

THE ESM CANETHUMPER[®] AS A TOOL TO HELP MAKE CHOPPER

HARVESTERS A COMPLETE SUGARCANE HARVESTING

SOLUTION.

There has been a large increase in the usage of large chopper harvesters for harvesting sugarcane. This is especially prevalent in Brasil where there were approximately 1050 new chopper harvesters bought in 2008 alone. The main reason for this is the decrease of available labour and the world trend of green cane harvesting.

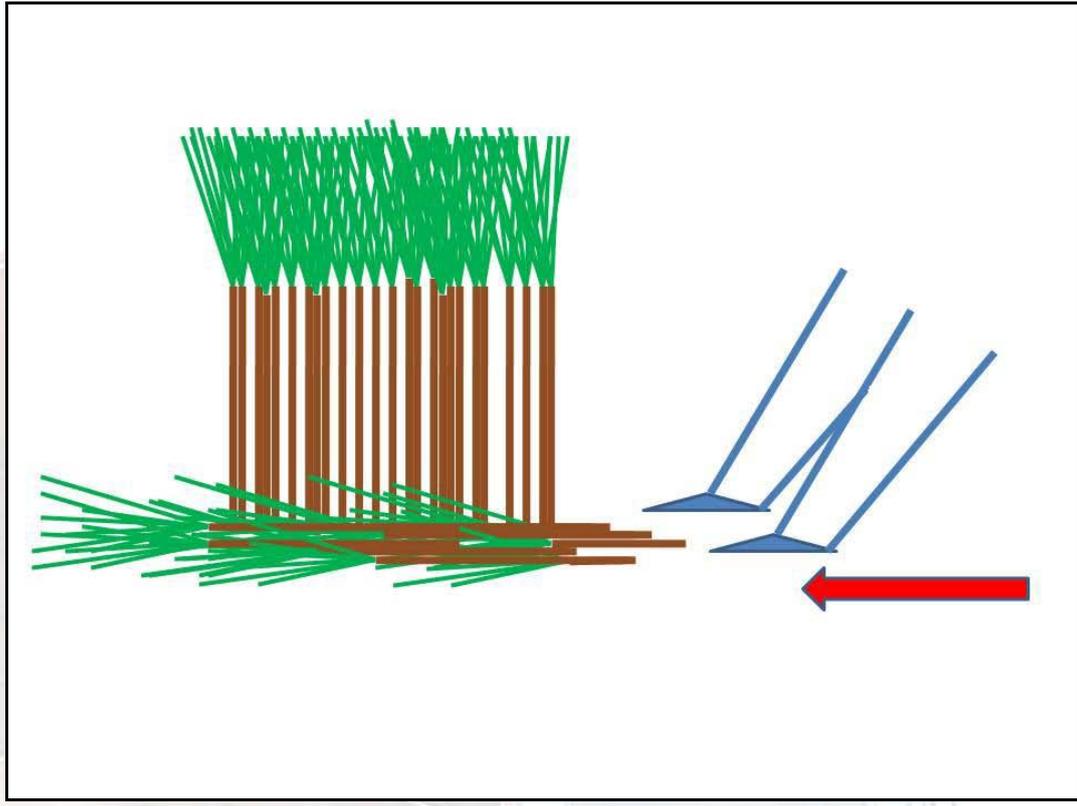
There are, however, lots of limitations and costs that come with using these large machines. They include the following:

- A good land preparation is required,
- Minimal slope,
- Long lines and
- Area's to be able to turn commonly known as headlands.

This is where the **CANETHUMPER[®]** has become a useful tool or help for the large chopper harvesters. It does this in 2 main ways:

1. Cutting the entry point for the tractors and trailers and turning areas for the choppers so that they do not ride over the cane,
2. Cutting the sugarcane on the contour where the chopper harvester is unable to ride,
3. Cutting areas that are wet, and
4. Decreasing the number of short lines by as much as 69%.

