

Juicing Done Right for You and the Environment – Junaid Kalmadi – #920

Dave Asprey:

You're listening to The Human Upgrade with Dave Asprey. You've come to expect that you're going to know why you're listening to the show before you listen to it, so that you don't have to waste time if it's a topic you don't care about. What you're going to learn about on the show today is a way to get your vegetables because you probably don't, even if you do your best, about 9% of people get the amount of veggies the government recommends. And how to get a bunch of other nutrients like things that aren't in soil. And we're going to talk a little bit about how to get food back into the soil because about 40% of what you buy at the grocery store, those fresh salad greens and all that ends up getting wasted before it even gets to the grocery store.

So, it turns out there's something you can hack in your own intake and in the way we treat our farms and even our farm animals. Relatively easy thing to do that can make a big difference for you and something that I've worked on for a while, so that's we're going to get out of it. And you might as well know that we're going to talk about phytonutrients and nutrigenomics and how food is the signaling molecule for the body. So, learn more about how to tweak your food, so you get your veggies without having to eat kale because kale is evil. On that note, we do have a live audience as usual from The Upgrade Collective, thanks guys for tuning in and asking questions through this.

And our guest today is Junaid Kalmadi, who's founder and CEO of Farmers Juice and I am an advisor, investor in Farmers Juice and have been for a while, because they were able to do things in juicing that really I didn't think you could do. I quit using juice years ago when I quit being a raw vegan because of some of the problems with just going on buying commercial juice and Junaid convinced me there at The Upgrade Cafe in Santa Monica sitting down once, "Oh you know you can actually do this right, here's how it works." So, we're going to get into something about juicing but mostly just why would you need stuff from plants that you might not know you need?

And Junaid with his company Farmers Juice makes Keto friendly and functional green juices that don't have the bad stuff in them. And the bad stuff from my perspective being the things that are high in oxalic acid. Some people tolerate it better than others, we don't all need that. So, this is how to do juicing safely and how to do it so that it doesn't break the planet even more. Junaid it's good to see you again, my friend.

Junaid Kalmadi:

It's good to see you too, Dave. Thanks so much for having me back on the show.

Dave:

It's been what? Two years or so since you were on?

Junaid Kalmadi:

Yeah, I think almost a year.

Dave:

Almost a year, okay, cool. All right, and for background for people who didn't hear your last interview. You are a co-founder of Brain.fm that did music and neuroscience. So, you're generally a biohacker nerd, you could say right?

Junaid Kalmadi:

Yes. I started Brain FM as probably, as a 24-year-old entrepreneur and I was really curious about the science of combining neuroscience with music. So, we created music that's designed for the brain to help you focus, relax and sleep, which is how we originally met. You were a fan of Brain FM and the core sort of underlying thread between Brain FM and Farmers Juice is, I'm less motivated by money. I think like as soon as you get money as an entrepreneur, you lose that motivation. What's more sort of fulfilling is how do we create positive impact for individual people's lives tangibly, as well as for our planet, all the stakeholders involved. So yeah, that was the continuing inspiration of Farmers Juice.

Dave:

You were overweight and not feeling really good as the Brain FM founder and juicing played a major role in that, which is cool. We talked about it on the show before, but why do you think it was juicing not just eating veggies that made a difference for you?

Junaid Kalmadi:

Yeah, that's a great question. So, if you zoom out, most people may have heard of cold pressed juicing and it's a buzzword, if you don't really understand what it is and it's actually a very simple yet powerful idea. So, to break it down, what is in a vegetable, or herb or spice? So, for any vegetable, there's two building blocks, there's the liquid which is the juice, and there's the solid which is the pulp. So, in other words the juice and the pulp are two components for every single produce in the grocery store that you get, be it a vegetable, herb, spice or a fruit in the plant kingdom. But there are certain vegetables that have 70% to 95% of their nutritional content, their core content as liquid.

So, for example, celery, cucumber, carrot are three prominent examples, but the liquid or the juice component hosts a plethora of essential nutrients. And also, phytonutrients, which are these colorful plant compounds that are actually over evolution. These plants use these phytochemicals to protect themselves. And it turns out, these phytochemicals also play a role in protecting us in terms of our brain health, aging more gracefully towards longevity. So, when I just kind of discovered that cold pressed juicing can basically take three to five plates of salad, and you juice it, so it's 1.5 pounds of produce that's squeezed.

So, you separate the pulp from the juice, and you get this end product of this incredibly high nutrient dense jolt of vitamins, enzymes, phytochemicals that give you this tangible positive effect within your biology, within your mood, within your own like mental state to perform your best.

And I think that juicing is fantastic, but I don't think it's a replacement for salads that have fibrous content, or smoothies however you choose to get on your key plants that make you, that support your vitality.

So, I think salads and smoothies are essential, but juicing, when done right, if it's made from organic, high quality produce, in our case, we use ugly produce. And we can get into that a little bit, why that's incredibly important for our planet, as well as just as an individual, a super curious cool concept. That's sort of our philosophy behind Farmers Juice and why I was personally inspired to start it.

