Orientation Aid for the Start of the Season
Precea – trailed models

Contents

1. General information

- Use of this document requires that the **operating manuals** for the implement and the software have been **read** and **understood**. The corresponding documents are listed on the right side.

- For this reason, it is necessary to refer to the operating manual for additional information. The **operating manual must always be available** when working with the orientation aid for the start of the season.

- The Orientation Aid for the Start of the Season - Precea 9/12000-TCC document serves as a guideline for the user to check the implement for the new season and to put it back into operation. This document is based on Precea implements with software version **NW356-E.022** and is also only valid for this version.

Designation	Operating manual
Precea ISOBUS software	MG7486
Precea 6000-TCC	MG7635
Precea 9/12000-TCC	MG7506

2. Preparing the implement

Coupling the implement: establish all connections between the implement and the tractor, such as ISOBUS, lighting, and hydraulic system. Then the jack must be moved into transport position manually or hydraulically, depending on the equipment.

Aligning the implement: for precise seed placement, the running gear frame as well as the two implement sections must be aligned horizontally.

Aligning the frame: to align the frame, there is a small spirit level on the left side of the main frame and in front of the running gear wheel that serves as an aid. With the ball hitch coupling and the drawbar eye, the frame is aligned via the mounting position. It may need to be adjusted by repositioning the bolts on the adapter plate. With the lower link hitch, the frame is aligned with the tractor lift linkage.

2. Preparing the implement

Aligning the sections: this requires that the frame is aligned horizontally. The sections are moved into working position on the field, and the coulters are pulled through the soil for a few metres. In this state, the section profile tube should also be aligned horizontally. The catch rollers should also be difficult to turn by hand (4). If this is not the case, the stops on the two lifting cylinders must be adjusted.
- On the Precea 6000-TCC, the stops are turned via a thread.
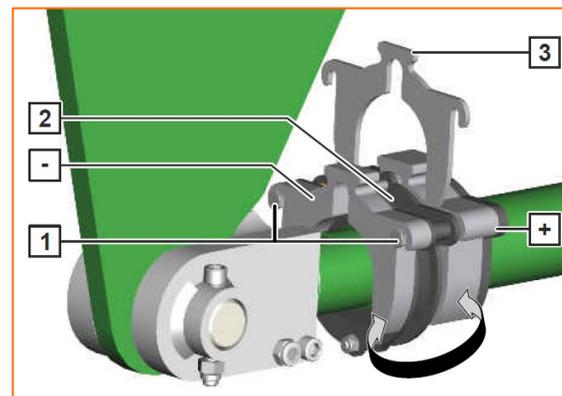- On the Precea 9/12000-TCC, the stops are adjusted by adding or removing spacer elements.

The adjustment procedures can be found in the respective operating manuals.
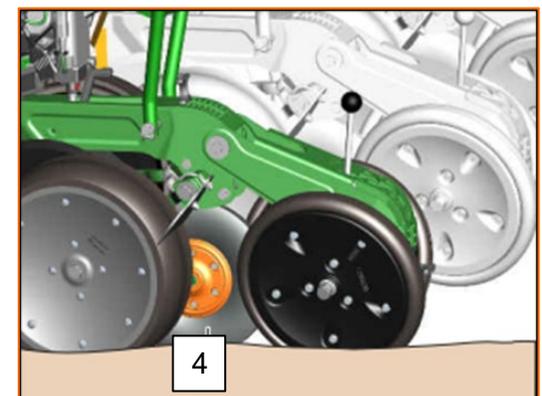

Adjusting the stops via a thread – Precea 6000-TCC
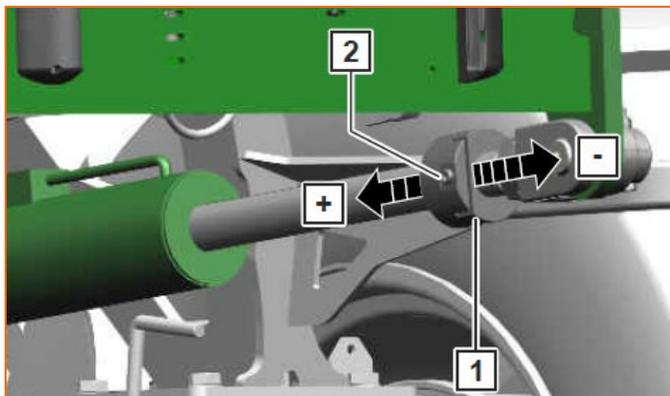

Spacer elements - Precea 9/12000-TCC

Catch roller in correct working position

3. Calibration of the fertiliser metering

General: use suitable metering cores. Slide a calibration bag under each metering unit. To start the calibration on the control terminal, refer to the ISOBUS software operating manual in the *"Calibration menu"*.

