

Daniel Decker: Welcome to Jon Gordon's Positive University podcast. My name is Daniel Decker, I'm the co-host of Positive U. And on today's episode, Jon talks with Dr. Zach Bush, one of the most compelling medical minds working to improve human health today.

Daniel Decker: This interview and what Dr. Bush shares about the science of health, disease, glyphosate, food allergies, and the healing of the gut, is truly fascinating. As one of the nation's only triple board-certified physicians, he knows his stuff.

Daniel Decker: And you definitely want to listen close to this one, because I promise, it's going to blow your mind. But here's the thing, don't keep what you hear to yourself. Share this episode with others, we'd love to hear from you. And when you do, post on social and tag Jon Gordon 11, that's @jongordon11 with what stood out most to you.

Daniel Decker: All right, let's dive on in.

Jon Gordon: Hey, I'm Jon Gordon with Positive University. And today my guest is Zach Bush MD. Zach, how are you doing?

Dr. Zach Bush: Jon, I'm really pleased to be on your show and pleased to be with your audience. I'm doing great today.

Jon Gordon: I am so thrilled to have you on here, because one, this is near and dear to my heart. I struggle a lot with gut health. Can you talk about first and foremost your experience as a doctor, your academic training, your credentials and so forth, so people understand who I'm talking to?

Dr. Zach Bush: Sure. I come out of the academic environment of Western Madison. Medical doc, MD. Trained University of Colorado, and then subsequently went to the University of Virginia for subspecialty training in internal medicine, which is general adult care. It's also the foundation for all the subspecialties at Madison.

Dr. Zach Bush: So everything from hospital-based care all the way down to the subspecialty clinics of cardiology, pulmonary, renal, all these subspecialties that focus on disease management in these little sectors.

Dr. Zach Bush: And after internal medicine, I went on to be a Chief Resident training year-round faculty at the University of Virginia. Really at that point started to uncover some truths that I hadn't really seen before. "To really learn something, you have to teach it," is what they say, and that definitely happened to me.

Dr. Zach Bush: And so I went from kind of swallowing the dogma and trying to become an expert of the dogma, to realizing there were some massive fundamental flaws in our teaching in our education systems around medicine. And realized that almost all of the data I had been taught was really coming out of the direct stream of the pharmaceutical companies, and their belief systems around the

necessity for disease management and really the natural absence of health itself.

Dr. Zach Bush: And so that had really shaped who I had become as a doctor. And that turned me into a technician, it turned me into a pharmaceutical rep more than anything else. And in the end, I was struggling to see positive outcomes in my patients. And so in a little bit of sense of hopelessness and frustration, I went on to further training. I figured I needed to know more, so I did a subspecialty in endocrinology and metabolism. Three more years of fellowship training in the ways in which hormones and the environment dictate our metabolism, and how we utilize fuel for optimal health and healing.

Dr. Zach Bush: Only to find that whole subspecialty really, again, steeped in the pharmaceutical model. Where we had to give exogenous hormones of growth hormone, or insulin and thyroid, and all these exogenous hormones. Estrogen, progesterone, and we became these technicians of hormones instead of really backing up to say, "Wow, maybe a 4,000 hormone system that works in concert like a symphony every day would be really foolish for us to micromanage, or try to use these dull hammers of a single hormone-type management system."

Dr. Zach Bush: But that was ... you know, we didn't have much more to go on. Our toolbox was thin. But then 2006 hits and a couple of books start coming out around the power of nutrition to affect chronic disease, and one of these was from Neal Barnard. I went on to read his book on reversing diabetes, and I had gone to the third best training program in the world for endocrinology, and nobody had mentioned that you could simply just reverse diabetes. And so that was a huge a-ha moment for me, that actually correlated with my cancer research.

Dr. Zach Bush: So by this time, I had found my way into basic science research around chemotherapy development and management of cancer. And at that same time, I was proving under the microscope that vitamin A compounds from food was one of the most powerful ways to kill cancer. And so the concert of somebody coming in to say you could reverse chronic disease like diabetes with the nutrition, and meanwhile I'm killing cancer under the microscope with nutrition, was that a-ha moment of, "Wait a second, is there a bigger message here, that maybe the whole disease paradigm has been just degraded by a lack of nutrients, a lack of nutrition in the environment?"

Dr. Zach Bush: So I got really passionate on that. I set out to start a new approach to nutrition education within the academic setting. That ran into all kinds of roadblocks, from funding all the way to really, philosophy. And ironically, it was the dieticians that were training the diabetes educators that came to block our progress, because I was out to really teach a plant-based philosophy, which is where most of the science really laid in reversing cardiovascular disease, reversing diabetes, reversing cancer.

Dr. Zach Bush: And so I set out to start that clinic, but it was flying in the face of the food pyramid and the importance of milk and dairy and meat proteins in the diet and all of this. And so that led to kind of a schism, and I had to make a decision at that point. My basic science research was collapsing because the NIH was failing under the recession at the time. University was in a massive layoff phase, nobody was really out to protect anybody's job. And the only way to protect your job was to wrap yourself around a pharmaceutical promise.

Dr. Zach Bush: And so the physicians that were surviving had grants that were supported by the pharmaceutical industry and everything else. And in this tumultuous time, Eli Lilly, a big pharmaceutical company, bought University of Indiana and suddenly funded all their labs, meaning that those researchers never had to write another grant again. And so there was a huge e-flux of our endocrine department to the University of Indiana to start drug research there under this pharmaceutical company.

Dr. Zach Bush: And so to see the lines that had been blurred for many years suddenly be erased completely, and realizing, "Wow, our Western medicine paradigm really is owned and manipulated and mandated by the pharmaceutical industry at every level, and we need to break out of that." And so I didn't know how I could fix academia at the time, but I knew I could at least learn, myself, nutrition and become [inaudible] of the education.

Dr. Zach Bush: So I left academia in 2010 and started my own nutrition center in rural Virginia. I figured if I could teach the most impoverished communities in our state a nutrition program that could be scalable, then I could affect the whole world. And so we set out there, and within a few months we were having extraordinary results in some of our patients. But there was a big 30% of our patient that, over the next couple of years, proved that food itself was not enough to heal. The food was actually often hurting them, and we were seeing health food become noxious, inflammatory, to patients with things like diabetes and heart disease and the like. Chronic fatigue syndromes, their inflammation would go up eating kale and would go down eating refined foods.

Dr. Zach Bush: And so that really challenged everything we understood about nutrition, and it forced me to go deeper than the food itself, and that's when I got into soil science. And so now I meet you today as a crazy doctor who's out in this incredible cross-section between our food industry's megafarming and our medical systems and megapharma, and how those two chemical industries have collided and are actually run by the same corporate structures, the same companies owning both our farming industry and big pharma of Western medicine.