Dave:

So, here's the thing, you go into an organic grocery store and there's going to be signs sometimes about nutrient density in these foods. And you look at lettuce and like, "Oh, it's relatively high in nutrient density." "What are you talking about?" "It's because it's mostly fiber and water, that aren't calories," all they care about is calories. I was a devout raw vegan, I had salad bowls bigger than my head that I would

fill three times a day, and I would blend the crap out of everything and it actually still wrecked my health. So, one of the things that happens when you're eating whole plants, assuming that you can find the whole plants that aren't actually going to nail you with their toxins, that's hard to do, but you can do it.

You just can't eat enough of them to get all the minerals and all the water that you want. It's physically impossible to get that much food in, that's why if you go raw vegan, you lose weight, it's called malnutrition and not getting enough energy. And even if you spend two hours a day preparing and eating the way I did, it wasn't enough you couldn't do it, even with gobs of coconut oil. But if you were to say I'm getting most of the nutrients from 1.5 pounds of salad, but I just drank something. And I'm going to eat a pound of salad and maybe put a pound of steak on it if that's the likely best thing you could possibly do. You're still getting more aggregate nutrients.

So, the name of the game for me now in the way I look at biohacking is how do I get the most nutrients per high quality, dense calorie? Because it turns out you need energy, that's what calories are, but you also need nutrients. And juicing is this neat thing, where you can add a bunch of nutrients that don't fill you up and that's really, really helpful. Some types of plant juice can make you feel more full, but it's not that much energy in it. What it is though is it's a ton of nutrients, so now you eat the salad for nutrients, you ate another 1.5 pounds worth of salad in the Farmers Juice smoothie that you just had next to it that was shelf stable in your fridge. So, you could do it more easily than the way I used to by grinding up my own veggies in the juicer.

And then you eat all the other stuff you're going to eat and suddenly you end up with a net much more positive than you could if you just ate stuff. And that's why I'm interested in juicing, but it has to be done right? Because plants are dangerous, let's not mess around.

Junaid Kalmadi:

Totally, and you brought up an excellent point that it might be easy to assume that just if you're eating a whole foods rich diet with the right kind of plants, you're getting a lot of nutrients. And compared to a processed diet, that's true. But you might not be getting all the nutrition you'd expect from one cucumber to the next. The question is not how much of a certain nutrient or vitamin we need to not get sick. It's how much do we need to be optimally healthy. So, in fact, it's sort of common knowledge for listeners of radio, but what the government recommends is definitely possibly not enough in terms of its official guidelines.

And today, even with sort of, "enriched food or healthy food," like you said, more than 92% of Americans are deficient in one or more vitamins. And a key, when you hear that 92% of Americans are deficient in one or more vitamins, that doesn't mean they're receiving less than the amount they need for optimal health. That means they're receiving less than the minimum amount necessary to prevent deficiency diseases, so that is not a good state. In a study published actually by the Journal of American College of Nutrition, researchers found that 6% of those who are tested had serious vitamin C deficiency and 30% were borderline low. And it even goes into a fascinating concept but a report in The Journal of Pediatrics found that obesity and malnutrition can coexist.

So, for example, if you're all-

Dave:

They usually do.

Junaid Kalmadi:

Yeah, they usually do, exactly. If you're obese, if you're overfed, and you're under nourished even as a child with cognitive disorders, that study found that you can have scurvy or severe vitamin D deficiencies or rickets. So, these deficiencies literally damage their brain, and you never think of an overweight person, like the both of us have in the past as malnourished, but we were. And it connects back to soil. I think soil is sort of understood. Go ahead.

Dave:

I was just thinking before we go into the soil, government recommendations are to keep people from costing so much in lost productivity, that it affects the national economy. So, from a government's perspective and it doesn't matter what style of government, they all function in the same way. You are basically like in The Matrix, you're a coppedtop for a society. Your job is to produce something and that's why they want you to have a bunch of kids, right? And this is now changing in China for instance, there's a many kid policy, but they don't want you to be very healthy, because people who aren't very healthy are easily programmable and easily controlled.

So, it's a massive act of rebellion to give yourself enough nutrients to say, "You know what, I'm actually fully aware in present and I don't really want to be a coppedtop." And it sounds a little bit out there, "What? You mean by eating properly and turning on my mitochondria at full strength, I might actually be dangerous to the world?" Yup, you might be dangerous to the world, you also want to make it a better place." Like that's my whole focus for the next god knows how long, is turning that stuff on for people. And honestly, if you don't have enough phytonutrients and if you have too many toxins from manmade sources, from things that are manufactured or even from nature, you simply can't run at a high enough power level to do what you're here to do.

So, this is why I wanted to have you back on, was just to talk about the system of that because we have farms with soil. And that's already been damaged, and you're doing something both to get nutrients back in people, but also to get it back in the soil. So, talk to me about the link between soil and us and what you're doing about it.

