

Heavily weeded beet piles?
Send only beets to the factory - with the
HOLMER tips on optimising loading
quality.



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Demands

The requirements for beet harvesting and loading have changed in recent years:

- ▶ Expansion of organic sugar beet cultivation
- ▶ Climatic change (dry summer months and thus inhomogeneous populations)
- ▶ Increasing reduction in the use of herbicides in sugar beet cultivation

Stocks with a high proportion of arable accompanying weeds in particular repeatedly cause problems during loading:

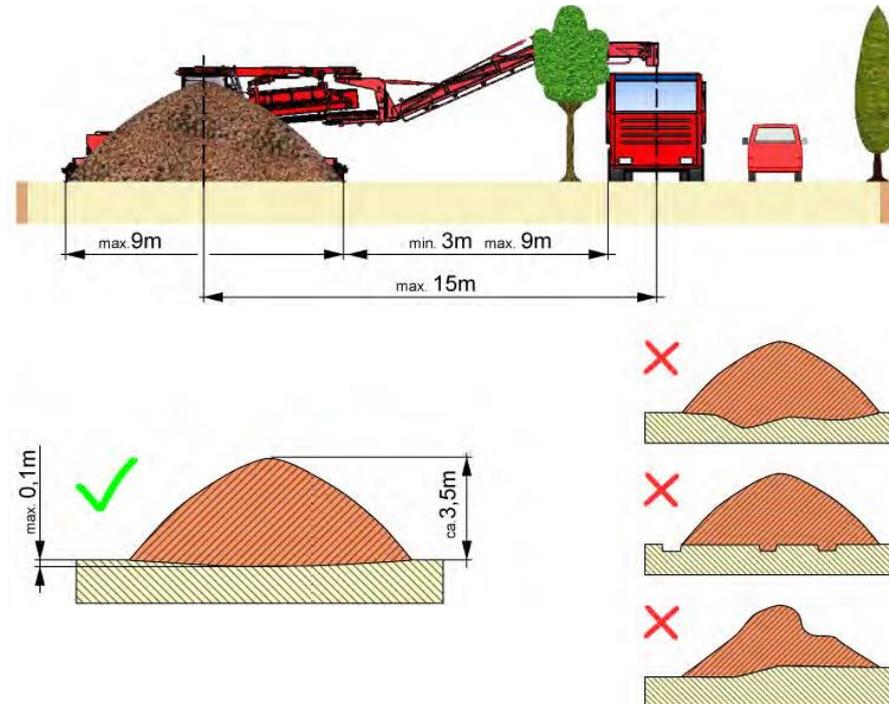
- ▶ Difficult cleaning of the long structured weeds
- ▶ Increased risk of clogging due to additional plant material
- ▶ Often small beets that have special requirements during loading
- ▶ Increased risk of beet damage due to more intensive cleaning performance



Piles

To enable optimal and efficient loading of the piles:

- ▶ Adapt the harvesting settings to the conditions (dry, wet, high weed stocking...)
- ▶ (see HOLMER information "Small beets - dry conditions" or "Weed crops - difficult harvesting conditions")
- ▶ Pay attention to the correct piles system (see diagram below).
- ▶ If the beets are loaded promptly, the windrow width can be reduced somewhat → A lower beets flow in the Terra Felis enables more intensive cleaning, especially when there is a lot of weeds within the piles.



Difficult loading conditions

A high proportion of weeds or dead beet leaves makes loading more difficult.



Starting points for difficult loading conditions:

- ▶ Feed rate
- ▶ Post-cleaning
- ▶ Pick-Up
- ▶ Water spray system if necessary

Feed rate

By adjusting the creep speed, the amount of beet on the pick-up can be influenced.

Slower:

- ▶ Beet quantity on the pick-up lower
- ▶ Beet contact with distribution and pinch rollers increases → more intensive cleaning of unwanted material

Faster:

- ▶ Larger beet quantity on the pick-up
- ▶ Reduced beet contact with distribution and pinch rollers → More gentle pick-up, but less cleaning of dirt and weed

Note:

At lower feed rates the cleaning capacity increases, but the loading capacity decreases.