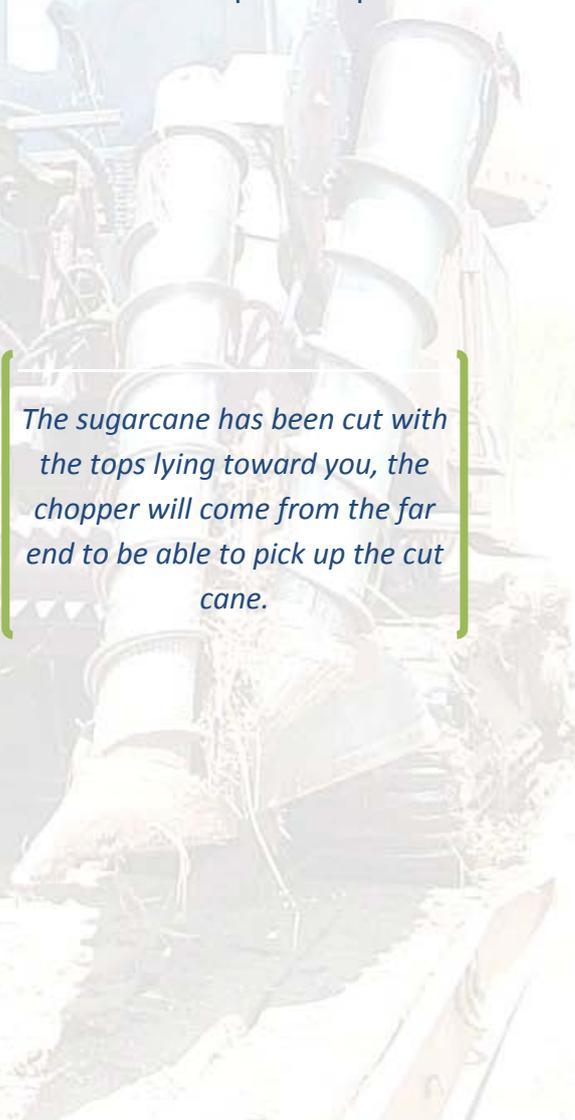
The **CANETHUMPER[®]** does this by cutting using the 5-7 labour units and placing the cane against the line that will be cut or lying it right next to the cane with the butts lying toward from where the chopper harvester will be coming from. The chopper harvester battles to pick the cane up if the tops are pointed toward the harvester. The correct way is shown in the photo's below:



Schematic showing lying of the cane against the adjacent row and the direction of the chopper harvester to be able to pick it up.



The sugarcane has been cut with the tops lying toward you, the chopper will come from the far end to be able to pick up the cut cane.





Cutting the entry point for the tractors and trailers and turning areas

For the large chopper harvesters to enter into fields the first line is normally trampled by the trailer if entering in the centre of the field due to large fields or multiple choppers in a single field. This results in losses and damage to the cane. The **CANETHUMPER**  has been used effectively to open these areas up for the first line and entry point as the following pictures shows.



Position of the trailer (row opened by CT)



Harvester + trailer (opened row by CT)



Cutting the sugarcane on the contour

Due to soil conservation and the prevention of erosion combined with supplying good drainage, the fields require contours. These contours cannot be effectively harvested using the chopper harvester due to the slope and the risk of the machine toppling over. A common thought is to not plant these areas but will result in as much as a 15% decrease in available area that the farmers are not willing to loose. In these cases manual cutting has been used in the past but we have seen that it is more efficient to use the **CANETHUMPER**. The following pictures show the **CANETHUMPER** cutting on the contour and opening up the area ready for the chopper.



