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Carbon Frontiers | Episode 8
Bruce Tozer, Former Head of Environmental Markets, JP Morgan and NED, Agribusiness & Carbon-Related Boards

We continue exploring Carbon Frontiers this week with Bruce Tozer, Former Head of Environmental Markets at JP Morgan, Carbon Advisor at Abaxx Technologies, and a Non-Executive Director on a number of agribusiness & carbon-related boards. SmarterMarkets™ host David Greely sits down with Bruce for a conversation about the future of our food systems and to discuss what's happening on the carbon frontier at the intersection of agriculture, climate, the environment, and technology.

Bruce Tozer (00s):
Personally, the thing which is really exciting me most is how we can get precision ag and data technology to work, really work, on farm at scale. I think we could help make farming 20% more environmentally efficient in a short period of time if we could get that. And you don't have to tackle every farmer, you know, just the top 1% of producing probably 20% of the food would make a massive difference. And these are clever people, so it's not about lecturing to them, it's working with them and trying to make innovation really work for them. So I think that's really exciting.

Announcer (35s):
Welcome to SmarterMarkets, a weekly podcast featuring the icons and entrepreneurs of technology, commodities, and finance ranting on the inadequacies of our systems and riffing on ideas for how to solve them. Together we examine the questions are we facing a crisis of information or a crisis of trust and will building Smarter Markets be the antidote?
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David Greely (01m 15s):
Welcome back to Carbon Frontiers on Smarter Markets. I'm Dave Greely, Chief Economist at Abaxx Technologies. Our guest today is Bruce Tozer. Bruce is former Head of Environmental Markets at JP Morgan and a Carbon Advisor at Abaxx and Base Carbon, as well as a Non-Executive Director on a number of agribusiness and carbon related boards. We'll be discussing what's happening on the carbon frontier at the intersection of agriculture, climate, and the environment. Hello Bruce. Welcome to Smarter Markets.

Bruce Tozer (01m 44s):
Hi David. Good to be with you.

David Greely (01m 46s):
Well, I'm really glad to have you here today and I'd like to begin by acknowledging a debt of gratitude. Our listeners should know that you have been a huge contributor to Smarter Markets behind the scenes by connecting us with so many insightful guests that you've gotten to know in your 30 years in the markets. So from all of us, thank you. Now you've spent much of those 30 years in markets working at the intersection of agriculture, the environment and carbon, including working at Rabobank and starting the environmental markets group at JP Morgan in the 2000s. I wanted to start maybe with a more personal question. How did you get started in agriculture and then what drew you into the markets?

Bruce Tozer (02m 25s):
Well I didn't really have much choice. I grew up on a farm and, and loved it. But it was really interesting. My father was really self-taught, loved science. We had students from all over the world working on the farm, academics turning up from research stations. We were specialists in seeds, so I had a real sort of grounding in it and probably today my parents would be arrested for child labor, but there you go, modern day slavery. But I just grew up with it really, and it's great and then I had a chance after school, traveled nearly for two years, worked in Australian New Zealand, traveled through Indonesia, worked on farms in Oregon, even Willamette Valley when it was still producing grass seed. So, and then I went off and did agricultural economics, which was pretty quantitative degree at Newcastle.

Bruce Tozer (03m 15s):
And then got a master's degree in France at a French grander coal and ended up working for Danone in marketing and then by exchange coincidence, I ended up running my family farm for 10 years. Really loved that, but got a bit bored, went to business school in Switzerland and ended up working for Rabobank and from there, did a series of jobs. I had fantastic experience there in the mid-90s and really for someone who'd been on a track most of the previous 10 years, I got given opportunities I'd seen nowhere else. So I went to Asia for them, ran a project finance business doing really exciting, agribusiness projects in Indonesia, Vietnam, China, Australia and then ended up going back to London, running the commodity finance business and a, a small derivatives business. So that's how I got into it and then I ended up going to JP Morgan to do structured financing commodities just as carbon was happening and people kind of worked out that carbon was gonna trade like OTC derivatives, illiquid derivatives did for ESG and the projects were gonna look quite like the risk we were doing in agribusiness project finance, so small projects, non-recourse, high risk illiquid countries with lots of problems that you can't put on spreadsheets. So that's sort of my journey to, to where I got to.

