. It's not unique in a historical sense because that was the way that all turkeys were raised 50 years ago. They take dust baths, and they fly around a bit and play. They are very active. They are not only healthier because they can be outside, but I believe that the ability to move around and develop muscle tone and collagen leads to a better eating experience, which is really what it's all about.

Blazer: And are the male turkeys right along with the females?

Niman: We do to a point. Turkey breeding is pretty rough on the females. Because turkeys evolved in northern climates, they have been Darwinian selected to only lay eggs in the spring and summer. That's because their offspring would not survive if they were hatched in August or September. They wouldn't mature enough to get through the cold winter whereas chickens evolved in the tropics, so they lay 300 eggs a year, and they can be born any time of the year.

In answer to your question, from August to November, which is the big growth spurt and is when the turkeys may become sexually mature, because the females aren't cycling then, they are not building eggs, and the males are not interested in them.

There are no alpha struggles or males jumping on the females because they are not driven to breed at that time. There is no estrus happening – or the equivalent of estrus. So they can run together.

You cannot necessarily run breeders together like that because it's pretty violent, and it's a problem. So we manage the toms with the breeding females, so we rotate different toms in and out for breeding purposes, and we also give the hens a rest because the semen from turkeys will last for ten days in the oviduct. So if they lay two eggs every three days, they don't have to mate that frequently.

In answer to your questions, sometimes we sort them because they have different growth rates and it's a little bit easier to manage, but they don't have to be separated. They can run together.

Blazer: So they get a fair amount of insects in their diet, too, because they are out there free-ranging in addition to the grain that you feed them.

Niman: That is correct. Of course, you put a few thousand turkeys on a few acres, and there aren't too many insects that survive too long. They work hard to get every one of them.

Blazer: So if I was growing top quality insects, and that could be a feed source for you, wouldn't that be something good for the industry?

Niman: There is a lot of work to that, especially the larva. Will Harris at White Oak Farms is doing that – or at least he was. I'm not sure if he is still doing it. He would reproduce soldier flies.

He had a slaughterhouse on his place, and he would take the slaughter and use that as a medium to grow flies, and he would feed the larvae to the chickens.

Will Harris is quite a celebrity farmer in Bluffton, Georgia. He's an interesting guy. You should interview him.

Blazer: I will. So, Bill, we are not going to get to sheep today. That will give us an opportunity to talk one more time, if you don't mind.

Niman: No, I love it. Any opportunity to talk with Harry Blazer is one that I want to take.

Blazer: The permaculture approach integrates animals with other agriculture. The modern agriculture will tell you to do just the opposite. In what way is poultry complimentary to a farm or with other animals and other mammals?

Niman: When and if you can gather their manure, which we do because they are inside half the time, once a year we clean that out and compost it slightly. Poultry manure is a cold manure that can go right on the ground. So we do compost, and we spread it before the rains. It's a phenomenal source of nitrogen. That is a classic animal rotation returning nitrogen to the soil, and it's very effective – especially in areas that are nitrogen-deficient.

That is an obvious one. Another thing that we do is we are able to use our naturally occurring forage and other plants and insects and convert that to droppings, and spread them on the ground.

Blazer: Poultry is actually quite complimentary with beef cattle, for example. So the beef can be there, the chickens can be there, and the chickens pick the insects and larvae and other things out of the dung as they start to mature. It's very helpful, right?

Niman: Yes, but the reality is that in terms of natural systems, I think that we would be far better off without these one-stomach creatures – pigs and chickens – because for them to really thrive and be available for human consumption, they need to be fed grain and seeds of the plant. There is an awful lot of land that is being tilled and disturbed, and what is going on underground – which is so complex and important – from carbon sequestration to making soil and all of the regenerative things that we need to focus on to plow and plant land to grow corn and soybean, even if you do it organically, there is a net loss. Compare that to grazing animals, and we should just be eating grass-fed beef and sheep, or any grazing animal like buffalo, if we want to do the best thing for the environment.

