SUCCESSFUL PLANTING

Tool for the planting quality control

Planting quality control

Before proceeding to look for the causes please check:

- that you have observed the setting recommendations in the instructions (disk seed scraper setting, tyre pressure…)
- if all the elements have the same symptom

Icons significations:

 Come back to the home page

 Close the document

 More information

 Come back to the previous question

 Close the window

Start the Diagnosis

Are there doubles on the disk?

How can I check it?

YES

NO

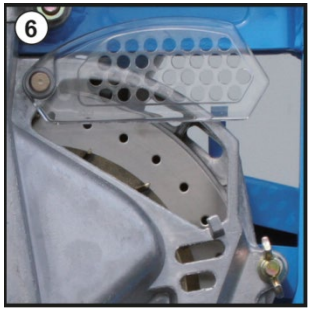
Are there doubles on the disk?

How can I

How can I check for the presence of doubles?

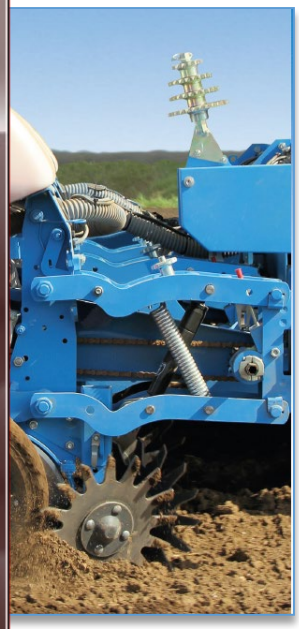
Instructions:

- Lift the planter and actuate the power take-off at the correct speed



- Rotate one of the planter's wheels by hand

- Observe the seeds aspirated onto a disk, through the inspection window



Check the points causing doubles:

- Excessive power take-off speed
- Seed scraper setting too high
- Seed scraper worn or warped
- Disk hole diameters too large
- Level of seed in the box too high

I have checked all of these points. Has the problem been rectified?

YES NO

Check the points causing doubles:

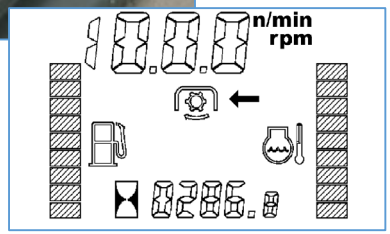
Excessive power take-off speed

Tractor revolution counter faulty or inaccurate
Engine speed too high

Corrections:

Check the speed using a tachometer
Observe the standard speed for tractor drivers

Info:
Suction value: 55 mbar/row



I ha
been rectified?

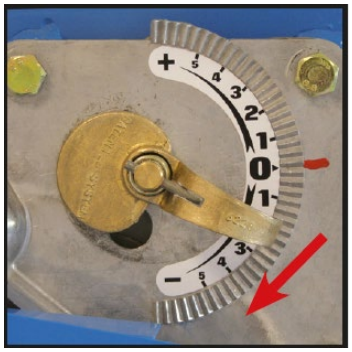
Check the points causing doubles:

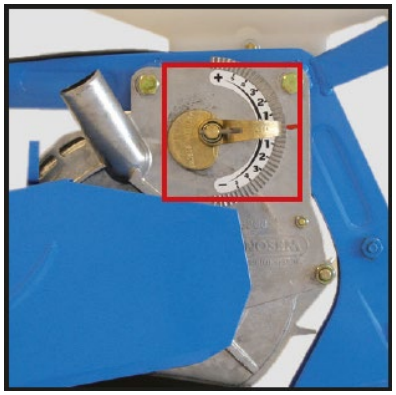
Seed scraper setting too high

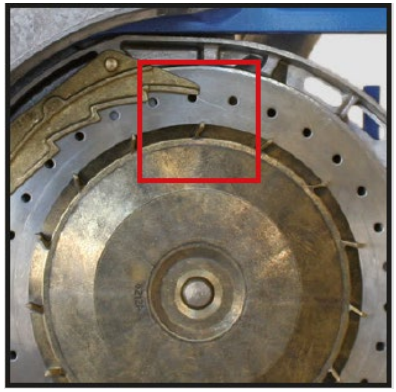
Sowing small seeds (according to varieties)
Small number of rows
Seed not graded

Correction:

Reduce the value of the setting needle







I ha
been rectified?

Check the points causing doubles:

Seed scraper worn or warped

Correction:

Change the seed scraper

Info:

Change the seed scrapers on all the rows at the same time.

Number the parts of the seed metering device (seed scraper, disk, cover) in order to always replace them on the same rows.

I ha
been rectified?

