

diffusetap
Virtual Event Series

Derisk Your Sustainability Investments with Tax Dollars

Guest Speaker:



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Founder
City Farmers

Hosts:



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DiffuseTap: Derisk Your Sustainability Investments with Tax Dollars

Last time on DiffuseTap, Ian Hedrick, Founder of City Farmers, talked to us about the true value proposition of vertical farming, how VCs and the US government are supporting the agriculture space, and how innovative farming methods are changing the industry.

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DiffuseTap

This networking session is part of our weekly virtual events series. Networking (you'll bump into at least a dozen high caliber fund managers) meets purposeful (you'll tap into brand-new sources of ideas)... straight from your armchair like a boss.

Meet the Speaker



IAN HEDRICK is the Founder of [City Farmers](#), the Urban Agriculture Research & Development Initiative of the [Public Health Institute of Metropolitan Chicago](#). City Farmers facilitates university research for urban agriculture best practices, and develops and maintains an open source knowledge base to support the creation of workforce development programs and businesses.

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KENNY ESTES: Mr. Hedrick, thank you for joining us. Do you want to tell the good folks a little bit about your background and what you're up to over at City Farmers?

IAN HEDRICK: Yeah. My name is Ian Hedrick. I'm the founder of City Farmers. My background is very blue collar. I had a dad who was a carpenter, and a mom who was a self-employed seamstress. I realized from a young age that you could become an entrepreneur, and you did not have to go get a job and work for somebody. That was not my dad's desire. He really wanted me to get a government job like him, and get a pension. But it just wasn't for me.

So, after a three year gap from high school I moved to Chicago for architecture school. Originally, the plan was bachelors of architecture, masters of civil engineering. For better or worse, I had to drop out after a couple of years. Having moved to Chicago, I realized that there was a really flourishing urban agriculture scene. It's the most urban ag-friendly city in America. The zoning is very friendly for it, making it very simple to do here.

And there are actually 890 documented either farms or community gardens within the city. It was a really massive thing. I worked in the industry for a few years for other people, knowing that something was possible. But also, let me go and validate assumptions. Let me go test this theory and see what's going on. And after a few years, I realized "wow, there is a ton of potential here." But for better or worse, maybe a lot of the companies were doing it. Maybe things could be brought to another level.

So, I spent about a year forming a partnership with the [Public Health Institute of Metropolitan Chicago](#). That's who sees the farmers' breakthroughs through a fiscal sponsorship. And then after a year, at the top of this year, we finally launched. Now we are up and running, and it's so amazing.

KENNY: Well, I have a confession to make. I know almost nothing about this space. Can you set the stage a little bit? I gather that the US government is pretty active in trying to promote this type of stuff. What is the status quo at the moment?

IAN: Yeah. VC is taking some stabs at vertical and urban farming. In the past, one of our advisors actually raised a billion dollars in 2012. He built out a 90,000 square foot warehouse, over by O'Hare Airport. He had five levels of hydroponics in there. They were selling to Whole Foods, Mariano's, and all the major grocers in the city. Very similar to [AeroFarms](#), if any of you have heard of AeroFarms out of New York. They recently went bankrupt.

Basically, the big investors in farming here saw what was coming with AeroFarms and down the farm here back in 2017. So after those failed experiments, VC had a bad taste in their mouth and left the industry to the wayside. But the food system still is very fragile across the board. If you really take a look at the way we ship food across borders, for multiple nations to get here, it's on average in [Chicago](#). Our food travels 1,500 miles before it gets here.



Thanks to the pandemic and all the supply shortages, we had some exposure on how fragile some of our global supply chains are.

We have things like the Food System Transformation Framework which are specifically created for driving urban agriculture research. And fortunately, a lot of corporations like the American Heart Association, GitLab, and others are also pouring money into this.

So, where the for-profit sector has been willing to move, – and for good reason, based on bad experiences – the non-profit sector stepped up to carry the weight. And that makes sense because one of the purposes of nonprofits isn't just alleviation of the poor. It's also the advancement of science.

KENNY: Okay, so the story I'm hearing is that VC came in, they did it as for-profit investments, and generally, those flopped a little bit. And now, the stage is being set by pretty significant subsidies from the US government, as well as these 501(c)(3) organizations.

Are you structured as a 501(c)(3) ? And how does that work? When you're talking to investors to pitch what you're doing, and you're saying you're a nonprofit, how does that conversation go?

IAN: Yeah, 100%. We operate through a fiscal sponsorship. We have a 501(c)(3), the Public Health Institute of Metropolitan Chicago. They are a 30-year-old public health nonprofit that was spun out from the city's government about 12 years ago. They're the 501(c)(3) of record. Our money hits their bank account. And then, from there, we use it for our purposes. It's an annual contract. We operate through a fiscal sponsorship with the Public Health Institute.

The way the conversations with investors go is, look for a lot of these grants from the government, etc. We can get multimillion dollar grants, especially with the prestige of the fiscal sponsor we operate through. But we do need matching capital going into it. Oftentimes, you need 25 to 50% of the capital ready, and then they can support the rest.

