

Taranis interview part 2: Bullish stance on growth prospects

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US precision agriculture business Taranis (Westfield, Indiana) claims to leverage “unrivalled” proprietary artificial intelligence (AI)-based datasets to deliver agronomic insights across various international markets and anticipates doubling its revenues this fiscal year.

In this follow-up interview with *Crop Science Market Reporting*'s Akashpratim Mukhopadhyay, Taranis' chief commercial officer, Mike DiPaola, discusses various operational aspects involving the business, and delivers a keen analysis of factors influencing the global digital agriculture sector.

Akashpratim Mukhopadhyay (AM): What is Taranis' business model like? Is it outright sales, or does it also include subscriptions and/or services?

Mike DiPaola (MD): Taranis has long-term partnerships with the largest US agricultural retailers. We work business-to-business (B2B) with these entities. They purchase our solution and offer it in various formats to growers as part of what they do. While you can look at it as a year-to-year subscription, it is really a B2B relationship. We do not directly sell to farmers.

Our solution is designed in a manner that enables retailers, who are the advisers, to work better with the growers. The model is similar in Brazil, where we engage with large energy and sugar cane companies that produce their own cane.

AM: How has the business expanded in the past seven-eight years, and how were revenues in 2022?

MD: We have more than doubled the business at a compound annual growth rate (CAGR) for each of the three years in a row – 2020, 2021 and 2022. Our annual recurrent revenue (ARR) is already greater than \$10 million, and we crossed that milestone a while ago. We are aiming to double that figure this year.

For scalability, 2020 is our reference point. The period before that was more about incubation and innovation. We had a small, but good business in the preceding years. The revenue streams opened up further when we went fully commercial in 2020 with a full service that has since grown to generate the income that we talked about.

AM: Which are your focus markets? What percentage of revenues in 2022 came from overseas operations vis-à-vis the domestic US market?

MD: Taranis operates in the US and Brazil, as well as in Europe, particularly in Germany. Additionally, we function in several Latin American markets, and in Kazakhstan and Morocco.

The US and Brazil are our core business regions, and we have facilities and offices in these countries. In Germany, we work with Sumi Agro, and they are helping us expand in Europe.

As far as revenues are concerned, it is going to vary depending on how one looks at it, because we have global customers involved as well as some corporate deals. Right now, I would say we derive about 80-85% of our revenues



from the US, which is the market leader. This is followed by Brazil.

AM: What are your expansion plans in the Asia Pacific and African markets?

MD: We are open to expand into the Asia Pacific region and have already worked in Australia and Malaysia. We worked in Morocco even today. In fact, foraying into these geographies is also about partnerships and timing.

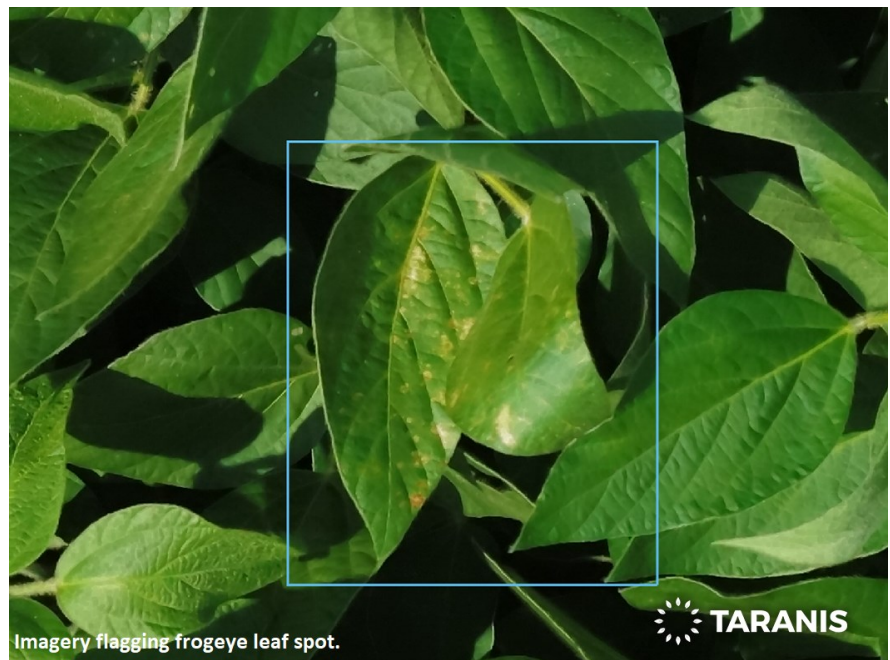
US is our primary focus at this time, followed by Brazil and Europe. Wider spread in the Asia Pacific is likely to take four or five more years, but a suitable partnership can change that. As far as Africa is concerned, we are looking at a similar timeframe. As a company, our interests lie principally in markets where corn (maize), soybeans, cotton and sugar cane are grown.