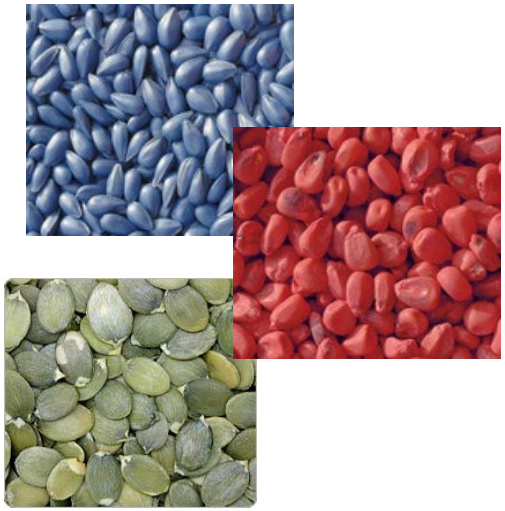
Check the points causing doubles:

Disk hole diameters too large

Seed not graded
Specific variety

Correction:

Replace the disks (see instructions)



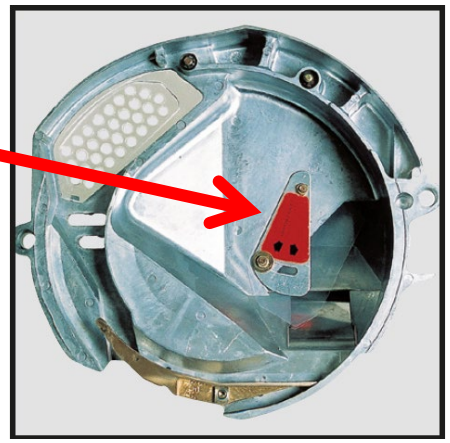
Types of seed	Number of holes	Diameters of holes (mm)
Corn	30	5
	24	5
	18	5
Sweetcorn	24	3,7
Sunflower	12	2,5
	18	2,5
	24	2,5
Beetroot	30	2
	24	2
Bean	60	3,5
	60	4,5
Soybean-Pea	60	4,5
Rapeseed	60	1,2
	72	1,2
	36	1,2
Cabbage	36	1,2
Sorghum	72	2,2
Horse bean	30	6

I ha
been rectified?

Check the points causing doubles:

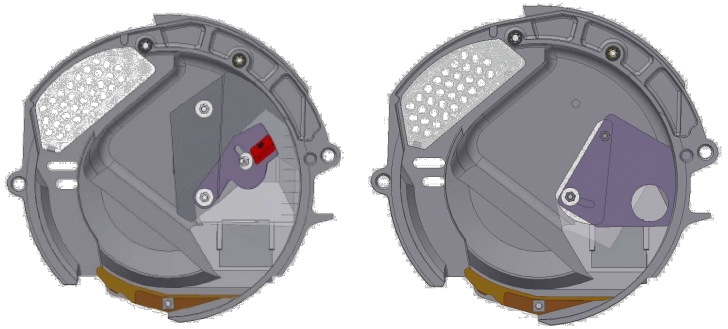
Level of seed in the box too high

Level flap incorrectly set
Level plate unsuitable
Sowing in slopes >20%



Correction:

Check the level plate and its position (rapeseed, sunflower, corn…)



Info:

The Steep Slope level plate is mainly suited to very fluid sunflower seed.
(6233-2)

I ha
been rectified?

Are there skips on the disk?

How can I check?

YES

NO

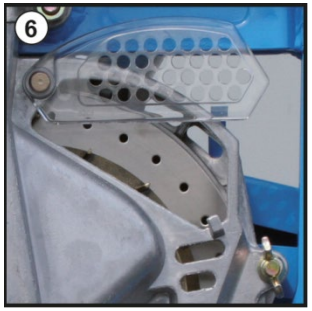
Are there skips on the disk?

How can I

How can I check for the presence of skips?

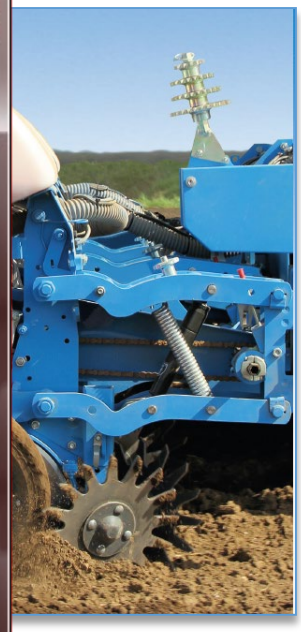
Instructions:

- Lift the planter and actuate the power take-off at the correct speed



- Rotate a wheel of the planter by hand

- Observe the seeds aspirated onto a disk, through the inspection window



Check the points causing skips

- Excessive working speed
- Insufficient power take-off speed
- Suction pipes poorly connected or pierced
- Seed scraper setting too low
- Seed scraper clogged up or warped
- Disk or wear gasket warped or worn
- Diameters of disk holes too small
- Disk holes blocked
- Foreign bodies in the hopper
- Arching of seed

I have checked all of these points. Has the problem been rectified?

YES NO

Check the points causing skips

Excessive working speed

High density sowing (rapeseed, beans, horse beans, soybean…)
Rough preparation of the seed bed (minimal cultivation techniques, stony conditions…)

Corrections:

Reduce the travel speed
Increase the number of disk holes (according to diameter)
Increase the debris or clod remover setting
Modify the debris or clod remover (flexible, floating…)
Fit an additional lost motion spring

Info:

1.6 km/hr extra equates to 10% of extra weight required per unit

I have … been rectified?