The contour where the chopper harvester cannot cut





Ready for the chopper harvester

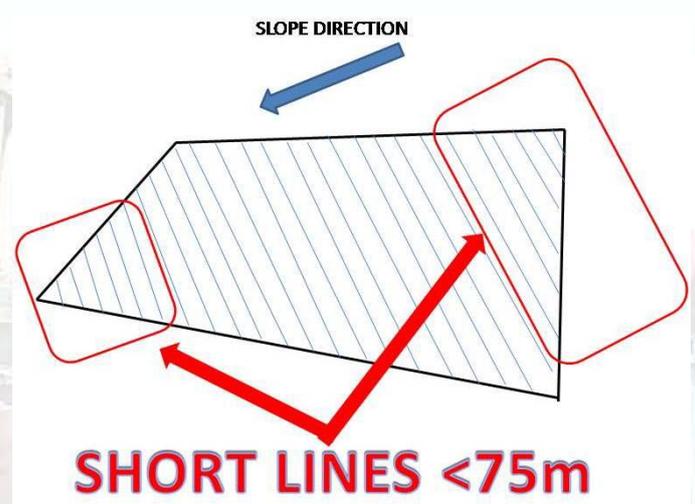
Cutting areas that are wet or where difficult for the harvester

There are numerous areas where it is not advisable to send a chopper harvester due to numerous reasons like safety (underneath or near power lines), wet areas where machine might get stuck or damage the fields, a large outcrop of rocks in field that the machine should not go near or near a sink hole. These areas can be cleaned up with the **CANETHUMPER** team and the cane moved nearby by hand to where it is safe for the chopper and the tractors and trailers to work. The following picture shows a very wet area where the chopper was unable to go.



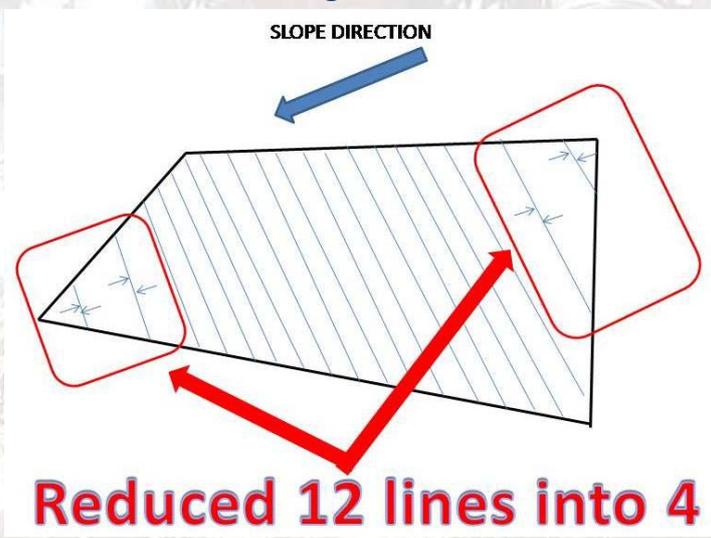
Decreasing the number of short lines for the chopper

This is an area where the **CANETHUMPER** has excelled. Short lines is a fact of life in any sugarcane operation due to the lie of the land and having to follow contours to allow for water drainage and flow. This can be clearly seen in the schematic below. It is thus inevitable that the large chopper harvester is going to encounter short lines during the harvesting period.



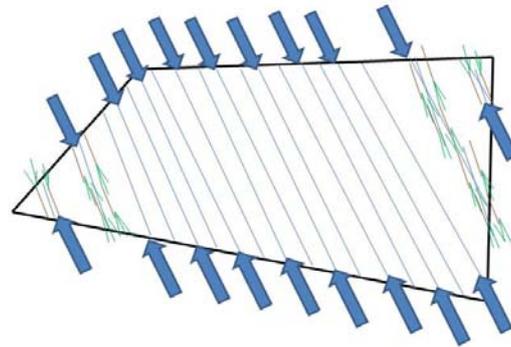
These short lines hamper the efficiency of the Chopper by causing a high number of turns by the chopper, tractors and trailers. It is known that an efficient chopper harvester requires lines greater than 200m preferably.

