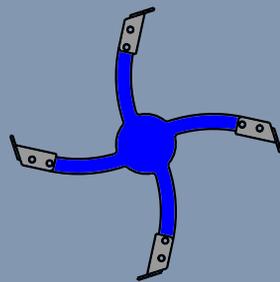


# Photoheylar

Weeding - Precise and simple



# In-row rotor weeder.

The **Photoheylor weeding system** is unique one the market. The novel camera system allows for crop detection rates greater 98%.



The machine allows hoeing in sugarbeets between **two leaf stage and beginning of crop cover**.

The **customized shape of the rotors** makes the removal of weeds growing within rows easy and reliable.

Front mounting maximizes the drivers view on the hoeing implement. This allows easy control and adjustment of machine settings to maximize performance even under challenging working conditions.

Furthermore, the two actively steered implement wheels of the front mounted machine optimize the weight distribution in the field.



# Conventional row hoe

The **Photoheyl** row guidance reliably detects the crop rows with the help of cameras.

The implement wheels of the machine and the tractor wheels are steered synchronously. Only this makes it possible to guide the hoe accurately along the crop row and minimize the width of the hoeing-strip.



The **standalone Photoheyl row guidance system** can be easily integrated into any already existing hoeing system.

For instance also In-Between-Axle systems like Fendt GT can be updated with our row guidance system.

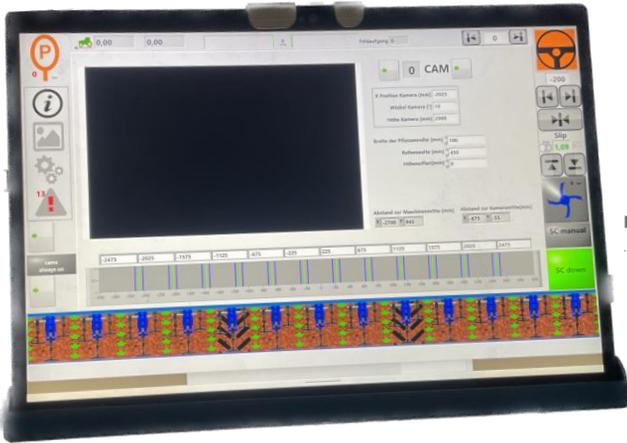
The machine can also be steered manually and hence allows precise work in every situation and tailored to your use case.



# Row guidance system

## Easy mounting guaranteed

Tablet



Cameras



Steering valve

For tractors without inbuild steering system setup a valve block can be retrofitted by us.



Steering via Can-Bus

Fendt and CNH tractors that have a steering valve pre-setup need no further retooling and can be steered directly via CanBus.

Case



Fendt



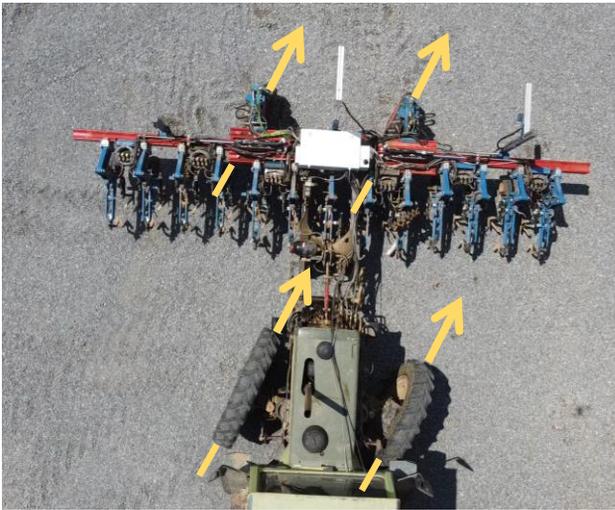
ISOBUS TIM Steering

New tractors that have ISOBUS TIM can use this to connect to and steer the hoe.



# Precise steering – despite acclination

Robust row guidance by synchronously steered support wheels



The support wheels are actively steerable and able to synchronously follow the steering of the tractor.

This enables the driver to monitor both the hoeing equipment and the tractor simultaneously. Especially on headlands and in narrow curves this provides a strong advantage compared to other systems.