Pick-Up – Speed

The cleaning intensity can be controlled by adjusting the speed of the receiving, distributing and gathering rollers:

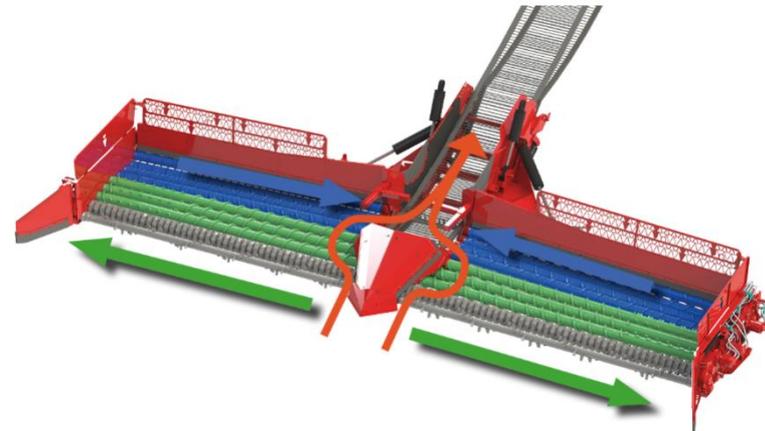
- ▶ High speed: cleaning distance almost doubles → maximum cleaning for dirty beets
- ▶ Low speed: Beets are fed directly to the middle belt → Maximum protection for clean beets

Recommendation for strongly weeded beet piles:

- ▶ Set the speed of the distributing and collecting rollers to more than 70 % → for intensive cleaning
- ▶ In-feed conveyor speed more than 80 % → Stretch the beet stream for optimum cleaning results in the after-cleaner

Note:

At higher roller speeds, cleaning is more intensive, but the risk of injury to the turnip body increases.



Pick-up – working angle

By pick-ups with VarioPick, the working angle of the pick-up can be adapted to the conditions:

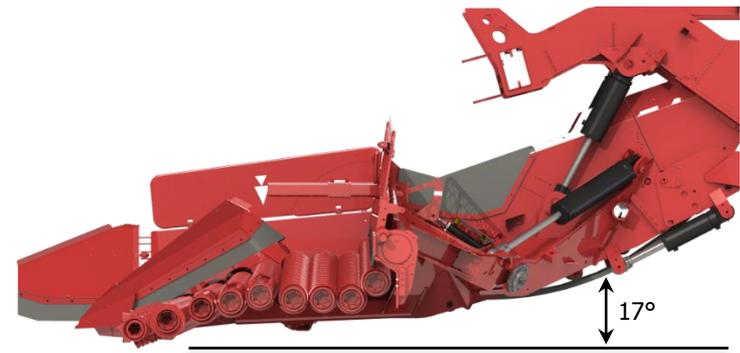
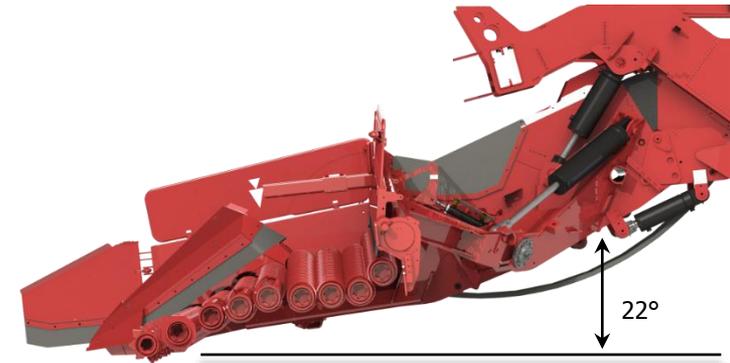
- ▶ Steep angle: more intensive cleaning, more space under the pick-up for cleaned material
- ▶ Flat angle: Gentle cleaning, low thrust requirement

Recommendation for strongly weeded beet piles:

- ▶ Angle of attack as steep as necessary and as flat as possible
- ▶ If already cleaned material is pulled upwards again by the rollers, set the pick-up steeper.