But the beauty of it is not only do you get the procedure of working with this type of nonprofit, you also get to get in early on the technological advancements we're making. What we can offer to investors isn't an immediate return. I cannot currently promise you a return on investment, but we can promise this first right of refusal on any intellectual property that we develop.

I think of us as the open AI of urban vertical agriculture. But rather than using some crazy distorted corporate structure, where it's three different corporations all tied up in weird ways, it's very simple. Our nonprofit generates intellectual property, that intellectual property is licensed to a for-profit, and that for-profit can accept capital to scale. We offer the right of first refusal.



KENNY: So in this case, is there a tie to academia as well? When you're talking about intellectual property, this is just something you're developing in-house. Are you actually going to coordinate with universities? Because that's something we've heard before, where you use nonprofits to do deep research in an academic setting. And then, when you want to monetize and benefit from that IP down the road, it becomes a for-profit. Is that the play here?

IAN: That is kind of the play here. It's a little bit of both. There is a fair bit that we can do independently. We have a Canadian researcher on our team who has been very deep in controlled environment sciences since the 80s. He has worked with DuPont and a bunch of really big corporations developing some really fantastic greenhouse technology.

And then, we also have a technology partner based out of Lithuania working on the growing methodology. Our system is true vertical. It's these towers where we spray a fog on the roots of plants, to make it very simple. And so, yes, the academic partners do come in there. We're having a number of conversations to form those partnerships, and it definitely is part of the hope.

We have technology that is about this close to becoming market ready, that we don't need the academic partners to prove out. But there are other technologies and other crops that are going to take a little bit longer. Those are the conversations we're having with the academic partners about.

KENNY: Gotcha. So are you sick and tired of strawberries yet?

IAN: I'm not. I love strawberries so much, and that's the thing about it. We're really just emulating the way how the biggest berry company in the world became the biggest berry company in the world. In the 1940s, Driscoll's bought a berry research program from the state of California. It has been about a decade researching roughly the breed of berry that's on the shelves today, the Z-57 Berry.

And then, once they recognize that they had a berry that gets shipped from California to New York and does not get spoiled, and could sit on the shelf for a few days and still look pretty, they deployed it into the market. It's very similar to what they're doing. Unfortunately, the way that they industrialized berries means it's a 40% cost of goods sold product. There is a lot of margin there to be eaten up. The napkin math shows the technology that we're about to deploy could cut that in half.

KENNY: Okay, and the reason for that is the transportation costs. You do local growing, and potentially you can make it less durable. Maybe that has an impact on the actual taste of these fruits and vegetables down the road. Is that the idea?



IAN: It's also significantly more land efficient. We can grow an acre's worth of strawberries in an eighth of an acre. Driscoll is using more traditional agricultural techniques. We're significantly more land efficient. We use 90 to 95% less water. And then yes, ultimately, it is a more flavorful and nutritious product as well.

KENNY: Interesting. And you're running these farms yourself, or are you working with local mono-condo associations? How does that work for us? I'm assuming they're relatively small and just just spread all over the various rooftops in the urban areas.

IAN: Not rooftops. The engineering of most buildings are just not designed to handle rooftop gardens. We're looking at vacant lands in cities. Your average lot in Chicago is 25 feet by 125 feet. And on any of those lots, we can grow a minimum of 5,000 plants at a time.

KENNY: Gotcha. Okay, so you are actually doing the farming. And I'm assuming, I don't know, they tore out a bunch of houses on the south side of Chicago maybe a decade or so ago. A lot of those are still vacant. So that's where you are primarily focusing at the moment.

IAN: Yep. The city of Chicago owns around 30,000 vacant lots. Based on the napkin math, if we were to grow romaine lettuce and sell it for \$2 a head, which is undercutting Whole Foods prices, and we put one of our greenhouses on every vacant lot that the city of Chicago owns, we would have a \$2.25 billion annual revenue business.

KENNY: Wow. Interesting. And a much lower cost of goods sold. You are starting with strawberries, but what is the trajectory? You mentioned berries, but what are easy and what are hard vegetables?

IAN: Blueberries are super difficult, but we would like to take those on. A lot of the conversations we're having with academic partners are about blueberries, just because they're a difficult crop to grow. But with strawberries, there has been a decent bit of research. Singapore and Japan came out with the foundational research and white papers for what we're doing.

We are mainly focused on strawberries in part because with things like lettuce and kale spinach, it's already been done. There is no reason for us to try to compete with Gotham Greens. They have a 100,000 square foot greenhouse on the south side growing plenty of lettuce and basil for the whole city. It's another market, and it's a very high margin product. There's ample room for disruption to happen there.



KENNY: Sure. I think I have a couple questions from the chat, one from Mr. Lynn. Does that qualify as organic? I mean, I don't even know what organic means, honestly.

IAN: Yeah. We're pursuing organic certification from the USDA. There are certain qualifications to meet there. But yes, it's organic. That means everything and nothing. As long as you meet their qualifications, you can get the stamp.