Calibration procedure: prepare the procedure via the software, Field menu > Calibration > Fertiliser (1), check the values and change if necessary (2, 3), pre-metering (4). Calibrate with the calibration button or TwinTerminal (5). Weigh the quantity and enter the value on the terminal.
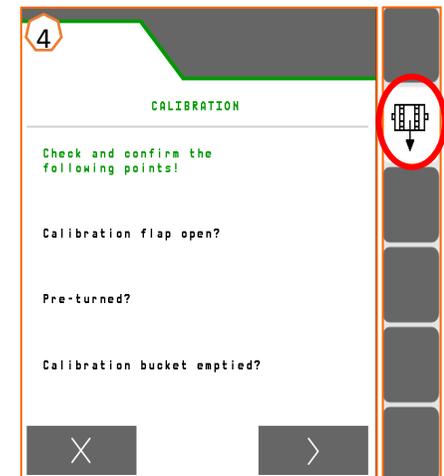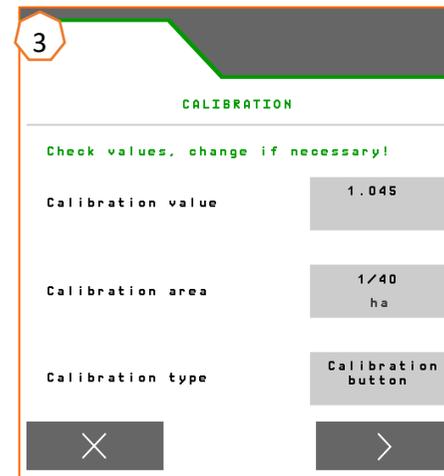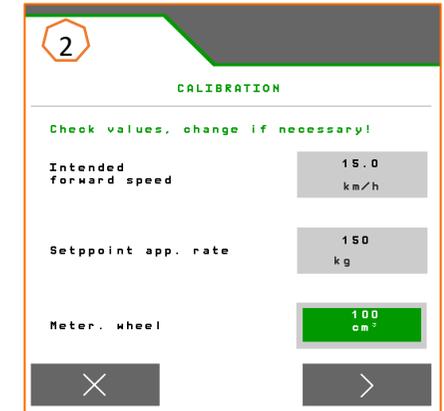
# 4. Adjusting the application rate for seed

Software settings:

Settings menu > Products > Seed (1) . Here, the target spread rate 1 and the placement spacing 1 can be set. For the calculation, the corresponding singling disc must be selected. Entry of the target spread rate 2 is only required if you want to set different spread on different rows, e.g. for seed propagation. For the CSS system, the pressure difference and the automatic function can be selected here.
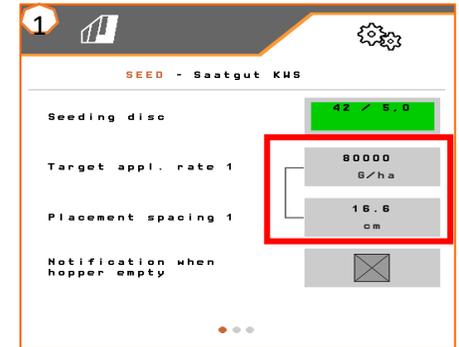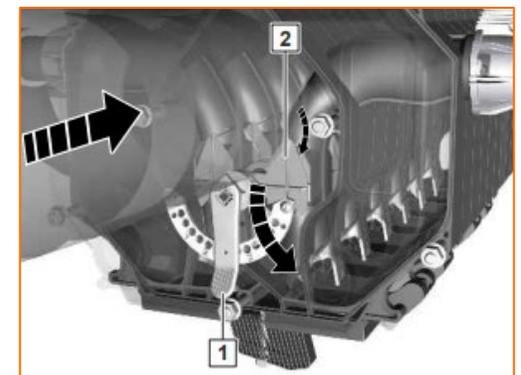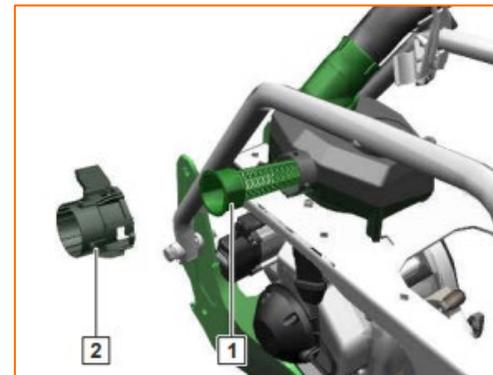