David Greely (04m 37s):
That's great. Well, we're glad you got to hear and one thing I wanted to dive into you with you today is, you know, we spent a lot of time on the podcast in this series discussing the role of energy and fossil fuels in carbon emissions, but as you said, you've been much more focused on the role of agriculture. So maybe my first question to you is, why is the agriculture and the food sector important in the mission to significantly reduce carbon emissions and achieve net zero?

Bruce Tozer (05m 05s):
Well, it's pretty simple, David. You know, the best estimates for food sector and agri growing sectors, the probably the two-thirds of it is somewhere between 30 and 34% of total emissions come from agriculture and food. So you just can't solve this problem without working out how to grow and produce and consume food more carbon efficiently than we currently are doing and food sector and farming by itself will probably never be able to get the net zero by itself. So it's critical and it's a challenging sector because it's very fragmented and it's very idiosyncratic and is very policy driven country by country. You know, there's more interference in agriculture by government than probably any other sector. So it, it's a fascinating one

David Greely (05m 54s):
And probably more interference because it's the most important.

Bruce Tozer (05m 58s):
Well, you know, I think people if they understood how important food and agriculture is to China, it's their number one priority Food security and getting that right and very, very few people in the West actually understand what China's doing and what its food policy is, but it's critical. So yeah, and if you go back, it's really interesting. You go back to the early 2000s when, you know, the first real hit at Carbon came through and we started pricing it and thinking about it seriously. McKinsey's produced a carbon abatement curve, which showed what was the cost of marginal cost of abatement for various different things, starting with energy efficiency, which is the easiest, most least cost. In fact, you save money but never gets done and take it all the way down to carbon capture and storage, which is the most expensive. No one yet has produced the carbon abatement curve for agriculture. You look at the sectors and look at what are the abatement costs of in dairy, what's the last cost once, what should we go for and that's what the transition's gonna look like.

David Greely (07m 02s):
Right, I'd love to get back to that on you, but first I wanted to ask you, you know, the agricultural industry is different from the fossil fuel industry in that it both affects the climate and it's affected by it and I was curious, how has the ESG pushed to net zero as well as climate change itself been impacting the agricultural sector and those who are financing it?

Bruce Tozer (07m 24s):
Well, the debate's been going on a long time, and it was like many things was at the margin for a long time. I got involved when I was farming back in 1991 with a organization called Leaf Linking Environment and Farming and it was trying to demonstrate you could be environmentally much more impactful and responsible and yet use modern science responsibly and well and we were one of the first demonstration farms. That organization was run by a brilliant girl called Caroline Drummond. She grew it to work in agriculture in 30 countries. Tesco's and supermarket now use the leaf mark for 14,000 water agricultural supplies and she basically was doing regenerative agriculture before anyone coined the, term regenerative agriculture and it went from guys you are, you are crazy, you're not quite like the organic fringe, but you know, we are here to produce food, not the rest, to actually, this really makes sense.

Bruce Tozer (08m 21s):
And what we demonstrated is by adopting better rotations, farming at the margin and using environmental corridors, you could actually produce higher gross margins and more profit. So this thing's been going on for a long time, but it's becoming mainstream now and if you go back into history, the Scotts have this wonderful word called stewardship for how to manage land and stewardship means you steward and look after your land in such a way that you leave it in better repair than when you took it on. So I think in the seventies, eighties and nineties, you know, we were worried about food scarcity and new science was coming out and we applied it to the max. There's a great farming family over here called disruptions who run a business called Gs, the largest horticultural business in the UK at 600 million. Speaking to the founder, I said, what are you doing about soil facility, went really interesting. I learned soil sciences university and we forgot all about those basic lessons. We chased productivity and now we're realizing we're having to go back and really relearn how to manage soils and asset better. So, interesting.