Check the points causing skips

Insufficient power take-off speed

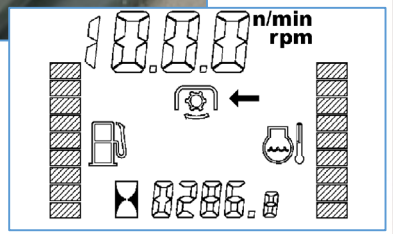
Tractor revolution counter faulty or inaccurate
Engine speed too low

Corrections:

Check the speed using a tachometer
Observe the standard speed for tractor drivers

Info:

Suction value: 55 mbar/row

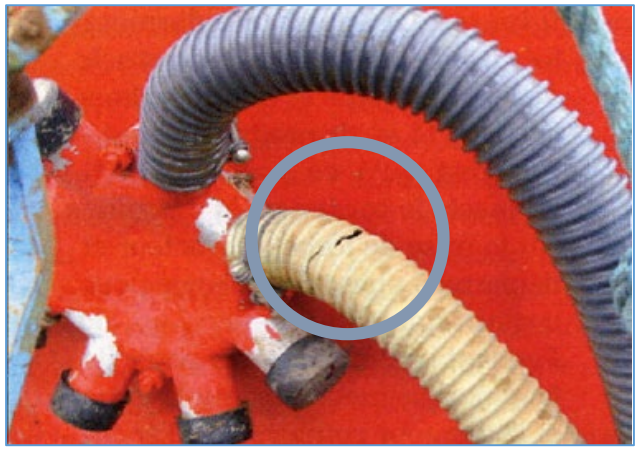


I have … been rectified?

Check the points causing skips

Suction pipes poorly connected or pierced

Collars not sufficiently tightened
Perforated pipes



Corrections:

Replace the faulty pipe(s)
Tighten or replace the collars

Info:

Prevent pipes from coming into contact with projecting or vibrating parts
Ensure that the pipes do not bend excessively
Check that the pipes are not taut when folding the planter

I have … been rectified?

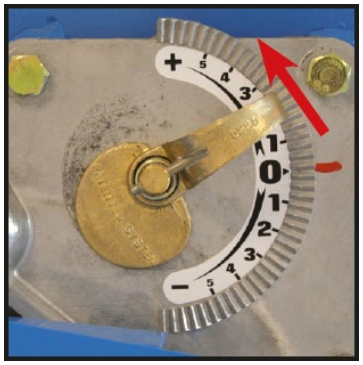
Check the points causing skips

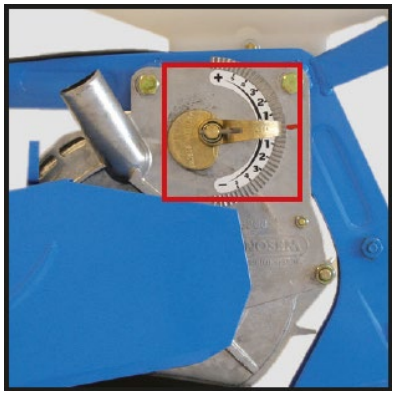
Seed scraper setting too low

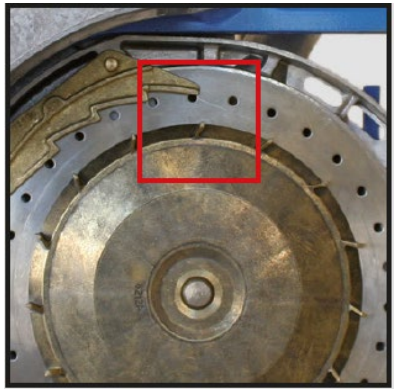
Sowing large seeds
Disks with many holes
Many seed units

Correction:

Increase the value of the seed scraper setting needle







I have been rectified?

Check the points causing skips

Seed scraper clogged up or warped

Seed treatment deposited on the tip of the seed scraper
Seed scraper warped

Corrections:

Clean the seed scraper with the wire brush
Change all of the seed scrapers if warped

Info:

Number the parts of the seed metering devices (seed scraper, cover, disk)
so that you always replace them on the same units.

I have been rectified?

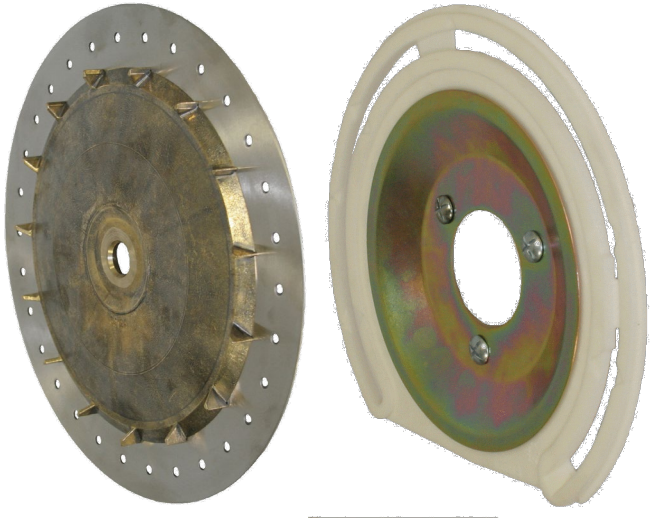
Check the points causing skips

Disk or wear gasket warped or worn

Presence of 2 grooves on the back of the disks
Warping of a disk

Corrections:

Replace the disks
Replace the wear gaskets



Info:

Number the parts of the seed metering devices (seed scraper, cover, disk) so that you always replace them on the same units.
Observe the flatness of the wear gasket when replacing.

I have … been rectified?