Note:

If the working angle is steeper, the risk of the pick-up "floating up" is minimized and cleaning is more intensive, but diesel consumption may be higher.



Post-cleaning

Depending on the loading conditions and the installed post cleaner, further cleaning of the beets or gentle onward transport to the transfer conveyor can be achieved.

In-feed conveyor and the post cleaner are designed in such a way as to prevent the build-up of weeds. The coils of the pinch rollers (as well as of the gathering rollers) are guided to the end of the roller body, which efficiently prevents weed build-up.

Recommended for heavily weeded beet piles:

- ▶ Swing in beet brake
 - ▶ Increased cleaning intensity through mixing and braking of the beet stream

Especially important for dirty piles:

- ▶ Observe wear of the roller coils
 - ▶ Replace or repair worn or damaged rollers
- ▶ Check and clean scraper (on short transfer web)



Post-cleaning

Depending on the post cleaner, there are different possibilities to react to strongly weeded rents:

- ▶ HOLMER Filter Belt Cleaner
 - ▶ Set the speed of the transfer web more than 90%.
→ For stretching the beet stream

- ▶ HOLMER Cleaner
 - ▶ Set the speed of the transfer web more than 90%.
→ For stretching the beet stream
 - ▶ Set the speed of the pinch rollers to greater than 80%.
→ For intensive cleaning



Post-cleaning

- ▶ HOLMER VarioCleaner
 - ▶ Set the speed of the drive-over belt higher than 90 %.
→ For stretching the beet stream
 - ▶ Set the speed of the pinch rollers to greater than 80%.
→ For intensive cleaning
 - ▶ Retract conveyor belt completely
→ Utilization of the cleaning capacity of the pinch roller



- ▶ HOLMER Crossroller flex
 - ▶ Set the speed of the transfer web more than 90%.
→ For stretching the beet stream
 - ▶ Set the direction of rotation of the stone separating rollers against the beet stream.
→ Weeds are effectively pulled from the beets



Note:

Higher speeds in the final cleaner improve the cleaning, but increase the risk of injury to the beet body.

Optional: Water spray system

In the case of weeded beet piles, a higher cleaning intensity is necessary, but the beet body is subjected to increased stress. With very dry beets, the risk of breakage losses and damage is increased for this reason.

The beet body can be protected by the water spray system:

- ▶ Beet and rollers are covered with a water film which acts like a lubricant.
- ▶ Beet jamming between the rollers is avoided
- ▶ If no water spray system is installed, a similar effect can also be achieved by watering the piles before loading.