David Greely (09m 29s):
Very much and is it changing like the, the impact of the climate at the farm level and the need to go back and relearn some of these old lessons? Is it changing the financing need that the agricultural sector faces?

Bruce Tozer (09m 44s):
Well I think what you're seeing, and it's not just in farming, but we're seeing more extreme weather events, more volatility. So you get extreme spikes of heat and they may not last for whole drive, but the, the extreme, you know, can really affect you badly if it's that flowering or late frost or really, really heavy rainfall, torrential rainfall. So what does this mean in terms of agriculture it means you've got more risk and more risk means that you can be wiped out, a crop can be wiped out. So what I think it means, and I see it in some of the businesses I'm on the board of that you'll have to have more equity and a bigger cushion. You know, farming is already very sensitive to debt, but when you, you put in weather events and volatility that can destroy a lot of your, your annual cash flow in two days, then it means there's even less margin for error.

Bruce Tozer (10m 39s):
What it means for the finance finances of agriculture, really interesting. So one of my old friends from Ravo is now CFO and he has led their work on taskforce for the climate disclosure. Now's got one of the biggest agri and primary food portfolios in the world, billions and what they're finding is what is no surprise really, their carbon disclosure concentration is as high as if you are a massive hydrocarbon bank. You know, there's a real carbon exposure and they're gonna have to work and they are working with their, their customers to work out how to reduce that and it's pretty acute in their domestic market because they import a lot of soy and corn and inputs to reduce very intensive livestock who then export a lot of manure and a lot of nitrates. So their core constituents are suffering as they try to get the grips of that.

Bruce Tozer (11m 34s):
But they're big finances in America of dairy, pork, poultry, and arable crops right and the biggest contributor to agricultural emissions is entero release from nitrates from nitrogen. So this is a big issue but it's also a big opportunity, an exciting one. I mean, I can tell you if you want a couple of anecdotes about businesses I'm working with, where we've suddenly realized over the last three to four years as we map our scope one, two, and three emissions, that we dramatically reduce our emissions with e without even really seeking to do so, but just by implementing better practices.

David Greely (12m 10s):
Oh, could you give an example of that.

Bruce Tozer (12m 11s):
I'll give you two. So I'm on the board of a plantations business called MP Evans. It's London listed. We grow the very essential crop palm oil in Indonesia and we've probably got the most sustainable production team in the country and we've reduced our emissions scope three emissions dramatically over the last five years by simply doing one thing, palm oil mills, which crush the palm fruit and turn it into CPO oil, give off a lot of waste stream and what we've done is captured the waste stream into biogas and turn it into methane, which we burn off and flare. So we're not le releasing methane into the air, we're capturing it and turn it into electricity and we're substituting electricity which came off the grid, which is coal fired for renewable energy. That's had a massive impact just by itself, so also taking where we were sending fruit to be processed by somebody else without that, our scope three emissions were really high.

Bruce Tozer (13m 10s):
Bringing those plants back and investing and bringing the plants onto farm has meant that they become scope to emissions and they're much lower. So this is using existing technology and using it really well and being efficient and what we then use is the waste streamers, which come out of by methane unit then put back on the plantations as compost. So these are, these are things we're doing and then I work with a company called Haygrove, which is soft root company. So we grow blueberries, strawberries, raspberries, blackberries, cherries in UK, South Africa, China and Portugal and we sell technology to 30 countries and we've reduced our emissions by 60% in the last five years. We've absolutely foot printed everything scope one, two, and three and we've offset the residuals. So when we fly fruit around the world, actually we found the emissions, which come from that were very, very low relative to growing stuff in greenhouses.