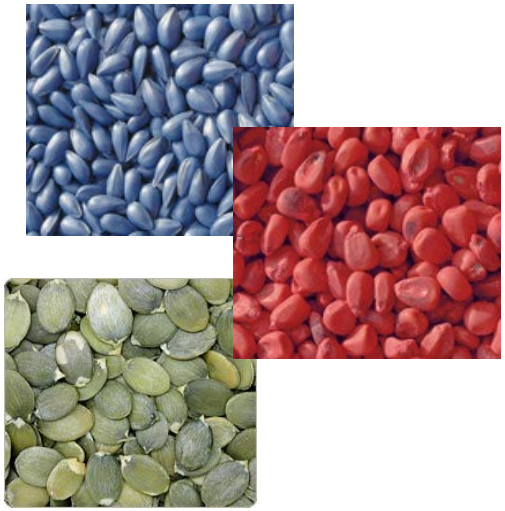
Check the points causing skips

Diameters of the disk holes too small

Seed not graded
Specific variety

Correction:

Replace the disks (see instructions)



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	36	1,2
Cabbage	36	1,2
Sorghum	72	2,2
Horse bean	30	6

I have … been rectified?

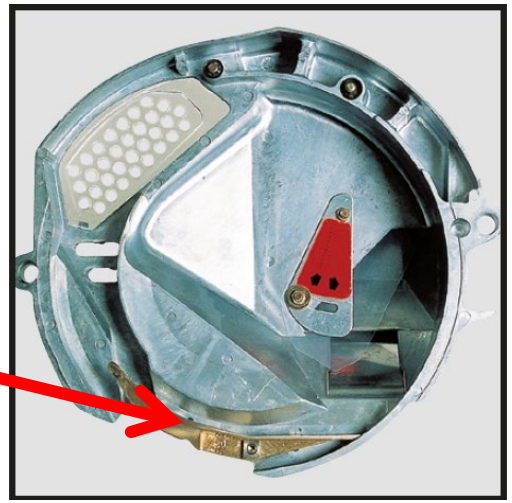
Check the points causing skips

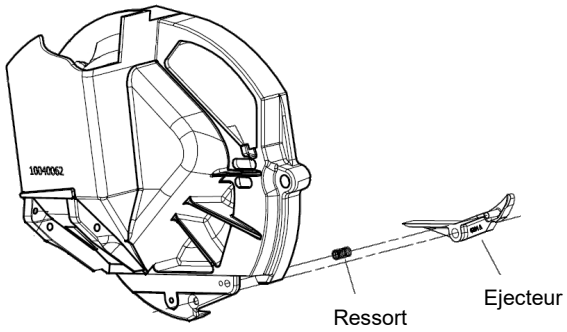
Disk holes blocked

Seed not graded
Seed ejector worn or blocked

Corrections:

Move the ejector in the cover by successive pushes.
Replace the ejector and its spring.





I have … been rectified?

Check the points causing skips

Foreign body in the hopper

Accumulation of remnants of seeds
Scraps of seed bag

Correction:

Completely unload the hopper and remove the cover of the metering box in order to clean with compressed air.

I have
been rectified?

Check the points causing skips

Arching of seed

Damp seed or sticky treatment

Correction:

Mix powder lubricant (talc, graphite …) with the seed.

I have … been rectified?

Is desired density being observed?

How can I know what it is?

- Sow in a furrow left open on one row

- Count the number of seeds on the test distance

- Multiply the result by 1,000

How can I find out my test distance?

YES

NO

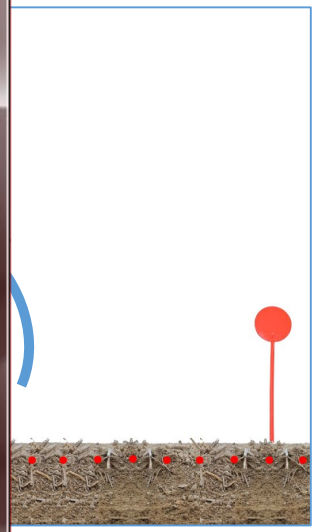
Is desired density being observed?

How can I know w

- Sow in a furrow l row

- Count the numbe test distance

- Multiply the resu



How can I find out my test distance?

Calculating the test distance:

1000 ÷ IR (cm) = distance (m)

E.g.: 1,000 ÷ 75 cm = 13.33 m

IR (cm)	d (m)
40	25,00
45	22,22
50	20,00
60	16,66
75	13,33
80	12,50

Check the points modifying sowing density:

- Earth sticking to the driving wheels
- Tyre pressure not observed
- Excessive working speed
- Considerable slipping of the planter wheels

I have checked all of these points. Has the problem been rectified?

YES NO

Check the points modifying sowing density:

Earth sticking to the driving wheels

Density reduced

Correction:

Fit an earth remover if possible

Info:

Reduce the tyre pressure (within the recommended range) to encourage self-cleaning of the tyre tread.

I have … been rectified?

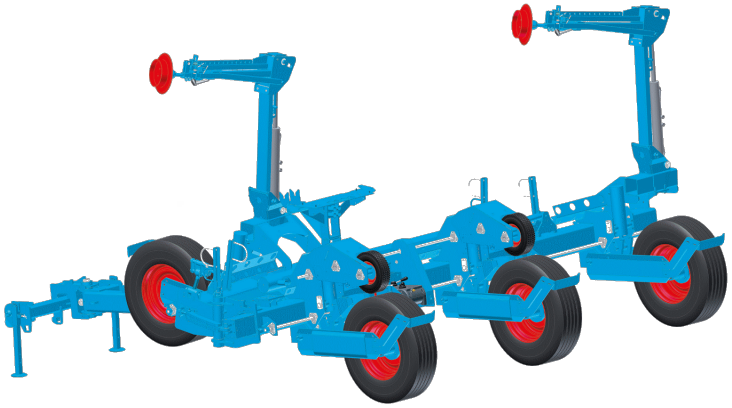
Check the points modifying sowing density:

Tyre pressure not observed

Modification of the wheel advance.