We also serve the Canadian canola market, but that is less of a focus right now.

AM: Is Taranis a standalone solutions provider, or are your offerings integrated with those from other players and/or OEMs?

MD: Our offerings are fully proprietary. We used to build drones, as well as our own optics until drone companies such as DJI had the required capability, and the industry was there at the right price point to undertake operations such as ours. Now, we are working with companies including DJI to use their hardware, and we have one of the world's largest fleets.

However, all the software, AI capabilities, dispatching and network management are taken care of by Taranis. As a solutions provider, we are pretty much standalone. Although our offering integrates with those of partners, such as Bayer's Climate FieldView and John Deere's Operations Center, it can also live on its own.



AM: The company has forged several partnerships with major crop protection and digital agriculture players since its inception in 2015. Tell us about your ongoing deals and collaborations, and geographies they are focused on?

MD: We work with a lot of large companies. In the US, we are dealing with top retailers such as Nutrien, Central Valley Ag, Helena and Wilbur Ellis, to name a few. The company works with all the leading co-operatives as well. Our partners in the country also include crop protection businesses such as FMC, Bayer and Syngenta. All of these firms are directly involved with us and benefit from our technology.

In Brazil, we have collaborations with BP Bunge and Raízen, which are some of the largest sugar cane and energy companies. Our partners in Germany include Sumi Agro.

AM: How do users access your service – in the form of an app/website – or is it a plugin that the user installs on the computer or a mobile device?

MD: We have a proprietary web application. All that the user needs is a computer, or an iPad and they can access our platform. Additionally, we have separate applications for the iOS and Android ecosystems.

We offer the ability to export common things like shape files and maps to other systems. But given the way our solution is designed and considering that we are the only place one can get this technology, our software and applications are uniquely designed.

AM: Taranis moved its headquarters from Israel to the US in 2020. How has that delivered in terms of business?

MD: Well, it was a normal process. The company was founded in Tel Aviv. We have since opened an innovation center in the city, and it houses our AI experts. All the heavy lifting and science around AI happens there, although we do some on-ground research and development in the US as well.

However, as a business offering full operational and software services, our partner market is principally in the US. So, being in Indiana lets us bring all the agribusiness talent into the company. Furthermore, it puts us closer to our customers. Taranis has employees that function with customers at the latter's sites. It allows the business to marry good AI technology with solid

agronomy and agribusiness capabilities in the market. So, the shift has made a lot of sense.

Also, when a company scales, it is less worried about funding, investors and technology. It is more concerned with how the technology is deployed. Taranis is in a scale-up and deployment phase, and we are growing a real business. This was another rationale behind the move to the US.

AM: Tell us Taranis' plans to safeguard its intellectual property.