Junaid Kalmadi:

Yeah, absolutely, that's a great point. Soil is most commonly considered even for myself a few years ago, just as dirt. It's just something that is on these fields that we, most of us in urban cities or if you're in a rural city maybe have a connection to it. Most of us don't see it and interact with it on a daily basis. But to reimagine soil, it's actually the living skin of the earth. And the Rodale Institute, which is an amazing organization and one of the pioneers of organic agricultural research, found that in every handful of healthy soil, there are more microorganisms that have lived in the entire history of planet earth, in every handful of soil. And soil ecology-

Dave:

More than have lived, that doesn't make any sense. What does that even mean?

Junaid Kalmadi:

Within the microorganisms, for every handful of soil there's trillions of microorganisms so within handful-

Dave:

Oh, the counts of organisms is higher than the number of species, all right I got it.

Junaid Kalmadi:

Exactly, exactly.

Dave:

It's impressive but questionably useful. All right, I got it. Good marketing Rodale.

Junaid Kalmadi:

Yeah, it's kind of to our child brain. Like for me, it's like super passing, oh my gosh, just take up a handful of soil and Leonardo da Vinci had an amazing quote that I really found inspirational was, and he said that 500 years ago, that potentially it's still true today, "That we know more about the movement of the celestial bodies above in the skies than we know about the soil underneath our own foot."

Dave:

I really liked him in Titanic, he was great.

Junaid Kalmadi:

That's funny, totally. A different Leo but it's such a cool name. So, if you want to think about 90% of all the organisms on the seven continent, on seven continents if they live underground, in soil it has this massive responsibility of 95% of all of our food production and that sort of comes from our soils. And by 2060, our soils will be asked to give us as much as food as we've consumed in the last 500 years, which is massive. So, more practically speaking, why does it matter to you and I? And the simple-

Dave:

I got to butt in for a second, we talk about peak oil, this was this big thing in I think the '90s or something, right? And it didn't appear to be real, but maybe it was, and we talked about peak carbon, none of that stuff matters, because peak soil is the important thing. And it's not that far away, 2060 that's less than 40 years, right? Am I doing math tight? 2060, 40? Whatever, it's 50 years, when is it 2020? Anyway, it's some amount of years that I'm going to be alive for, it's a small amount of years in the overall percentage of my plan. So, what are you going to do to fix our soil man? We have soil has no nutrients in it?

Junaid Kalmadi:

Yeah, absolutely. So, what we do is, we work with an alliance of farms that are organic and the key understanding is 30% to 40% according to the U.S. government, 30% to 40% of all the food supply gets wasted. We're talking about from the retail in terms of grocery stores, in terms of our home fridges, and even on the farms. So, imagine if one third of your fridge every day is taken and thrown in the trash, that's what happens right now with our entire food system. And on the farm, the reason why this happens is, a lot of these produce that gets wasted is "ugly produce," we like to call them cosmetically challenged produce. They may look, for an example, a cucumber may look round, instead of having a straight line as a cucumber. They may have a little blemishes, but it's the same amount of nutrients, it's the equal amount of nutrients.

And in America, grocery stores don't buy these "ugly produce," because they want the beautiful produce because that's what the American consumer culture has been over the decades been trained to produce. In Europe, for example, in the Netherlands, it's not the case. And they're more culturally familiar with ugly produce. So, as a farmer, every harvest is different and nature makes it hard to predict

how much will be produced every single harvest. And it's like relatively common that harvest over produce, over their forecast nature is very abundant. So, there's a lot of leftover produce that may be ugly and this is because it's equally nutritious, and it's unsold. We go to these farmers, we buy their ugly produce, we give them this additional form of income.

And we take this ugly produce, and instead of like trucking it to multiple different places, we juice it right on the farm. And when we juice it right on the farm, the special benefit is that we capture what we like to call, the peak nutrient availability. And it's highlighted, if you go to a Whole Foods or Trader Joe's or a Target and you buy a cucumber or a salary, and you keep it in your fridge. Typically, how long would it last for? Most people from my survey, they found that it's two, three, four days, but typically it goes bad after that. But if you go to a farmers' market, a local farmer's market where they've literally harvested, picked it up from the ground and then the same day or the next day, they've come to a farmers' market and they're selling it to you.

There's no sort of like middlemen, warehouses and all this time, the produce last fresh for double the time. So, it really matters when you juice your produce, if you're juicing it from the grocery store, we recommend, even if you choose Farmers Juice or you don't, if you're interested in juicing, try to support your local farmer by going to the farmer's market and then juicing it. And you'll actually taste and feel the difference, it's pretty powerful. So, by buying produce from these farms and by empowering farmers with this additional economic income source, we support these farms that are doing the right thing in terms of being certified organic farms. And that's one way we reduce the food waste problem.

The other aspect is when you juice, if you juiced at home or if you even observed the juice shop, there's this massive amount of pulp. And pulp is typically wasted or if you're a conscientious person, you can maybe put it in your compost or a backyard garden but most pulp goes wasted. What we do is we work with dairy farmers in California and we take these thousands and thousands of pounds of pulp and we give it to dairy cows that eat it, and then they poop, which helps rebuild the soil. So, this is one principle and aspect of regenerative agriculture that we're involved in.