Dr. Zach Bush: And how that's come to be and perhaps how we can escape that is consumers.

Jon Gordon: Yeah, some call you crazy, but I've listened to you. I've listened to a lot of your podcasts, your interviews, your work, and I call you brilliant. And it's one the

reasons I wanted to have you on, because personally, I struggled for years, over the last 12 years now, with stomach issues, with gut health issues, with food allergies, and my health was getting worse and worse every year. My daughter struggles with it, my son struggles with it, and my wife struggles with it. So as a family, we can't just go out to dinner and have a normal meal, we are really struggling.

Jon Gordon: It was so bad last year that I had to go see a doctor. I went to a holistic MD who ... a gastro holistic MD, and she started pointing me towards the direction of leaky gut, and trying to heal my gut. And then I found your product called RESTORE, and you can talk about that later. I started to take that, it started to really help a lot. But then I started to listen to you and what you had to say, and you have the answers. People need to understand that you have the answers that ails our society. Let's talk about what we're dealing with as a society, because I know I'm not alone. I'm hearing from more and more people that they're getting their colons taken out because they have inflammation.

Jon Gordon: Literally, people every day are just having to go through surgery to get their colons taken out because they're dealing with such issues. Can you talk about what we're dealing with as a society with the gut health and autism, and beyond?

Dr. Zach Bush: Yeah, you are absolutely not alone. We're looking at 80% of American consumers now identifying themselves having a gut problem. That ranges from severe heartburn to the food allergies and sensitivities you're talking about. 18 million people with gluten sensitivity that's severe now. We have millions of people with the autoimmune disease celiac disease, most of them going undiagnosed still. We have the whole cascade of ulcers to diverticulitis, to the intestinal hernias, the inflammatory bowel diseases, the poor motility syndromes of constipation, then diarrheal irritable bowel syndromes, all the way to rectal issues. And ulcerative colitis right there at the end of the colon.

Dr. Zach Bush: And so the whole gamut now, 80% of the US population, keep in mind we're 300 million strong. And so you start to look at that and unfortunately, that's not just the adults that are suffering. Our children more than anybody else are suffering with these gut disorders, and more than anything else, the allergies and food sensitivities. It is very difficult to find kids who are under the age of 10 that haven't been diagnosed with some form of seasonal allergy, food allergy, food sensitivities.

Dr. Zach Bush: It was the rare kid that had a peanut allergy in a school when I was growing up, and now 40 years later, you go into a typical nurse's office in the school and it's literally EpiPens with all kids in the school all labeled by name, so they know when to inject the epinephrine when they're going anaphylactic over what? And it's not peanut allergies, it's eggplant, it's eggs, it's avocados for God's sake. It's like every food on the planet can now cause sensitivities.

Dr. Zach Bush: And so this is really bringing you and 80% of the consumer into this realm of, "How did the food itself become inflammatory? How is the food making us sick?" And to answer that, it took a brilliant man that works alongside me, John Gildea, a PhD in cell biology and historically coming out of research around cancer as well as kidney health and hypertension and all this. And he became really tied into [inaudible] and some of these other great minds coming out of the late 1990s that were starting to blow the whistle on our chemical industries and our food industry.

Dr. Zach Bush: So he had been following that data, and when I came to him with the RESTORE product that you had mentioned, and we started doing science with him around how it was functioning to cause such changes in the gut. He quickly discovered that we had found really, the heart and soul of the problem as much as we had found the solution.

Dr. Zach Bush: The problem, it turns out, is in this leaky gut phenomenon that you described there. What your physician was recognizing is that you had lost your boundary between the outside world and your immune system. Everything you ate had the ability to move unregulated into your immune system, and you had them mount an attack. And so you were mounting a food fight every time you ate, which was depleting your energy, brain fog right after, bloating, slow bowel movement, and an enormous amount of indigestion, reflux, poor sleep quality, vascular inflammation. It causes rosacea, facial changes, all kinds of skin problems can result.

Dr. Zach Bush: And then it gets into the neurologic stuff. The poor sleep quality is part of that neurologic injury, but poor sex drive comes after that. Testosterone drops in men, estrogen/progesterone ratio screw up in women. And we get this huge endocrine disruption from the neurologic disarray happening from this overwhelm from the meal itself.

Dr. Zach Bush: So what's driving that? What's causing this permeability and this leak to happen? It is one molecule really, in our food and water systems that's driving this in force, and it's a molecule we'll call glyphosate. Which doesn't sound familiar to the vast majority of you until you find out that it's the active ingredient in Roundup, the common weed killer that all of you likely have in the garage, or have certainly seen on the shelves at Lowe's, seen at Home Depot, and every other garden store in the country.

Dr. Zach Bush: Roundup went off patent in 2007 and became available at the generic level, and so now the vast majority of Roundup is not even made by Monsanto, it's made actually by Dow and 3M and the five other big chemical companies in the US. But even they are dwarfed by the amount that was made in China and dumped on the international market at pennies on the dollar compared to the Roundup.

Dr. Zach Bush: And so glyphosate is now at five billion pounds a year in consumption world-wide, and that unfortunately is a water-soluble toxin. A water-soluble toxin is a

bad idea on a planet that is 70% water, not just by surface area, but the air we breathe, the clouds that rain it down upon us, the plants that grow within that soil, and the bodies that would live off those plants. All 70% water.

Dr. Zach Bush: And so as we track this molecule through the water ecosystem, we find out that 75% of the rainfall, 75% of the air we breathe is contaminated with this glyphosate molecule. The foods we eat, contaminated with glyphosate. Now typically this is in root vegetables at the highest, but all the way up to our kale being high, Brussels sprouts being high. A lot of these foods that we think as staple superfoods are now contaminated, and it's because of the farming practices using so much of this glyphosate in the environment.

Dr. Zach Bush: So what does the glyphosate do? We've been told by the chemical companies that it's safe for humans. Why would they say such a thing? It's because they identified in their patents that this affects an enzyme pathway that kills bacteria, fungi, and plants, therefore it works as a great weed killer. Spray it on a weed, the weed's going to be dead in a day or two because it's depleted that plant of its protein structures.

Dr. Zach Bush: When you their ability to make protein, the plant or the human dies. The reason they told us it was safe for humans to be around is because we don't have the enzyme pathway that makes those amino acids or protein building blocks that the plant and bacteria do. Instead, we rely on our food chain to provide the amino acids, and so we call these the essential amino acids, and there's nine of these guys.

