



GRIMME

MATRIX 1200 / 1800

10 tips for professional seeding of beets

10 tips for professional seeding

This document "10 tips for professional seeding" is intended to help the farmer to check the most important functions of the machine in a short time.

- 1 Good preparation is money in the bank!
- 2 Couple the machine correctly
- 3 Visual inspection of the seeding coulters
- 4 Visual inspection of the seed-meters
- 5 Testing of the electrical drives
- 6 Air pressure and condition of the tyres
- 7 Basic settings immediately before seeding in the field
- 8 Clod clearer
- 9 Seeding control
- 10 Control during and after the first round



10 tips for professional seeding

Tip 1 Good preparation is money in the bank!

"Like seed, like harvest".

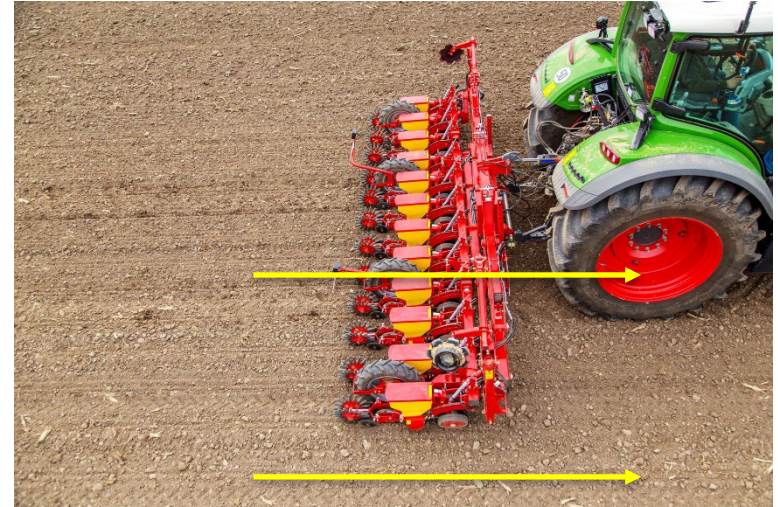
A piece of wisdom that applies especially to the seeding of sugar beet.

- 1 The preparatory soil cultivation should be carried out in the same working direction as the seeding. The soil should be fine-textured and optimally recompacted. Crop residues of the previous crop on the soil surface may disturb the seeding process.

Be aware that you are drilling seeds worth about 300,- €/ha (~270 £).

With 50 ha of beet per season, that is 15,000 € (~13,500 £).

Half a day to check the machine before the season is well invested if the MATRIX is to perform to its full technical precision.



10 tips for professional seeding

Tip 2 Couple the machine correctly

Couple the machine to the tractor:
Align the machine frame in working position.

The height of the main frame
is ~ 490 mm on solid ground.

2 The height of the main frame
is ~ 470 mm in the field.

(Measured from the lower edge of the main frame
to the floor.)

When lowered, the upper and lower guides should
be fixed and not wobble. Otherwise the machine
drifts further down the side slope row by row.

The machine must be pulled centrally, straight
behind the tractor. To achieve this, the lower guides
must be aligned parallel to the seed drill.



Tip 3 Visual inspection of the seeding coulters

Seed coulters are made of cast iron. They may have been damaged during transport or when the machine was placed on hard ground.

3 To minimise the risk of damage to the seed coulter, optional parking supports are available.

Check the correct distance between the seeding coulters.

The distance between the seeding coulters corresponds to the row width of 45 resp. 50 cm.

Detailed photo of the wear of the seeding coulters on the following page.