Correction:

Inflate the tyres in accordance with the recommendations (see instructions and chart)



I have
been rectified?

Check the points modifying sowing density:

Excessive working speed

Slipping of the planter wheels increase with the speed

Correction:

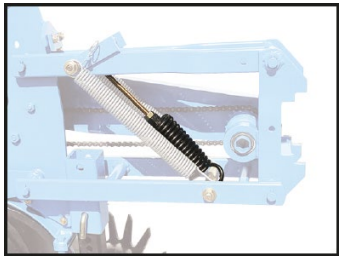
Reduce the travel speed

I have … been rectified?

Check the points modifying sowing density:

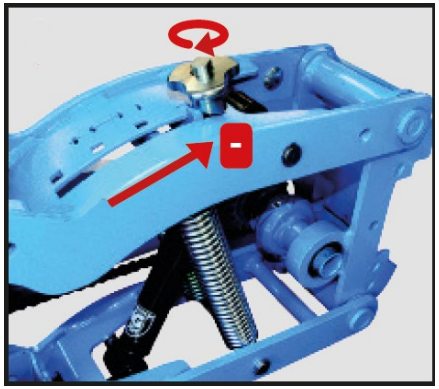
Considerable slipping of the planter wheels

Considerable resistance to the drive of the planter
Lack of adhesive weight on the frame



Corrections:

Identify the cause of drive overloading (turbofan running, move the wheels by hand)
Reduce the depth control pressure on the units.



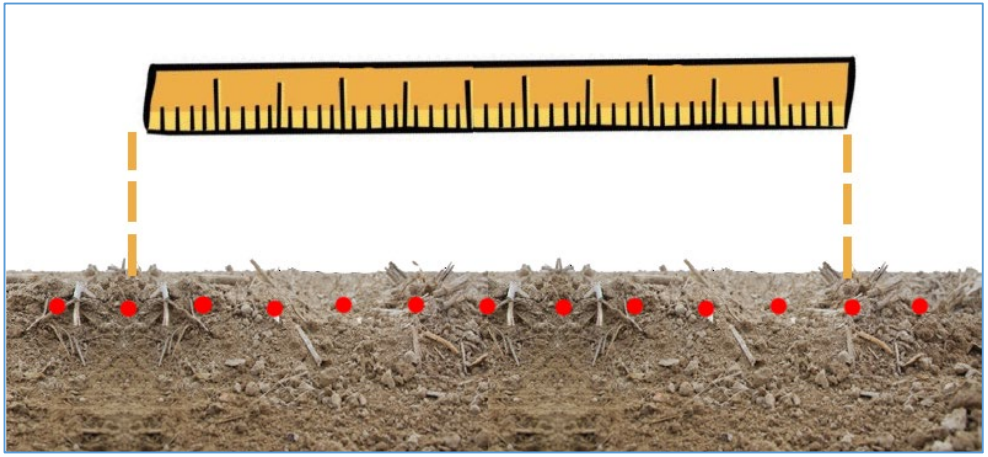
I have … been rectified?

Is the distance between seeds observed?

How can I assess it?

- Check the density actually sowed (count on test distance)
- Using a ruler, dig up 11 sowed seeds
- Measure the distance separating the 11 seeds, then divide the value by 10.

(Permissible variation of 2.5 cm)



YES

NO

Check the points causing irregularity:

- Planter incorrectly hitched
- Excessive working speed
- Excessive wear of the tip (or shoe)
- Suction setting too low
- Work in sticky soil with packing wheel

I have checked all of these points. Has the problem been rectified?

YES NO

Check the points causing irregularity:

Planter incorrectly hitched

Heeling fault of the planter, disrupting the seed dispensing rate in the chute.

Correction:

Adapt the length of the third point

Info:

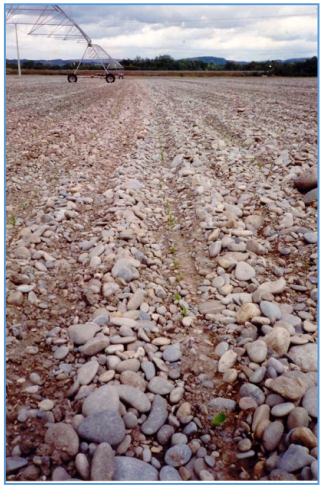
Use the furrowers, turbofan, or hoppers as a point of reference for the correct level

I hav
been rectified?

Check the points causing irregularity:

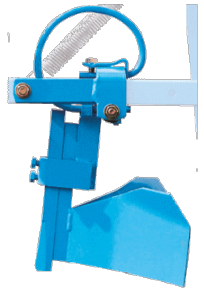
Excessive working speed

High density sowing (rapeseed, beans, horse beans, soybean…)
Rough preparation of the seedbed (minimal cultivation techniques, stony conditions…)



Corrections:

Reduce the travel speed
Increase the number of disk holes (according to diameter)
Increase the debris or clod remover setting
Modify the debris or clod remover (flexible, floating…)
Fit an additional lost motion spring



Info:

A floating or flexible residue remover reduces the risk of jolting the unit

I hav… been rectified?