Dr. Zach Bush: They're a lot like the vowels of the English alphabet. If you remove a Z, you don't screw up the alphabet that bad. My name and maybe the zucchini suffer, but the rest of it goes pretty ... But if you take out a few of those vowels and you suddenly don't have an O or an I or an E, you're starting to misspell a vast majority of the words. Now if you do this in the protein world and you take out three or four of those essential amino acids of the nine of those, you suddenly start misspelling a ton of proteins. And when you misspell proteins, they misfold, and they become dysfunctional. They either don't work at all, or they don't work as well. And some of them will go on to actually cause plaques.

Dr. Zach Bush: If they're misfolded enough, your immune system can't get them out of the body, and they create these tangles. And that's what we find in the brain of Alzheimer's, in the brains of Parkinson's patients, and the brains of people with ALS and the spinal cords. We see it in MS, we see it in the pancreas of diabetics, we see it in the abdomen of people with lymphomas and leukemias. And so these tangled proteins are kind of a unifying finding or symptom of screwed up protein synthesis. We're messing with that protein synthesis because we're literally growing a food chain that's missing some of its vowels.

Dr. Zach Bush: And so we start misspelling proteins at the fetus level. A mother cannot build a healthy fetus without the complete complement of letters or amino acids to

build that child. And so if we can't form the fetus correctly, we come out vulnerable.

Dr. Zach Bush: At the same time, this molecule is destroying not just the proteins for human life, but for bacterial life as well, and so it functions as a potent antibiotic. And oddly, Roundup, for being the weed killer extraordinaire that it is, it's never been patented as such. It's been patented, it's said, as an antibiotic, antifungal, antiparasite. It kills life in the soil. It also kills life in your gut.

Dr. Zach Bush: So when you're eating and drinking and breathing Roundup, you're killing the microbiome and its antimicrobial properties. You can't pick up a newspaper or a magazine these days without realizing that the microbiome is somehow important. And that term isn't even well understood by doctors, let alone the lay public yet. We keep thinking of bacteria, it must be the microbiome because we've heard of probiotics. Well bacteria are a tiny piece of the microbiome. We've got maybe 30 or 40 thousand species of bacteria. In contrast, we have 300 thousand species of parasites. In contrast, we have five million species of fungi.

Dr. Zach Bush: Five million species of fungi. We have billions of species of viruses. We haven't even begun to categorize them. There are too many variations and they change too quickly. So the microbiome is this vast ecosystem that outnumbers human life by such an extraordinary amount.

Dr. Zach Bush: Even one little parasite, this little nematode worm, that one little species within that vast kingdom, there's more weight of nematode on the planet than any other species on the planet. And so it's just mind boggling how large this ecosystem has to be on the planet to make the verdant soils that would grow the verdant plants, that would grow healthy animals, whether it's livestock or pets or humans. We won't grow healthy without that verdant life exploding from the soils that is based in the promise of this ecosystem, this diversity, that for millions and millions of years have been present on the planet.

Jon Gordon: So what's happening then to the soil, and then to our guts as a result of the glyphosate?

Dr. Zach Bush: Very good. So as we start to destroy the soil with this antibiotic, we start to sterilize the soil, we lose the regenerative quality of the soil itself. It can no longer heal itself from the chemical injuries we do, or from the natural injuries. Rain itself can injure it, right? You flood a field, can be an injury to the microbiome. A dust storm comes across, could kill the microbiome. All of these things can ... but resilience happens when there's vibrant ecosystem within the soil.

Dr. Zach Bush: So as we kill that, we lose resiliency, we lose the regenerative quality, and we start to require enormous amount of inputs into that soil. We have to start to pharmaceutically manage that soil. It can no longer make its nutrients, because

there's no metabolism, there's no digestion happening in the soil, and so we have to start pouring in expensive nutrients. And so the farmers are increasingly finding their financial backs against the wall, because they can't afford all of the inputs, because their soil can't product it anymore.

Dr. Zach Bush: And so they're increasingly dumping chemical and petroleum-based fertilizers into their soils to create some sort of green life. Well green life without nutrient density and diversity, it has a weakened immune system. In addition, if the Roundup is in the mix, it's lost its boundaries just like we get leaky gut, they get leaky root tubules.

Dr. Zach Bush: And so now they can't absorb the nutrients they need, they're in an inflamed and stressed out state. And stressed plants produce stressed fruits and vegetables. And bizarrely, we now know that the genetics of a stressed out plant can transfer to the genetics of a stressed out animal consuming it, including us. In other words, if corn, soybean, or the pig you're eating was stressed out at the moment it was harvested, it put out genetic information that will modify your genes to create stress in your life. And so if you can't figure out where your stress is coming from in life, which is not too uncommon, I've seen people quit their jobs, cash in 401ks, sell the house, buy an RV to get away from stress, and they can't figure out why they're still steeped in anxiety. It's coming literally from their gut, literally from their food itself, it's programming their body into an immune reactive fight-or-flight stressed out state, genetically producing a stressed out endocrine system in response to food that is nearly dead by the time it's harvested, and maybe never having experienced life.

Dr. Zach Bush: I don't think that genetically modified corn growing in a field that will never produce food that is actually digestible by humans is really the fulfillment of corn. Then you look at a chicken that's never seen sunlight, never tasted fresh water, has never seen sunshine or the dirt under its claws, and it's raised in a cage as small as its body, can't turn around, beak's cut off. It's shat on all day long by the seven chickens above it. That animal is screaming stress and near death by the times it's butchered as a broiler chicken, and that's what ends up on your chicken salad, and the genetics in that piece of meat are screaming stress.

Dr. Zach Bush: And they're called microRNA, it's these tiny little messengers from the non-coding or non-gene regions of that DNA of the chicken that now goes into your bloodstream. We now know that at least 5% of the microRNA in your bloodstream is from the food you just ate. Another 30% is from the bacteria and the fungi that are going to digest or process that food. All that signaling for your genomics now produces who you are today. You are extremely plastic.

Jon Gordon: We've come to believe that sterilization is the to health, but you're saying that's not the answer. It's actually necessary to have dirt, it's necessary to have real soil, real bacteria in our guts. Can you talk about that? And then, what's the by-product of all this sterilization, all these antibiotics, on our health? What are we

dealing with as a society now, and what are the patterns that you're seeing that actually should cause us concern?

Dr. Zach Bush: Absolutely. It's a perfect question, because at some point you have to say, "Well if this guy's right, then we should see disease everywhere. If we're breathing and steeped in this chemical and it's in our food, it's in our water, we're breathing it, it's raining on us. Well this would have to have massive devastating effects on public health that should be easily measurable." And in fact, it's extremely easy to measure, and it's extremely easy to demonstrate the overlap between these chemicals, the Roundup chemicals and the diseases we face today.

