Guest: Ishai Gottlieb

Company: AgroScout LTD

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Mr. Gottlieb is the Global Sales Director for the company AgroScout which is an artificial intelligence powered decision support tool that leverages drone data. He has an undergraduate degree in Agriculture/Plant Science and Economics for the Hebrew University in Israel. He originally had dreamed of farming but realized that this was too expensive to do in Israel. He’s been in sales for 13 years, starting in finance and then transitioned into working the technology sector. To give back to the community he did some volunteer teaching of agricultural curriculum at a primary school in Israel to introduce young adults to new technologies. Around this time he met Simcha Shore, the CEO of AgroScout. Simcha provided him with a drone and an educational license for the software to use at the school and they became friends. He then was hired in his current role as Global Sales Director which he has been in for 2 years.

AgroScout offers an artificial intelligence based decision support software tool based upon drone data that is collected by the customer using their platform. They provide a multidisciplinary service that is focused around the customer journey. They provide the customer with a survey grade data capture tool (UAS and sensor), data storage capacity, and access to an advanced machine learning/artificial intelligence analytics platform. One selling point of this product is the user-friendly interface that enables the customer to easily access, visualize, and analyze data collected as frequently as they desire. This really provides the customer with a holistic overview of the crop production cycle from planting through harvest; enabling them to take stand counts, schedule irrigation and fertilizer application, and monitor fields for pests and pathogens. They are continuously improving their product. Recently, they were able to accurately predict product yields mid-way through the growing season in a cooperative venture with Olam (processing company focused on garlic and onion).

The tool works as follows: The user utilizes the drone to fly their field. The data from the flight is then automatically sent to the cloud where it is stored and processed. This is very rapid and the customer receives a receiver report within 30 minutes – 2 hours depending upon how many images were collected during the flight. Part of their service is the generation of a prescription map for the field which can be directly uploaded into sprayer equipment as shape (.shp) files.

The example application presented at the 2023 Potato Expo trade show is on control of Colorado potato beetle. Their platform flies an RGB drone at very low altitude and their AI product counts the number of beetles visible on the canopy in segments of predefined size within the field. Based upon these counts, it will determine if spraying is needed given a user defined action threshold.

Their business model is subscription based. They also can/will provide drone hardware the suits the customer’s application. Unlike some other drone measurement companies they have the customer fly the drone. The trade-off is that the customer can fly as many missions as they wish without any additional cost. One future product they hope to roll out soon is a completely autonomous drone scouting system, where the drone is launched from and returns to a communication tower + charging location and flies missions on a consistent schedule without needing humans to be present.

AgroScout works in variety of commodities. They started with potato and tomato. These were chosen for several reasons. First, they felt that these crops (growth habit, grower problems) provided a good test cases for generating AI applications. Second, because there are higher value specialty crops where growers have higher margins than traditional row crops. They also believe the technology they developed could add value to grower operations relative to traditional crop scouting techniques currently being used.

They have since expanded their footprint into corn, soybean, cotton, and sugarcane. They do some orchard crops including banana, cacao, and are continuously adding more crops into their portfolio. In 2023, they also added onion and garlic to their product portfolio.

Current operation spans 21 countries. Industry partners include Simplot, PepsiCo, AECI Plant Health, Syngenta in Brazil, Olam, and a handful of smaller operations. Investigating partnerships with Nutrien Ag, Wilbur-Ellis.

Generally, companies like PepsiCo and AECI pay the license fees for contracted growers and ask them to use the technology. The data is sent to both the grower and the parent company. This helps with transparency for all the players involved.

The value for the grower customer is that they can identify problem spots early and selectively treat problem areas rather than the entire field. For chemical companies this can be beneficial too. Customers sometimes wait too long to spray which reduces the efficacy of the pesticide product. With this tool they can be aware of issues earlier and may be willing to purchase premium pest control products if they can be applied in smaller dosages rather than treating an entire field. Food processing companies also like being able to track the status of raw materials received from different growers through their reports. It helps forecast product supply and gives them a better idea of product quality before harvest.

Challenges that they have faced have been that the service requires the customer to do things a little different than they may have done them in the past. This can be a big challenge, particularly in North America where folks are fairly set in their way of doing things. Also the quality of their product has improved since their initial roll out which requires constant communication with interested parties to demonstrate their improvements and new features.

Subscription service is calculated by acre or can be purchased as a blanket license for a research location. The price of a recommended drone and sensor system can be included in the subscription.