

LACOTEC

Innovative Landtechnik

MASTERCRACKER

A new dimension in corn shredding



Mastercracker convinced!



The feed costs decreased by about one cent a litre, thanks solely to the improved shredder

(Landwirt Benning)



With the improved cracker I've fuel reduce of 80 liters per day!

(LU van den Heuvel)



I'm convinced that all normal standard crushers in all standard SPFH encounter the same deficit. Every brand.

(LU Gottschalk)



Never before we had such a nice, solid and stable flux of forage out of the chute.

(LU Sturris)



The Cracker proofed to demand few power, as we can drive this fast.

(LU Vink)



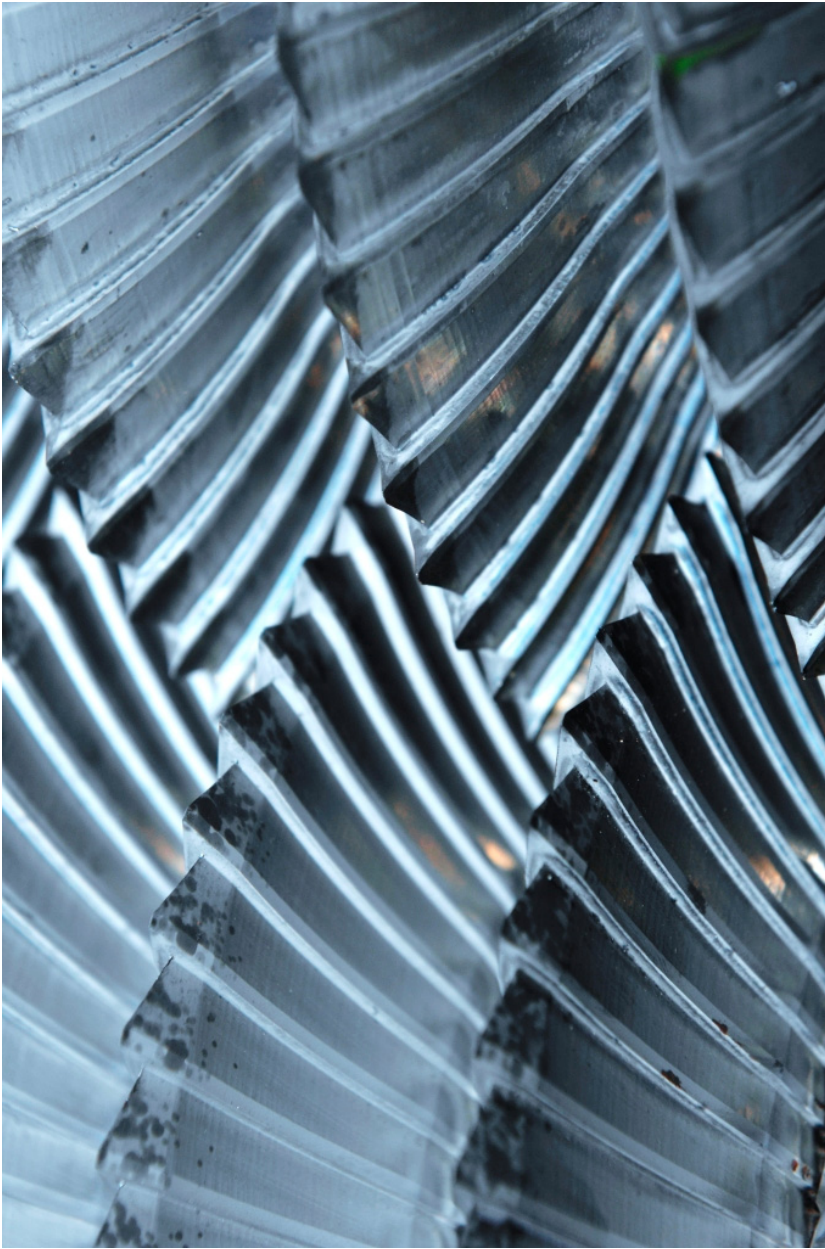
The kernel crushing is perfect !

(LU Us Bilang)

At our BIOGas customers we score very good marks, we are the preferred contractor by far.

(LU Blohm)

For your maize only the best!



Mastercracker

- ♦ Perfect Corncrushing
- ♦ Patented form of teeth
- ♦ Long lifetime, coated surface
- ♦ Tested by practitioners and found for well
- ♦ Ready for any challenge
- ♦ Without any problem in GPS
- ♦ Tested in the known SF harvesters



Mastercracker



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**We do not talk ourselves,
we let our customers speak for themselves !**

The feed costs decreased by about one cent a litre, thanks solely to the improved cracker!

(Bauer Benning)

With the improved cracker, I've a fuel reduce of 80 liters per day!

(LU van den Heuvel)

I'm convinced that all normal standard crushers in all standard SPFH encounter the same deficit. Every brand. The cracker is super!

(LU Gottschalk)

With the cracker, the kernel crushing is perfect !