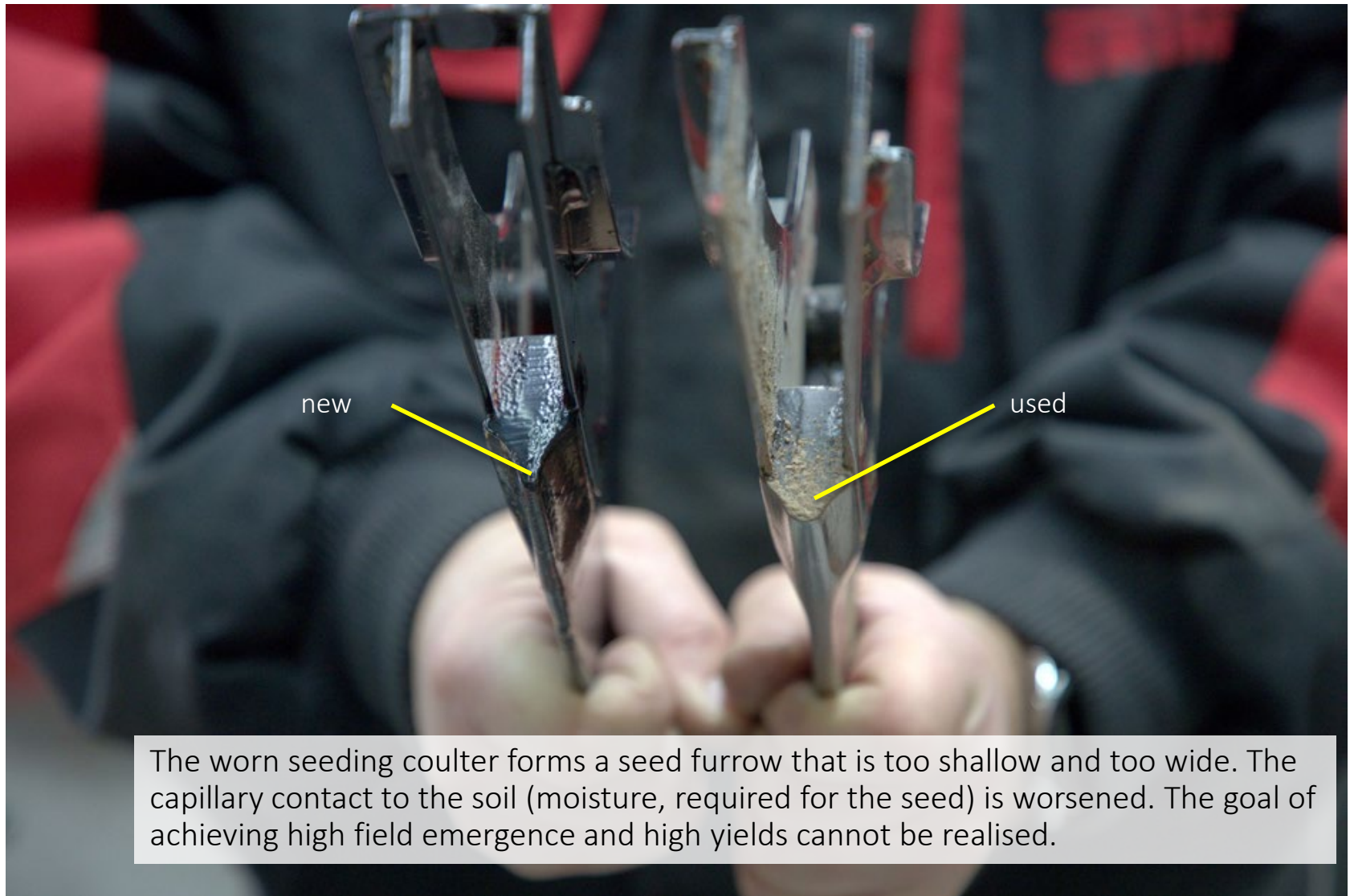


(Picture shows optional equipment)



Tip 3 Visual inspection of the seeding coulters

3



The worn seeding coulters form a seed furrow that is too shallow and too wide. The capillary contact to the soil (moisture, required for the seed) is worsened. The goal of achieving high field emergence and high yields cannot be realised.