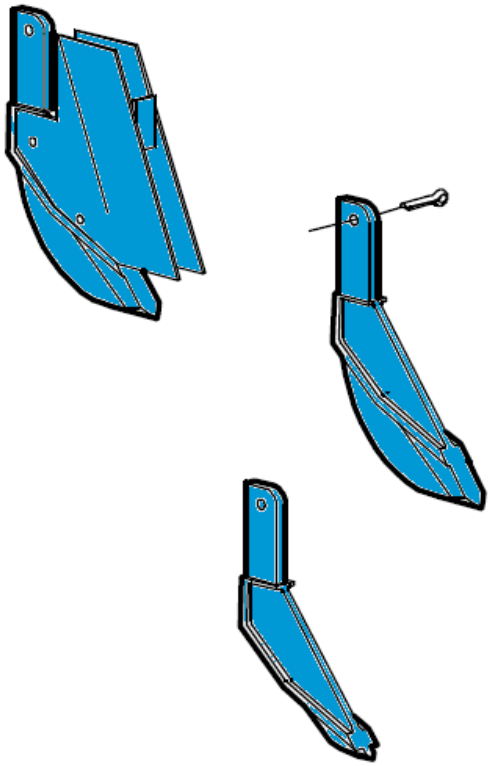
Check the points causing irregularity:

Excessive wear of the tip (or shoe)

The furrow is not in an ideal V shape

Correction:

Change the shoe or tip



I hav
been rectified?

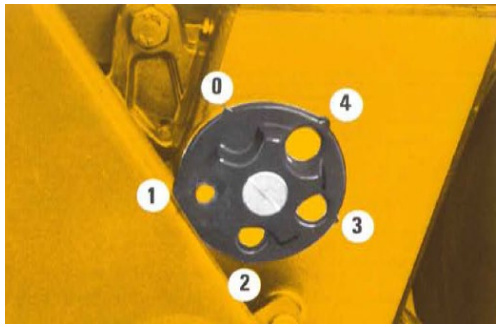
Check the points causing irregularity:

Suction setting too low

Setting combined with the seed scraper on NG Plus, NC and NX seed metering devices.

Correction:

If setting independent, increase the suction power.

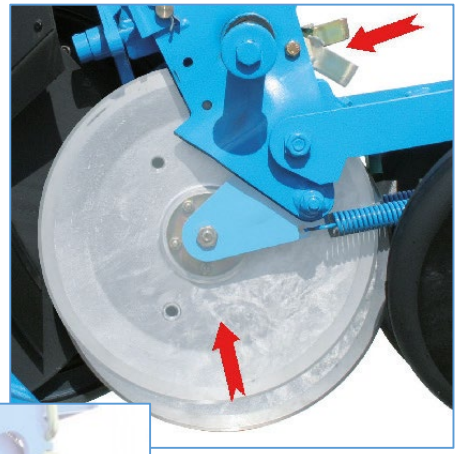


I hav
been rectified?

Check the points causing irregularity:

Work in sticky soil with packing wheel

Earth adhering to the packing equipment (Pro wheel) can disrupt sowing in plastic conditions



Corrections:

Check the functioning and condition of the packing wheel scraper
Retract the packing wheel

I hav
been rectified?

Is the planting depth consistent ?

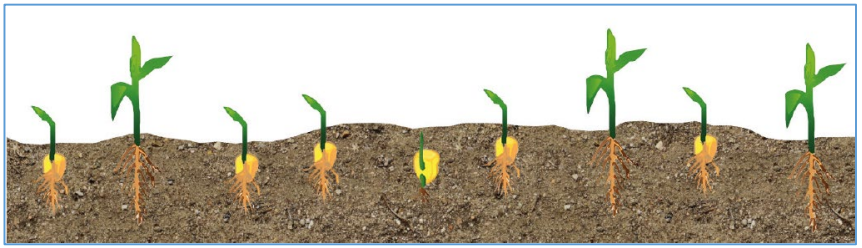
Adjust the rows identically :

- The height of the gauge wheels

- The pressure of the rear units

- The pressure of the press wheels

- The pressure of the metering unit parallelograms



YES

NO

Check the points causing irregularity:

- Work in sticky soil with packing wheel
- Wrong adjustment of rear unit
- Tip (or shoe) broken or not suitable
- Not enough pressure on metering unit
- Badly adjusted clod removers or trash wheels

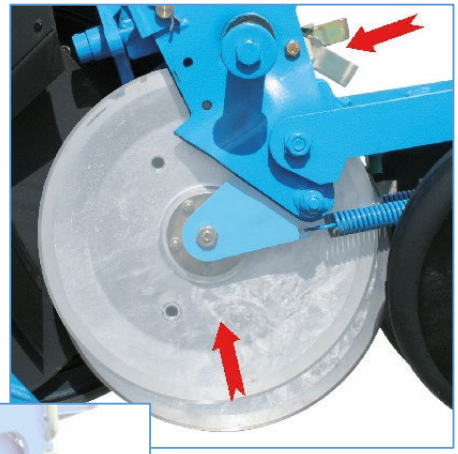
I have checked all of these points. Has the problem been rectified?

