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MV: [00:00:00.15] Welcome to RPM, the podcast that explores the world of private markets. I'm your host, Michael Venne. Today we're talking about one of the oldest industries in the world, agriculture. And lately “ag” has been front of mind for everyone. Let's dig into some of the details. Food prices have been rising along with inflation more generally. The FAO's food price index, for instance, recently hit an all-time high, exceeding the prior real dollar peak hit in the 1970s. Beyond the horrific humanitarian toll, the war in Ukraine has magnified commodity price inflation. Last year, two big climate conferences, COP 26 and COP 15, brought into sharper focus the importance of reducing carbon emissions and protecting Earth's biodiversity. Consumers are increasingly demanding greater sustainability of their food. The boom in venture capital backed ideas and technologies has the potential to fundamentally change agricultural supply chains. And finally, the so-called democratization of private markets has created opportunities for non-institutional investors to invest in real assets. Joining me today to discuss these topics and more, Ryan Ramsey, a principal on our Infrastructure and Real Assets Team based in Sydney. Ryan, welcome to RPM.

RR: [00:01:13.50] Thanks, Michael. It's my pleasure to be talking to you today.

MV: [00:01:16.23] So Ryan, when people think of agriculture or AG, they tend to equate it with farming. But as we outlined in our research report, it's much more than that. Ryan, how do we define agriculture?

RR: [00:01:29.13] Thanks, Michael. You know, agriculture is not an asset class as such. It's really a sector and it spans a range of different asset classes, whether it be from sort of lower risk return farmland and infrastructure through to higher returning and risk, you know, agribusiness and ag, ag and food tech. If you think about it, it really sits at the intersection of real estate, private equity, infra and venture. And I think why that's interesting is it allows investors to customize their strategy to gain exposure to the sector, but they can do that with a range of different return targets and risk profiles and other portfolio characteristics like liquidity. You know, the one thing that sort of links all of them is the role that each of those investment opportunity plays in facilitating the agricultural supply chain to support the production of food, feed, and fiber, which are all

essential to sustain the global population. And it's this essential service that really underpins the uncorrelated and resilient characteristics of the ag sector.

MV: [00:02:34.02] And I guess beyond those uncorrelated and resilient characteristics, I mean, what else is attracting investors?

RR: [00:02:41.47] It's part of the rationale, you know, especially when it comes to real assets. You know, as I mentioned, there's different investment opportunities within the ag sector and they do have different characteristics, as you'd expect. But real assets, which I guess has been our focus, has proven to be highly resilient through economic cycles. If you think about correlation, which is a key sort of reason why investors have been attracted to the sector in the past. And it most of the volatility does stem from weather induced changes in supply, which impacts on inventory and then flows through to pricing. You know, I think investors new to the sector often sort of misunderstand or are afraid of this risk, frankly, and because it can be mitigated through strategy, whether its farmland leasing or different business models that can help to manage this risk. But it's also this risk that causes agriculture to perform differently into most investments. And that's what helps to reduce overall portfolio volatility as a result. But at the end of the day, returns, you know, they must stack up on a risk adjusted basis. They need to be competitive with other sectors. And I think as the ag industry has matured over the last 10 to 15 years, there's a lot of good examples of how, you know, ag has been able to achieve this.

MV: [00:04:00.93] So let's move to some more topical discussions. Starting with inflation, ag is often regarded as a hedge now that we are during our first inflationary cycle since the 1980s. How is ag holding up?

RR: [00:04:15.27] Yeah, very topical, Michael. We we're at the Global ag Conference, you know, last weekend, you know, ESG has been a big driving focus of sort of renewed interest in the ag and timber sectors more generally. But it was interesting just how big an issue inflation is and how much of a focus it is for investors right now. If you look at the correlation between ag returns and inflation, I think what's most interesting in and I guess most important is how that hedge plays out in those highly inflationary periods where inflation is unexpected. That's what I guess we saw back in the seventies and eighties when we had our last big cycle and through that cycle ag performance.

Quite well with higher cash returns and higher returns overall, which helped investors to mitigate that inflationary cycle. If we think about what's happening now, you know, the question is, is that same sort of correlation and hedge playing out? And I think the simple answer is, yes, it is quite clearly at this stage, soft commodity prices are up, cash returns are up, and asset values are rising.

