**MycoPodcast-MLyons-Ep1**

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Nick: Welcome to the first episode of our new Mycotoxin Matters Podcast. I'm Nick Adams, Global Director for Alltech's Mycotoxin Management platform. I'm going to be your podcast host each month as we explore a range of topics in and around the concept of mycotoxins, sometimes more detailed, sometimes less detailed. Today, I am delighted to have our president and CEO, Dr. Mark Lyons, on our first episode to explore the topic of climate change and how it connects to Alltech's mission of working together for a planet of plenty. Mark, welcome.

Mark: Thanks, Nick. A great initiative and thanks for the opportunity.

Nick: We know in this podcast, we focus on the challenges of managing mycotoxins. However, before we get into more of a discussion around some of the technicalities, let's take a step back and look at the bigger picture around climate change and sustainability because clearly, that is increasingly becoming a board level discussion. Was Alltech's mission of working together for a planet of plenty a response to these challenges?

Mark: I think that this element of climate change and concern around environmental impact, and particularly in our case, the impact that agriculture has on the planet is something that's been growing in importance. I can remember back to studying climate change and environmental science back in university. At that stage, when you spoke to the climate scientists, they were certainly already convinced that we were going to and we were influencing the planet around us, that there was going to be a lot of ramifications for climate change. But I think it took a long time for industry perhaps to accept that, and also policymakers to accept it. So that has been something that sustainability, as we talk about, has really moved into the fore and has become really a non-negotiable. Really, I think this has been driven as much by consumers as anyone.

When I think back over the history of Alltech really since the very beginning, 1980, the focus of the business was very much on food production, on health, on wellness, and that wellness not being possibly just limited to humans and to our animals, but also our planet. So in the mid '80s, late '80s, Dr. Lyons, my father, launched the ACE principle. That was something that I think was a very strong indication that we saw that animal, consumer, environment, these were the core elements that we needed to be focusing on. Planet of plenty, I think, was just us taking what was already there, that legacy and history that we had connected to the ACE principle, and putting it in a different context.

Right now, I think that the future and future success, challenging ourselves to overcome some of these big issues is going to come down to collaboration. That's where that working together element of the message is so important. Planet of plenty really is an indication, I think, of the optimism that we see, that we have realized and we've seen over the years that when we can work together, when we can utilize new innovations and new technologies, we can actually create an abundance of food. And especially when you think about this past year, 270 million more people are food insecure this time of year versus this time last year. That's extraordinary to just think in that period of time. The challenges have yet become even bigger and I think that's the thing though that we need to step up as an industry, as an agri-food industry to overcome. So we're really trying to utilize that storytelling element of Alltech that focus on sustainability, and of course, the core of everything, the primacy of science, which we always talk about within Alltech.

Nick: Maybe then following on from that, Alltech signed on to the UN Global Compact less than a month after sharing the company mission of working together for a planet of plenty. Why was this commitment important as part of this bigger picture?

Mark: I think that the UN Sustainable Development Goals are something that are very helpful in terms of a framework. There's an element there where you can really have a sense of this is how we're doing, this is how we are aligned, and this is how we compare to other companies and other sectors.

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I think as a business leader, I think that's been something that I found beneficial. We were very fortunate, and possibly this was part of the reason that we were able to receive the UN Security Council at the end of 2019 at our headquarters, was the fact that we'd signed up, and I said that to them. I said the fact that these are here, we can measure ourselves against them. That's actually something that's quite helpful. I think that it also gave our team a strong signal that this is something we're serious about. Purpose has always been a big part of our business, but hasn't been so, I think, explicitly articulated. We always knew that the business was here to make that impact on our local communities, on our industry, and hopefully on our society. But I think that through this time, it's become so clear that the role of business in society right now is growing in importance. We've had challenges in government perhaps taking that leadership position. There are a lot of big issues to deal with. Businesses need to step up. I think it was a good way for us to be able to say, look, we've got this big mission of working together for a planet of plenty. Let's start to show that we're really taking actions, and the Sustainable Development Goals were a really helpful way for us to frame that out.

Nick: That's fantastic. That led then to our first sustainability report that's come out in and around that. Maybe you could just touch on that quickly.