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Tip 4 Visual inspection of the seed-meters

The seed-meter is the heart of the machine. It ensures safe filling of each cell of the cellular wheel and thus ensures precise placement of each single beet seed.

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Check the wear and tear panel in the seed-meter for signs of wear.

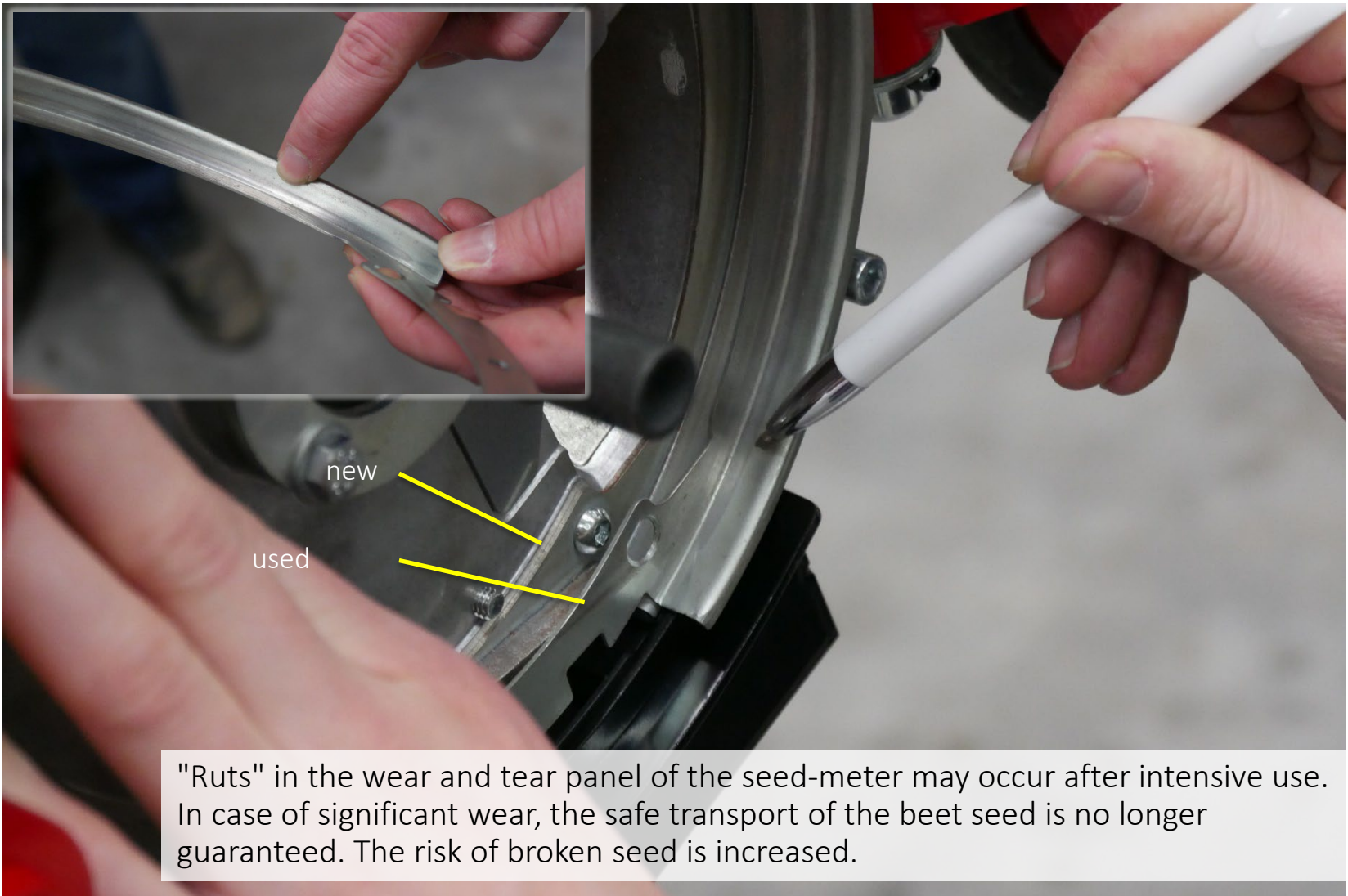
Check the crescent-shaped cover ring for signs of wear.