YES NO

Check the points causing irregularity:

Work in sticky soil with packing wheel

Earth adhering to the packing equipment (Pro wheel) can disrupt sowing in plastic conditions



Corrections:

Check the functioning and condition of the packing wheel scraper
Retract the packing wheel

I hav
been rectified?

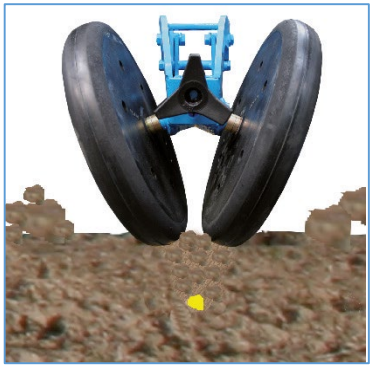
Check the points causing irregularity:

Wrong adjustment of the rear unit

The unit is not adjusted in an optimal manner

Corrections :

Modify the spacing of the closing wheels
Modify the pressure of the rear unit
Modify the pinching of the closing wheels (according to model)



I hav
been rectified?

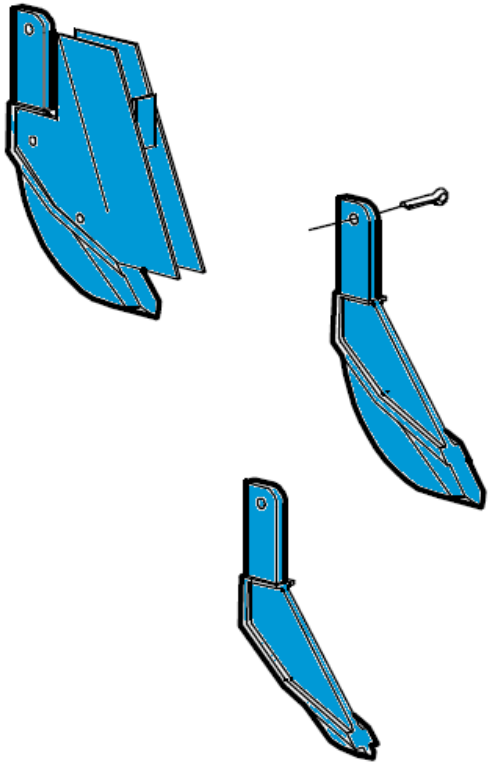
Check the points causing irregularity:

Tip (or shoe) unsuitable

The soil flow is badly directed and perturbs the see placement in the bottom of the furrow.

Correction:

Change the shoe or tip



I hav
been rectified?

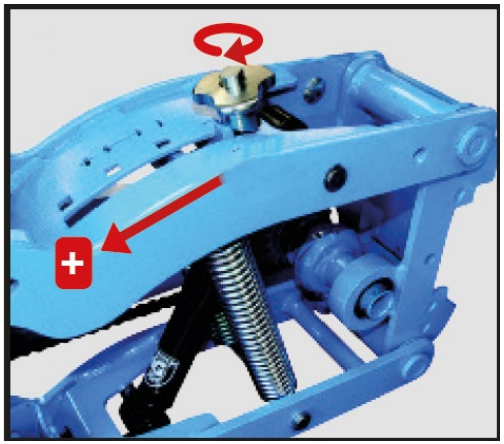
Check the points causing irregularity:

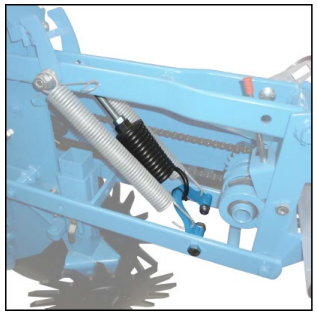
Not enough pressure on metering unit

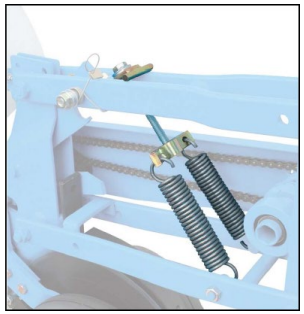
The metering unit is not in permanent contact with the soil

Corrections :

Increase the pressure on the metering units
Add an extra pressure spring





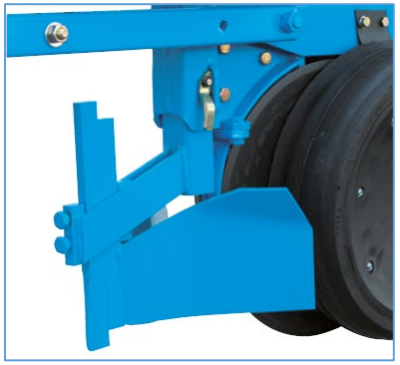


I hav
been rectified?

Check the points causing irregularity:

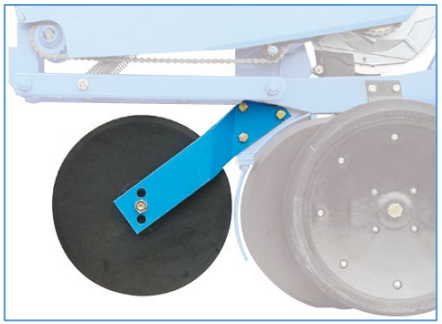
Badly adjusted clod removers or trash wheels

The metering unit rests on the front-mounted equipment which perturbs the metering unit
The lack of agressivity of the front-mounted equipment does not clear sufficiently the passage of the gauge wheels



Correction :

Adjust the height of the front-mounted equipment



I hav
been rectified?