RR: [00:05:28.70] And ag, like all industries, is facing some cost pressures around supply chain constraints. But, you know, I think every industry is dealing with those issues. And at this stage, you know, prices have more than offset those higher costs. And so higher profits are flowing through to the industry. If you think about the cause of that relationship, you know, food is a key component of the CPI. But I think more importantly, spending on food is non-discretionary. We can't survive without it. And that's it sounds like stating the absolute obvious. But if you look at cycles and whether they'd be past economic cycles or even pandemics, you know, obviously that's relevant to date and because consumption has been very resilient through those cycles. And what you do see is consumers changing where they eat. They might not go out and eat at a restaurant as many times a week. They'll eat more at home. But the actual volume of food that is consumed, as you know, is constant through those cycles. And I guess that highlights that sort of defensive, sort of resilient characteristic.

MV: [00:06:37.52] Yeah, certainly felt that at the market this past weekend. So next is the Russian invasion of Ukraine, which has roiled commodity markets. Both countries are major exporters of wheat and corn. And to compound matters, Russia and Belarus are major exporters of fertilizer. Both factors have caused prices for food and other commodities to skyrocket, as you've just pointed out. And at the same time, forward prices for many of these commodities are heavily backwardated, which is to say the market expects future prices to fall below the current spot price. There's a lot to unpack there. Ryan, what are you hearing about the effects of the war?

RR: [00:07:17.15] It's probably worthwhile sort of going back to the conditions that predated Ukraine. I think Ukraine's obviously brought it into a lot of focus and I think food inflation has really bitten in the last month or two where it's become, I guess, front and center, both for investors but also consumers. But I think what's sort of lost in that is that food or underlying commodity prices had been building for a couple of years prior to this time. And what we're seeing now, I think, is that really translating into food prices

pre-Ukraine, you know, grains and oil seed prices were already up. Coffee, sugar, cotton rule, a long way up on where they were compared to the prior ten years. And so, we're already sort of facing quite a sort of high price environment pre-Ukraine and that was due to several different demand and supply factors. We've had a period globally of some less favorable weather conditions which has the effect of reducing production volumes and inventory levels. You know, there's the ever-compounding effect of, of income growth in, in developing economies, which is resulting in the transition to higher quality diets. And what does that mean? It means more calories and more protein. And that has a bigger demand requirement on the industry that compounds compared to sort of more basic diets, which are sort of carbohydrate rich.

RR: [00:08:45.11] There has been a recent step up in demand for biofuels, in particular biodiesel in the USA. And, you know, that's a transitionary fuel as the industries develop technology and try and move towards electric vehicles, but, you know, plays a key role in that transition. And then lastly, you have, you know, just the COVID induced logistics disruptions that we're seeing across all supply chains. And, you know, that has had the effect of increasing the amount of inventory you need in the system. So, all of that was playing out pre-Ukraine and, you know, prices were up I think then comes along the war and war in Ukraine and you know that's as you say it's relevant for grains and oilseeds markets you know, between them and Russia, Ukraine, or about 30% of global wheat and 15% of global corn exports. And that's a bit of big part of the supply base to be sort of put into put into question. And as a result, we've seen prices increase very significantly for those two crops. You know, as a result, they are up about 30% the calendar year to date, off the back of already being up. Quite a lot compared to the ten-year average. And then, as you say, there's also the issue around fertilizer.

RR: [00:10:08.68] Russia and Belarus are 40% of the world's potash. That's a big number. Russia, obviously a big supplier of nitrogen-based fertilizers, but also a big supplier of the natural gas that's used by other countries to produce fertilizer and to produce energy. And obviously, that's a big topic of conversation right now in Europe given the dependence there. So, what does all that mean? That supply is at risk? Exports have effectively stopped out of Ukraine for the time being. And this is particularly relevant for the Middle East and North African countries, which are about 50% of the volume that normally comes out of that part of the world. And these are countries that already have a high level of food security risk. You know, I think on the

fertilizer issue, it's probably more of a short-term problem. Those supply chains will reroute, you know, prices are up. That incentivizes new production to come online. But that will all take a bit of time. So, I think in the short term, you know, the risk is around the large import markets, in particular Latin America and India. And so that I guess it does put a question mark over production yields in those countries or regions over the short term. And I think the importance of these two factors is just played out in commodity prices.

RR: [00:11:30.25] There's a lot of risk and as a result, prices have rallied very significantly, and these supply chains will eventually adjust and reroute. And as I said, new supply will come online, but it's going to take time. And there is, I guess, a genuine risk that some portion of the production in Ukraine is lost for a period. So, sort of putting all that together, you know, I guess, what does it mean? As with all cycles, you know, we expect that prices will moderate over time from their current sort of record levels. However, you know, I think there's a few things that sort of underpin a more favorable outlook going forward. You know, those sort of demand and supply factors which preceded the Ukraine will all remain. So, they're not really going away. The trend away from globalization is only getting stronger. Supply chains have changed from just in time to just in case of the amount of inventory that the system needs to hold, as has increased. And all this points towards sustained sort of upward pressure on prices over the long term. And so, we think that the outlook certainly is looking a lot more favorable than it has for quite a long time, you know, certainly compared to the last ten years.

