EKOBOT AB (publ)

BOOKLET

Ekobot's mission is to contribute to the development of resource-efficient, sustainable agriculture and to create products and services that provide farmers with better opportunities to increase their food production while also reducing the amount of inputs in their crops.

Introduction to Ekobot

Ekobot was founded in 2017 for the purpose of enabling efficient precision farming using autonomous agricultural robots where weed management takes place entirely without, or with minimal use of, chemical pesticides. The vision is to provide the agricultural sector with a long-term sustainable alternative for reducing or completely phasing out chemical spraying in crops for human consumption

In 2022, Ekobot took great strides toward contributing to sustainable, eco-friendly, long-term and cost-effective agriculture through the successful development of the autonomous Ekobot WEAI agricultural robot. Ekobot has devoted the past year to initiating and setting up commercialisation through multiple product demonstrations on agricultural fields in Sweden and the Netherlands, which has resulted in a commercial breakthrough and the company's first ever orders.

The focus in 2022 was also to develop and verify the company's SaaS-offering, Ekobot PLUS. The service collects field data via the robot system in real time, and the data is then analysed using artificial intelligence (AI) to help the farmer make decisions on inputs such as fertilising, irrigation and harvesting. In 2022, requirements specifications were evaluated together with end customers, and the intention for 2023 is to launch Ekobot PLUS to the first pilot users.

In the fall of 2022, the company gained a new strategic shareholder in the form of Dutch investment company, Navus Ventures B.V. ("Navus"), which invested in Ekobot through a directed share issue. Navus is part of a family business which is closely linked to the Dutch agricultural company Lely, which has extensive, sound experience of innovations in the agricultural sector. Both Navus and Lely are based in the Netherlands, which is one of the Ekobot's most important markets in the short term. Navus has announced that it intends to play an active part as a major Ekobot shareholder.

Ekobot is equipped with an efficient and proven technology, and the company's agricultural robot has had a commercial breakthrough, in a market characterised by driving trends and a positive development forecast. At the same time, Ekobot is supported by an investor linked to a major player in the agricultural industry, with great confidence in the continued development of Ekobot.

Ekobot in brief

Ekobot conducts operations based on the business idea of developing, manufacturing, and selling autonomous agricultural robots that enable efficient precision farming where weed management takes place entirely without, or with minimal use of, chemical pesticides.

BUSINESS MODEL

Ekobot's business model builds on a combination of technology, product, and services. Sales consist of the operational leasing of Ekobot robot systems and associated service and support. Customers lease the robot for 36 months for EUR 90,000 excluding VAT. Each robot system has the capacity to handle around 10 hectares. The Ekobot PLUS service offering and its pricing has not yet been finalised.

VISION

Ekobot's vision is to become Europe's leading company in autonomous agricultural robots and aims to be the agriculture's go-to supplier of advanced weed management services and decision support.

STRATEGIC GOALS FOR 2023

The board of directors has established the following strategic goals for 2023:

- Signed customer contracts for 25 robot units for delivery in 2024.
- Signed agreement with a pilot customer in respect of Ekobot PLUS.
- Signed agreement with a distributor in Denmark.
- Signed agreement with supplier for production.
- A completed and evaluated 2023 season in which existing robots have undergone performance improvements.
- Prototype production concluded and commencement of production of the next robot generation for deliveries in 2024.
- Production optimisation with a focus on cost reductions in tool and robot systems initiated.
- Development of a tool system for a new crop commenced.

THE AGRICULTURAL ROBOT – EKOBOT WEAI

Ekobot's autonomous agricultural robot Ekobot WEAI comprises three subsystems:

Carrier system

The carrier transports the core Ekobot technology, the mechanical tool system and the AI and camera system.

Mechanical tool system

The tool system that makes the practical work of combating weeds possible on agricultural land. The mechanical design of the tool and the Ekobot AI model allows weed management to be performed with high precision.

AI and camera system

The third system consists of an AI model and a camera system that controls the two other subsystems. The image information provided by the camera system is interpreted by an AI model that sends signals and instructions to the other subsystems, which act accordingly.