Implement settings on the seed emitting unit:

The position of the control flap adjusts the air quantity that is provided to convey the seed. Depending on the seed type (2), read the desired control flap position (1) from the sticker. The control flap position and the differential pressure are reference values. **Note:** if too much or too little seed is conveyed to the singling unit, adjust the setting.
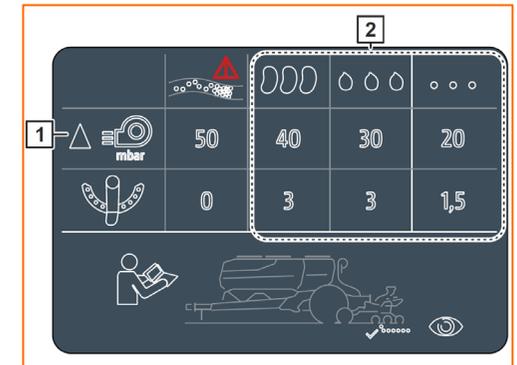
Implement settings on the seed receiving unit:

Depending on the crop size, the orange sieve (small mesh) or the green sieve (large mesh) is installed on the seed receiving unit.

5. Implement settings

The table is used to set the grain singling according to the seed. The sliding shutter positions and fan pressures are reference values. Check the grain placement after driving a short distance.

Seed		Seed singling unit							PreTeC mulch seeding coulter			Central Seed Supply system		
Type	Thousand grain weight	Bore holes	Hole Ø	Farbe	Sliding shutter	Air pressure,	Filling block	Opto-sensor diameter	Feed channel diameter	Furrow former diameter	Seed press roller	Control flap	Differential pressure	Sieve
					Maximum working speed 10 km/h.									
Rapeseed	> 4.5 g	120	1 mm	Light grey	B/C	35 mbar ± 5 mbar	Orange	16 mm	16 mm	12 mm	20 mm	1.5	20 mbar	Orange
	4.5 g Up to 7 g	120	1.3 mm	Anthracite grey	B/C			16 mm	16 mm	12 mm	20 mm	1.5	20 mbar	Orange
	> 7 g	120	1.6 mm	Black	B/C			16 mm	16 mm	12 mm	20 mm	1.5	20 mbar	Orange
Sorghum	25 g Up to 45 g	80	2.5 mm	Bordeaux red	B/C	35 mbar ± 5 mbar	Orange	16 mm	16 mm	16 mm	16 mm	/		Orange
Soybean	• Silver-grey singling disc: maximum working speed 8 km/h. • Violet singling disc: maximum working speed 12 km/h. There can be deviations in the distribution along the row. • 45 cm or 50 cm row spacing with max. 50 grains/m². • Depending on the seed, the actual application rate can deviate strongly from the target rate.													
	120 g Up to 265 g	80	4 mm	Silver grey	D/E	45 mbar ± 5 mbar	Green	16 mm	16 mm	16 mm	16 mm	4	40 mbar	Green
	120 g Up to 265 g	120	4 mm	Purple	D/E			20 mm	20 mm to 16 mm	16 mm	16 mm	4	40 mbar	Green
Field bean		55	6 mm	Red	D/E	45 mbar ± 5 mbar	Green	20 mm	20 mm	16 mm	16 mm	4	40 mbar	Green