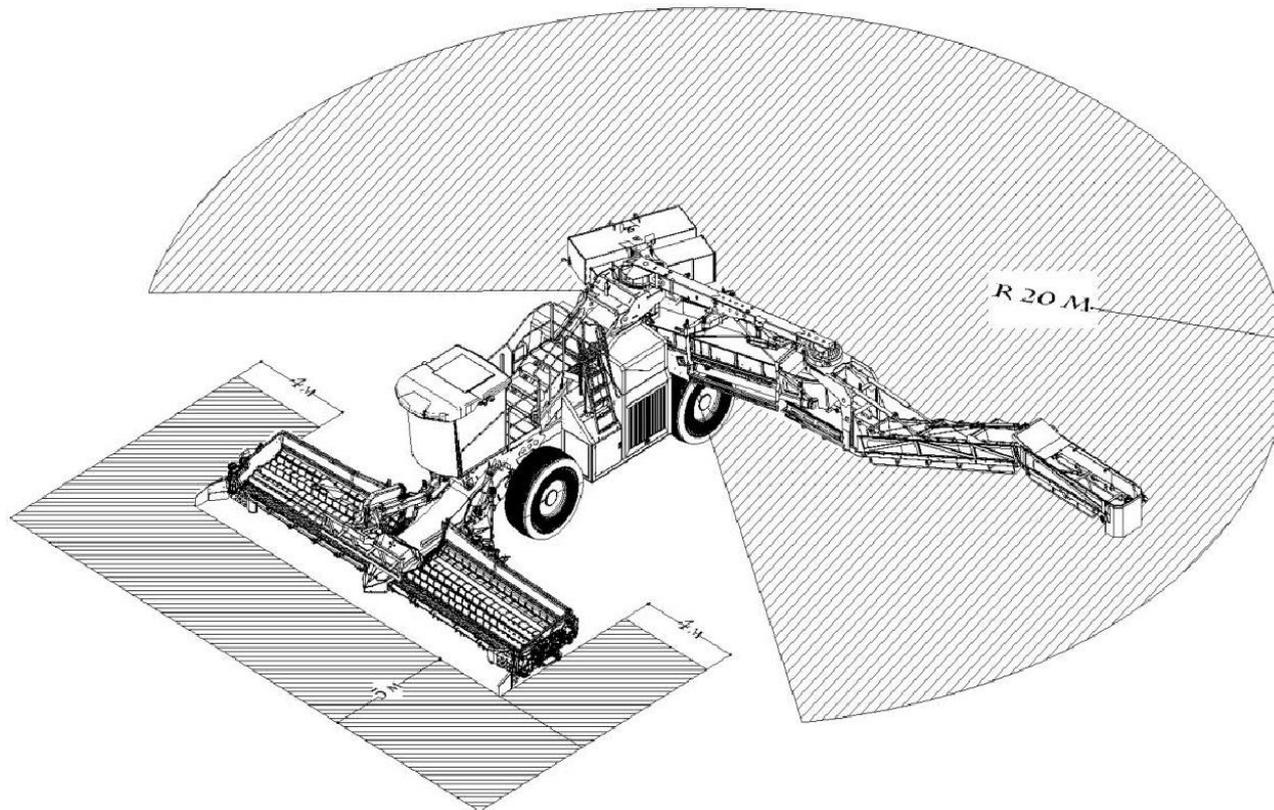
Note:

The use of the water spray system can help to prevent damage to the beet body. However, the cleaning intensity is reduced.



Danger area

- ▶ If weed or dirt deposits build up in the machine, they must be removed when the machine is completely shut down. Further information can be found in the operating instructions.
- ▶ As soon as a person enters the danger zone (see diagram), the machine must be stopped immediately and the person concerned requested to leave the danger zone immediately. The machine may only be put back into operation when there are no more persons in the danger area.



Communication

Not only technical settings and driving skills are important during loading. The communication with the beet grower is also of decisive importance - especially in the case of piles which are difficult to load due to the high weed content.

- ▶ Discuss options and risks with the grower.
 - ▶ A more intensive cleaning of the weed can cause a higher risk of injury to the beets.
 - ▶ Diesel consumption and wear costs can be higher than normal.
- ▶ Make rental pictures for documentation.
- ▶ Enter a note about the piles in the loading order.



We are here for you!

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▶ You made the right choice:

Thanks to VarioPick and VarioCleaner, the Terra Felis is ideally equipped for changing loading conditions.

Tests have shown that with intensive cleaning (low feed rate, high roller speed, steep working angle) up to 92 % more weed can be removed than with gentle setting.

▶ Admittedly:

Strongly weeded beet piles require intensive cleaning, which results in greater wear. However, you shouldn't save on the wrong end here, because only a well-equipped and adjusted machine loads what has been harvested.

▶ Any more questions? Your local HOLMER service partner will be happy to help you.

▶ HOLMER customer service in Eggmühl is always there for you!

Free 24-hour hotline:
+49 (0)9451 - 9303 3900



Much success and good luck with the 2019/20 campaign!



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