Dave:

Do you blame veggie influencers on social media for causing this epidemic of people only eating pretty produce?

Junaid Kalmadi:

I think it's the momentum of people who were there before that, and they're unconsciously participating in it. In terms of the American consumer culture, on the grocery level stores, I think to my knowledge, it's hard to get the clear data on this by researching it online. But I think it's probably when there was a shift to local farming, to mass farming. So, it was called as like "Green Revolution," where roughly right after World War II, we had these massive amounts of pesticides. Specifically, ammonium nitrate, that was used in World War II as ammunition but then got repurposed to be used on farms. And with this started monoculture, because this whole Green Revolution around 50 years ago started because we were, as a society, in the culture, the American population was 100 million people, today's roughly 330 million.

So, there was this fear, which was accurate, that we're going to have this massive population explosion and we're not going to have the ability to feed this massive population. So, they started using pesticides and went away from plant diversity in terms of having multiple different crops that actually is really good for the microbiome of the soil to have monoculture more prettier, cleaner crops that will sell. And this was started in on an industrial level agriculturally. And that rolled over to being a mass consumer trend that was accepted.

Dave:

And all of that, and what you just mentioned there that you're doing by taking our waste products, basically the pulp and feeding it back to the animals so that we can then get those nutrients and to get that precious animal-based food. That's the way to solve the problem and what happens to the poop of those animals? Do we pile it all up and then get rid of it the way they do the hog farms owned by China that are filling up most of the southern U.S.? Or are they doing something else with the poop?

Junaid Kalmadi:

The poop goes to the soil. And that's-

Dave:

Oh my god, you're building soil. So, there you go.

Junaid Kalmadi:

You know, a next level thing of it we're planning on is not taking the pulp and directly putting that in the soil. So, that would be incredible. It takes maintaining that pulp and transporting it in a special way. And we have to find the farmers that are interested in rebuilding their soil. So, it is a fascinating way to sort of like our plants can be used as direct food back to the soil, which is a fascinating concept. I really like how you touched on the zooming out, collecting the perspective on Big Ag how's it connected to Big Pharma. And the statistics for our population right now is not super encouraging, that we have 70% of us that are overweight and it's crippling our economy, like Medicare and Medicaid are really, really hurting under the weight of chronic disease.

And it's not just the United States, it's a sort of global problem. \$47 trillion will be spent globally across the world, fighting chronic disease that's mostly diet driven. And I've heard Dr. Hyman on the show, and he shared a statistic that like 45% of the world's, even though the United States has 45% of the world's population. We were burdened with 20% of the world's COVID cases. And it's fascinating that when food, if it's rephrased as not being like medicine, but it actually is medicine by one of our advisors Dr. Mark Hayman and a friend of yours-

Dave:

You can't do that, Mark's a dear friend but if you say food is medicine, then it'll get regulated and you'll have to go to the doctor to get a salad. You got to be careful with that one.

Junaid Kalmadi:

That's hilarious, yeah. It is remarkable how powerful food can be. There was this amazing study within a prison that had violent crime inmates. And the violent crime went down by 56% after they had introduced a healthy diet. And 80%, if they had just introduced a multivitamin, and that's fascinating. That can actually change and heal our culture and instead of putting people within a prison, or putting people in schools with just really, like public schools that have really poor-quality food. If we actually want to rebuild our sense of health as a culture individually and collectively, food is this massive and our food systems are this massive lever that we can turn on that can have this ricocheting effect and this domino effect across culture.

And it can all look so confusing when we look on the outside. How is the unhealthiness of our obesity population connected to violent crime in terms of our prisons? There is a common link in terms of solution, not the solution, one of the powerful solutions, is to rethink food as medicine, rethink our

soils not as these commodities that we can just use and till but as our allies, as our friends. And our entire, like 95% of our food really comes from it so it's really like we have this like self-protection as a species. We want to have a healthier future, especially given our population growth, we have to really reconsider our soil. So-

Dave:

Do you really believe in population growth?

Junaid Kalmadi:

That is something that is so geopolitically diverse as a question, it's a good question. It really depends on, I think India and China over the two bigger drivers, it depends on their policies. What do you think? I'm curious.

Dave:

I have zero concerns about population growth. And the reason for that, is that I have a long timeframe and I wrote a book on fertility. Human fertility across the planet is in massive decline because of what we've done to our soil, because of pesticides, because of endocrine disruptors, because of tens of thousands of chemicals that mess with us that we put in the environment every year. I am more concerned about our ability to reproduce healthy offspring as a species than I am about population growth. So, we're probably peaking sometime in the next five, 10 years and it's going to go down from there, both as education goes up.

And as food and quality food goes down, you simply can't pump out a lot of kids the way that made a lot of sense in the 1950s because we had lots of space and lots of food, and you could do it. It simply won't happen when people are packed in cities the way they are now in much of the world. Because we can't sustain it biologically, it actually doesn't work. So, when you look at things like I'm worried about carbon in the air, it is going up. However, the number one carbon sink is?