Detailed photos of the wear can be found on the following pages.



Tip 4 Visual inspection of the seed-meters

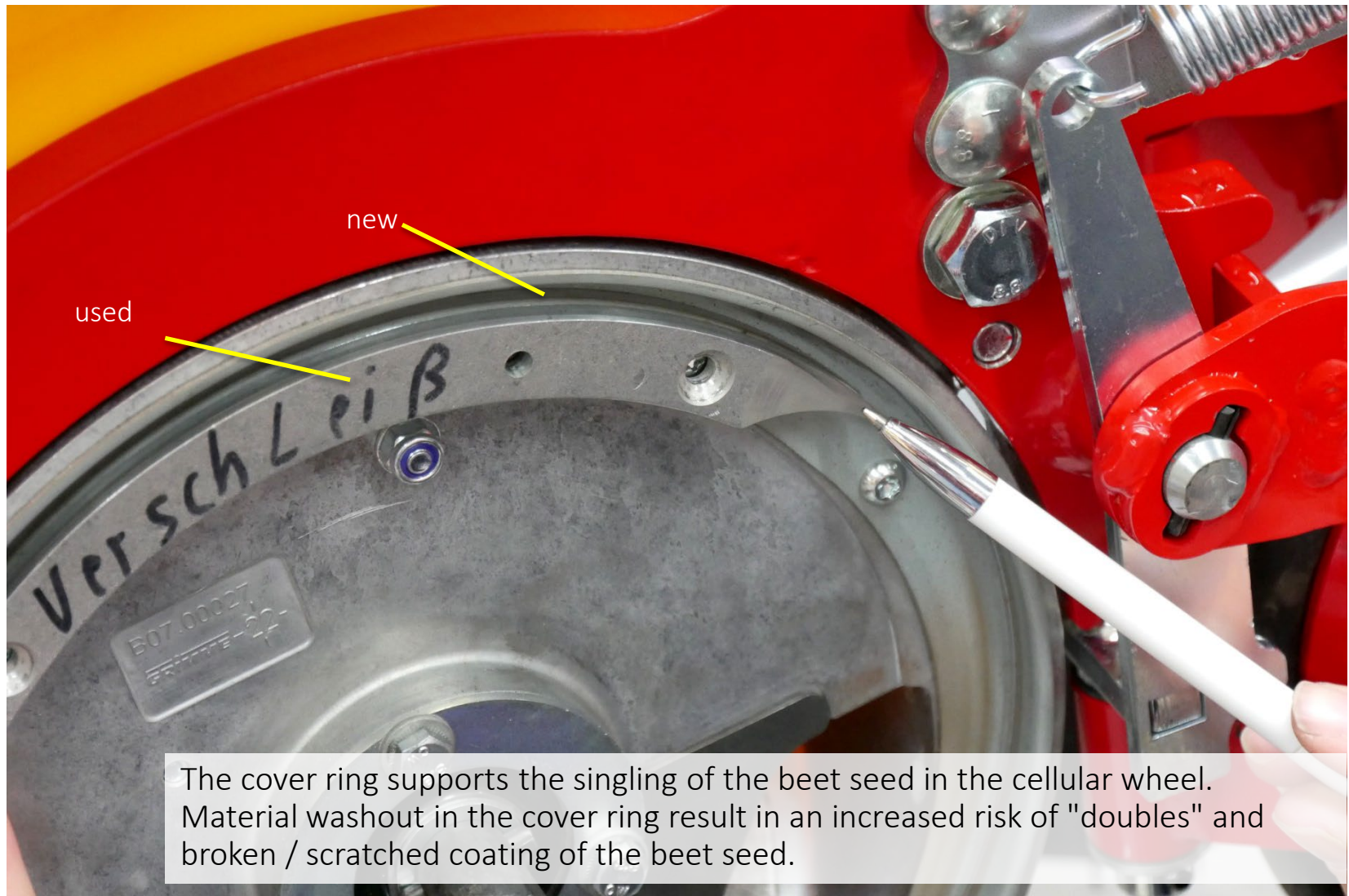
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Tip 4 Visual inspection of the seed-meters