5. Implement settings

| Seed		Seed singling unit							PreTeC mulch seeding coulter			Central Seed Supply system		
Type	Thousand grain weight	Bore holes	Hole Ø	Farbe	Sliding shutter	Air pressure,	Filling block	Opto-sensor diameter	Feed channel diameter	Furrow former diameter	Seed press roller	Control flap	Differential pressure	Sieve
Maize	> 220 g	42	4.5 mm	Beige	E/F/G	45 mbar ± 5 mbar	Green	16 mm	16 mm	16 mm	16 mm	3	30 mbar	Green
	200 g Up to 300 g	42	5 mm	Green	E/F/G			16 mm	16 mm	16 mm	16 mm	3	30 mbar	Green
	> 300 g	42	5.5 mm	Purple	E/F/G			16 mm	16 mm	16 mm	16 mm	3	30 mbar	Green
Sugar beet		34	2.2 mm	Blue	B/C	35 mbar ± 5 mbar	Orange	16 mm	16 mm	12 mm	20 mm	/	/	Orange
	For seeds larger than 15 mm: an opto-sensor, feed channel and furrow former with a diameter of 20 mm are required.													
Sunflower	70 g Up to 85 g	34	3 mm	Orange	E/F/G	35 mbar ± 5 mbar	Green	16 mm	16 mm	16 mm	16 mm	/	/	Green
	85 g Up to 95 g	34	3.5 mm	Brown	E/F/G			16 mm	16 mm	16 mm	16 mm	/	/	Green
	< 95 g	34	4 mm	Pink	E/F/G			16 mm	16 mm	16 mm	16 mm	/	/	Green
Squash		10	4 mm	Opal green	F/G	45 mbar ± 5 mbar *	Green	20 mm	20 mm	20 mm	16 mm	/	/	Green

* For seeds with a low volume weight, an air pressure of 35 +/-5 mbar can be sufficient

5. Implement settings

**Adjusting the placement depth on the coupled fertiliser coulter**

The depth of the fertiliser coulter is coupled with the depth of the seeding coulter. When the depth of the seeding coulter is adjusted, the depth of the fertiliser coulter is also automatically adjusted. The depth can be adjusted at 5 levels. Insert the pin in the desired position.

1. Raise the implement.

2. Secure the tractor and implement.

3. Remove the linch pin 3.

4. Remove the pin 2.
   The notches 4 between 1 and 5 serve as orientation.

5. To adjust the fertiliser placement depth, turn the adjustment shaft 1 to the desired position.

6. Install the pin.

7. Install the linch pin.

8. Make the same adjustment for all fertiliser coulters.
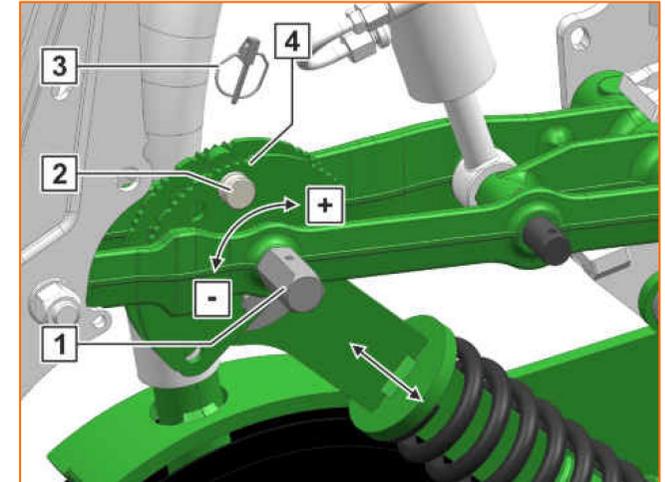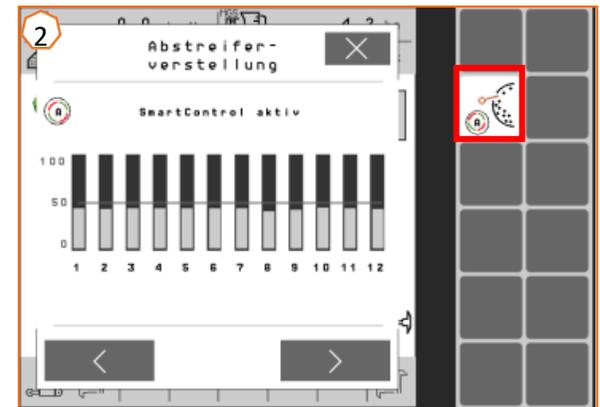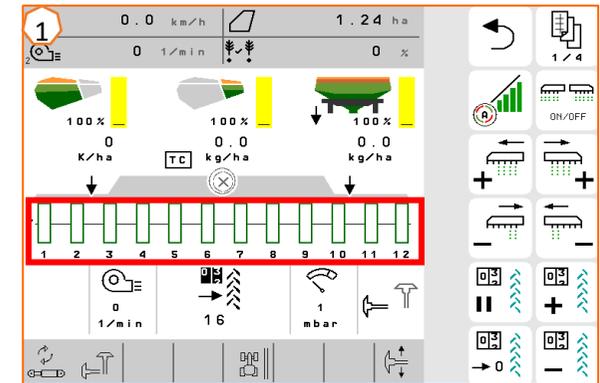
5. Implement settings

- (1) **Sliding shutter:** set according to the seed type, see table on pages 8-10. Only open far enough so that there is enough seed in front of the singling disc but the seed chamber is not overfilled.