Mark: Yes. That was very helpful. Again, the way we think about sustainability, I think, is pretty broad. We think about the impact, obviously not just the environmental impact, the economic impact, the role that we play, particularly in our sector, in rural communities, but in all the communities that we operate in. The first sustainability report compared to, from what I understand, the second and then going further forward, is more around those stories and the different things that you've done and the initiatives that have been initiated both in that first year and also prior to.

Going forward, I think there's going to be a lot more data and measurement and all of those types of things, but we wanted to make sure that we brought that element of telling the stories of the different types of things that we're doing in different communities. From the stories of the projects we've had for a number of years throughout Latin America that related more to children's homes and those types of places and educational connections we've had, to that story in India, which I found fascinating. Our team was able to highlight that girls were only going to school half a day because there was only one set of toilet, and so we built toilets. Then they felt safe and they could stay for the entire day. It's simple, little things like that.

Then of course, things that we're doing that are much more related perhaps to the way people might think typically of sustainability, things like E-CO₂ and the activities we have there, which are very much connected to our ability to measure environmental impact and reduce it. It was a great report. I'm actually really excited to see how we pull the next one together, which I guess we've got about another four, five or six months to put some work in on.

Nick: Yeah. Well, we certainly look forward to seeing that when it comes out. I think the timing of the initiatives is really relevant given where the industry is going. That's highlighted really well with the recent launch of the European Green Deal encompassing its Farm to Fork Strategy. Within this, there are key areas focused around soil health, chemical use both pre-harvest and in feeds. How is Alltech's business set up to help European producers, but increasingly global producers to deal with this changing landscape, do you think?

Mark: I actually think the targets are very ambitious and quite broad and widespread. It was interesting to see some of the highlights just recently from the discussions in Davos. I think that these conversations are continuing and it's something that we need to really not only have an eye on, but I think one of the things that we've been working on this year is how do we also have a voice as an industry in this discussion.

The Farm to Fork initiative that you mentioned is very much led by, I'd say, the human health side of things and perceptions of human health. So I think it's a really critical thing that we get the right information. We've created partnerships now with many different groups, but one in particular is the CLEAR Center at the University of California Davis. Professor Frank Mitloehner is doing a lot of work right now in terms of what the environmental impact is of particularly beef and dairy, and how the methane and the biogenic cycle works and how actually the environmental impact of beef and dairy might not be as significant as it is presented.

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Those are really important things, I think, on that side for us to be able to talk to the experts, the policymakers, and say are we really looking at the right facts or are we possibly changing our industries in ways that is going to hurt not only our food system, but also many of those individuals involved in farming, and also perhaps not achieve the environmental goals that we think we are achieving for not using the right data. On the other side, we know, of course, that we can improve in terms of our environmental impact as an industry. I think what's exciting to me is you start to see all the parts of the business starting to work together. You have, of course, the analytical side, things like InTouch, which allows us to really influence nutrition on those beef and dairy farms digitally. We have tools like our IFM, in vitro fermentation, which can give us indications of environmental impact or productivity, and those two being linked.

Businesses like E-CO₂, they're in Stamford that is now starting to take a bigger step and really has moved into the mainstream, I think, of Alltech in these past 12 months, being able to make those environmental assessments, those on-farm assessments. Plus, of course, things like our crop science, all of our traditional Alltech nutritional products, and really having a refocus where they're thinking sustainability is going to be one of the major elements of our technologies. What if we said that's the thing that we're presenting to customers? How would that change the value proposition? It's exciting to see that shift and I think it's part of the broader shifts that we're seeing globally where people are saying it's not just about economic growth. It's also about many other elements as we think about economics. I think that Alltech is very, very well suited to be the most relevant company in this space.

Nick: I think some really good points there particularly in and around that concept of the different elements of the business coming together because when we look at how the landscape is changing and this increased need for producers to understand their environmental credentials, not only do we need to get the facts right, which is where people like Professor Mitloehner are coming, but we also need to then be able to collect and verify that information, which is where Alltech is here to come in. Of course, we can then provide the individual solutions that we have from the different platforms. I think it's really interesting to see those different elements coming together.

You mentioned earlier around the crop science side of the business. I think you talked about the concept of spending more time in crop science because there's a great opportunity there. What are your thoughts around that side of the business?

