

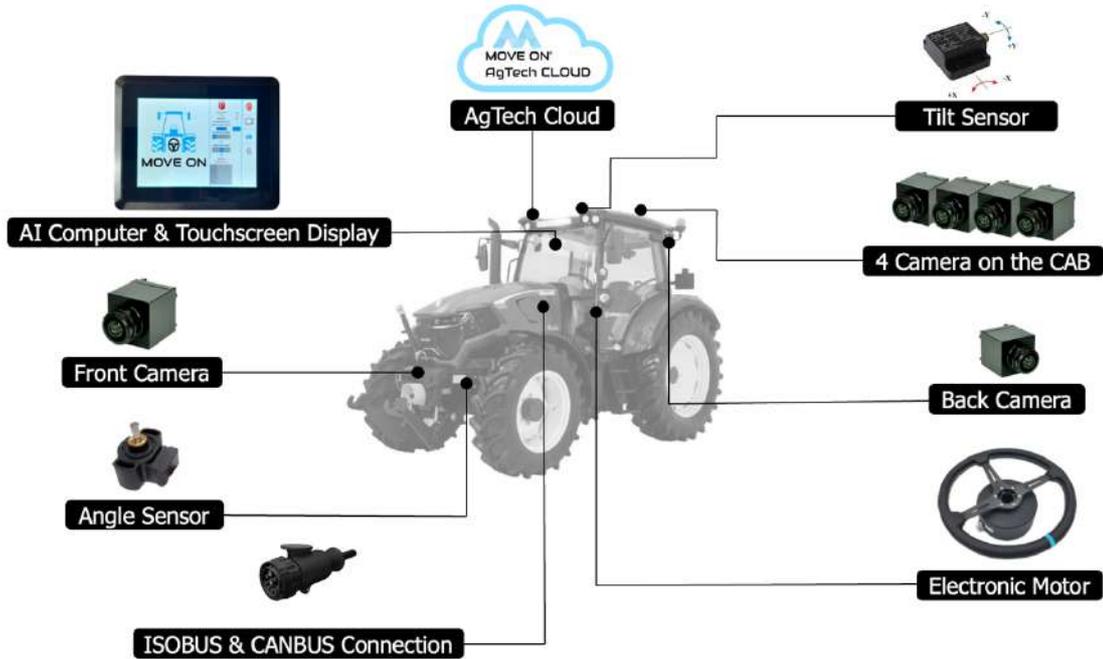


AUTONOMOUS TRACTOR KIT

TASAI – Autonomous Tractor Kit makes tractors level 4 fully autonomous.

It provides a 360° view of the tractor and the field with cameras, artificial intelligence softwares and cloud connectivity with MAC(MOVE ON AgTech Cloud). It eliminates the need for operators in post-sowing operations that the tractor will perform in the field.

TASAI Kit consists of 6 cameras, Artificial Intelligence Computer (Touch Panel), Angle Sensor, Tilt Sensor, ISOBUS and CANBUS connection and optional electronic or hydraulic steering kit.



Our company protects the IP Rights of our product with the Patent Registrations numbered 2021/003997, PCT-TR2021/051207 and the Trademark Registration numbered 2020/123367.

Cameras

TASAI – Autonomous Tractor Kit works with artificial intelligence softwares to make sense of the images taken from the cameras and accordingly algorithms such as route extraction, plant detection and weed separation. The kit recognizes the field and the plant by sight through cameras. The cameras are resistant to water, dust and mud in the IP69 protection class.



AI Computer and 8" Touchscreen Display

The AI Computer and 8" Touchscreen Display in the TASAI – Autonomous Tractor Kit make sense of the images taken from the cameras and performs the operations that the tractor needs to do.

Angle Sensor

With the angle sensor placed on the tractor axle, the system reaches the rotation angle information of the tractor and produces the angle information that the tractor should go. The angle sensor is resistant to water, dust and mud in the IP69 protection class.



Tilt Sensor

The tilt sensor placed on the tractor cabin enables the tractor to work more accurate on sloping fields.

ISOBUS and CANBUS Connections

TASAI – Autonomous Tractor Kit can communicate with ISOBUS supported tractor attachments thanks to its ISOBUS connection.

TASAI – Autonomous Tractor Kit can communicate with the tractor with CANBUS support thanks to the CANBUS connection. In this way, there is no need to use Hydraulic/Electronic Steering, Angle Sensor and Tilt Sensor equipment.