KENNY: Gotcha. Okay, Erin had an interesting idea. You talked about the vacant lots, but you are not putting a greenhouse down. Walmart apparently shut down a lot of stores on the south side not long ago. Is this something that you could stick into shopping malls or big boxes?

IAN: That's a tricky thing. And again, this is what our advisor found when he raised 25 million in 2012. They had a 90,000 square foot cardboard factory. It's very similar to a Walmart building. When you don't have sunlight, it becomes very expensive because you need to import your lights, your energy.

That just racks up the cost extensively. So, it's really not the best idea to build greenhouses and use controlled environments where the sunlight is powering your plants to the fullest extent possible. It's a big part of the equation.

KENNY: Meredith had a question with two hearts on it, so this is going to be a good one. Do you want to grow weed?

IAN: Do we want to grow weed? The market is kind of tricky. I've had some conversations with some people about it. I mean, we're open to it. It's a revenue stream for sure. But I'm not that excited by cannabis, to be honest. The food system is very fragile. I know it's very easy to think that food is abundant, especially here in Chicago.

I live walking distance to a Whole Foods and a Trader Joe's. It's very easy to think that food is abundant, and it's coming to us all the time. And to some extent, it is. But it's also because of foreign labor forces that are being paid less than a livable wage and oftentimes, in horrid conditions. I mean, our avocados most often come from a village where all of their water is actually being used by the avocado farm. And so, the potable water that they drink and bathe with is being shipped into them on a truck weekly. There is a really massive social impact element to this that gets downplayed or not discussed that much.

With cannabis, yeah, it's cool. I mean, will we do it for the revenue? Sure. But when you really look at the mission of transforming the food system and creating a more resilient equitable food system, I don't know.



KENNY: Right. You're not excited by cannabis, which I gather is the norm. Let's go back to the nonprofit element. There is a famous issue with open AI not too long ago, where there was this combination between a nonprofit and for-profit, and everyone knows that story. Do you want to talk a little bit about how you guys are structuring and how you're trying to avoid some of those governance issues that are plaguing them?

IAN: Yeah, I think it was an [All-In podcast](#) where they show a chart of the corporate structure, and I was like, "What is even going on here?" It made no sense to me. The way we're structured, the fiscal sponsorship is through the Public Health Institute and myself directly. So, any intellectual property we create can just simply spin out our own nonprofit once we're ready, and once we don't have to lean on the Public Health Institute as much.

But also, it's very simple. Like Salesforce and other orgs have done this before, you generate intellectual property as a nonprofit. And then, you license that nonprofit to a for-profit. It's literally just an intellectual property agreement. That's theirs. I don't understand why [Sam and the OpenAI team](#) wanted to go with that crazy corporate structure.

Maybe there was some type of control over things they get, or it was a way of boxing Elon out of the equation. I truly don't don't understand why they did things that way because it doesn't have to be that complex. It really can be as simple as, here's intellectual property, here's a licensing agreement to a for-profit, go scale it.

KENNY: Okay. And then go back and have it as a separate company other than the exact same people, and then move money around that way. That totally makes sense. I'm just going to let you riff because we have about two minutes left. It's an open-ended question. Is it ethical for philanthropy and tax money to de-risk farming and sustainability?

IAN: I 100% think so. 501(c)(3)s are mission oriented organizations. If you're working with a nonprofit, the founder or the people you are working with can't really file for bankruptcy and take your investor money to go buy a house with it, etc. It's a mission-focused organization. You can set up a board of directors to guide the organization and keep it on its mission. And it just opens up so many capital pathways, and different partnerships.

It's much more difficult to work with universities as a for-profit. It's much more difficult to work with the federal government and some of these corporate foundations as a for-profit. So yes, in my view it's completely ethical. And in fact, it's highly de-risking for investors to do this.

I'm hoping we could set a model even for other industries like nuclear fission, and others to take advantage of these research budgets. Working with nonprofits, what I found is if you don't have business-minded people in there, for better or worse, a lot of the money gets squandered.



But if you have business-minded people in there who think in terms of capital efficiency, you can actually stay true to your mission, execute at a high level, and create that social impact with returns that investors hope to see. I don't think there is any ethical issue so long as you are aware of the regulations and laws and how they work, and just work to stay in that framework.

KENNY: Awesome. There's one more question from the chat. Listeria contamination is a thing in the agricultural pipeline. Does your solution make that less of a problem than shipping it across the country? Or is it going to be an issue no matter what?

IAN: With controlled environments, you do have much less risk of pathogens generally in your plants. If we truly see this thing all the way through and scale it to the scale we hope to see, then what you will see is on average, a less than five mile transportation distance from the farm to the grocery store. It's almost very direct. So, generally speaking, yes. Pathogens contaminations across the board should be significantly less of a risk.



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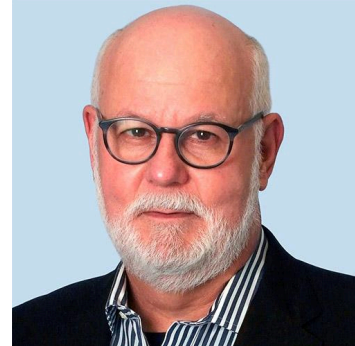


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