Bruce Tozer (14m 10s):
Biggest reduction we made was, we have some glasshouses in South Wales, which we took over from tomato producers and we substituted gas, thank goodness we did at the time for biomass burners and we were taking locally off cuts from forests in Wales to fire them up. That reduced our emissions by about 40%. Just doing that and just getting really efficient, measuring everything, really efficient in the way you use fertilizer, all of these things and our teams are incentivized to do that, but we've gone way beyond that in, in other ways. So we've got a fantastic farm or two or three farms down in South Africa. One is by Hamas, which is like Cape Cod and we're in this beautiful valley and people sort of like don't really like the plastic tunnels there, but we grow a lot of stuff around them. There's amazing hills covered in FBOs, which is very rare sort of ecosystem of Heather Henry type plants, Protis.

Bruce Tozer (15m 07s):
And we've taken the technology we have in our nursery and grown a million fame boss plants and re replanted them. We've done that just outta love because the owner likes doing it and there's one plant which is called the eight Day Healing Plant. It's a nice story. This, there are only eight plants left. Our guy who runs the nursery is a world expert and this stuff is really hard to germinate, has to be put through fire and God, that's what you've got. One seed, we produced 20 plants in three years. I was down there last year. I said, Hey, why don't we tissue culture this, we've got a tissue culture plant for multiplying up cherries and blueberries. So that's what we're doing and we're, you know, these are gonna be collectors items and we're gonna commercialize those and plat back into biodiversity. So I think those sorts of things will actually provide opportunities to commercialize it later, but there's all sorts of things you can do and the real point of this I want to make is it's producers of stuff who grow things, who know how to do this stuff. Who's gonna run the best nursery, an ex-investment banker or someone who's produced millions of plants for forestry or plantations, you know? So I think there's great opportunity and I think farmers give the right incentives and producers will do a great job.

David Greely (16m 24s):
And I wanted to ask you about that point because often the folks in the financial markets are dealing with risk on a daily basis. But when you talk about farmers that's dealing with risk of another level and I'm curious, like you've mentioned many of these great bright spots and new approaches, what are some of the risks in investing in these new approaches and these new ways of doing agriculture?

Bruce Tozer (16m 47s):
Well, I mean I think really, really interesting Aaron, something I'm involved with as well is precision. So you know, really being able to be very precise and monitor almost meter by meter or pixel by pixel, what's happening in the field. So you can measure them out of fertilizer, seed the productivity, and then really treat the field not as a field but meter by meter and currently there's about eight to 9 billion being spent a year on precision ag inputs, gizmos for measuring stuff. But I honestly think there's virtually no pharma who's getting any much any real benefit from it because the data is not interoperable. So you got a John Deere Tractor, N Sensor, nitrogen sensor from Yara, a class combine, they all measure things slightly differently. And I think someone about 10 years ago went to them and said, you know what, data is the new oil.

Bruce Tozer (17m 45s):
You can create a, an integrated data vertical and make your farmer beholden to you for everything and guess what farmers don't want that. So it's been, there are terabytes of data on some of the best farms in the world and they're struggling to bring it together in a way that you can get real insight and do it better. So I think the big challenge in precision ag is to make all the data that is collected usable and interoperable and that's really exciting and also there's a big issue, you know, like where Abaxx have been really concerned about whose data is it anyway, we think the most valuable data comes from the farm and it's the farmers and you know, you need to work from that basis. Much harder to work with 200,000 farmers than three big Agri businesses. But if you, if you really want to break this and

make it work as it could and should, you've to got to work from the bottom up and build trust and show people what is the value of doing this.

Bruce Tozer (18m 44s):
They're not gonna do it because you can measure it, you're gonna do it because it makes their life easier and better. I like it a little bit the challenging ag, precision ag is like Formula 1, you know, formula one, now you've got all the guys sitting in, in the garage with megabytes of data, but Lewis Hamilton doesn't have time, you know, he just needs to rat, what do I need to do to drive better and that's where we've got to get to with precision ag. So I think it can be done, but it's no substitute for knowledge what it should allow people to do, manage it should allow farmers to manage bigger areas with more accuracy, but they still need that intuitive, what's the right thing to do today as well as art as well as sites.

