

Naïo Technologies launches robotic weeder for large vegetable farms

Tech & Bio Crop and Machinery meeting – June 1st & 2nd – Bignan, France

“Could you make a bigger version of Oz, a robot that straddles and weeds large, tightly planted vegetable beds?” This recurring question has led Naïo Technologies to create a new robotic weeder, 4 years after the launch of their [autonomous weeding robot Oz](#). The new robot goes by the name of Dino and has been specifically designed for vegetable farms of 10 ha (24 acres) or more. The Dino robot straddles vegetable beds to mechanically weed them without human intervention.

[The Dino weeding robot](#) is designed for farmers who aim to save time through efficient mechanical weeding. Dino is lighter and more energy-efficient than a tractor. It doesn't compact soil, is environment-friendly and also avoids unnecessary physical strain during weeding. Naïo Technologies' Dino robot was first presented at the [Tech & Bio Meeting on Crops and Machinery](#) in Bignan, France on June 1st and 2nd, 2016.



Dino: the story behind the robotic weeder for large vegetable farms

Naïo Technologies aims to **help farmers save time by creating innovative tools to solve critical issues** and improve working conditions, limit chemical input, respect crops, maintain soil structure and increase farm productivity.

With this philosophy in mind, the company from Toulouse, France developed their weeding robot Oz between 2011 and 2013. Oz autonomously assists market farmers during weeding and harvesting. Its laser and camera-guided precision technology has already been adopted by over 50 producers (market farmers, tree nurseries, horticulturists...) and has now been adapted to larger robots. When Oz was launched, some farmers expressed their interest in a bigger weeding robot for larger vegetable crops...

In 2013, Naïo Technologies started working on a large straddle robot with [Elatec](#), a French company known for its R&D expertise in agricultural machinery. Elatec also develops electric wheel base units for market farming that can be automated using Naïo Technologies' precision guidance technology.

In 2014–2015, Naïo Technologies collaborated with French agricultural equipment specialist [Carré SAS](#) to create the prototype of the Anatis straddle robot. However, in the absence of a definitive partnership agreement, both companies decided to discontinue their cooperation.

In 2016, Naïo Technologies decided to return to their initial idea of 2013 and develop the large-scale weeding robot internally. This led to the creation of Dino, which is now ready to weed large vegetable crops!

The technical side of the Dino large-scale weeding robot

Dino is the **first robot to mechanically weed large vegetable beds** in farms of 10 ha or more. This innovative agricultural robot guides itself, is **entirely autonomous** during weeding, improves soil maintenance and reduces the workload for farmers.

In order to adapt to soil and crop type, the Dino robot can be equipped with **a range of laboring tools** in the same way as a tractor. These tools are also compatible with the Oz weeding robot: inter-row plowshares, comb harrows, spring harrows and specific plowshares for in-row weeding. More tools, such as Kress finger weeders, are currently under way to enable a variety of weeding techniques while respecting the robots' technical characteristics.

The Dino robot is an electrically driven lightweight and **consumes significantly less energy than a tractor**. It also avoids soil compaction, even when used on a regular basis.

Technical characteristics

- **Speed** 4 km/h
- **Size** Length 2.20 m / Width 2.10 m / Height 1.30 m (beds from 1.20 to 1.80 m)
- **Weight (w/o tools)** 600 kg (depending on battery and tool configuration)
- **Autonomy** 8 hours

The Dino robot is now available worldwide

On June 1st and 2nd, 2016, the visitors of the **Tech & Bio Meeting on Crops & Machinery** were the first to discover the Dino prototype in Bignan, France. The robot received a warm welcome and will be marketed in the coming months. Interested farmers and companies are invited to contact Naïo Technologies or their distributors for more information:

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About Naïo Technologies

Naïo Technologies was founded in 2011 by Gaëtan Séverac, a robotics engineer with a PhD in embedded systems, and Aymeric Barthès, a robotics engineer with an agricultural background. The company's main motivation is to help farmers solve their daily problems. In accordance with their corporate social responsibility engagement (RSE), they have gathered a team of 17 employees and are supported by shareholders who share their convictions and understand the challenges start-ups have to face. In December 2015, Naïo Technologies launched a 3rd round of fundraising, resulting in 3 million euros of additional funds and 7 job creations in 2016. Currently, they're working on the development of a vineyard robot.

For more information: <http://naio-technologies.com/>

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