- (2) **Singling disc:** for the different seed types, there are suitable singling discs with the corresponding number of holes and hole diameter, see "Installing the singling disc" in the operating manual. To replace the disc, remove the cover (2) and release the lock (3). For every disc, there is a suitable ejector wheel that also needs to be changed.

- (4) **Seed placement depth:** adjust using the setting lever. Half-steps are possible by setting the lever at an incline. The seed placement depth depends on the soil type, coulter pressure and working speed, amongst other things, and can only be determined during field operation.

- (5) **Disc closer (optional):** adjust the disc closers using the setting lever. In Position A, the disc closer is deactivated.

- (6) **V press rollers:** the roller closes the seed furrow. The pitch, spacing and pressure can be adjusted. In addition, the rollers can be arranged offset to one another.
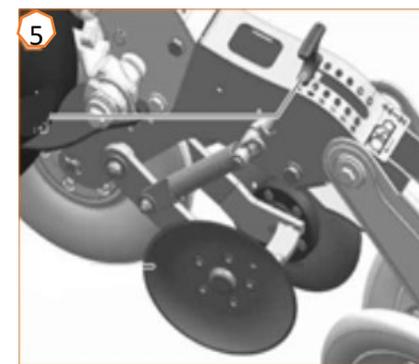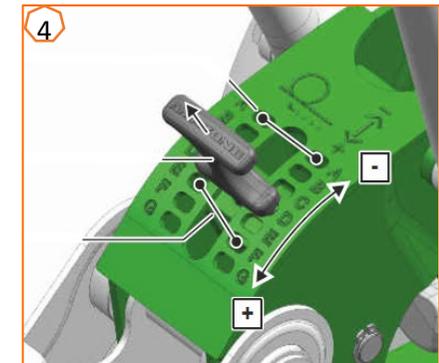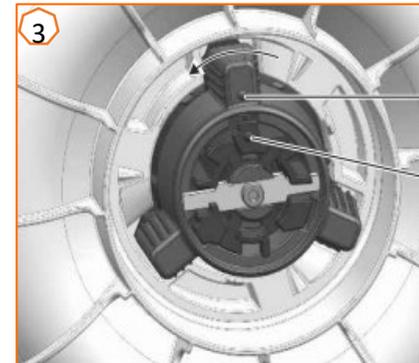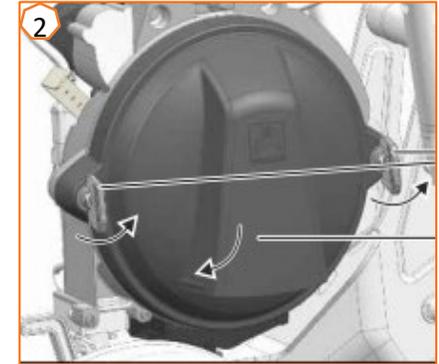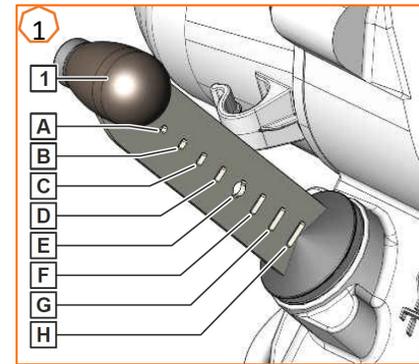
6. Adjusting the scraper

Adjust the scraper: reduce the value if there are gaps. Increase the value if there are doubles.

- Automatic scraper function (SmartControl)**:** this function is activated per default and regulates the scrapers automatically, depending on whether the opto-sensor is detecting gaps or doubles. To deactivate SmartControl, click on the bar graph for the singling accuracy (1) and then on the button (2).

- Adjusting the scraper manually**:** to adjust the scraper manually, the SmartControl function must be deactivated. Click on the bar graph for the singling accuracy (2). Use the "plus and minus" buttons to adjust all of the scrapers together (3). If you scroll further in the display, each scraper can be adjusted individually.