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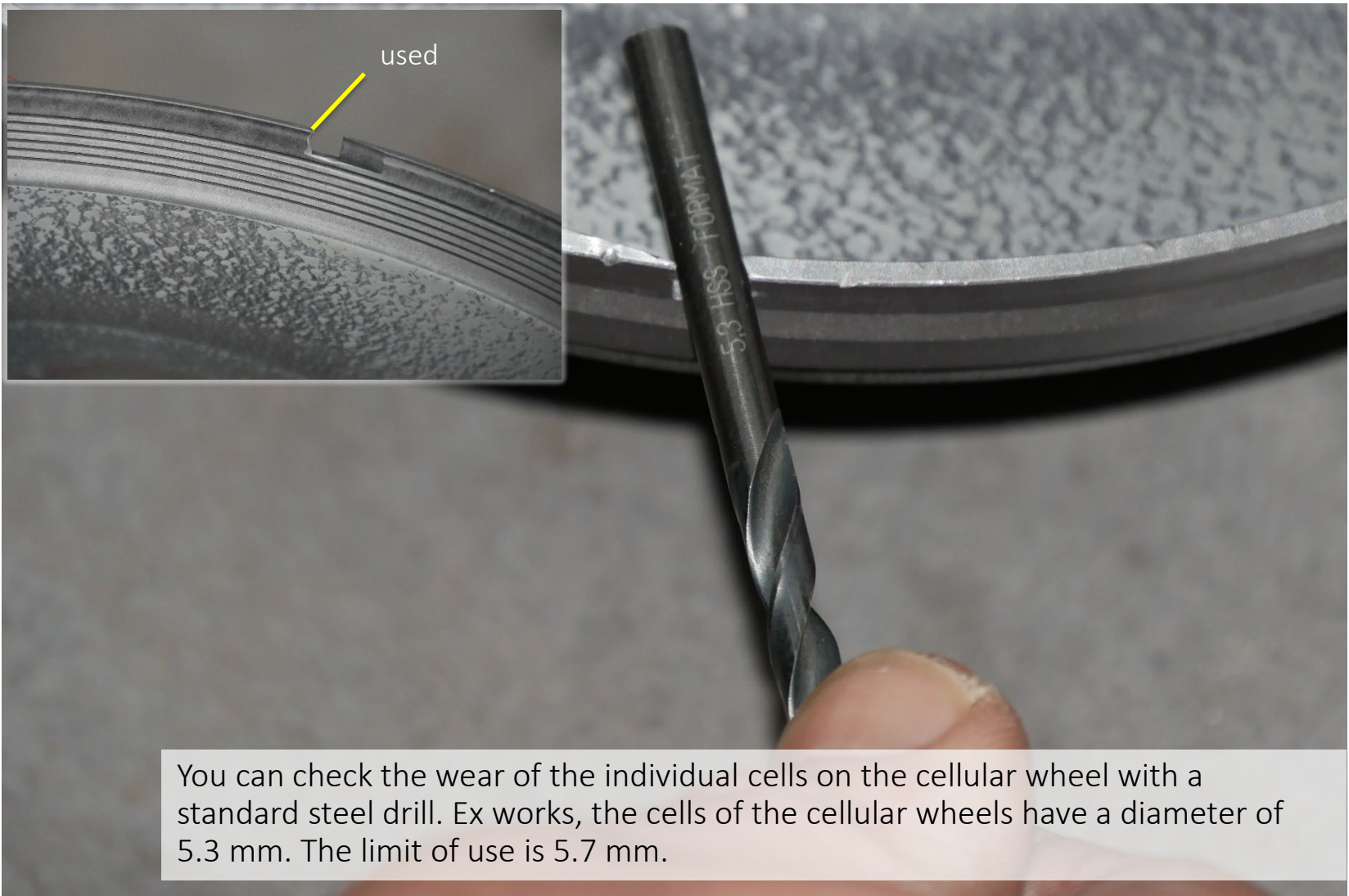