Dr. Zach Bush: So what are those? Starting in children, you mentioned autism. Autism spectrum disorder, now one in 36 children by our last numbers, but those are already old numbers. Many of us in the industry think that we're more like one in 20, one in 25 kids with autism. Attention-deficit, next up. You're in the one in eight to one in six children with attention-deficit/hyperactivity disorder. Next up are the allergies, you're at like one in four children with an allergy, either seasonal, food, or otherwise.

Dr. Zach Bush: Next up is the attention hour, the anxiety disorders, major depression. By the time we're in adulthood, we're looking at one in two people with a prevalence of major depression. And anxiety disorder is right behind that, like one in three, one in four. Sleep disorders are one in two by college age. We see our college kids, our number one drug right now is Ritalin and Adderall, these stimulant drugs that they're taking to be able to focus on a test.

Dr. Zach Bush: These remove creativity from the brain, when you put the brain in fight-or-flight, you see this happen. And if you get through college, you've got your metabolic disorders really starting to hit hard. That's going to be obesity, prediabetes, metabolic disorders like polycystic ovarian syndrome, low testosterone disorders in males, low fertility. We've seen a 50% drop in sperm counts in western countries in just the last 20 years. 50% drop. It's gone from 96 million sperm per milliliter to 48 million. If we do that one more time, we are going to approach 70% of males with infertility.

Dr. Zach Bush: And so you do that in the next 20 years, in the next 40 years, you see 95% of males hitting infertility. So this line streaks down into this parabolic current, where we lose the species. Not just because of chronic disease burn, we literally won't be able to have children. We will not reproduce with the sickness of the sperm that we carry.

Dr. Zach Bush: And so this is the precipice that we stand on. If we go further down the adult population, we see cancer doubling from 1990 to 2025. That should be impossible if the model of cancer is correct. We were told it's the most common genetic disease in humans, it's caused by at least 17 years of genetic damage is necessary to be unrepaired in the cell before it can become cancer. If it was that

complicated to get cancer, we should have never seen one generation be able to produce a doubling of this disease process in adults. And in children, it's even gotten faster. We've seen a 3x to 5x rate of cancer climb in children over that same 20 year period.

Dr. Zach Bush: Leukemias, lymphomas, all the way to sarcomas and weird tumors that have never happened in children. Neuroendocrine cancers, sarcomas and osteosarcomas of the bone, muscle, all of these things affecting children now. And so then we get past the cancers, and you get into the neurodegenerative conditions, MS 5x, celiac disease 3x, and just in the last 15 years on the celiac disease there.

Dr. Zach Bush: The ALS, if I didn't mention that one, is around 5x. So you've got all of these diseases taking off neurodegeneratively. But beating the band on those is Parkinson's disease in males, and Alzheimer's disease in females. The rates have been unbelievable since the 1970s. In some populations, 10x, 15x times the rates of disease in the adult population.

Dr. Zach Bush: If we just look forward 16 years, two more American presidents, what do we see 16 years out? If these lines continue, we will hit autism at one in three children, and we'll hit adults with about 75% cancer rates. That is the collapse of an empire. There is no financial inspiration that we can do for one another, there is no way we can take business accelerator model to enough economic surplus that we would be able to support that generation of disease.

Dr. Zach Bush: We cannot support one in three children with autism, period, let alone any of the other diseases. The cost of autism per year on anum over the lifetime is thought to be as high as perhaps \$1.5 million in the United States, and that's a combination of not just direct medical, but loss of productivity. Not just of the individual who can't participate in the workforce, but both of their parents and their grandparents are affected in productivity. So it wipes out three generations when you have one autistic child, and so we'll see the impact of productivity through three generations, and one in three families.

Dr. Zach Bush: And then we have to deal with the rest of those diseases that I've gone into. And so, welcome to the future of the United States. It does not exist past 2025, 2030 at our current trajectory, unless we change absolutely freaking everything. And when I say we change everything, it needs to be down to the microbiome level. We need to change our relationship fundamentally to nature. There needs to be a fundamental shift in the way that we think about food, the way that we consume food, the way that we encourage our farmers to grow that food, the way in which we put our economics behind those farmers, because I guarantee you they are capable of change. I can guarantee you they are capable of scalable change, on the scale that you need.

Dr. Zach Bush: And so these farmers that we are working with now every day are some of the most inspirational brave characters I've ever met, and they are so ingenious in

their troubleshooting, their problem-solving. These are the geniuses among us, and they are generations old in their resilience and their desire to deliver a great product to you. And so they are capable of making the shift, but they need to know that we as consumers are willing to put our money where it's at. Really support not just buying good quality food, but we need to support a new economy around these farmers.

Dr. Zach Bush: [inaudible] relationship with banks via the farm bill, which backs the crop insurance, which is really a welfare program to the farmers. Which means the farmers can't grow food, they can only grow commodities crops, corn, soybean, alfalfa, canola. Which never ends up on your plate, they don't even grow food.

Dr. Zach Bush: We keep saying, Monsanto and these big companies in the chemical world keep saying, "We have to have chemical farming. We have to have GMO to feed the world." They are not even feeding you or your children. Kansas is 90% under cropland. 90% of the food that is consumed in Kansas is imported. They're not even growing their own food, let alone feeding the world.

Dr. Zach Bush: One in four children in Kansas goes to sleep hungry. We are starving our farmers and their children into this oblivion because we won't let them grow food. We are making them grow corn, soybean, alfalfa for what? Mostly for the fuel industry and the plastics industry. The chemical companies, the processed food industry. That's what takes the majority of the crops that we grow.

Dr. Zach Bush: The little bit that might turn into food doesn't go straight to human plates, because you can't actually edibly consume genetically modified corn, you need to get that ground down into a meal that can then be diluted out by some other grain, then put into a cow, a chicken, or beef ... or, I'm sorry. Or the swine, to end up on your plate. And so it's only indirect that any of that crop ends up on your plate, and in so doing, it polluted the planet.

Jon Gordon: Well let's talk about this for a second. So you talked about all of the issues that we're having, the prevalence of disease as a result of all this. But why is this happening? Because we all look around, we all are living, and we know something is going on, right? We're seeing more and more family members with Alzheimer's and issues, and autism we're seeing increase. We're seeing more people with food allergies. Everyone says, "Yeah, no one was allergic to this kind of food 30 years ago." We hear that all the time. And so people are looking around, they know something's going on, but they don't know why.

Jon Gordon: Zach, why is this happening? Why are we all of a sudden allergic to all this food, and why are we experiencing these health problems? Take us to the microscopic level of what's happening inside our bodies, and then let's move to what's happening at the soil level and what we can do about it.