Junaid Kalmadi:

Soil?

Dave:

Soil, right? So, we're saying, "Okay, great. So, the faster that carbon goes up, the faster trees grow, it's rocket fuel propellant for growth." So, we'll get more algae, I like the way the world looks but we'll get more algae, it'll suck the carbon out of the air over time, if we keep enough of our ecosystems intact. And so, what's going to happen, humans can't reproduce but I'm pretty sure trees will be able to. It's just, put on a 50-year hat and I don't think we have as big a problem with populations we think we do but we will have a problem with human suffering along the way. Even Elon Musk is forecasting a crash in the human population. For all we know, it's happening right now, for all we know there could be people trying to engineer that. It's a common plot in your science fiction James Bond kind of movies.

But there's always about 4% of the population between 4% and 6%, who are sociopaths and psychopaths. And it's measurable and repeatable through as long as we've known about those concepts. So, you give some of those people enough time and technology, of course they're going to do bad stuff to the rest of us. That's separate from what we're all doing to ourselves by degrading our soil, putting chemicals everywhere, but either way, either one of those paths you want to "believe in," in the future. I don't think we're going to have too many people, we're going to have too few healthy people.

Junaid Kalmadi:

Yup, that's a very optimistic hopeful view. And that I would totally, as a future parent, I would feel like having a healthy offspring, like one or two is more important than having seven like my grandparents. And soil has this massive lever if it's unhealthy it actually releases carbon, and if it's healthy it actually captures carbon. And if we produce the next generation of regenerative farmers, it's going to take an incredibly collective will to really make that happen. And there's this amazing nonprofit called Kiss The Ground, they've got a Netflix documentary as well called Kiss The Ground and we actually donate to Kiss The Ground that, they basically educate farmers, organic farmers, non-organic farmers.

And they provide them financial support, and they work with them to, because most of them have this generational knowledge on like tilling is good, and that they haven't even heard of this. So, it's just like, if we get the farmers on board and we understand, "Oh wait, your harvest is going to be less unpredictable, that you're going to have a higher nutrient dense quality of produce. This is going to be one of the next trends for consumers. And once they understand from a cost basis, the expenses will be less volatile, and the harvest is the output, it's going to be more stable and more abundant and rich. The next challenge in terms of rebuilding our soils and with regenerative agriculture is, can we get the consumer attention and demand from the grocery stores over time. This is going to be, I think a decade long process but-

Dave:

Demand for ugly produce or demand for like-

Junaid Kalmadi:

Regenerative produce.

Dave:

Just regenerative produce in general?

Junaid Kalmadi:

Yes.

Dave:

Right now, I have stopped caring about the organic standard. Because it's become so owned by big food, it doesn't mean what it once did and it prevents farmers from adding specific nutrients to their soil. There's nothing wrong with saying, "You know, I have some magnesium deficiencies in my soil, I'm going to add just magnesium." So, I would do that and I don't care if it's a chemical. I just care is it tested and do we know what it does to us and our offspring and to bacteria and to fungus? As long as that's all there, that's why the organic stuff is limited and it's expensive. It's driving up costs and it's not improving soil, it's not improving the world regenerative would. Do you have a general standard that people can look for? Is it yours? Is it someone else's? I don't know about those.

Junaid Kalmadi:

Yeah. So, right now, regenerative is very, very scarce in supply within our food system, let's be clear. You can have a farm if you're have the self-initiative, if folks are interested in buying regenerative produce, one of my good friends Mollie Engelhart, she actually has a regenerative farm. It's fascinating, she took this barren piece of land and within three years, completely transformed it. It grows watermelons to all

kinds of green vegetables. And she employs all the regenerative techniques that are most calm and she's actually a total innovator in the space. She uses cows, hundreds of chickens, and she documents it all actually on YouTube. So, you can actually learn her techniques as she's experimenting. But if you want to buy a regenerative produce box, and you actually want to try the difference, you just go to sowaheart.com, you can just-

Dave:

S-O-W a heart?

Junaid Kalmadi:

Yes.

Dave:

The reason that you convinced me to be an advisor, investor several years ago is you had the vision to make it closed loop and this is just not like normal juice. Normal Juice, you go to Jamba Juice, I want to pick on a big corporate entity that could make my life miserable, but it's mostly sugar just same as Starbucks, right? And I'm not going to, Starbucks brought good coffee [inaudible 00:33:53] so I'm not going to pick on either one. But over time, it evolved into sugar bombs and that's what happens when big companies, imagine what would happen if Twinkies took over a juicing company. What would they put in there? I don't really know but it might not be what you want.