7. Start screen of the implement software (ISOBUS)

- The implement software is divided into the Field menu (1) and the menu for the settings (2).

- By clicking one of the buttons circled in red in the image, you can switch between the menus.

- From the Field menu, you can switch to the submenus Work, Calibration, Documentation, Filling, and Emptying.

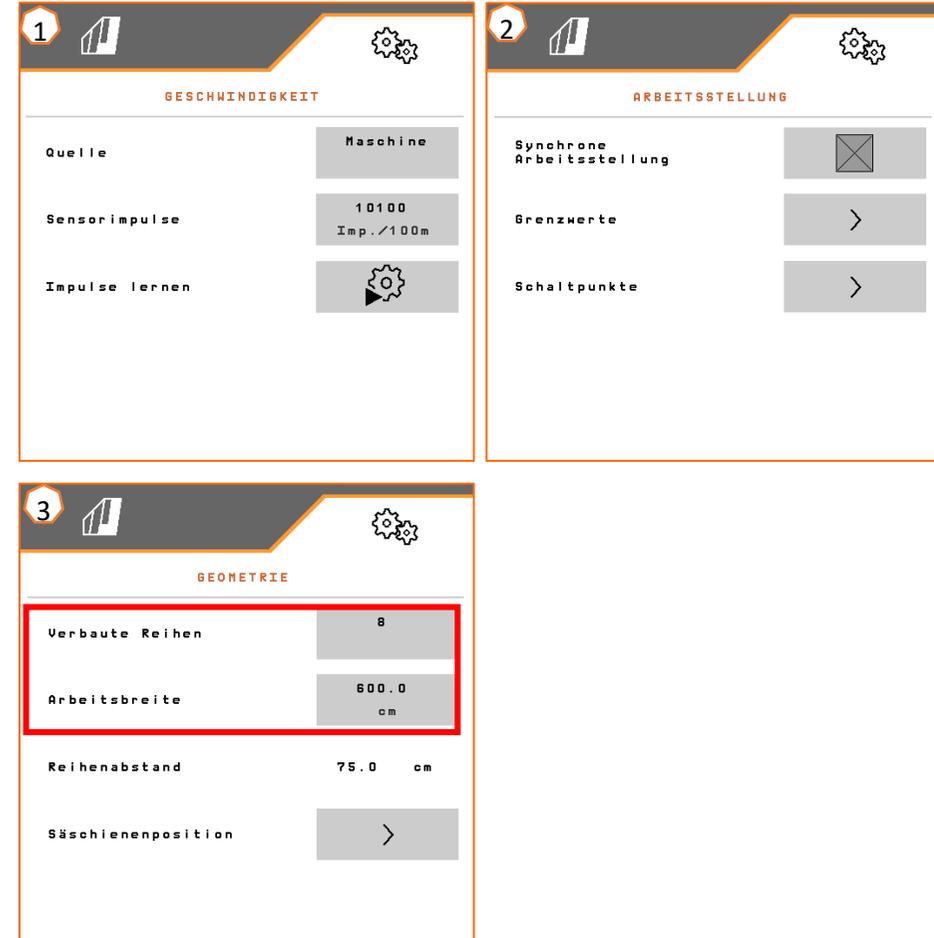- From the Setting menu, you can switch to the submenus Implement, Profile, Products, and Info.