AgTech Cloud Platform Connection

TASAI – Autonomous Tractor Kit provides remote connection with MAC(MOVE ON AgTech Cloud). In this way, the data received from the tractors with TASAI are transferred to the cloud and it is possible to use Web and Mobile applications that contain the working information of the tractor and TASAI.

Hydraulic or Electronic Steering

TAS kit performs steering in 2 different ways. By changing the steering wheel of the tractor steering is done with electronic steering or with a hydraulic block completely

designed by our company without making any changes in the tractor cabin.

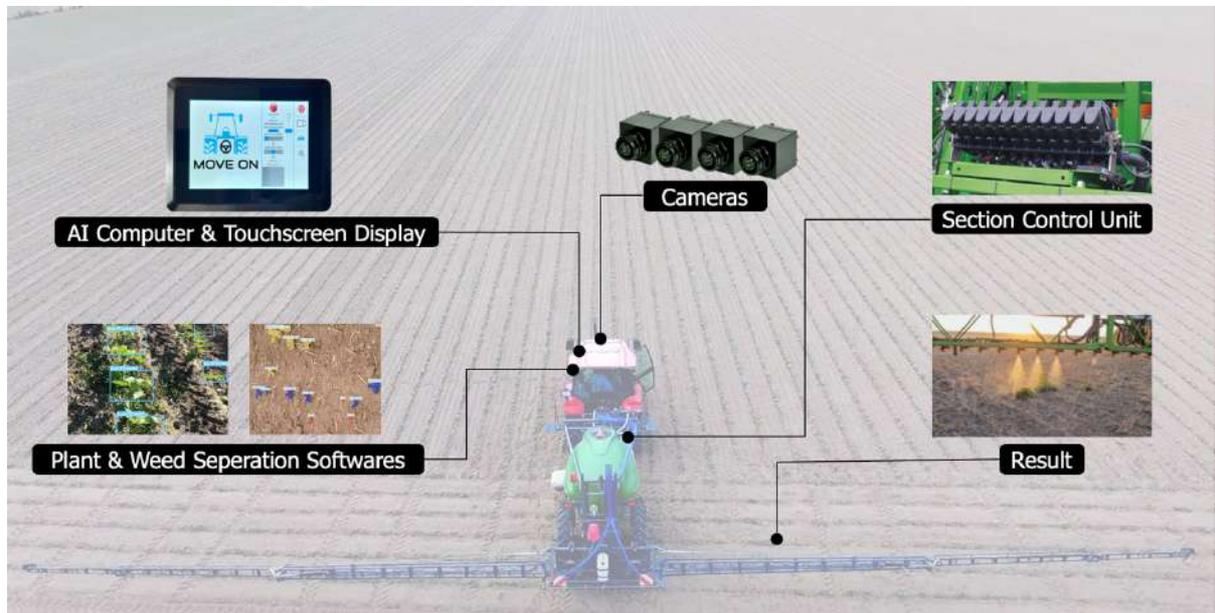


TASAI kit has 2 versions as spraying and hoeing.

SPRAYING

TASAI Autonomous Tractor Kit sees and separate plants and weeds from cameras and makes spraying processes smart. With artificial intelligence-based algorithms and TASAI software that can make inference green from green, the chemicals used in **spraying operations are reduced up to 80%.**

TASAI, which separates plants and weeds, sends information to the spraying machine to spray only the weed. TASAI can communicate with ISOBUS supported sprayers or connect to old type sprayers with section control unit.



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Plant and Weed Separation Softwares

TASAI – Autonomous Tractor Kit works by making sense of the images coming from the cameras with artificial intelligence softwares. Working with data on the growth processes of plants from planting to harvestin after sowing, **TASAI recognizes sunflower, sugar beet and corn** plants by seeing them and **seperates them from weeds**. Since the software is based on artificial intelligence, it works not only with color separation infrastructure, but also with a



complex infrastructure such as **pattern recognition**. For this reason, TASAI can work in fields where plants and weeds are green.



Section Control Unit

TASAI – Autonomous Tractor Kit integrates section control unit with old model sprayers and controls parts of the machine via TASAI computer. There is no need for a section control unit on a sprayer with ISOBUS support.