Junaid Kalmadi:

Yeah, absolutely. I think it's fascinating that most juices out there right now have 30, 40, 50 grams of sugar, even though it's marketed as this healthy beverage that has a ton of phytochemicals and a lot of key nutrients for your body to thrive. Many of these juices are sweetened with apple or pineapple and would taste well, sells well. That's like general understanding and obviously, the negative costs of putting 30 grams of sugar in your body just in 10 seconds is a high potential for your insulin to spike. Which can cause a drop in your energy, your mental stamina not to mention a whole sort of potential negative side effects like frequent urination, increased thirst. And this is if you have consistent sugar intake.

And what we did Dave and it took you six months to really get convinced is that, we can actually make a low glycemic keto friendly juice by specifically using non oxalate produce or no kale, no shard. And we used cucumber, celery, basil, mint lime and it still tastes delicious. The key thing is, if we get rid of all the bad stuff, high amounts of apple juice, high amounts of pineapple juice and if it just tastes like grass, I don't want to drink it. I wouldn't want any of my friends to drink it, how do we make a delicious? So, that was one of the key challenges that you came back with feedback is like, "Hey, these tastes good but this other stuff, even though it has a lot of nutrients, kind of makes me gag. So, can you make this taste good and have a ton of nutrients?"

So, after six months of iteration, we created this keto friendly certified organic juice that has 1.5 pounds of produce, that's delivered to you. Just go to farmersjuice.com and you can get a whole box for your family. And it took a lot of collective will to get the supply chain right on the back end, as an entrepreneur you understand that. To make this possible, because there's no point in creating a partial good if some parts of the system, especially with the soil, with our farmers, with our sourcing with using recycled only bottles versus using single used plastic. So, every single bottle that we have is actually recycled plastic already.

So, we encourage all of our customers to recycle it. And as long as you recycle it, theoretically speaking, depending on how sophisticated your local recycling systems are, it can be a closed loop. So, that's one of the key differentiators, how we think differently about sugar, creating delicious juices and using eco-conscious materials within what we do.

Dave:

Okay, I've got a few questions for you from The Upgrade Collective, it's helpful to have a live audience here with me. So, one of them is saying, "Are you testing for nutrients on day one and on day 30?" Because the thing that's cool is, this is very affordable, Farmers Juice because you send it out, by the way, you use code upgrade on farmersjuice.com. And I'll give you \$10 off any box of juice, which is just the way Junaid saying thanks for listeners. But if you go in there and it last 30 days, which is more than most juices, we'll talk about the technology that allows that to happen. But, "Do you measure nutrients on day one and day 30? Is it the same? What kind of what kind of drop off do you see?"

Junaid Kalmadi:

Yeah, that's a good question. So, we're actually in the process of doing nutritional testing. And once we have that answer, we'll definitely share that. It is an interesting problem set, to say for example, a cucumber in the month of March that season, versus in December, it's not the same cucumber. So, there's a nutritional difference over time. So, we have to generalize, average out different seasons to actually say, what does the data say from four different seasons? Because we don't want to say, "Oh, this is what it is." And then they have another test, so we want to be thorough in this process. And we're just working with third-party experts on this at the moment to give that transparency.

Dave:

Let's talk a little bit about what's really going on with that, because you hit on something massive. When you put politicians in charge of what people eat, they will take unelected regulators who have financial interests and then they'll make policies. So, I had the same problem when I worked at Bulletproof. A cashew that you pick in one part of the world at a time of the year when there was plenty of sunshine is going to have different levels of nutrients in it, it'll even have a different density. So, who says that a label on a bar that comes from actual food that's grown on the world should be accurate within, it says 100 calories? Oh, no, it was 95 or it was 105, that's normal.

And you can't ever know how many calories you're eating all these calorie people say, "I measured everything so I know how many calories," no you didn't. Because the water weight and the density of sugars varies based on region, based on species, based on soil composition and based on sunshine and based on insects. So, all of these mean that what you're eating, you'll never really know and that's okay. And so, to your point with Farmers Juice, you can know how much juice you put in from the plants but it is going to vary depending on how ugly the plant was. Because the uglier it is, probably the higher nutrition it is because it went through some more stress so it fought harder.

A small kind of like I fought hard is going to have more nutrients than a big I never had a stress in my life kind of plant. So, just to expound on that answer for The Upgrade Collective member who asked, I think that was Deborah, looking at the slope of the curve of does a vitamin C or something degrade with the technology for preservation that Farmers Juice is using? I think you can tell us the slope of the curve, but you can't tell us with any degree of reliability exactly how many nutrients are in the beginning or the end. Am I hitting that right?

Junaid Kalmadi:

No, you actually nailed it on the head. And I think because of your experience with Bulletproof and being on the food development side, you understand this problem. And in terms of how, if anyone says to you, this is the exact nutritional content and this is the standard. I would question that, you need to have a diverse, because there's so much diversity in the background of different contributing factors. So yeah, but we are working on getting an answer to that.

Dave:

Okay, good deal, it's a good answer. So, something else you're doing has been really, it's been challenging for the juice industry. So, if you're listening to this show guys, you hear me talk about upgrading humans and that is what I'm here to do. And just food happens to be one of the big ways to do it. But that means I've studied some things that you would never hear about or know about, but you'll learn about on the show because it matters. And one of them is how do you preserve food? My basic rule is, don't eat food that spoiled because of mycotoxins and histamine and bacterial toxins and lipopolysaccharide. These extra toxins will trash your longevity.