8. Work menu of the implement software (ISOBUS)
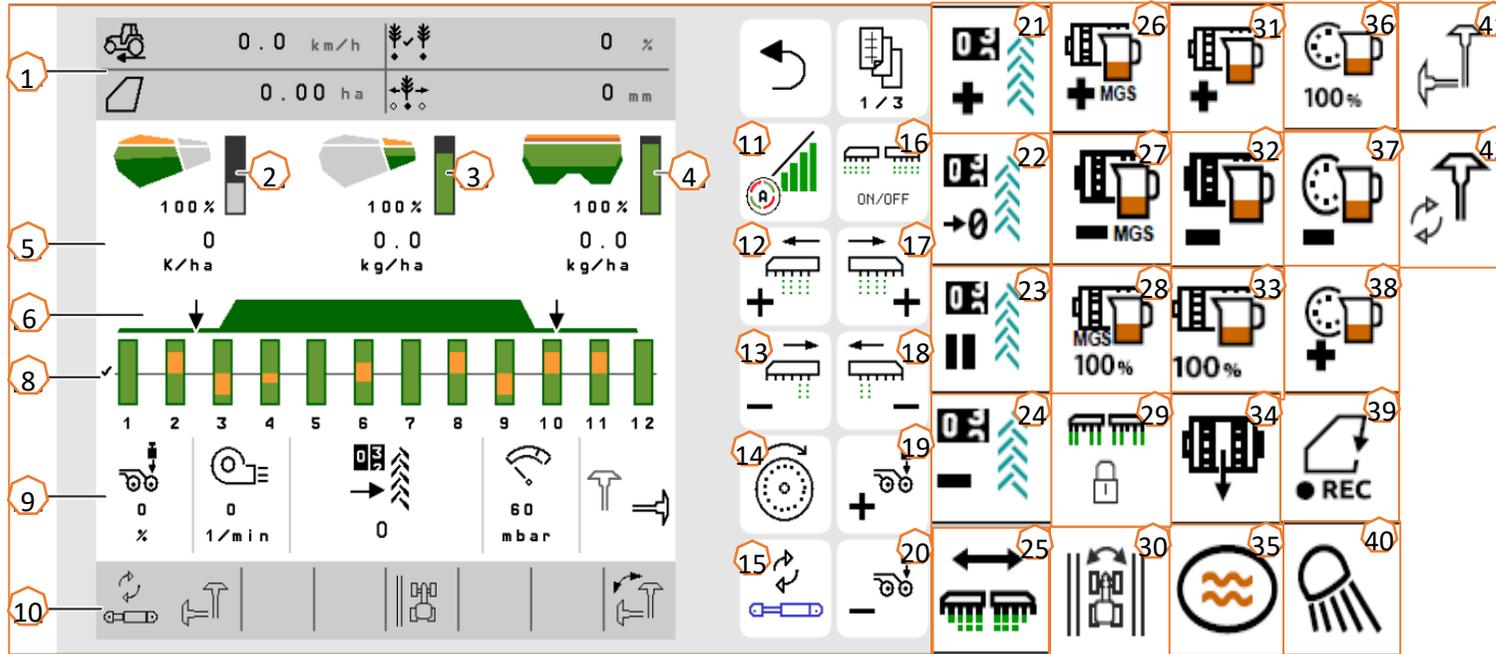
(1) Multi-function display (freely configurable)
(2) Seed fill level indicator
(3) Micropellet fill level indicator
(4) Fertiliser fill level indicator
(5) Application rates
(6) Status of the working position and Section Control
(8) Bar graphs for the seeding coulters
(9) Implement data
(10) Status bar
(11) Section Control on/off
(12) Switch on part-width section to the left
(13) Switch off part-width sections to the right
(14) Fill the singling disc

(15) Change pre-selected hydraulic function
(16) Switch all part-width sections and the metering unit on and off
(17) Switch on part-width sections to the right
(18) Switch off part-width sections to the left
(19) Increase the coulter pressure
(20) Reduce the coulter pressure
(21) Advance the tramline counter by 1
(22) Set the tramline counter to zero
(23) Pause and start the tramline counter
(24) Reduce the tramline counter by 1
(25) Switch on all part-width sections
(26) Increase micropellet application rate
(27) Reduce micropellet application rate
(28) Set micropellet application rate to setpoint

(29) Block rows
(30) Switch over field edge for tramline calculation
(31) Increase fertiliser application rate
(32) Reduce fertiliser application rate
(33) Set fertiliser application rate to setpoint
(34) Pre-meter fertiliser
(35) Water hole
(36) Set seed application rate to setpoint
(37) Reduce seed application rate
(38) Increase seed application rate
(39) Start GPS recording
(40) Switch work lights on and off
(41) Pre-select left/right track marker
(42) Change track marker function

9. Software: Settings menu (ISOBUS)

- **(1) Speed signal source / teach-in pulses per 100 m**: Settings menu > Implement > Speed > Teach-in pulses / source. Here, the source for the speed signal can be selected and the pulses per 100 m can be calibrated. With an electrical drive, the number of pulses is approx. 10000.

- **(2) Source / teach-in working position:** Setting menu > Implement > Working position > Teach-in switch points. Here, the source for the "working position" signal can be selected and the switch points for "metering on" and "metering off" can be taught-in. The limit value must be taught in before teaching in the switch points.

- **(3) Number of rows on the terminal:** Settings menu > Implement > Geometry. Here, check and enter the actual number of rows and the working width to calculate the worked area and grain spacing.