Blazer: So we need billboards that are the exact opposite of the Chick-Fil-A ones. We need chickens on the billboards painting, "Eat more beef."

Niman: Exactly. It has to be grass-fed beef through.

Blazer: Of course.

Niman: I think that one of the tragedies is all of the corn and monocrop cultures which are such huge business that all of the research and energy that went into producing genetically modified plants was driven by this huge need for corn and soybean – a huge percentage of which is used to feed animals.

Blazer: Bill, when I was over in Europe helping a major chain, they were making a big deal in the UK about how they don't allow GMOs unless you put them on the label, but every major chain frowns on GMO as an ingredient. But, through the back door – or the front door, if you want to describe it that way – huge amounts of GMO feed for animals was coming in. In fact, there was this time when there was about a three- or four-day gap in the non-GMO feed. That is when the floodgates opened for the GMO feed. You wonder sometimes if that gap was engineered.

Niman: By Bayer or Monsanto.

Blazer: Right. By the Third Reich.

Niman: Exactly.

Blazer: Do you use antibiotics? If you use them, do you segregate? If you use them on a turkey or a chicken, do you say, "It has to go somewhere else?" What is you policy on that?

Niman: Specific to our turkeys, with the heritage breeds, one of the compelling things about those breeds is that they are hearty. If you allow them room to roam and you don't overcrowd them, they rarely have need for therapeutic treatment like antibiotics and antimicrobials.

When you do have situations, which we have had, we treat them with antibiotics, and we sell them to the same customers, but not as antibiotic-free.

My philosophy – and I have never equivocated regarding it – is that anybody who raises animals should understand the miracle that these things really work, and that when animals are sick, given therapeutic treatment of the right antibiotic they recover, and it's a wonder. To deny them that would be cruel.

Also understanding that I am a strong advocate for the use of antibiotics to treat animals who are ill, I am even stronger in my position that you should never use antibiotics to replace good husbandry or prophylactically because you are worried that they might get sick. You prevent things through husbandry and through genetic selection and the environment that you provide them so that they can thrive.

Blazer: Is there or would you impose a mandatory waiting period after you've treated a flock with antibiotics?

Niman: Of course. The withdrawal periods on the labels are absurdly short. It's been proven – and you know that I have been involved with this in a really deep way from testing – that most antibiotics are metabolized and excreted at different rates for the different families of antibiotics. Tetracycline may be different than penicillin and so on.

After 60 days or 90 days – and we test down to parts per billion – you can't identify or discover any antibiotic residue from animals that have been treated 60 to 90 days prior to testing. So if they fully metabolize it, I am really supportive – based on that – and the results that you get by treating animals.

Animals will get sick, and I cannot justify antibiotic-free/never-ever as a marketing ploy because the consumer has been convinced that that is what they should be reporting.

Blazer: You also see on chicken labels, "No hormones used," but that is an FDA policy, right? You can't use hormones on chickens.

Niman: That is correct. There is some history there – the DES scare, the cervical cancer that was a result of all animals being fed DES, which was a synthetic estrogen used in the 1950's and 1960's. The young women and girls who ate that developed a very high rate of cervical cancer at a very young age. So that was the beginning of the discovery of that and the consequent outlawing of it.

As you said, the use of hormones is outlawed for good reason in poultry and pigs – single-stomach animals – but it is not outlawed in the use of multiple-stomach animals, such as beef cattle.

Blazer: So the diseases that are famous for wiping out millions and millions of chickens sometimes in this country and often times in Asia, is it much less likely? Is it almost impossible that that type of epidemic would occur if we were raising our chickens and our turkeys the way that you have?

Niman: The industry says that the threat from avian influenza, which is the dread disease that you are talking about, or Newcastle disease is another one, that these are diseases that are spread by wild birds. Strangely enough, serious outdoor-raised poultry has less of an incidence than total confined, indoor-raised birds of avian influenza. That is what the data shows.