MV: [00:12:46.42] Fascinating. So, an important part of the ag story is the idea of greater efficiency. Right. I mean, we've in our paper, we talked about that over the last 50 years or so. The total output from farms has nearly tripled, while inputs have been virtually constant. A big part of this has been the utilization of fertilizer and pesticide. I would think there's only so much upside there. Right. And to continue that trajectory, the efficiency gains are going to have to come elsewhere. Could you briefly talk about the role VC and AGTECH are having in shaping the future of agriculture?

RR: [00:13:25.90] Yeah. So, I think you're you know, you've arrived in terms of the, you know, the use of fertilizer in particular, the benefits of that have really been maxed out in most of the developed world. You know, we've reached a point where you can't really apply it much more and get more benefit. In fact, many might argue that there's this

greater benefit from reducing fertilizer. And so that does mean we're increasingly dependent on new technologies and ways of doing things. And I think agriculture is often criticized as being slow on the uptake of technology. But I think this is at least a little unfair. If you look at total factor productivity gains exceeded the broader economy over the last 50 years and the road crop industry has adopted a range of technologies, you know, different seed traits and GPS-enabled equipment. There were tractors driving around on GPS probably before any other industry other than perhaps defense and, you know, no-till farming systems where it's completely changed the way crop farming is undertaken. So, the industry has, you know, has always been, I think, very adaptive to the tools that are available. And it must be adaptive due to the fact they face this ever-evolving weather risk, which with climate change is only getting more variable. But they've been dealing with that and adapting to it over a very long time. But I think. What. Has happened in the past is that the technologies know the investment and innovations has been narrow. It's been highly focused on inputs and equipment to support the road crop sector. And what we're seeing with the rise in Agtech funding through that venture community is a much broader base of sort of investment and interest, whether that be across different subsectors, whether that be at different points across the supply chain. And I think also a much greater focus on overcoming some of the sustainability challenges that are faced by the sector.

MV: [00:15:40.75] So you mentioned climate change. I'd like to turn our attention to another element of the ag story, which is ESG. Last year, Natural Capital was a major focus of the UN's big climate conferences. How do we define natural capital and how does it tie into investors ESG ambitions?

RR: [00:16:01.87] Well, I guess I'd start by saying that institutional investment into the ag sector has always been aligned with responsible investing principles. And what I mean by that, well, it's managing ESG risks and doing no harm. So that's the base that I guess the industry's work from for, you know, for quite a long period of time. Now, natural capital takes that one step further. It applies those same principles, but it involves sort of extending beyond that to try and capture ESG opportunities and actually do good have a positive impact. So, we define natural capital with those investments where there are clearly identified ESG opportunities to do good, to have a positive impact. And these objectives form a fundamental part of the investment case, just like with any financial targets. And one of the attractions of the ag sector is there's quite

strong alignment between sustainability and financial outcomes being more efficient with your inputs, improving the health of the soil. These are things that all result in better, better yields, less variable yields and ultimately better returns for farmers. So that sort of alignment, you know, I think interesting and important part of the natural capital opportunity. The ESG objectives that we focus on, it's about improving the environmental outcomes to help enhance, I guess, the sustainability of production systems, especially in the light of climate change, which is making systems more, more variable and placing greater strain on, on conventional farming systems. We think about those objectives being aligned with improving the sustainability of Earth's natural capital. And by that we're talking about air, land, water, and all the connecting ecosystems which collectively sustain life on this earth.

MV: [00:18:01.21] This all sounds good, but what does it mean practically? What are some of the specific objectives that that you're focused on?

RR: [00:18:10.72] Yeah, so, so we think about it, we, I guess on two levels. And you know, the first is decarbonization, you know, ag and timber are, you know, natural carbon sinks and you know, based on the technology that's available today, they're also the lowest cost carbon sinks to naturally sequester carbon. And put simply, you know, that is extracting carbon from the atmosphere and storing it in vegetation and soil. And so, you know, we think this offers a quite unique opportunity to generate carbon credits, but equally importantly, play a key role in supporting the transition to net zero. You know, these carbon sinks can help to offset the emissions that will continue in other sectors, which are more difficult to mitigate for a period and ultimately can, you know, can play a role in undoing some of the damage that that has been done over time. an interesting sort of opportunity for the ag and timber industries more generally is how, you know, that value creation opportunity starts to translate into both revenue streams and asset values because at this stage, you know, it's still very early and we think that's a real opportunity for investors. The other component is around biodiversity. You know, I think the one of the takeaways of the COP meetings is the importance of biodiversity to improve the resilience of natural ecosystems, to sustain climate change. And so, this is it's not I guess the key point is that not all about carbon.