The cover ring supports the singling of the beet seed in the cellular wheel. Material washout in the cover ring result in an increased risk of "doubles" and broken / scratched coating of the beet seed.



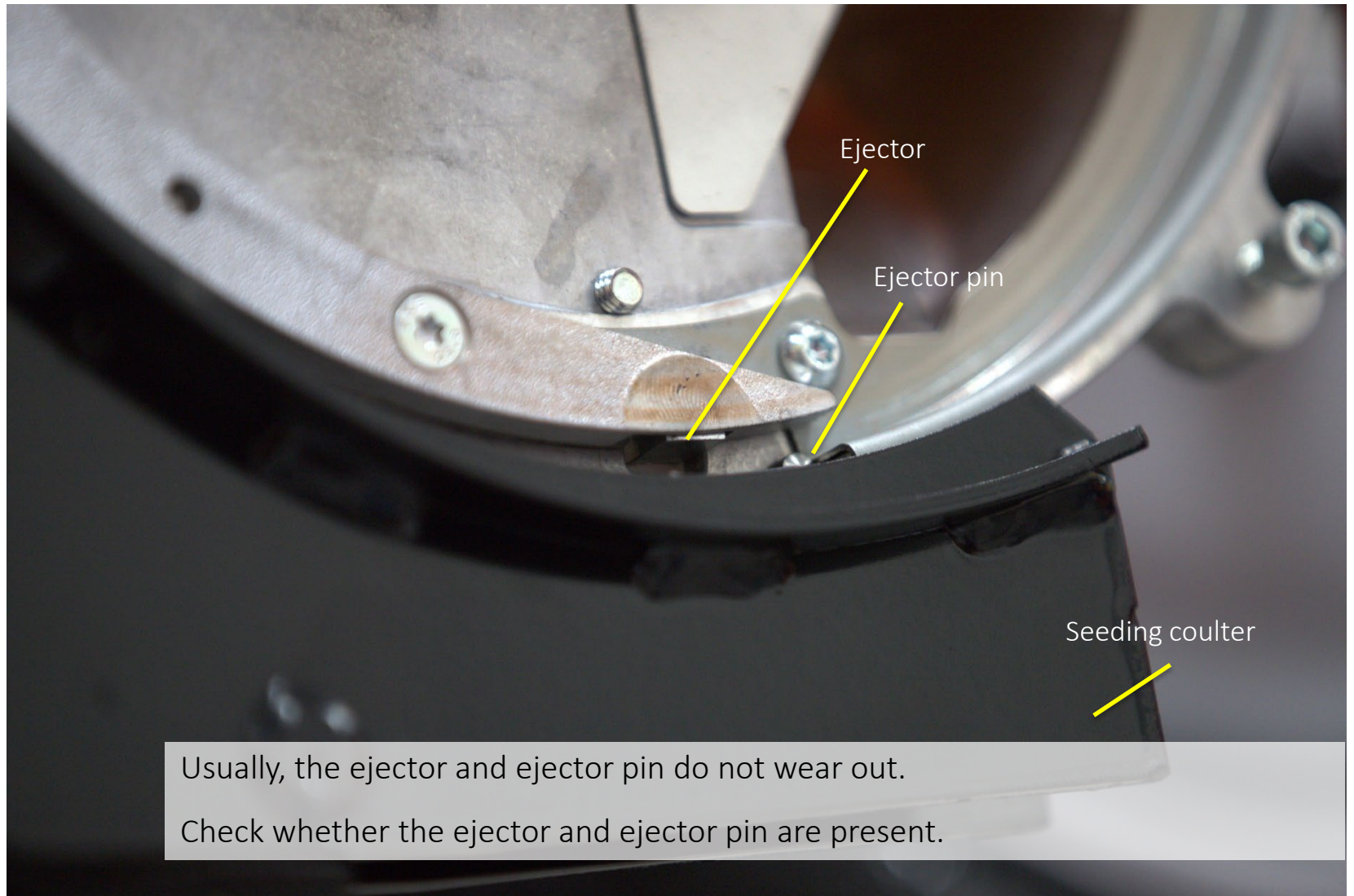
Tip 4 Visual inspection of the seed-meters