David Greely (19m 28s):
Right, so do you see, it sounds like the having access to the data in a usable way so you can just kind of move on and you don't have to be a data analyst to, to run your farm is one of the, the hurdles to cross over. Do you see any other big challenges to getting some of these new approaches that you've talked about or new technologies adopted at scale on the farm level?

Bruce Tozer (19m 51s):
I mean, I think we are gonna see some amazing technologies and we're gonna see whether farmers like it or consumers like it, we will see insect animal protein for, you know, either crush for humans in sort of some sort of fake burger or going into animal feed and people are really working out how to scale that up you know, we're seeing meat being grown in the laboratories, whether or not it really replaces broad scale beef farming, I don't know, but the emissions should be a lot lower. So there's all sorts of technologies coming and some of them won't require many farmers, but the ones where it requires farmers to adopt and implement it takes a bit of time. But farmers are, farmers are really got a lot of ingenuity and I think quite a lot of, you know, not the really lab-based scientific stuff, but a lot of innovation will come from farms and from people tinkering around like it always has done. If you read Nicholas Nassim Talleb and anti-fragile, he bangs on for ages about how innovation doesn't necessarily come from big budgets and lots of scientist. It comes from people who are really passionate about something working a problem until they've solved it and I think there's tremendous scope. I'd like to see both things good science from universities, good innovation and farmers really encouraged to, to be citizen scientists on their farms.

David Greely (21m 14s):
And where do you see the balance of that innovation in agriculture coming from now. Is it more of that top down coming from the big corporations and the research universities or bottoms up from the farm?

Bruce Tozer (21m 24s):
It's both. I mean, I think in, you know what I've seen like this soft route business, my friend Angus he started with nothing, right? Absolutely nothing and has grown a big business, but he has led so many innovations because you know, he's in the field, he's always trying to think what's the better way to do this. So we were the first people to grow straw reason and soft fruit in, in coy, in pots in substrate and so you've got to provide everything to the plant then and thinking out at how you do that. And when you've got literally 150 hectares of highly intense, highly valuable crop and you're putting all the water into it and all the fertilizer and all the disease control, you know, there's a lot needs to happen and he is the guy who's sort of worked out how to do it and integrate. There's a lot of people contributing to it, but it's people at the sharp end who on the production side really thinking about how you do that. So it's both really we, we couldn't have done what we've done without the science, but without someone practical really thinking about how to adopt it, how to finesse it, you know, it doesn't work.

David Greely (22m 31s):
Right, so we have people doing that on the farm and then on the other side we've got what's happening in carbon and climate tech and I'm curious, how do you see, you've worked in both areas, how do you see what's happening in agriculture converging with what's happening in carbon and climate tech now?

Bruce Tozer (22m 48s):
Well, I mean with climate tech, if you look at, now if you look at agricultural supply chains and the big traders, one of the things which is really coming is traceability in providence and how do you do that and link to traceability in providence is also what's the carbon footprint upstream of my soy gonna be in Brazil, what's the data do I need with that. How do I capture that data. What sort of

technology do I need for authentication and identity and all of these things. So that's where it combines with digitization and commodity supply chains, which is really difficult and you need to be able to understand both. So that's one area in what we're doing on farm data interoperability, which allows you to really measure on a pixel by pixel basis the efficiency of use of nitrogen. What we are finding in one of the firms I'm helping is even the best, best, best % of farmers in the best year are only 70% nitrogen use sufficient.