Small flocks – backyard flocks – because there are so many, they might yield a different analysis and a different result. But birds that live outside are heartier. Even though they are more likely to be exposed to droppings from wild birds that would be spreading the influenza, they are also more resistant just like the wild birds are resistant to it.

My experience with poultry is that when we start them indoors so that they don't go outside until they are 16 weeks old, they tend to develop more intestinal enteritis and illnesses that aren't life-threatening but are GI tract challenging. As soon as you let them outside, that goes away. So we have found that to be a therapeutic treatment.

Rather than reach for the antibiotics, if birds begin to get a little 'loose' (their stool gets loose), if you will, we open up the doors and let them out, even if they are only six weeks old. We let them loose, and they quickly snap back.

Blazer: One of the reasons why you keep them enclosed is because of aerial predators. Is that a primary reason?

Niman: Yes, and they need to be kept as much as possible at a constant temperature. Outside some days it's windy and some days it's cold, and then they don't get heated up in the sun of the day.

Actually, the farm that we raise our turkeys on, which is in the Central Valley in California where it gets very warm, they would come into the building during the daytime to get out of the sun if they didn't have shade available.

Then they would go outside in the afternoon and spend the whole night outside, and then come in the next morning to eat and drink, and then they would go out again. Noontime when the sun was high and it was hot, they would come in.

The opposite is true of the young birds; they want to be warm. Poultry likes to be about 100 degrees in the early stages of their lives. So it's easier to maintain a friendly environment for temperature by keeping them enclosed. That is called 'brooding'. That means that the newly-hatched chicks or poult (baby turkey) you want to keep them at 100 degrees for a couple of weeks.

Blazer: So you have the poults, the toms, and then what are the adult females called?

Niman: With chickens you have chicks, which are newly-hatched chickens. They could be roosters or hens. A newly-hatched turkey is called a poult, and the males are toms and the females are hens.

Blazer: We are about out of time, but I just wanted to mention that the poultry categories are actually quite rich. You have ducks, geese, capon, quail, guinea hens, and all kinds of stuff. Have you had experience raising any of those other alternative poultry?

Niman: No, but we did work with a big slaughterhouse farming operation in the valley that was raising and processing all of those. I have some familiarity with it – more than most people do.

Blazer: Are they likely to be as commercially raised as anything else?

Niman: Yes, and they have their own family of diseases and challenges. The ducks – it's not pretty.

Blazer: Is there anything else that you would like to tell our listeners before we sign off?

Niman: I think it's important to try to discover and have access to outdoor-raised poultry, preferably pasture-raised. Most importantly, gain access to birds who have unfettered access to the outdoors. They have a better life, they are healthier, they taste better, and it's better all around. So whenever possible to get genuine outdoor-raised poultry, which is not easy, but which hopefully will become easier as time goes on, try to support that.

Blazer: We are not only calling you the Godfather of Grass-fed, but we are going to start calling you now the Poultry Pundit. How is that?

Niman: I love it. I am excited about it. I'm very passionate about animal food and trying to restore sensible ways of feeding people really wholesome animal food. You cannot do that without being involved with poultry. It's so ubiquitous. It's such an important part of everybody's cuisine that to stick with pigs and cattle because they are more interesting and you don't have to have eight billion of them to meet the annual need in the US, but I want to change things and restore sensible systems for producing animal foods. Chicken has to be a part of that. Therefore, I am driven at this stage of my life to do that right in the best possible way.

Blazer: That sounds like a heck of a mission statement. I love you, buddy.

Niman: You, too. I look forward to talking sheep – and counting them.

Blazer: Thank you.

MODIFICATION

Transcripts are not always verbatim. Modifications are sometimes made to improve clarity, usefulness and readability, while staying true to the original intent.

DISCLAIMER