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Tip 4 Visual inspection of the seed-meters

4



Usually, the ejector and ejector pin do not wear out.
Check whether the ejector and ejector pin are present.

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Tip 5 Testing of the electrical drives

Fill each seed hopper with a jar full of seed and place a collection tray under the seeding couler.

5

Unique: The MATRIX enables a function test at the push of a button (menu level C) !

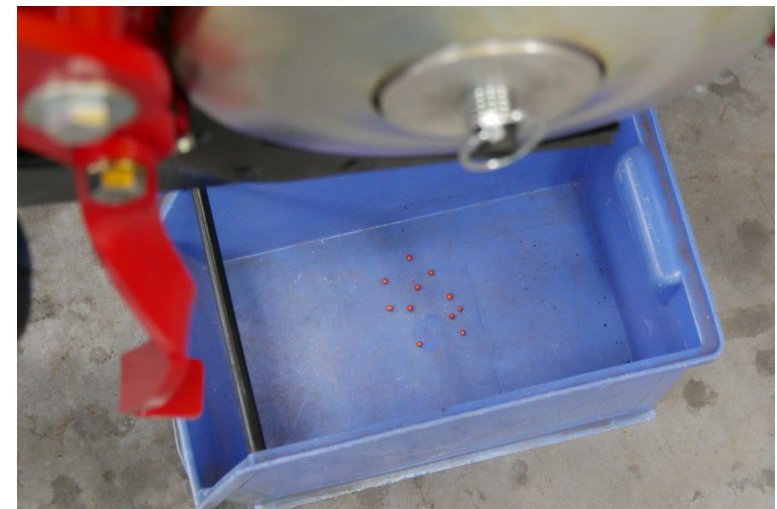
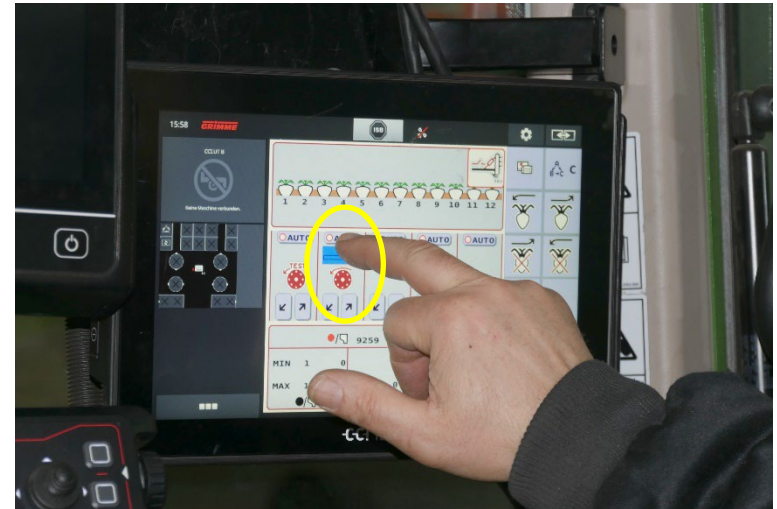
Enter a "simulated driving speed" (e.g. 50 % for 6 km/h).