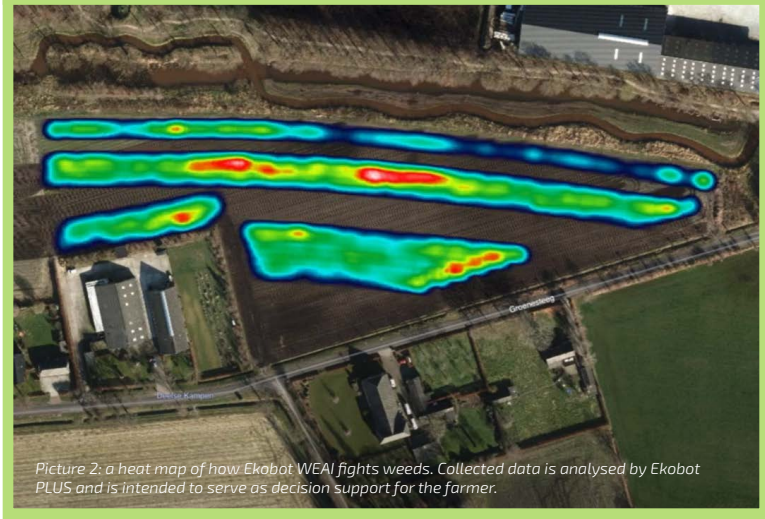
Picture 1: Ekobot WEAI fights weeds in agricultural fields.

DECISION SUPPORT SERVICE – EKOBOT PLUS

In 2022, Ekobot PLUS features were specified together with an end customer. The launch of Ekobot PLUS is scheduled in 2023 to the first pilot users.

By adding Ekobot PLUS, the farmer also adds value through an integrated data collection and analysis system. The service collects field data via the robot system in real time, which is then analysed using AI to help the farmer make decisions on inputs such as fertilising, irrigation and harvesting.

Ekobot PLUS increases the farmer's margins, and as a scalable solution it has the potential to meet current and future needs for quantitative production volumes with the greatest possible consideration for the environment. All in all, data collection will enable Ekobot to use the robot platform in the future to make multiple vertical SaaS offerings through Ekobot PLUS, thereby generating new revenue streams.



Picture 2: a heat map of how Ekobot WEAI fights weeds. Collected data is analysed by Ekobot PLUS and is intended to serve as decision support for the farmer.

Market and competitive advantages

11.2 PER CENT

The global market for organic farming is expected to reach USD 287.8 billion in 2027, which represents a compound annual growth rate of around 11.2 percent from 2022.[1] For farmers to choose organic solutions, they must refrain from using commercial fertilisers and non-organic chemical pesticides on their crops.

19.3 PER CENT

The global market for agricultural robots is expected to grow from USD 4.9 billion in year 2021 to USD 11.9 billion in year 2026, which represents a compound annual growth rate of 19.3 percent up until year 2026.[2]

UNDERLYING GROWTH FACTORS

- Reduced availability of seasonal labour and increases of the minimum wage.
- The use of plant protection products is heavily regulated by EU pesticide regulations.
- More favourable prices for the Internet of Things and GPS technologies.
- Maturity of existing agricultural technologies and the introduction of new agricultural technologies.

THE BIG GLOBAL PROBLEM

The global population is forecast to reach 9.2 billion people by 2050, which will require an increase in food production of at least 60-70 percent.[3]

Precision farming is expected to play a key role in this development in order to safeguard reliable production and more efficient use of available agricultural land.

1. Research and Markets, *2023*, Organic Farming Global Market Report 2023. https://www.researchandmarkets.com/reports/5735287/organic-farming-global-market-report#tag-pos-12
2. MarketsandMarkets, *2021*, Agricultural Robots Market. https://www.marketsandmarkets.com/PressReleases/agricultural-robot.asp
3. Silva, G., *2018*, Feeding the world in 2050 and beyond – Part 1: Productivity challenges. Michigan State University Extension. https://www.canr.msu.edu/news/feeding-the-world-in-2050-and-beyond-part-1

COMPETITIVE ADVANTAGES

Ekobot believes its solution can improve conditions for crops during their most vulnerable period and contribute to a 5–20 percent increase in crop yields, which, according to the company, is unique in the market.

Third-party controlled tests of Ekobot's robot system show an approximate 6 percent harvest increase compared to conventional cultivation techniques using chemical weed control.