#2 - Earth Microbial - Advancing Sustainable Agriculture Through Microbial Innovation

CEO: Albert Yi

Interviewer: Adam Amin

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Intro

Albert Yi, the CEO of Earth Microbial, leads a company that is at the forefront of agricultural innovation, a company that leverages microbial science to address critical global challenges such as soil degradation, food security, and sustainable farming. Earth Microbial develops and commercializes beneficial microbial strains that enhance soil health, improve crop resilience, and increase agricultural efficiency.

Background and Inspiration

Albert’s journey into the agricultural sector is rooted in his extensive background in business and technology, particularly in the software industry. "My background has always been in, ‘hey, how do you build a business?’" Albert explained. The move from software to agriculture was driven by a desire to apply his business acumen to a field with tangible, global impact. "I see the opportunity to be a part of something that's going to help, something that’s easy to explain, right? We help people grow food better," he noted, particularly highlighting the appeal of making a direct impact on food production.

The inception of Earth Microbial

Earth Microbial was founded on a critical need in the agricultural industry: enhancing soil health and crop productivity amid increasing global challenges. Albert identified the shrinking availability of arable land and the rapid erosion of healthy soil as pressing issues. "You've got this ever-shrinking amount of farmland...and then you've got a population that's just growing exponentially," Albert said. To address these challenges, Earth Microbial focuses on developing microbial solutions that improve soil health and crop resilience, especially in non-traditional growing environments such as deserts or

areas with degraded soil. "Healthy soil takes 500 years to grow; our contribution is to help crops and food grow better, more efficiently," Albert told me.

Product Innovation and Market Reception

Earth Microbial specializes in microbial strains that enhance plant growth by improving soil health and reducing the need for chemical fertilizers. One of their key innovations is a bacterial strain that converts atmospheric nitrogen into ammonia, an additive and booster to fertilizers. "We're so addicted to fertilizer, we can't get rid of it...but what we do is we try to bring in technologies that will help crops and food grow better, more efficiently," Albert said.

The company’s products have shown significant results, particularly in controlled environments like greenhouses. Yi shared a success story from one of their greenhouse customers specializing in tomatoes: "Their tomatoes grew anywhere from 16 to 30% bigger...they knew there was a significant material increase in the amount of tomatoes." This not only increased the yield but also enhanced the plants' resistance to diseases like powdery mildew, leading to healthier crops and reduced financial losses for the growers.

Challenges and Strategic Decisions

Navigating the agricultural sector has presented several challenges for Earth Microbial, from regulatory hurdles to market skepticism. "The challenge is always how do you bridge a great innovation from scientists and make it commercially viable," Albert said, describing the difficulty of convincing farmers to adopt new technologies. Farmers, who have been farming "since the beginning of time," need to see tangible results in their own fields before they can trust new innovations.

Regulatory challenges also pose significant barriers, especially in the realm of biologicals where outdated regulations can slow down the commercialization process. "Regulation...can stifle the ability to get to market and innovate," Albert noted.

Despite these obstacles, Albert remains focused on the long-term goals of Earth Microbial, like proving the effectiveness of their products and maintaining customer satisfaction. "We just want to make sure it works, show that it works, make sure they're happy, so they buy more," he explained, reflecting the company’s customer-centric approach.

Impact and Future Vision

Earth Microbial’s work is crucial in the context of global food security and sustainability. By helping farmers grow healthier, more resilient crops with less reliance on chemical fertilizers, the company is contributing to a more sustainable and efficient agricultural system. Albert is particularly excited about the future possibilities, some of which include growing food in extreme environments like

deserts or even outer space. "Our future roadmap for R&D is being able to grow food where food typically isn't grown," he shared, pointing to the ambitious goals Earth Microbial is striving to achieve.

Conclusion

Earth Microbial exemplifies how innovative science can be harnessed to address some of the most pressing challenges in our world today. By focusing on practical solutions that improve soil health and crop productivity, Earth Microbial plays a vital role in the future of sustainable farming. The company's journey from innovation to commercialization reflects a deep commitment to both scientific excellence and real-world impact. All of this ensures that their contributions make a tangible difference in global food production.

You can find their products at earthmicrobial.com!

Adam’s takeaway

Albert’s comment on making the customer happy really stood out to me. His trust in farmers, who, through centuries of experience, know what’s best for their land, allowed him to provide a fulfilling product that creates efficiency and strength. In many cases, the best product is one that keeps the customer happy, and that is exactly what Earth Microbial does.