Don't eat food that won't spoil because food that won't spoil will trash your gut bacteria and your cells as well. There's usually chemicals that keep it from spoiling. So, that means, "Oh, great, Dave. Now I can only eat food that's in the 5% really fresh." So, what that means is how do we preserve food in a way that doesn't trash our biology? And one of the coolest things that's happened is the type of, we'll call it pasteurization but it's the wrong word. Pasteurization by definition, pasteurization have cooked the milk which trashes the milk, so it won't spoil. That's what pasteurization is, what do you do that's called pasteurization that's not pasteurization for a Farmers Juice?

Junaid Kalmadi:

Yeah, so most juices, if they're not on the fridge they're heat pasteurized. Which means and there's enough suggestive evidence that actually degrades the nutrient quality. And it basically makes it super high sugar but very dead in nutrients. It's like why would you even drink that just because it taste good? So, cold pressed, it's made in a cold environment but after it's made, it's incredibly sensitive. Because the juice that you drink in the morning versus a day later can have less nutrients and it will even taste different. If you juice at home, that's your experience. What we do is we use this innovative technology called HPP or high-pressure processing. And it's a fascinating food innovation that's used in avocado, guacamole dips to baby food smoothies that are organic and Whole Foods that you can find.

And basically, it's this giant machine that's as big as the size of a yellow school bus and you introduce a juice that's freshly pressed that's locked and sealed into this machine. And it then introduces cold water and high pressure coming from every single direction. But what's remarkable is there's enough pressure that the juice bottle in the HPP machine can go to the bottom of the ocean or the top of Mount Everest, it's that much pressure. So, with the combination of pressure and cold water without any additives, without any chemicals nothing just plants, it increases the shelf life by getting rid of any of the negative bacteria that would cause E.coli growth. Or any of the various diseases that would happen if you have a raw unpasteurized juice over three to four days. It's actually bad to drink.

So, in a way it's creating safety in terms of the juice quality, it's also creating a nutrient preservation. And it's also preserving the vibrancy of the taste and color. So, we say the difference between an HPP juice and a raw fresh juice, if you're juicing at home, is there is a difference. So, if you juice just at home and you drink it right there, great. I have a juicer at home, I do that occasionally and I think that's awesome, but it takes 30 to 40 minutes to clean the juicer, get the produce, cut the produce. It's a hassle and if you want to make juicing as part of your habit and level up your health, it's challenging. So, there is a huge convenience factor.

Dave:

I'll just say this as the raw vegan, former raw vegan guy. I had the \$500 slow juicer and the champion juicer and I could make carrot pulp desserts that still tasted like crap and all that. It takes over half your kitchen, there are food safety issues that most people who juice don't really pay attention to. So yes, there is that weird black stuff in your juicer that you probably didn't notice. It is a manufacturing process and now I'm going to say something really unpopular. Even with Farmers Juice, it is processed food. There is nothing wrong with processing food. When you take the shell off your walnut, it's processed food when you cook it, it's processed food. It's just about processing it in a way that's biocompatible for humans and for the planet. And your HPP process for farmers to use is one of those.

It is the right way to do juice to preserve its nutrients and some of the structures in the cells. But now people are asking from The Upgrade Collective, what about freezing it? Can you make ice cubes out of Farmers Juice and use them later? Is that good or bad?

Junaid Kalmadi:

That is creative question. So, when you unbottle the juice, you can pour it out and put it in your ice cube tray, that's totally fine. If you take a juice bottle that's unbottled and you put it in the fridge, it can explode. So, don't do that. A cool way to use the juice apart from just drinking it is to make it into ice cubes, put it in your smoothie, or you can just put it straight, the juice into your smoothie. And it just gives a level up to your smoothie. Another creative way is, if you introduce it into your sparkling water, it actually tastes pretty delicious. You can take macadamia nuts for example, you can soak them with the juice and you can blend them. And it makes this juice elixir of juice plus macadamia milk, it's delicious. It doesn't sound like it but when you try it, it's just can be like almost like a meal replacement. So, there's creative ways to do it.

Dave:

One of the other things that I like to do is take the keto versions of Farmers Juice and sometimes even the non keto versions, it's not like you can't have some carbs. I'm not a zero-carb guy unless I'm in a keto phase, which I do on rare occasions just because I want to. But you can add MCT, you can add nuts, whatever you want but getting the phytonutrients with a little bit of fat, you actually absorb your vegetables better. And this is well documented, in fact I gave a talk to David Wolf's group, which is like the biggest group of devout vegans you're going to ever find. Guys, I'm a lacto, ovo, beefo, porko vegetarian, but I hope we can talk.