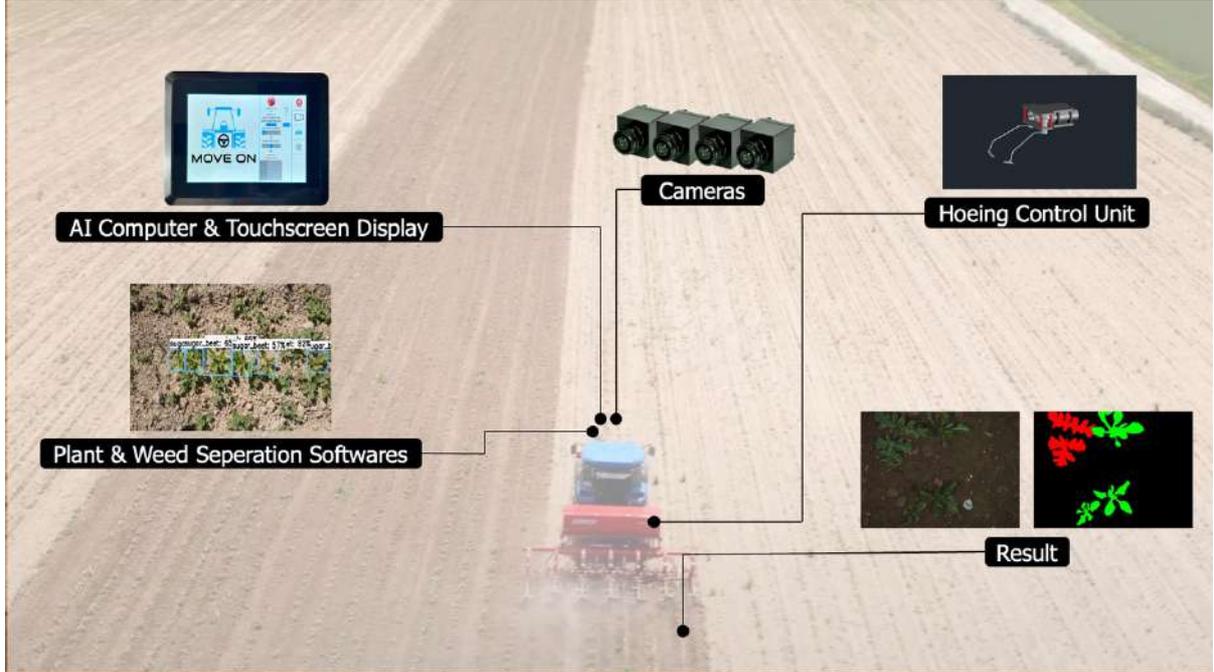
RESULT

TASAI – Autonomous Tractor Kit provides a dynamic system that sprays only the weeds or only the nutrients on the plant, thanks to the green-to-green extraction algorithms and the section control method.

WEEDING

TASAI Autonomous Tractor Kit sees and separates plants and weeds from camera images. TASAI makes weeding processes smart. With artificial intelligence-based algorithms and TASAI software, which can extract green from green, **in-row weeding processes are made smart and autonomous.**

TASAI, which separation the plant from the weed, sends information to the weeding machine so that the weeder feet move around the plant.



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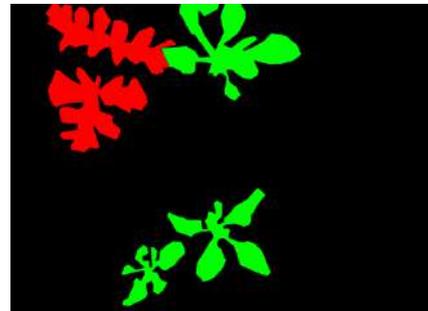
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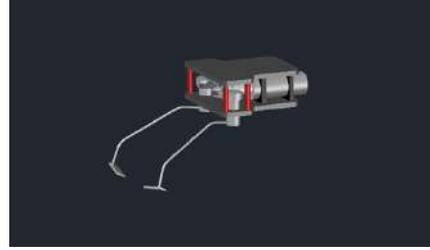
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Hoeing Control Unit

TASAI – Autonomous Tractor Kit controls the hoeing control unit with images taken from the cameras. After the plant is separated from the weeds by calculating the distances between the in-rows and the rows, TASAI can communicate with the Hoeing Control Unit and performs the hoeing process on the row.



RESULT

TASAI – Autonomous Tractor Kit sees the plant with green-to-green extraction software and performs in-row weeding. In this way, a more dynamic weeding operation is carried out by reducing the human-force.