Bruce Tozer (23m 50s):
So that 30% is either going up into the air, into the water, of course, right. So fertilizer price has gone through the roof, so they're wasting 30%, but N2tO is 300 times more noxious than carbon. So this is where AgTech and climate tech comes together and this is not for me, this is not if you can reduce direct emissions on farm, this is not about creating carbon credits, it's actually about reducing your baseline carbon per unit of output and frankly, I'm telling all my farmer friends think very, very carefully, even if you can create carbon credits and sell them about doing so, why. Well, in the push to net zero guess where the net zero is gonna be pushed to from the food industry up the chain to the farmer. So if you sold your carbon credits today for $10 a ton, but in five years' time, you know, the end guy down the chain says, I want net zero supply commodities you could be more short than you would be, but it may be a $100 a ton. So I mean, the real game for me is to understand your baseline, understand what methodologies technologies you can apply to reduce carbon use to improve soil fertility and carbon in soil but it's not necessarily about creating tradable carbon credits out of agriculture.

David Greely (25m 15s):
And that's interesting, as you said, the, the farmer is kind of naturally short carbon in that they're a net emitter and so I guess you would say it's, do you see when you, when you say this, when you tell this to other farmers, are they trying to access carbon financing at the farm level?

Bruce Tozer (25m 31s):
Well, it depends what country you're in. You know, Rabo is doing some great work in Africa with a little initiative called Acorn where they're helping small scale farmers through regional banks. They have shares in there to sequester carbon and it makes a really difference to their livelihood. Australia has implemented a carbon farming government scheme and I think it's about 500 million a year, which is, it's sizeable, it's not huge and farmers are sequestering carbon for the Australian government, partly at water sell into the market. This is a really interesting thing because about three or four years ago, we looked at it carefully, a friend and I and we, it looks like if you pay farmers to reduce carbon and provide environmental services, it doesn't necessarily count as a production subsidy under WTO rules. It doesn't distort trade in the trade of grains or whatever. So it looks like you can actually support farmers and their revenues and their income by getting them to produce our environmental goods.

Bruce Tozer (26m 33s):
Actually before this discussion I googled up and I saw there was a work stream in WTO looking at this whole issue. So when you start moving these things around, it becomes some interesting knock on effects and one of the knock on effects of the carbon farming scheme in Australia is the most unproductive land out in the boondocks, you know, which is $20 an acre and produced a lot of scrub and very extensive cattle is now worth a $100 an acre if you just take the cattle off and le leave it to grow scrub and so that's causing some problems for people and inflating land prices. In the UK where we have peak carbon schemes for restoration of peak bogs in, in extensive areas of Scotland. You know, one, one guy bought a grass more five years ago for 3 million, an insurance company paid him $ 33 million 18 months ago to buy it for, for carbon restoration. I mean, everybody thinks it's a bit bonkers and they must have, I'd love to see what, what carbon price they plug in their spreadsheet but what I'm saying is carbon and reforestation agroforestry in marginal areas of Britain has changed, has made marginal ground as valuable if not more valuable than grade one agricultural land. So carbon and carbon economics is changing a lot of relative values. Fascinating stuff.

David Greely (27m 55s):
And it's very fascinating the point about how, you know, governments could subsidize their own farmers, their own agricultural sector, which governments often like to do. And they could do that without violating WTO rules potentially.

Bruce Tozer (28m 08s):
Well that's what it seems like. I wouldn't say it's it, but it, it seems like there's a possibility that could be the case. Right and it's interesting in a way it sort of makes sense if for your NDC of your country you can encourage your farmers to actually improve the environment, become more productive because if you improve soil fertility, increase your resilience and improve your resilience of your agriculture and you can count it towards your NDC reduction and keep farmers who can be quite corless at times, particularly in France, if they don't like things bit happier, then why not? So I think there's gonna be a really interesting 10 to 20 years now where

countries and policy makers and governments work out how to reward farmers for environmental goods that make sense, but they're still productive. So my aim in all of this is to be hated by the extremes at all sides. People who say it's got to be all rewilding all back to nature and don't care about farming and people say it's got to be, you know, the most productive science and we throw everything at it without worrying about environment. You know, if, if I'm being disliked both by both ends of the argument, I think I'm just about in the right place because saying it's either or is really a full dichotomy.