10. Preparation for the Task Controller in the implement software (ISOBUS)

- **Terminal:** the functions of the Task Controllers are controlled through the terminal. The terminal must be prepared accordingly. You can find more information in the operating manual for the respective terminal.

- (1) **Geometry:** Settings menu > Implement > Geometry Here, the implement geometry can be checked and adjusted. The implement logs onto the Task Controller with this geometry. If Multi Boom is activated in the implement software, the implement distinguishes between the placement points for fertiliser and for seed.

- (2) **Switch-on and -off time:** Settings menu > Products > Seed/Fertiliser The switch-on and -off time defines the delay between the command from the terminal to switch the part-width sections on or off until the seed/fertiliser actually reaches the coulter. Incorrect settings can cause overlaps or gaps.

- (3,4) **Application maps / jobs:** the "TC" icon in the Work menu and Product menu indicates that the implement is receiving the target spread rates from the Task Controller and is therefore receiving an application map or job.

- (5) **GPS recording:** Settings menu > Implement > Additional functions With the GPS recording, the spreading can be simulated for the connected control terminal without actually spreading seed. The control terminal marks the driven area as the worked area. The worked area can be used to create a field boundary.
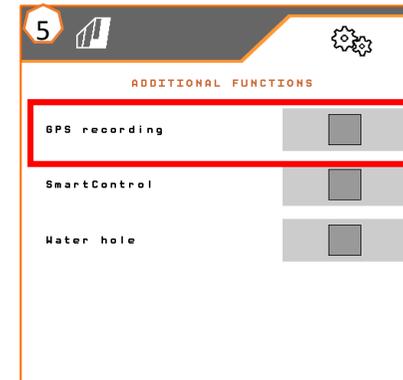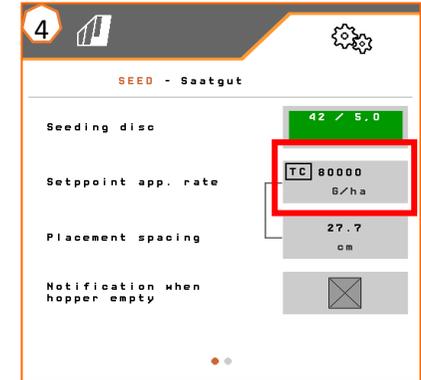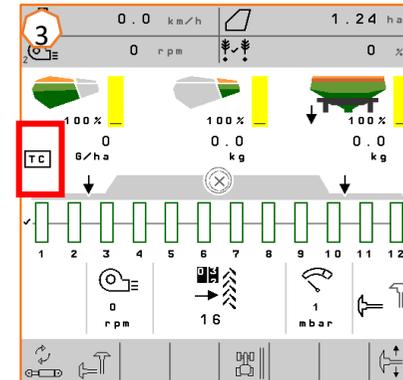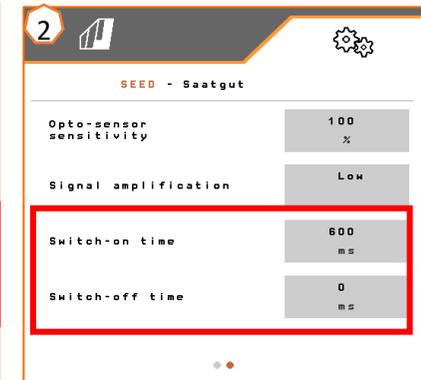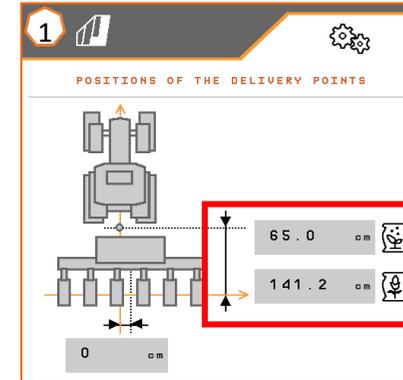
SmartLearning app

The AMAZONE SmartLearning app offers video training courses for the operation of Amazone implements. The video training courses can be downloaded onto your smartphone if necessary, and are therefore available offline. Simply select the desired implement for which you want to watch a video training course.

Info Portal

Our Info Portal provides a wide variety of documents for viewing and downloading at no charge. These can be technical and promotional printed material as an electronic version or also videos, Internet links and contact data. Information can be obtained by mail and subscriptions to new published documents from different categories are available.

www.info.amazone.de/

MG7829