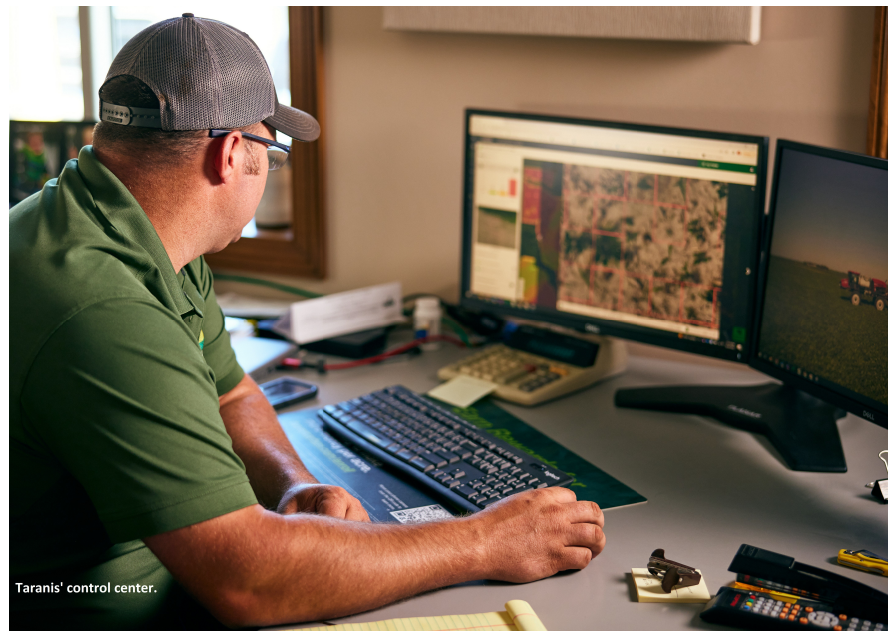
MD: Cyber security is a key focus for us. Israel is quite well known for digital and cyber security, and that is part of the reason we have the tech center in Tel Aviv. We have the required certification and undergo third-party audits to verify the security of our databases and all of our capabilities. Taranis also implements proprietary data safety measures, besides using other methods to ensure that the information is fully encrypted and backed up and does not fall into the wrong hands. That is why, the data are accessible only through our apps.

Also, a lot of our staff, including our CEO, come from the cyber security world. So, we are well-versed with the latest developments in data safety.

AM: How do you see the global digital agriculture sector evolving in the short-to-medium term? Has the ongoing economic downturn and the semiconductor chip shortage affected the industry?

MD: At Taranis, we are well prepared for these situations. There are ups and downs involving components such as chips. I do not think it is a huge issue that will have a long-term impact on the market.

In fact, a lot of things have changed for the better, such as battery consumption. Drones are getting smaller and are offering enhanced capabilities. So, even if a chip goes up, the energy capacity and optics improve. These factors are getting better and more ubiquitous.



The market, as it stands now, is influenced by the capabilities on offer, and is not dictated by cost. Not many companies are willing to branch outside of a hardware or software perspective, and embrace services focused on solving specific problems. As a result, they get tied up. For instance, there are companies in the digital world that have a unique regulatory carveout. For some, it maybe spraying with drones, while yet another may have a unique capability on a sensor. In a way, that is very narrow, and there are not a lot of barriers to entry.

But for a business such as Taranis, we have got an unrivalled AI-based database that has been built since 2015. We built this repository even before the technology existed. Then, we created a network and developed the ability to dispatch and get the drones on top of the acres. We already had the framework to analyze the images, and now we have the drones. Subsequently, we solved the problem of moving people and equipment. As drones got smaller, we focused on making them and the insights delivered more automated.

Now, we are in an acquisition space that involves going and getting the data. At the same time, we are a network provider utilizing AI. However, we do not have to focus on the hardware, as I mentioned earlier. That puts us in an arena where other companies are creating business models just to support what we do as a vertical. Our use of technology puts us in a different space.

As for the sector as a whole, the downturn makes it harder for other companies to get investment. Even a large business might find it difficult to allocate budgets to invent or create solutions. This is going to force people out of the market, and the winners will be the ones that can withstand the funding winter and stand alone.

AM: Do you think the dearth of funds will spur consolidation in the digital agriculture industry? Would Taranis enter the fray to acquire smaller players with promising technology portfolios?

MD: We do not need to do bargain-basement deals. I think the time for consolidation just to get bigger investments has gone away. Special purpose acquisition companies (SPACs) are also going away. As a result, I think a lot of companies are going to disappear, because if they had value, they would have already consolidated.

Taranis's acquisition strategy would be to extend its capabilities. We do not need to operate with another drone or AI business. Instead, we would expand further into the services that we are providing and develop unique technologies and sensors to understand how plants express what is wrong with them. We would look for partnerships that make this strategy work. Additionally, the company intends to delve deeper into agronomy, while evolving its optics and full field technology.

It is also a matter of being very selective about how a technology furthers the benefit for our customers and enhances their output. Taranis will probably get into things such as biological modelling, or different kinds of sciences that it does not have core competency in. So, it will either acquire that capability, or partner with groups such as Syngenta, FMC or Bayer to achieve that.



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