David Greely (29m 22s):
Yeah and talking about the role of governments, you know, in this early in the conversation you had brought up China and the priority it's placed on food security. How do you see China's relationship with its agricultural sector relative to what you see in the West or Australia?

Bruce Tozer (29m 40s):
I mean we grow soft fruit there. Driscolls, which is a massive US great world class company, big producers there as well and what you're seeing is they're zoning land. Soft root is not considered a priority. You have to struggle to get permission to take, convert land into soft root. They are absolutely now trying to protect their coal and asset for base commodities. They run the biggest strategic stockpile of commodities in the world. Yeah, massive amounts of corn and soy and when the Ukrainian war happened and there's a real problem with shortages, I think it was suggested to them that maybe they could release some their stockpile no way and no one really knows how much that is. But they are incenting investment in agriculture highly, you know, so they're, but there's a real problem with labor, right. Agriculture, anything which is labor intensive is really struggling all around the world. No one wants to do that work anymore. So that's a bit of a challenge and they're investing along the Silk Road. So you'll see a lot more stuff happening in Kazakhstan and Uzbekistan, which goes back, goes into Russia and comes into China. So they're looking for ways they can secure food supplies close to their, their, their frontiers as well. Yeah.

David Greely (31m 00s):
And maybe taking a step back, how do you see the roles of government food processors, commodity traders and farmers and lowering carbon emissions in agriculture and making it more sustainable, like what direction are they each moving in and are they working with or against each other for the most part.

Bruce Tozer (31m 18s):
I think things have changed dramatically in the last five years, 10 years. When I was a, in 2003, I was involved in the start of something called the Sustainable Food Lab, which tried to get dialogue going between banks, farmers, NGOs, and big business and the traders and you know, at that time the traders were going, this isn't an issue and we're not gonna really bother. We'll pay a bit of lip service to it. Now they're seeing it, it's really important. There's pressure being put on them from the brand holders and the processes because it's coming from consumers as well and it's something which has moved from being, well, we're trying to ignore it for as long as possible to actually, we have to do it to, no, this can be a really good opportunity for us and agriculture is really fascinating because of all the commodities, it's a real hourglass. There's millions of producers, a few traders and a few big processors and millions of consumers. So if you want to solve this problem, the best place is to work with those companies in the middle and you can look at them as some environmentalists do as being evil. But you know, you need to convert the people who can have the biggest impact and there's some great people, great people and great resources there, so, but they need to treat the farmers equitably and really work with them and that's always the source of tension, right?

David Greely (32m 41s):
Yeah, that's always the sticking point, right? And agriculture is the power of the processors who are at that narrow part of the hourglass. What do you think is a way to improve that relationship?

Bruce Tozer (32m 51s):
Well my father used to tell a story about his father who was at a market and the three of them were talking, three farmers were talking about a local tradesman who one said he is bloody useless, he never turns up the other. So he is not bad and my grandfather said, well, he arrives always the next day and they say, well that's strange Henry, why is that. He said, I threaten them with cash now. So what do I mean, I think supply chain has to be fair to agriculture and a marketplace is difficult, but at times I think farmers really feel that if they're hands of, you know, what feels like a cartel, it's distressing for them and so that is where regulation also comes in and, and competition regulation. So, you know, it's a delicate one.

David Greely (33m 40s):
Yeah.

Bruce Tozer (33m 41s):
And it will always be so right, but what's interesting in the whole AG thing is the big companies used to have a monopoly of data and information. Now you're sitting on a tractor in Matt Grosso, you can almost have has as good information as they've got. So how does that play out in terms of negotiation power?

David Greely (34m 02s):
And I was curious, are you seeing more young people get into agriculture these days than maybe when you did?