Dr. Zach Bush: Perfect. So Roundup, glyphosate, a single molecule comes into the body environment, first thing it does is kill the soil nutrients, and that's the soil of the

Earth around you that would grow the plants, but also your gut. So your gut is supposed to look like a fertile garden, and so you're supposed to have tens of thousands of species of bacteria, tens of thousands of species of fungi, parasites, viruses, all working together to create a balanced ecosystem. Just like a section of the Amazon jungle, or a coral reef with all of these teeming species cooperating in their little niches within the ecosystem to produce not only fuel and the information and nutrient for the environment, but also to suck up the waste products of the other species.

Dr. Zach Bush: And so in a closed system, when you have a healthy ecosystem, there is no such thing as waste. And then humans come along and we screw up the structure of all these naturally occurring compounds and we put them back out into nature where they cannot be reconsumed, because we've broken the cycles of carbon and other molecules on Earth by our consume product industry. By forgetting that chemicals should be able to be recycled into nature, we disrupted all of these natural cycles. So we disrupted carbon cycles down to the biological level, that means we are losing the function of the bacteria themselves.

Dr. Zach Bush: And so as the bacteria start to fail, and we start to lose species of bacteria, we're now running on fumes when it comes to nutrient delivery. Because the food on your plate can't actually get into your bloodstream and cannot get into a cell to feed it. It has to be first metabolized by bacteria and fungi and the like, into little constituents. Amino acids, phospholipids, tiny little breakdown products that become biologically available to the human cell eventually, to be turned into anything from fuel to the building blocks for protein, to the building blocks of the lipid membranes, to all the structures that are necessary to make you you.

Dr. Zach Bush: You are separated from the food on your plate many times. First by the bacteria and the fungi. Then it has to get into your cell, be processed through the gut into your liver, repackaged, sent out to all your cells where it's digested and consumed by another part of the microbiome, which is the mitochondria. Mitochondria are bacteroid little guys that live inside your cells. The average human cell has 200 mitochondria teeming within it.

Dr. Zach Bush: There's actually three different species of mitochondria. Much like the outside microbiome, this inside microbiome lives to make us live. And so it digests all of the fat and sugar out of your diet and turns all of that into one thing, which is adenosine triphosphate and lots of signaling molecules. And so in the digestion of fat and sugar, you end up with one fuel, ATP, and that's what drives your cellular function, all your enzyme functions, all of your metabolism, dependent on bacteria, fungi. Repackaging in the liver, and then delivery to the mitochondria, redigestion, remetabolized into just the few fuels you need.

Dr. Zach Bush: Now you put Roundup in it, kills the bacteria microbiome. Kills the barrier system that would intelligently absorb those nutrients into the liver. Destroys the tight junction of the liver itself. Undermines the liver's ability to make

glutathione, a critical antioxidant, and many other detox pathways like the DPP4 enzymes. So liver's failing.

Dr. Zach Bush: Now you send out unpackaged, unapproved information out into the bloodstream, and the first thing that hits the mitochondria is toxin now. So you've got glyphosate in your bloodstream and you're peeing out glyphosate. We just finished a double-blind placebo-controlled clinical trial with RESTORE, turns out that none of those patients going into that study could be found that didn't already have Roundup in their urine. They're all peeing out Roundup. Why? Because it's in their bloodstream, it's in their food, it's in their water, it's in the air they breathe.

Dr. Zach Bush: And so it's now destroyed all the way down to the vascular level, goes through the blood vessels, destroys the endothelial tight junctions. Again, leaky gut, leaky blood vessels. Leaky blood vessels quickly turns into leaky brain. So now you're leaking across all these tissues, and ultimately, leaky kidney.

Dr. Zach Bush: Now you're a permeable mess. Everything you put into the body causes stress and inflammation on all these different levels. And now you turn into a rapidly aging organism. Why? Because you're dehydrating and undernourishing. You can't hydrate effectively if you've got holes in all your membranes. So with that dehydration event, you're peeing out fresh water that you never were able to absorb into the cells of your body. You're turning into a prune. You're aging at a faster rate than any generation before you did.

Dr. Zach Bush: And that's why in kindergarten, you can go around and compare all the chronic diseases in our children. We see numbers like 46%, 50% of children with some sort of chronic disorder by the time they hit high school/college now. That is a devastating number, and why? Because they are leaking on every single facet, they have no workforce. Their microbiome workforce, which is 10x the human workforce by the way, 90% at least of the work done in the human body is done by bacteria. So you kill the bacteria, you've lost 90% of your workforce.

Dr. Zach Bush: And then they start to lose their human cell function, because the mitochondria, the other half of the microbiome, which is 14 quadrillion, 100 times the human cells, is now suffering, and you can't make fuel. So you're running on fumes, you have no building blocks. You have no detox pathways. You have no metabolism. And so our children are aging fast, and they're developing the diseases that we used to see in geriatrics.

Dr. Zach Bush: And so this is the process, this is the phenomenon that's unfolding in our cells.

Jon Gordon: And it's inflammation, right? Doesn't inflammation drive a lot of this?

Dr. Zach Bush: Inflammation's the symptom of everything I just described. And so as you lose the boundary, the first thing that gets hit with all of that overwhelm is your immune system. The immune system's job is to mount an inflammatory reaction

to try to do damage control. That works very well for a short period of time. We call it acute inflammation.

Dr. Zach Bush: And so if in a healthy state, I run down a case of stairs, I will do millions of tiny microfractures in my bones. And immediately, the immune system kicks in, does an oxidated burst to destroy the damaged cells, and it calls in new osteoblasts to lay down new bone. That's an acute inflammatory reaction that ends up with stronger bone, not weaker bone.

Dr. Zach Bush: That should be happening in every organ system. Injury happens, boom. Repair kicks in, you get up stronger, not weaker. And this is the classic saying, right? Whatever doesn't kill you makes you stronger. That's exactly true in this world of acute inflammation.

Dr. Zach Bush: However, if you start stacking acute inflammation on acute inflammation on kind of acute inflammation, because you have no regulatory system, you've lost the boundaries. You're overwhelmed with toxicity. Now you turn into chronic inflammation. This is that switching moment where you go from stronger is better, to weaker with every single immune reaction. Why? Because you ran out of reservoir.

Dr. Zach Bush: There's a reservoir of many different proteins, but we can think of the antioxidant reservoir as an obvious one. Everything in Whole Foods and every grocery store you walk into, everybody and their mother is saying they're an antioxidant now. Antioxidants are actually not the opposite of oxidants, it's a misnomer there in the chemistry. An antioxidant looks like Pac-Man, and in the mouth of Pac-Man, it has to bind an oxidant, but it also has to bind a reductant, which is a negative charge.