To help the chopper and make the whole system more efficient the **CANETHUMPER** a day or 2 before the chopper harvester gets to a field goes in and cuts the shortlines putting 3 lines into one in the following manner:



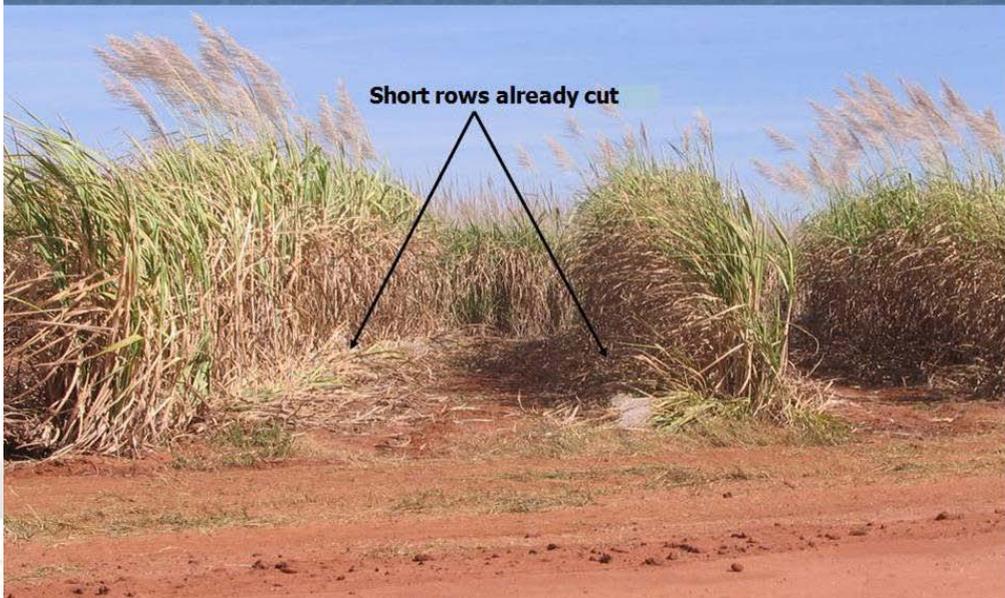
When reducing the lines it is important to have an understanding of how the cane must be laid. A little bit of planning saves a lot of time and effort later when the chopper arrives. This includes the lying of the cane all in the same direction and ensuring that the chopper does not have to skip a line to cut and pick up.

SHOWING DIRECTION OF THE CHOPPER HARVESTER



The following pictures shows where has been done and can save the chopper harvester up to 69% due to cutting the number of turns and making the short lines effectively three times longer. The chopper has to harvest slightly slower but the savings are worth it.

Cutting short rows (3 x 1 system)





Accumulated short rows being harvested with 69% of reduction.



To offer the complete harvesting package it is essential to have an ESM **CANETHUMPER** working alongside the large chopper harvester. This will ensure that the cane is efficiently harvested using the minimum amount of labourers possible. Ask for a **CANETHUMPER** as a valuable “add on” when next discussing a new Chopper harvester with your local dealership. The benefits of this will pay for itself after 1 or 2 years since you will be using the **CANETHUMPER** and will be saving money on the whole system on a **daily basis**. Making the chopper

harvesters more economical... This will be far more valuable than any monetary discount you might receive.

The ESM **CANETHUMPER** is well distributed throughout the world so you can count on our support in any location with the best after sales service that includes all the spares and training needed.

Get **the edge** over your competitors and neighbours. The ESM **CANETHUMPER** will create a long term success in sugarcane harvesting within your neighbourhood and across the globe.



Ennepetaler Schneid- und Mähtechnik GmbH & Co. KG

Kölner Str. 29

58256 Ennepetal

GERMANY

Tel.: +49-2333-9688-0

Fax: +49-2333- 9688-88

Internet: <http://www.esm-ept.de>