## Stability on slope

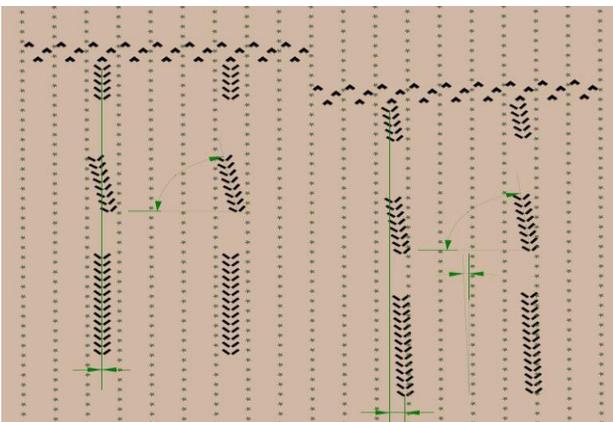
Accurate work on all levels

Precise row guidance in hilly terrains can be especially challenging. By oversteering of the tractor wheels when driving orthogonal to the slope [Photoheylor](#) keeps you on track.



With slope correction

Without slope correction



## How the slope correction works:

The front wheels of the tractor get steered further upwards than the supporting wheels of the hoe. This prevents the vehicle rear from slipping and the tractor stays parallel to the crop row.

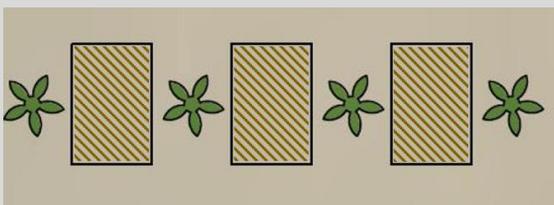
# Rotor – adjustable from cabine

## Abilities:

- **Zero-point intervention** of rotor avoids any soil movement into direction of travel
- **Fully-automated** height adjustment of rotors allows the farmer to adjust working depth from the cabine
- **100Nm torque** cuts even puddled and incrusted soils including weeds
- **weeds are cut out** from the crop row and is through in the between-row space where its again uprooted and buired by soil by the subsequent tools
- Working speeds up to **3.5 kph** can be realized
- **Section control** allows every rotor to be lifted to 20 cm height independently to enable a neat and clean lifting and lowering of the machine on the headlands.



Due to its slanted positions the rotor always cuts at the **right angle** to the crop row.



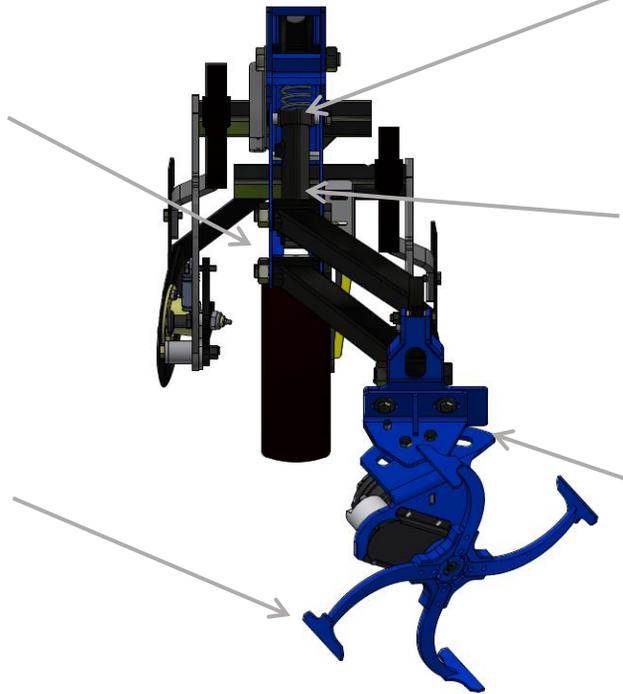
## Zero-point intervention explained:

The engagement angle of the rotors is real-time adjusted so that the forward speed of the tractor is completely neutralized by the backward movement of the rotor. Hence, there is no soil movement in direction of travel as frequently observed with other tillage tools. The zero-point intervention prevents the crop from being buried.

# Maximum performance no matter the conditions

Parallelogram-guidance of rotor mount to allow for a robust and exact height guidance of the hoeing tool

Customized rotor blades that can be tailored to the planting distance in the row by choosing smaller or bigger blades