Dr. Zach Bush: And the microbiome is extremely good at making negative charge compounds to fuel your antioxidant. As soon as it binds a reductant and an oxidant, Pac-Man can close, neutralizing that into a benign salt, and ejected. We should see Pac-Man zipping around the tissue all over, cleaning up all of the oxidative inflammatory response that we have. But if we do this too much and overtax that, and by the way, poison the genome with Roundup, which blocks the ability to make glutathione, which is our main antioxidant, we suddenly lose the Pac-Man.

Dr. Zach Bush: So not only is Roundup causing the injury, preventing the ability to manage that injury at the microbiome level, it's also undermining our ability to have that reservoir to deal with the inflammatory or immune system reaction to the damage. And so now we tip quickly into chronic inflammation, rather than acute inflammatory repair.

Jon Gordon: So you said a lot of these symptoms, a lot of these diseases started to take notice and started to really increase around the 70s and 80s. When did we start with the Roundup practice?

Dr. Zach Bush: Yeah. So Monsanto grabbed that patent in 1974. The chemical was made in 1959 by a Japanese researcher, was not put into the marketplace in any significant amount. The category of this chemical was called organophosphate. This is the same category in which Agent Orange sat, and that's why Monsanto was such an expert in this area is they made Agent Orange. And so they made their mark on the world when they started into chemical warfare.

Dr. Zach Bush: We killed most of Cambodia and Vietnam through serial bombing with Agent Orange. We destroyed entire jungles into moonscapes, no bacteria, fungi, plants left in those spaces. It took them decades, and still to this day, haven't recovered many of those ecosystems back to normal yet.

Dr. Zach Bush: And in the process, we caused massive amounts of skin burns and cancer and endocrine disruption and all this, through that organophosphate poisoning of their water systems and everything else. And so we caused decimating work in the chemical warfare environment. War ends, and Monsanto can't sell Agent Orange. Turns their attention to another organophosphate, and decides to use it as a pipe cleaner. It was initially developed as an industrial pipe cleaner to clean out sediment and clogged large sewer pipes and the like, coming out of these chemical factories.

Dr. Zach Bush: Worked brilliantly, because it sucks nutrients out of the environment. And so it sequesters or chelates minerals, and that's terrible for the soil, but great for a clogged pipe. And so the problem was, was when the water dumped out the end of that pipe, it killed everything in the pond. So they realized it really wasn't going to work well, because to use it at the doses that they needed for chelation, they were killing all life around it.

Dr. Zach Bush: And so then they had to repurpose that, and they found that it was a great weed killer. If it could kill all the weeds out there, maybe it could kill weeds in a smaller dose. And unfortunately, this was a unifying feature of the male, especially American male, brain, is it doesn't like to weed. And so we as consumers by the 1980s, started spraying Roundup into our driveways, sidewalks, and everything else. And I believe we created the first epidemic as homeowners, not even as farmers.

Dr. Zach Bush: Farmers at this time in the 1980s, still had to use it very sparingly. Because if it got close to their crops, it would kill their crops. So during the 80s, we're pouring it into our gutters and water systems and the municipal system, we started drinking Roundup. And so we see an uptick. Uptick of all of the chronic diseases we're talking about.

Dr. Zach Bush: Then 1992 hits, and in 1992 we started spraying wheat. Wheat is one of the few crops that you want dead before you harvest it. And so Monsanto came along, and instead of selling it as a weed killer, they sold it as a desiccant to wheat farmers, and said, "Spray your wheat early and it will dry it quick, and you can get that harvest in early so it's not risked by the fall weather. Or if you're in a

southern climate, you could get two crops in, go ahead and kill and reseed. Get two crops of wheat out."

Dr. Zach Bush: And so through all of this little finagles and marketing strategies, they started in 1992 to spray more acres every year since then, of wheat worldwide. By the mid-1990s, we discovered this onset of gluten sensitivity and the autoimmune disease celiac. Every year that we sprayed more acreage, there was a linear increase that matched that acreage spray with the celiac disease. We've now as a laboratory been working out the details of how this gluten sensitivity happens. Turns out that when Roundup hits the gut wall, it creates a hypoxic injury, a lack of oxygen. And with that lack of oxygen, the gut lining expresses a bunch of receptors that then bind to gluten.

Dr. Zach Bush: And the gluten creates a further synergy with the Roundup to damage the tight junctions and create severe leaky gut. And so now, we have a huge percentage of the population that have had a gut sensitized from Roundup that now reacts to gluten.

Dr. Zach Bush: If you put gluten sensitive patients on a strict gluten-free diet, 85% of them still have the same symptoms, although perhaps less severe, same symptoms after a whole year of no gluten. It's because they're still experiencing on a daily basis, Roundup and glyphosate in their diet and everything else. And that's what's driving ... the gluten is simply a second hit. It's the glyphosate injury. So I don't actually believe there's such a thing as gluten sensitivity, there's only glyphosate toxicity, and gluten is just fuel on the fire.

Jon Gordon: Is that why people say they can go over to Europe and eat wheat over there and be fine with it?

Dr. Zach Bush: Precisely why. And so you take a gluten sensitive patient out of my clinic, send them over to Europe, they can't help themselves. Maybe it's the cute women, I don't know, but they're eating croissants on the streets of Paris two days later, and my gosh. They come back and they're like, "Doc, I ate like three croissants a day by the time I left France because it just was no problem." And they come back here and they tell me, "I think I'm cured." I'm like, "Well, I don't think you are, but you can give it a shot." And one croissant takes them two and a half days to recover from. Brain fog, poor sleep quality, sex drive's gone, and all the rest.

Dr. Zach Bush: That wheat with Roundup in it is going to destroy that ecosystem, and then on top of it, create this synergy effect of the gluten glyphosate phenomena.

Jon Gordon: Didn't Monsanto lose a lawsuit recently that proved that it was harmful to us?

Dr. Zach Bush: They finally lost their first big cancer case. There's 11,000 cancer cases in the pipeline. Most of these are leukemias and lymphomas because we've worked out the exact mechanisms of that over the years. But Monsanto, it turns out,

published their own cancer data around Roundup in the 1980s, but they said it was at such a high dose that it was necessary to be exposed to. That there was no way it could be significant in human consumption through the farming industry.