RR: [00:19:46.84] We think biodiversity is just as important in terms of a sustainable farming industry and broader environmental ecosystems. So. When it comes to

biodiversity, this is, I guess, a much broader range of measures that we think about. It could be the how much of the activities involve regenerative farming techniques, which is all about reducing the harmful, I guess, elements of some agricultural practices. And it's improving water quality that's coming off farms or improving import efficiency and water efficiency. It's recycling waste streams and it's restoring marginal land to natural vegetation, where often some land that's been used for farming for a long period of time. With the benefit of hindsight and today's cost structures perhaps shouldn't be farming. And can you take that back to nature? So that's just a name, a few of the different, you know, sort of more discrete strategies or objectives that we're seeing. And these are all opportunities that can be identified during deed, underwritten with financial returns and managed and assessed against these objectives to assess the impact that's being generated, just as we assessed the financial returns that have been generated. And that's really the key thing that we think about from natural capital is, you know, having strategic alignment with environmental impact, but also being able to assess and measure the performance against those targets.

MV: [00:21:30.41] Really quite fascinating. Finally, I want to ask about AG's place in the so-called democratization of private markets. Agriculture has historically been the realm of large LPs, but that's changing as there are now several products that allow non-Institutional investors to invest in real assets beyond diversification. What can ag contribute to an investor's portfolio?

RR: [00:21:55.13] I think let's start by saying that for non-institutions accessing the ag sector in particular farmland has been difficult, and agribusiness is well represented in public markets. Most of the big global agribusiness operations are public but getting access to farmland has proven more difficult. There are some farmland trusts that are listed in various markets, but I'd say there’s a bit of a mixed record and often, they've traded at a discount to NAV. And what we're seeing with these new private market vehicles, it's allowing high net worth or non-institutional investors to access the sector in a sort of structure that we think is more appropriate and better aligns with the long-term nature of farmland assets. They're not assets to trade weekly or monthly. They are they are long term assets that form, I guess, have an illiquid nature and that lends itself to holding them over the long term. The historical interest I think has been around that, the positive long term industry fundamentals. I think that's something that sort of gained, I think a lot of traction and is well understood.

RR: [00:23:11.39] I think farmland as a store of value is also been important and in the case of lease farmland, you know, I guess that's an alternative to fixed income, especially in the low in interest rate environment we've been in for, you know, for quite a long time now, you know, buying the least farmland which can generate a yield of three or 4% for road crops, maybe, you know, six, seven, 8% for permanent crops, you know, is a really attractive alternative when you combine the potential for long term capital appreciation as well. So, I think that's been the way most non-institutions or non-institutional investors have thought about it. But you know, right now I also think the inflationary risk and risk mitigation is a key driver where, you know, investors are trying to find ways to manage that. And as we've spoken about, the ag as a whole and farmland are really performing as we expected they would. And returns are, you know, for the time being, you know, offsetting that inflationary risk.

MV: [00:24:27.14] Ryan, it looks like we are out of time. Thank you so much again for joining me. I hear the weather has been rough in Oz. Please stay safe and hope to see you again soon.

RR: [00:24:38.63] Yes, thanks, Michael. I appreciate your time today. We are really excited about the ag opportunity and natural capital. If you look at the big picture, there's still a fundamental societal challenge where over the next 20 years we need to feed another, call it one and a half billion people, and we need to do that while also improving the sustainable. Ability of the sector and its ability to withstand climate change. So that's a big opportunity and a big challenge. You know, there's been a lot of talk about plant-based proteins and or substitute proteins, and I think that will form a key part of the solution. And we really see that as complementary to the broader production systems, in particular the protein production systems. At the end of the day, you know, the industry can't keep up with demand at this stage. So, we're going to need to develop some of those new alternatives. And but we also need to increase the efficiency and utilize the finite, finite resources we have. So, I think all that sets the industry up for a really, positive effort. And I'll leave it at that and thank everyone for listening in today.

MV: [00:25:53.14] That does it for this episode of RPM. For more insights on investing in agriculture, including the White Paper we referred to, please visit our website at

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