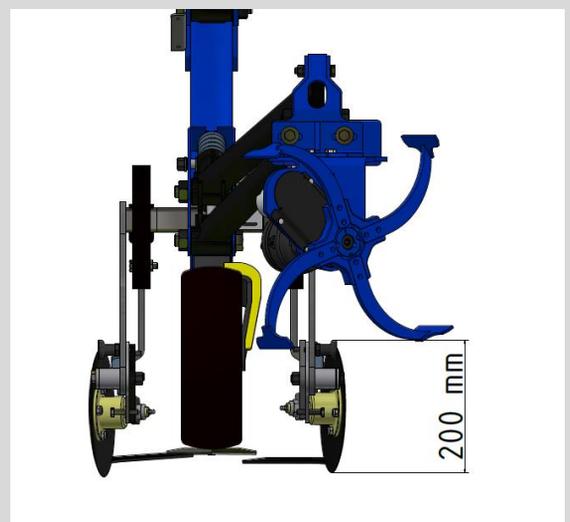
Hydraulic cylinder for easy lifting of rotor from cabine

Automated working depth control of rotors via ultrasonic sensors or measuring of the stagger movement of the tractor

Adjustable rotor cutting angle which needs to match the planting distance of the crop to allow for a perpendicular cutting of the rotor to the plant row.

**Hoeing in every situation – even without the rotor.**

When its desired not to use the rotor it can be lifted to 20 cm height from the cabine. Hence this machine can also be used as a conventional row hoe.



# Tool carrier

Neat and tidy

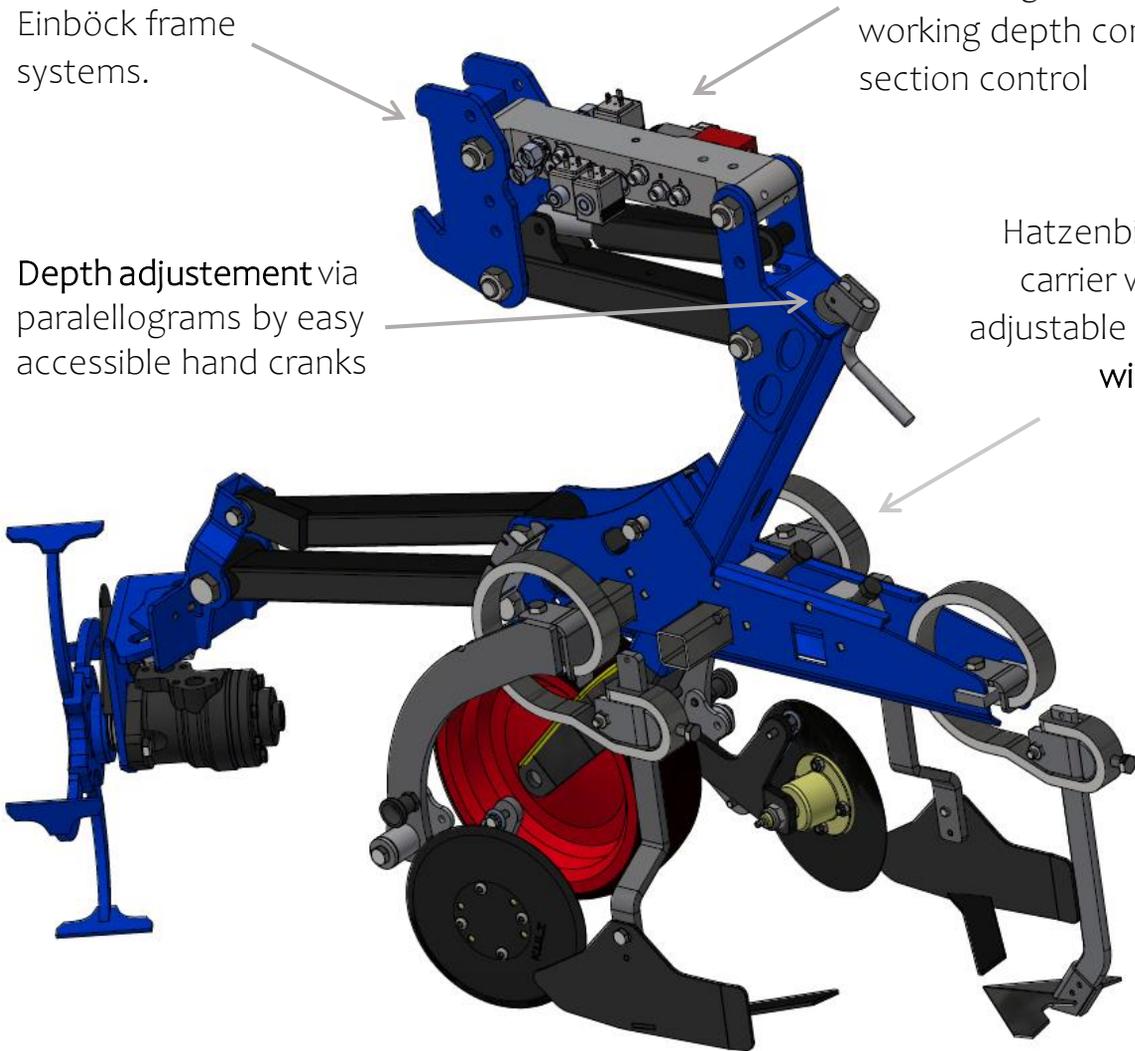
The Photoheyl tool carrier can be equipped with different tools. The simple and robust setup can be adjusted quickly to changing working conditions.