And they, they accepted me and [crosstalk 00:47:07] why ghee from grass fed cows that rebuild soil is good for them, good for absorbing their plants, and good for the soil, everything. The next year, I came back and I took a poll and two thirds of the audience including David, were actually putting grass fed ghee, clarified butter into their food to feel better. So, I'll just tell you getting more out of your plants involves broccoli, it's shaped like that to absorb butter like Mother Nature is perfect except broccoli is an engineered product, it's not natural. But I'm just telling you throw some fat in there and you'll feel better with that.

Junaid Kalmadi:

Totally.

Dave:

All right, so HPP we covered that and you can do that. Most people in the juice industry, you go to the store and you buy that expensive green juice or green smoothie, it's soup, it's just cold soup. It's been

fully cooked by the pasteurization process. And quite often they're throwing a bunch of the fiber in there and what we're doing here is using the fiber to feed animals, to feed soil and you're getting just the nutrients, somewhere your body can absorb the most. So, it's all right to eat whole plants if they're the compatible ones. What else do people need to know about juice? Or about what you're doing that's just different? Because you can buy juice anywhere it's just not the same.

Junaid Kalmadi:

Yeah, that's a good question. So, if you are interested in just leveling up your plant nutrition, I recommend it just taking it as an experiment. They don't even believe anything I'm saying, go try it yourself, drink it and have patience. Because when you drink it once, you kind of were like, "Oh, what are the benefits?" Some people may notice like, "Oh wow, that feels really good. My body's happy receiving it." But if you take it consistently over time, just like if you go to the gym once, if you exercise once versus if you exercise 20 times, you're going to feel like accumulating advantage over time.

So, that's just one of the things that we recommend. If you go to farmersjuice.com and you try our keto green juices, you have one but try to give it like consistency. Don't have once and then not have it for like 10 days and then try a little bit to really feel the difference. Because ultimately, it's your own body's intuition, if you feel good that's the ultimate sign whether if this is the right option for you or not.

Dave:

How much time does it take? And is this like, I drank two bottles and I felt amazing and my life changed? Or is this like do it for a month then you notice a shift?

Junaid Kalmadi:

Everybody is different so it's hard to say, but in general, right around the 10th or the 15th day, people begin to feel like, "Oh wow, like I feel really good," and this is a noticeable shift. For me, it depends on how much you really notice key differences. So, for example, if you're super healthy, and you're very attuned, you eat, even a little, you drink a little sip of coffee and you feel like, "Oh my gosh, I feel it, I feel great." Some people may notice it within the first few sips or some people it may take 10 to 15 days.

Dave:

If you notice it in the first few sips, it's because likely of the structured water. What I'm saying here is the HPP process and the fact that you're getting structured water out of the plants. That's the people who feel it right away, that's why they feel it. So, that's one of the neat things about juice. That's why you might go to a local juice bar and spend \$18 or something and get things, "Oh that felt really good." Or yours works out to what about like \$5 a piece or something?

Junaid Kalmadi:

\$6.

Dave:

\$6 a piece there you go, inflation. It's farmersjuice.com code UPGRADE and you save some money on it. Because seriously get more nutrients in whatever way you need, I will support you doing that. And I think Junaid's work in environmental and agriculture regeneration and restoration, in conjunction with entrepreneurship and making a product that improves the human condition. This is how you do it. It's something that makes you healthier. It's something that makes the planet healthier. I'm very much in

favor of that, it's hard to do and I think you've nailed it. So, thank you for being on the show and just for sharing all this knowledge.

Junaid Kalmadi:

Of course, and thank you for believing in us and being an advisor and supporting us to create this whole thing. You've been critical Dave, and I really appreciate you as a friend.

Dave:

I am grateful to have earned the position to be able to be an advisor to a good number of companies and to help entrepreneurs and you're doing good work. I mean, I can't even tell people how hard it is to do cold supply chain. It's miserable and you're doing that. And to work with all these farmers, it's a labor of love to be honest, it's a very hard business you're in. So, keep it up and keep doing it right and don't cut corners. Don't let big foods sneak people into your executive team to change things around, just maintain control. It's a really good idea, I tell that advice to all the entrepreneurs.

Junaid Kalmadi:

100%.

Dave:

Cool, alright, guys I hope that was a good podcast for you. I think it was, we got into all kinds of cool stuff you never thought we talked about when we're talking about juice and phytonutrients. But that's how it works, the world's complex but it's not understandable. And we're understanding more every day. You learned a lot here, Junaid's doing the right things. I will tell you if I don't make the juice myself or go to the juice bar and look at someone in the eye and pick every single ingredient. I'm not going to drink it but I do drink Farmers Juice because I know it's in there, because I helped to figure out what was going to be in there. And I know all the stuff that you now know about why it matters.

See you all in the next episode. Just every one of these, it's about upgrading humanity and yeah, what you put in your body creates how much power you have, how much energy you can make, it makes you dangerous. And it's your job to be dangerous, not because you're going to hurt other people but because you're dangerous to the power structures that want you to be obedient. I don't want you to be obedient, I want you to be full of energy. That is how we all win. See you all on the next one.