Please make use of this unique feature!

Control of the cellular wheel and the photoelectric beam

- Does everything turn smooth and quietly?
- Is there broken seed?
- Does the display match the real ejected amount of beet seed?

Detailed photos can be found on the following pages.



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Tip 5 Testing of the electrical drives

After activating the test function, each individual seeding unit is switched on in sequence.

Example:

For this test, we only filled seed hopper 1.

The error message "Seed hopper empty" [!] is displayed for seed hoppers 2 to 12.

The distribution of beet seed across all rows shows a minimum value of 0 (for rows 2 to 12) and a maximum value of 11 for row 1).

These 11 beet seeds must also be found in the collection tray.

The automatic testing of the seed distribution is unique on the market.



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Tip 6 Air pressure and condition of the tyres

Incorrect air pressure on the driving wheel with the pulse generator will affect the precise spacing of the seed.

6

An air pressure of 1.5 bar is set ex factory.

A special "tire" is the black rubber ring of the narrow pressure roller behind the seeding coulter. It should be intact and "tight".



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Tip 7 Basic settings immediately before seeding in the field

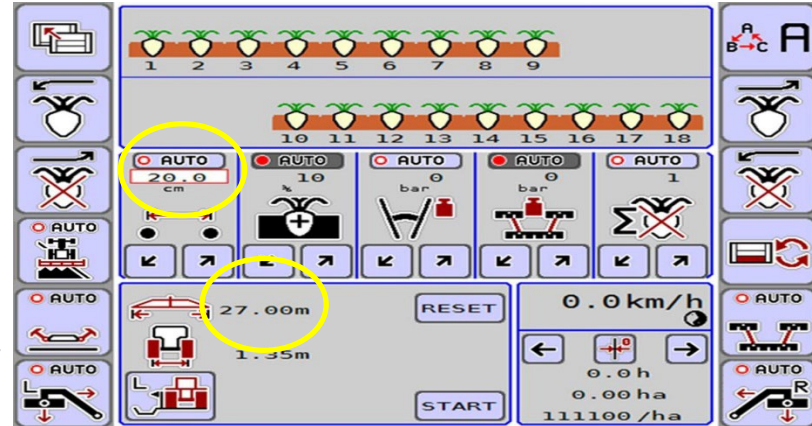
Check the correct basic settings of the machine.

- Number of beet seed per hectare (seeding distance)
- Distance of the spraying tracks

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Carry out a small function test immediately after filling the seed hoppers.

Activating this test, all cellular wheels make 2 revolutions each. The cellular wheel is filled with seed. Beet seed falls out of the machine.



Tip 8 Clod clearer

Check the correct setting of the clod clearers

8 Clod clearers should be guided approx. 10 mm above the ground. They move clods to the side before seeding and thus promote the precise placement depth of the beet seed.



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Tip 9 Seeding control

To check the correct placement of the beet seed, drive approx. 10 to 20 m with the machine lowered, stop and then get off the tractor.

- Check the seeding depth.
- 9 - Check the seeding distance. Carefully expose 11 beet seeds. Calculate the average value of the 10 distances from seed to seed.
- Check that the caster wheels and furrow closers are correctly adjusted.



Tip 10 Control during and after the first round

Check that the loosening tines behind the wheels are correctly adjusted.

- Clods of soil from the treads of the tractor tyre should no longer be visible.

10

Check the row spacing after the turning manoeuvre.

- The row spacing from the last row to the next first row after the turning manoeuvre corresponds to the row spacing within the machine width.

Check the lane marker adjustment.

- Practical experience shows that mechanical lane markers are recommended, even though they are not really necessary with modern GPS technology. The GPS signal could also fail (i.e. at the edge of the forest).