Compatible with Hatzenbichler or Einböck frame systems.

Decentral control block for rotor configurations, working depth control and section control

Depth adjustment via parallelograms by easy accessible hand cranks

Hatzenbichler tool carrier with easy adjustable hoeing-strip width



# Tools – tool change within 10 min

For an effective weed control the crop stand needs to be hoed multiple times until crop cover is reached. Since the complete tool carrier including the profiled tube is changed the machine can be quickly modified to another tool setup.

## Rectangular blade with cutting disc

The cutting discs are separating the soil left and right from the crop row. Each cutting disc has a working width of 2 cm. The subsequent Rectangular blade is working in this strip pre-formed by the cutting disc and cuts the sub-surface of the intermediate row spaces. In case of larger crops the rectangular blade can be lifted using a locking bolt to avoid cutting of leaves. The stone safety device provides robust performance even in rough terrain.



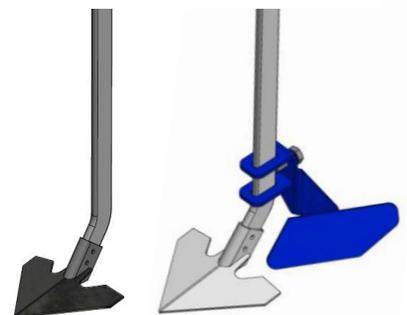
## Goose foot with row protection discs

These discs prevent the crops from being buried with soil. The teeth prevent cutting of leaves by the discs. In larger crops, the discs can be lifted and locked above the crop row.



## Goosefoot with ricing body

At higher speeds goosefeet blades create a small dam to cover small weeds. To enlarge this ricing effect additional ricing bodies can be mounted,



# Best performance

In every situation

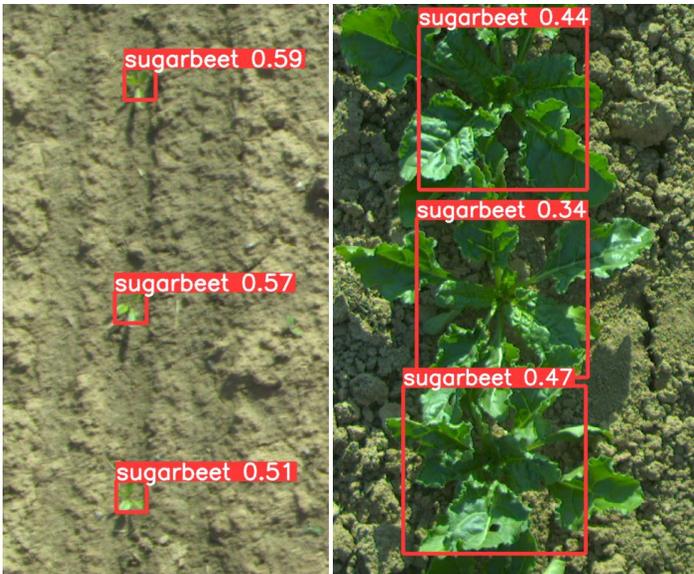


# Outstanding plant detection

Avoid laborious machine configuration

The detection algorithm can be adapted to any crop of interest within few hours.

### Sugar beet



### Corn



### Onion



### Pumpkin





Speed display

Activation of hydraulic system

Lateral hoeing machine offset

Manual offset adjustment

Enable auto guidance

Turn-off of individual cameras

Automatic turn-off of cameras synchronously to section control

Lifting of individual parallelograms

Simultaneous lifting of only rotors

Simultaneous lifting of all sections

Section control via ISOBUS

# Prerequisites

## Prerequisites of the tractor

- 80 l/min Load Sensing
- Pre-setup of automatic steering system
  - Steering valve
  - Steering wheel motor
  - ISO-BUS Tim
- Optional:
  - Section control via ISO-BUS
  - Vario gears



## Prerequisites of seeding and planting machine

- Precision planting with even distributed distances within the crow



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