Dr. Zach Bush: But keep in mind, that was the 1980s. They themselves couldn't even envision a day when they could actually genetically modify our foods, that we would spray it directly. And so I don't think they even guessed at how much Roundup they would ultimately sell when they figured out how to genetically modify corn, soybean, and alfalfa, and sugar beets to be sprayed directly with this chemical and delivered right to us. And so the wheat was the tipping point, but by the 1998-2000 range, we were hitting 85% of corn and 95% of soybean crops being grown as Roundup resistant seeds, that were then sprayed throughout their lifecycle with this Roundup chemical. And we're eating it now, and drinking it.

Dr. Zach Bush: And it's a devastating effect on the ecology. A devastating effect all the way down to humans. But one of the most powerful ways to demonstrate this at a public health level, take a look at our documentary series maybe, but see this in Spades, but if you map out the Mississippi River and its tributaries where we collect 85% of the Roundup sprayed in our country, you can see the cancer rates rise as you go down that river. And at the last 90 miles of the Mississippi River now, we have the highest rates of cancer in the entire developed world.

Dr. Zach Bush: So that's Baton Rouge to New Orleans, Louisiana. That's cancer alley. And that is not what was happening 25 years ago. The highest cancer rate deaths through all previous history before 2007 was up in the Northeast to Northwest. The poverty that's been rampant in the South for 200 years was never the driver of disease. The driver of disease that we now associate with the Deep South in Mississippi and Louisiana, all the obesity, diabetes, cancers, all of that. That was not happening until we poisoned their waters with Roundup.

Jon Gordon: So the Roundup is actually making its way down the river towards this location, where they have high rates of cancer?

Dr. Zach Bush: And you can map it all the way down. High rates of cancer throughout the whole farming sector now. Way above where we see in the Northeast and Northwest as we used to see it. Now the farming territories from Minnesota and Montana, all the way down through Wisconsin and Michigan and all this, all the way down through the Midwest, all the way down into the Deep South, highest cancer rates everywhere.

Dr. Zach Bush: And then you look at the ocean. And from space, you can see the dead zone at the end of the Mississippi River. That's larger than the state of Rhode Island now. The threatened zone around that dead zone is larger than the state of Texas. And so we're killing not just humans at the end of that river, we're killing life on planet Earth at the end of that river.

- Jon Gordon: Talk about your documentary. What's that called?
- Dr. Zach Bush: Farmer's Footprint is the documentary series. It's supporting a new org. We are launching a massive org, non-profit. My expectation and hope is that you will help me put my biotech companies out of business over the next 30 years. I don't want to make RESTORE for the planet, that feels like a waste of time and effort for Mother Nature. She has given us a huge gift, and understand that her soils can heal Roundup injury. She can have an antidote to this toxin we've put into her soils.
- Dr. Zach Bush: But we need to learn from that. Not to utilize all these ancient soils that we're extracting this molecule from for supplementation, we need that to be short-lived. I want the next 10 years, 20 years to completely change the farming industry so we don't need to supplement the stuff. And to join the Farmer's Footprint movement, we're bringing a new economy around farmers. And so you're donating directly to Three Buckets when you donate to Farmer's Footprint.
- Dr. Zach Bush: And what is education? Consumer education through the documentary series and town hall meetings. We've got town hall packets, so if you want to get ... activate your community, we'll have the PowerPoints, the media, the short docuseries to show, and all the rest. But also education of the farmers. University level, stem to stern, how do you take chemical farms and turn them into large-scale regenerative organic farms? That is not done on scale in most places, but we now have, through our partnerships, over a million and a half acres that have successfully made that jump. We need to accelerate that. That took 20 years to do a million and a half acres, we need to do five million acres in the next five years, and prove how much money comes out of that.
- Dr. Zach Bush: The early signs are clearly saying we can make \$40 net in a commodities market. In farming today with conventional ag, we can 10x that return with regenerative agriculture. We can create not one or two revenue streams on that farm, but six to eight revenue streams on that farm. And we can go to \$400 to \$500 an acre return, instead of \$40 an acre return. That is inspiring a lot.
- Dr. Zach Bush: And so our non-profit isn't just taking attention from our consumers, but large corporations are jumping in. Adobe Acrobat, the big software company, just jumped in with us. United Healthcare is talking about jumping in with us. We've gotten action from over five different large hedge funds that want to become part of the new capital structure around farmers.
- Dr. Zach Bush: We can break the back of the farm bill. We can break the back of the welfare system of the crop insurance, and we can create our own private economy that joins consumer dollars, investment and impact investor dollars, to create this new economy around our farming industry, and I guarantee you, our farmers will jump.

Dr. Zach Bush: We're going to make them the heroes of the new era. We are dying under the pressure of megafarming. We can not only restore, we can totally regenerate biology on the planet through our farmers' actions, and you get to drive that as a consumer.

Jon Gordon: Zach, I love that. Because this is Positive University, right? So this is about what is the positive action we can take, and I love farmers. You love farmers. I heard you say that you're very patriotic. Your brother's in the military. You want to do what's great for this country, and you believe ... and you mentioned Russia before and what they're doing. I want you talk about that for a second and why this is very patriotic, to do what we're doing to try to heal the soil back. Heal it again, right? And then also, our love for farmers and what they do. How does this actually help farmers, and how does it help our soil as we move forward?

Dr. Zach Bush: Perfect. Yeah, so from a Homeland Security standpoint, we're spending about \$680 billion a year now in the larger economy around the military, Homeland Security, defense spending and the rest. We're spending \$3 trillion a year on chronic disease management. \$3 trillion versus \$680 billion. And so we are 5x'ing our military spending on chronic disease management. We're not going to have healthy soldiers in 15 years. And so when we don't have Homeland Security because we don't have food independence, we don't actually make our own food anymore.

Dr. Zach Bush: We just sold Monsanto, no matter if you like the company or not, they're now a German company. They are owned and now dissolved, and fully integrated into Bayer pharmaceuticals. And so a German pharmaceutical company now owns your farming industry. 85% to 90% of your staple crops? Owned by Germany. That is not Homeland Security, that is not a patriotic centerfold. And so you think, "Oh, we going to spend billions of dollars on a wall to Mexico? That is insanity." But we can't even produce our own multi-billion dollar food industry. And so we should stop building walls, the Mexicans actually would like to help us grow our food. They drive our economy of food more than any other peoples on the planet do.

Dr. Zach Bush: And we're building a wall against them. And so we need to recognize North America, Canada, Mexico, and the United States need to come together and recognize that if we don't step up as a continent, and start producing real food, we are doomed. Why? Because all the other countries are ahead of us. Russia, you mentioned, is first among the developed nations to say that they are going to be Roundup-free, they're going to be a totally organic nation by 2025.

