LUXEED

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LUXEED Robotics

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TEAM

- Guadaluna Chaer: **CEO**
- Georgy Kassab: **COO**

- Jad Mansour: **CTO**
- Fadi Kaafarani: **Data & AI**
- Ghassan El Bounni: **AI**
- Angelo Yaghi: **Mechatronics**

ADVISORS

- Harrie Te Raa: **Agri Specialist**
- Roger Ottenheym: **Strategy**

TECHNICAL PARTNERS

- Stogger B.V.: **Electronics**
- ADDIT: **Manufacturing**
- Maastricht University

Startup and Funding Information

PRESEED

TRL 4

- AI Validated
- Conclude laser testing by Feb 2025
- Series of Demo in Spring 2025

FUNDING TO DATE

€200,000

LIOF

*1st tranche out of €350,000 LVFF

€120,000

LIOF

synergistEIC

Subsidies

Venlo, Netherlands

Scalable Laser Weeding Technology Promoting Herbicide-Free & Regenerative Agriculture

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PROBLEM

- Huge financial losses because of weeds and current weeding methods, amounting to up to 50% of the farmer's profits!
- Manual labor is getting expensive and more difficult to find, and farmers rely heavily on them to remove weeds close to the crops, with no precise technology alternative

- Soil disruption is present in traditional and new weeding technologies, and only lasers or electrical weeding are considered regenerative, preserving soil integrity.

SOLUTION

- LUXEED is using lasers and AI to eliminate weeds with high-precision, ZERO herbicides needed.
- We promote organic and regenerative farming practices, while adapting laser weeding technology for EU agriculture.

- Balancing precision, affordability, speed,, to make laser weeding accessible to EU farmers.
- Modular design, integratable on small driverless tractors, unlike current machine on the market from Carbon Robotics.

MARKET

- **Weed Control TAM:** €30B
- **SAM:** €1B, including 7 priority crops in 5 EU countries
- **SOM:** €120M
- Urgent need to replace manual labor and herbicides, allowing stricter herbicide regulations.
- Global robotic weeding machines market to increase by €242.78 million from 2021 to 2026. 18.41% CAGR

TRACTION

- 3 Dutch farming companies interested in performing trials
- 8 Dutch farming companies interested in attending our trials and giving feedback + 1 company from the US.
- 2 Dutch Associations network support.
- 2 Distributors interested in selling our modules in their country.

Value Proposition

- 50% more affordable, 60% more lightweight, and 70% more power efficient with the competitive speeds
- Ultra-precise targeting of weeds no matter how close they are to the crop
- 1-2 years payback time of the machine after purchase (for farmers)
- Available in different sizes (1.5m, 2.25m, 4.5m, 6m)

Technology Materials

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- Laser-Vision System calibrated: **https://youtu.be/6omKOpw9V7U**
- Pitch with Demo: **https://youtu.be/6EUVOhRYJOw**
- **A.I. Video Link**

A.I. (notice how the AI detect the growth stage of the weed so that we can maximize the speed and effectiveness of the laser while keeping the AI as efficient as possible. It is highlighted in red. This is AI generated)

It's important to note that while the AI was trained on images from Lebanese onion fields with perfect lighting conditions, this video was shot with shadows in the Netherlands, on Dutch weeds. So imagine the accuracy of the AI when we train it on annotated images from Dutch fields.