Is the furrow closing regular ?

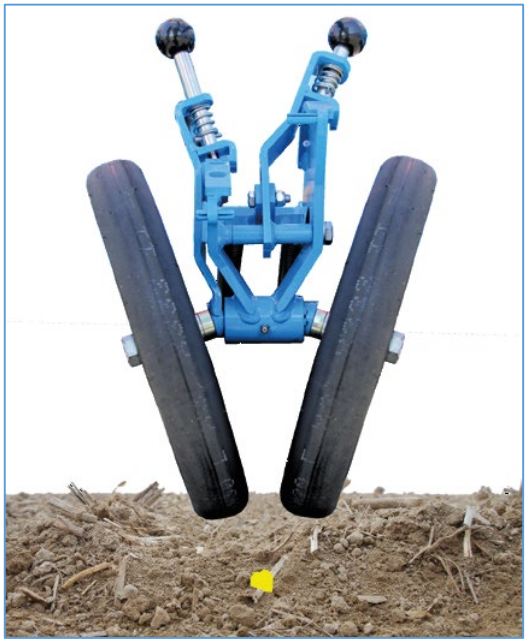
Adjust the rows identically :

- The height of the gauge wheels

- The pressure of the rear units

- The pressure of the press wheels

- The pressure of the metering unit parallelograms



YES

NO

Check the points causing irregularity:

- Sowing on lateral slopes
- Badly adjusted rear unit
- Clay soil in hard consistence

I have checked all of these points. Has the problem been rectified?

YES NO

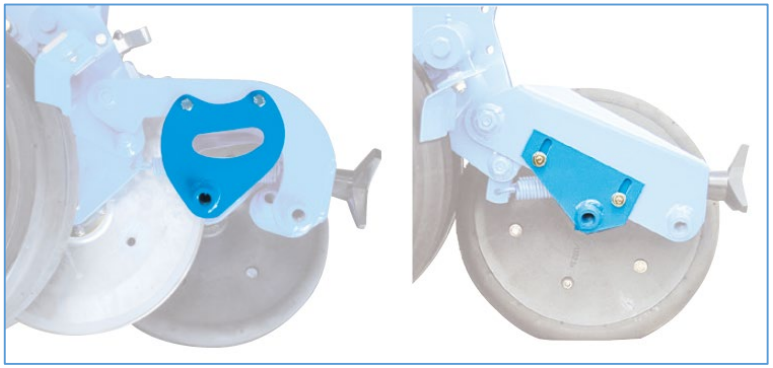
Check the points causing irregularity:

Sowing on lateral slopes

The inclined position of the hitched unit, off-sets the lining up of the rear unit

Corrections :

Bring the closing wheels closer together by adding a kit
Modify the spacing between the closing wheels



I hav
been rectified?

Check the points causing irregularity:

Bad adjustment of the rear unit

The wheel unit is not adjusted in an optimal manner

Corrections :

Modify the spacing of the closing wheels
Modify the pressure of the rear unit
Modify the pinching of the closing wheels (according to the model)

I hav
been rectified?

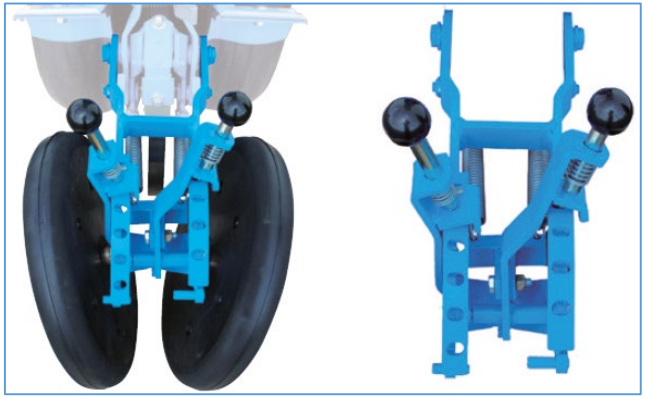
Check the points causing irregularity:

Clay soil in hard consistence

The absence of crumbly soil does not permit a sufficient movement of the earth

Corrections :

Use a more agressive rear unit



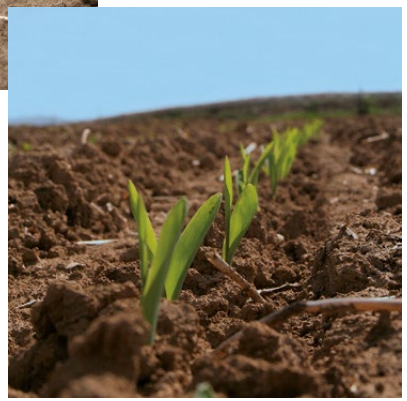
Modify the pinching of the rear unit (according to model)

I hav
been rectified?

Planting quality control

You have checked the quality of sowing and obtained consistent sowing?

Then sow!



Planting quality control

Aren't you obtaining the planting quality requested?
Make a list of all of the checks that you carried out and contact your distributor.

Are there doubles on the disks?

…

Are there skips on the disks?

…

Is the desired density observed?

…

Is the distance between seeds consistent?

…

Is the depth consistent ?

…

Is the furrow closing homogeneous ?