Dr. Zach Bush: We are not even going to be 10% organic by that time at our current rate. We cannot wait for the consumer to change under our current awareness. We need to be a force of awareness. You need to get on this bandwagon and you need to change the awareness of your family, your church, your workplace, whatever it is that you touch in the community. Become that [inaudible] of change and say, "No, screw that." There are two heroes in our society. Our military and our

farmers. If we can't raise farmer to the level of our military heroes, we are going to fail as a nation because our children are not going to know that that is a hero pathway for them to pursue.

Dr. Zach Bush: And we are seeing the death of farms in the country right now. In 2016, we lost 8,000 farms. 8,000 family farms went out of business in one year, and that's accelerating because of Trump's policies around the tariffs that have now forced the soybean and corn prices to the lowest point they've been in memory.

Dr. Zach Bush: We have farmers going out of business at such accelerated rates because they can't ... literally can't sell commodities. Corn is selling at -\$60 a bushel, meaning that there was a \$60 loss for every bushel produced in this country last year.

Dr. Zach Bush: And in an insane fashion, the food industry through our USDA and the crop insurance, is forcing farmers to grow three million more acres of corn next year. Why? Because the only thing the banks are willing to loan for is where the money is going to be paid out by the USDA and that crop insurance. And so we aren't even producing food that we expect to be able to sell, instead we're discounting it as loss and taking taxpayer money to create that welfare system to our farmers. It is pure insanity. From a food independent standpoint, it is non-existent.

Dr. Zach Bush: And so being patriotic today, I don't believe is about building walls and being nationalistic, it's about growing real food for our children. Feeding those children in Kansas and empowering those farmers to grow real food that they can feed their own children again.

Dr. Zach Bush: And so we need to stop the importation of food. We need to actually grow our own food. We need-

Jon Gordon: How do we help farmers out? So how can we help farmers going forward then?

Dr. Zach Bush: So there are pretty simple solutions on the local level. I mentioned the tools we're bringing to you from Farmer's Footprint. At Farmer's Footprint you can create ... put public awareness locally. What does that do? It fuels your local farmers to create larger co-ops. And the cooperatives or the CSAs that are out there are critical avenues for you to tap into. Your farmers market. Know your farmer. If you don't know your farmer, you've got to start down that pathway.

Dr. Zach Bush: Big cities, it doesn't matter. New York City, one of the biggest farmers markets on the planet, you can know your farmer. And so there's no excuse anymore with the industries that are starting to grow, for you not to know that person who's really responsible for growing the food that you eat.

Dr. Zach Bush: Fuel that economy. Get in partnership with that. You can do it at the macro level through Farmer's Footprint and through all that, support of the farmers and the

new economy there. But locally, I want you get engaged with your food. This can be as simple as starting to grow some food yourself. Growing one tomato plant, one basil plant, grow something to remind yourself that you need to have touch with your food industry.

Dr. Zach Bush: At the end of World War II, our victory gardens in London and the US were growing 45% of our food chain. 45% of our food system. At the end of that period, we were really able to kind of carry that forward for a long time to come. And so now, we see 1/10th of 1% of our food being grown in our backyard gardens. And so we outsourced, we turned into a chemical commodities market consumer, and we built the Monsantos and the Bayers of the world. And so your call is, build at home, build it local, know your farmer, support them across the nation, and let's create some food independence for this country.

Jon Gordon: I love it. How do we get these farmers off of the chemical dependence and moving towards a healthy organic farming? I know that that's a big initiative of yours.

Dr. Zach Bush: Yeah. So that's what we're building with Farmer's Footprint. So all of the dollars flowing in there is building the new economic model, and we've got hedge funds coming in, and these large corporations to help support the consumer dollars that are flying in. And so if you could become part of that, we will build that infrastructure, the university teaching for the farmers, and that economic structure that will replace that farm bill, will replace that commodities welfare system of the crop insurance, and create real economic returns for these farms, so that they can become generational successful farms again.

Jon Gordon: And you'll see the farmers will actually make more money as a result of doing this than what they're doing now.

Dr. Zach Bush: Vastly more. And that's my excitement, that's why the whole industry is going to change. When we prove this out on five million acres, the other 130 million acres are going to follow fast, because when you can 10x income, then the people will follow.

Jon Gordon: So the goal is five million acres. Where are you at right now? You said about a million?

Dr. Zach Bush: A million and a half have been regenerated by our partners over the last 20 years. And so we're stepping in now to accelerate that. And so this is a new org, farmersfootprint.us, you can get engaged there, and we're going to see if we can't change the world.

Jon Gordon: And how long does it take for the farm to actually regenerate? So people can know the immediate impact.

Dr. Zach Bush: One year. And so you stop spraying and plowing for one year, and you see complete recovery of everything from the earthworm populations to the micro [inaudible 00:57:33], and the soil is improving within a single year of regenerative practices.

Jon Gordon: Last question Zach. What are you looking forward towards going forward towards the future? What are you excited about going forward?

Dr. Zach Bush: I think we're going to change absolutely everything, and I can't wait to see what the world looks like when nothing's the same. I don't want a single consumer product to look the same. I don't want a single company that I drive by today to look the same. I want the whole world to shift so that my kids and grandkids and everybody else can see a different future. And we can stick around a little longer than those 70 years we're currently on track for. I'm excited for our future.

Jon Gordon: Zach Bush, where can people find out about you, and find out about all the work and your movement that you're creating?

Dr. Zach Bush: Education-wise, zachbushmd.com for kind of the medical and health side. Farmersfootprint.us for the farm activation and your town hall meetings and everything else, to activate your local communities. For the RESTORE product, it's RESTORE4life.com. You can find it on Amazon Prime, you can find it at a lot of health food stores around the country, and a lot of your integrated medicine clinics. Over 900 of them around the country carrying the product as well, so you'll find that out there for your family resources.

Dr. Zach Bush: For your pets, there's a product called LUMAPET, you can find that online as well. And then we've got big ag products coming out as well, but probably not for your consumer base. So lots to be had out there, and we enjoy the opportunity to converse with all of you. The social media environment's huge. Instagram is a good place to stay in touch with everything we're doing across Farmer's Footprint, Zach Bush MD, and the like. And so stay engaged. We're eager to hear from you, and we're excited about the momentum that you guys are really creating out there.

Jon Gordon: Zach Bush, thanks for your information, your knowledge, your awareness, and most of all, your passion to help us change this world. And you're on the right track, and I just hope more and more people listen to this, understand what's really going on, so they can make changes. I've made changes, and it's changed a lot. It's really helped me a lot, but we have so much more work to do. And this is just a great place to start, so thank you so much.

Dr. Zach Bush: Jon, thank you so much for having me on. I appreciated everybody listening. Thank you for keeping the momentum going.

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Daniel Decker: So until next time, stay positive and remember, the best is yet to come.