Bruce Tozer (34m 10s):
I think it went away for a long time, but I think right now there's new people and new talents and new skills coming in, and quite frankly, people are going, don't wanna train up to be a lawyer when I may. AI may take my job out. Whereas, you know, if I'm doing something useful and producing something and I'm working with technology to improve that, I might have a better life and it's not only people using technology, but they're really smart farmers are communicating their own story to consumers as well. They're very active on social media and you know, I've got a friend who's an agri farmer, he's got a pedigree, Aberdeen Angus herd and really good genetics and you would've thought he'd be the last person to be posting stuff on Instagram. He's got thousands of followers and he loves it and he really loves it. So, but I see good young talent coming in but the real challenge for them is back in the day, you could start with the sniffle, an oily rag. Now the value of assets, the land, the machinery you need to employ is millions, right. So there's a real barrier to entry in terms of the capital required.

David Greely (35m 19s):
Well, getting back to all the behind the scenes help you give us, I appreciate you coming out front and having this great conversation, but you are also in the midst of helping me plan a broader podcast series on climate, carbon and agriculture and so I was hoping maybe we could finish up today with you giving us a preview of sorts of the topics and discussions that you think will be among the most important for us to try to cover?

Bruce Tozer (35m 43s):
Well, I'd really like to get, there's some great things happening in AgTech, some new funds. AgTech has a concept sort of arrived about five years ago and there's been quite a lot of investments made, but not many exits and people working out what works and what doesn't but there is some fascinating stuff happening there. So across the whole piece from precision ag on farm to synthetic meat or grown meat, all of the, the things we've sort of touched on today, better water use efficiency. So I hope we're gonna get two or three of the leaders in that field to come and talk to us about that and what they see and how that's gonna impact climate. I would really like it if we can, and they're very conservative people, but some of the, the bigger guns from, you know, the big five, the ABCDs come and talk about what they're doing and how they see the opportunity on the finance side. Love to get a couple of people from Rabbit Bank who are trying to work out how they're gonna price their loans for carbon intensity and what that means and how they're gonna work with supply chain. Be great actually to have few farmers on. They're sophisticated people, you've got to understand they manage, as you say, a lot of risk production, risk, price risk, environmental risk, government risk. There's some great people. So I'd like to get one or two farmers from different countries come and have a chat with us and just shoot the breeze.

David Greely (37m 07s):
I'm looking forward to it and then one final question for you before you go. People may have gathered over the course of the conversation that you're, you're an entrepreneurial person, so I'm curious, what's most exciting to you out there right now from an investor entrepreneur perspective?

Bruce Tozer (37m 23s):
Well, personally or if I was just focused on making money?

David Greely (37m 29s):
Maybe both. Can I get both?

Bruce Tozer (37m 30s):
Personally, the thing which is really exciting me most is how we can get precision a and data technology to work, really work on farm at scale. I think we could make, help make farming 20% more environmentally efficient in a short period of time. If we could get that, and you don't have to tackle every farmer, you know, just the top 1% for producing probably 20% of the food would make a massive difference and these are clever people, so it's not about lecturing to them, it's working with them and trying to make innovation really work for them. So I think that's really exciting. I think the whole era of nature-based solutions in carbon markets is, it's fantastic, but my god, people don't really know what they're getting into. These projects take an awful lot of time. They've got an awful lot of risk and it's not a short-term opportunity, but getting it right and combining it with good, productive agriculture and integrating it with that, I think is a, a fantastic opportunity and we do it well. Well, we can bring back nature as well and biodiversity. So those are two of the things I'm really gonna be focused on in the future and, and it should be fun. The great thing about agriculture and people in agriculture is you can't cheat very much. Not for long. You get found out and so the people are really good, they're really resilient and they stick at it and you're can have a laugh as well. Don't take themselves too seriously and I like that a lot.

David Greely (39m 02s):
Thanks again to Bruce Tozer, Former Head of Environmental Markets at JP Morgan and Senior Carbon Advisor at Abaxx and Base Carbon. We hope you enjoyed the episode. Join us next week as we continue to explore the Carbon frontier on Smarter Markets. We hope you'll join us.

Announcer (39m 19s):
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