Mark: Well, this is a space that we've been operating in for a long time, but pretty much have remained in a few regions. In Brazil, we have a very strong business. We have a strong business in the US, and now, starting in Spain and Italy over the past few years that business is progressing. So it is one that I personally would be closer to, the animal nutrition side. I'm very interested in spending more time with the crop team and understanding the opportunities. This is a space that huge investment is going into and we've been involved in it for 25 to 30 years. Other companies are seeing this more natural approach, the removal of the need for pesticides or chemical fertilizers. That push really is, I think, coming up against an industry that doesn't have a lot of those answers today.

The biological space is something that has tremendous amounts of opportunity, and so we want to make sure that we are partnering with the right people. We're scaling and we're developing new technologies, and we're really giving that business the opportunity that it deserves. It's really exciting to see how it connects in in your area. We've been able to use some of those crop products and actually have better health for the plant itself and improve its own defenses, and therefore, reduce things like mycotoxins. It's exciting to see how those things have connected. We've even had an opportunity to connect that right into our brewing operations and had improvements in fermentation simply because of the lower mycotoxin load going in with those grains. There are lots of elements like that that I think are great stories and things that I suppose in my role, the job is to make sure that those are scalable and that we can move at the pace that we need to.

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Nick: Again, really reinforcing that whole concept of working together because certainly, even this week, talking to colleagues around that concept of pre-harvest stress on plants, how things are moving and going to move in the future, and the importance around Alltech crop science to minimize infestation of mold on the plant and reduce mycotoxins, it's going to be an increasingly important step and control point for producers moving forward. Finally, maybe just wrap up generally with some of the other things that are on your radar right at the moment when we think about the short-term and some of the issues that are right in front of us that you think need addressing.

Mark: Yeah. I think that one of the big challenges that we're facing is, of course, the immediacy of the challenge of COVID and what it has caused, the outcomes that are coming from that, the disruption within our supply chains. At the same time, a lot of what's going on with grain prices. It looks like 2021 is going to be a really volatile year. It's a year where we have, of course, the challenge of COVID. We've also got challenges right now in terms of the supply and demand, the flooding in China, which caused a big increase in imports from the US. A shortage really therefore coming out of that, and the fact that we've got very cheap money right now, so a lot of speculative money coming into the market. There's all that volatility and those challenges.

At the same time, we've got maybe a time where we are more focused on sustainability than ever, which is more of a long-term. These at times in the past have been at odds, that the long-term objective is sacrificed for the needs of today. I think that's in some regards the needle we need to thread here and make sure that we can get through this and we can continue to make the progress required. That we can utilize new technologies that positively have reduced the environmental impact that we have, at the same time, can overcome the fact that we may be short in terms of some of the macro grains, macro ingredients that we traditionally would use.

It's going to be a very dynamic year. We've been talking a lot about how sustainability is never achieved. It's a journey. It's something that we have to keep stretching and innovating and progressing. I think that for us, I think it's really responding to the new challenges that perhaps we weren't even anticipating back in December, but are here with us in January. At the same time, not taking our eye off the ball in terms of what the long-term goal is.

Nick: Great, Mark. Thanks very much. Well, before we wrap up, any final thoughts from you?

Mark: I think one of the most impactful messages that I've heard this year, and this is the past 12 months really, has been that agriculture is an extraordinary asset for our planet and for our society, not a liability when it comes to climate change. I think that's something that we need to internalize. I think there's been so much in the media negative about agriculture. You continually see messages talking about the impact of ruminant animals in particular being as much as fossil fuels. These are debunked reports that have been put out in the past.

The big learning I think I had especially learning from Professor Mitloehner was that we actually have an ability to potentially cool the planet when you think about the fact that our beef and dairy herds are probably going to shrink as we're becoming more and more efficient. We're actually producing more with less already. As we do that, we're putting less methane into the atmosphere. We now know methane is sticking around for ten years only and degrading further.

This whole biogenic cycle and this whole concept, I think, is really exciting. We've got to make sure that we bring that energy to our industry and make sure that we get that also not just to policymakers, but also to consumers in interesting ways. I suppose when you think about things that keep you up at night or perhaps get you up in the morning, that mission is a big thing that I'm very passionate about in making sure that we see the opportunity that's in front of us and how agriculture is a huge key to unlocking this great future.

Nick: Mark, thanks very much indeed, some great points. I really enjoyed talking with you and hearing about some of your thoughts regarding this changing landscape, how Alltech is set up and where you think things will be moving forward for us as we work together for our planet of plenty. Much appreciated and thanks so much indeed for your time.

Mark: Thanks, Nick, for the opportunity.

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