(LU Us Bilanz)

Farmers with experience already, state that with this better forage, on the slurry much less foam is to be noticed. That is clear proof of an optimal digestibility

(LU Vink)

Never before we had such a nice, solid and stable flux of forage out of the chute.

(LU Sturris)

At our BIOGas customers we score very good marks, we are the preferred contractor by far.

(LU Blohm)



‘Cracker with Mastercracker gets the most out of maize‘

Feed quality creates a solid foundation

Dairy farming | Text and photos: Hans Stiekema

Dairy farmer Frens Benning had made up his mind – his maize forage harvester had to be fitted with a mega-cracker. And 300 hectares later, he is still happy: "I quickly earned back all investment costs. The silage is exceptionally valuable and my feed bill has dropped dramatically."



Dairy farmer Frens Benning gets the most out his maize thanks to his Mastercracker.

In Dwingeloo in the Dutch province of Drenthe, Frens Benning runs a successful modern dairy farm together with his wife and son. Quality and output are the starting points for their partnership, in which Frens focuses primarily on the machinery. Should the Bennings demand something more than is available on the market, then they'll simply get it made. Frens has a good working relationship with a major dealer in the area, "so that we find the best solution together." The feed and its quality are consequently their biggest conversation points. "The feed must be healthy and must be properly looked after and distributed. After all, it is the feed for the ladies in the cowshed that has to be converted into milk of the best quality. Should the feed you grow not have the right properties, not be of the proper quality, then you'll unfortunately have to buy it."



Maize harvest

Maize harvest

Benning used to use a Kemper mounted forage harvester when he harvested the maize. "It was a four-row harvester and the Kemper's tractor had more power than was good for the harvester. A six-row harvester would have been quite possible for the tractor, but not for the Kemper," Benning says with a laugh.

The Kemper was fitted out with a mega-cracker. "This is a cracker with cone-shaped discs on two opposite axles with an equal number of revolutions per minute. These discs interlock, which means that there is a minimum of resistance and a huge operational length for cracking the kernels.

The shape means that the discs can also go through the feed at great speed," Benning explains.

To increase capacity and make better use of the short harvesting period, Benning considered engaging a contractor.

"But a contractor cannot guarantee that he is available to us at the best possible time."

While hunting for a forage harvester of his own – a second-hand one – he suddenly realised that not a single company made a crusher or shredder that could provide feed of a quality he was accustomed to.

"Standard shredders must do the shredding over the width of the channel. That is merely the width of the crusherroll. crusher rolls of a larger diameter mean a greater access speed and greater capacity, making the shredding more intensive," Benning says.

"Thanks to the interlocking discs of the Mastercracker, the effective width is three times larger than the channel width. No standard shredder can beat that."





The Benning farm company

The Benning farming company has 300 dairy cows and 220 calves. The average yield per cow is 8,300 kilograms a year, with 4.00 percent fat and 3.49 percent protein. The farm consists of 120 hectares of grazing lands and 30 hectares of maize. Benning cultivates a total of 160 hectares of land.

Feed quality

At the silos Benning proudly shows off a few handfuls of his high-quality feed. “A shredder must not affect the structure, but instead tear open every – and I mean every – kernel. Briefly coming into contact with them will certainly not do the job. The kernel must be completely open so that all the protein can be used by the cattle,” Benning says. “Feed is the raw material of my business. All feedstuffs, such as protein and fibre, must be used by the cows. That’s why you don’t see any birds on my land behind the manure spreader, picking up the remains of the feed.”



The discs of the mega-cracker interlock, resulting in a minimum of resistance and a large operational length for processing the kernels.





Thanks to the correct cracking technique, the kernels are fully open and the cattle can utilise all the available protein.

Contractor

Because he could not find a contractor that could provide the desired quality, Benning was on the look-out for a self-propelled forage harvester. But it had to be equipped with a mega-cracker, just like he was used to with the Kemper. However, the dealer he found with a used forage harvester was not very keen, "and that is understandable, as he believed that his shredder was the very best, and now he had to shed himself of that belief at my request". Benning rejected his proposal to rather install a re-cutter plate. "A plate like that is only used in an emergency, and it 'pulps' the product excessively, 'smearing' the feed out." But the dealer had to take it or leave it, because quality is of prime concern to Benning.

The dealer came down a peg or two and sold the forage harvester, an NH FX 450, to Benning with a converted shredder, a Lacotec Mastercracker. The additional value of my properly cracked feed is already equal to what the harvesting costs." The Benning partnership is very satisfied with the machinery. "The Mastercracker does not require more power, yet it simply does so much more. The new cracker's capacity is definitely not less, that is certain," Benning says. This is because of the very long operational length between the discs, which means the machine is also sustainable. Benning will take his 450 hp machine through a thick Dutch crop at 5 to 5.5 km an hour, something he is extremely proud of.



Development

A few contractors in the Netherlands have now had their forage harvesters converted to incorporate a Mastercracker. "These contractors will most likely charge a slightly higher price per hectare, but dairy farmers will quickly earn back the difference," says Benning. "Good quality is the most stable foundation for a company, be it a farmer, contractor or manufacturer. There is a rumour that a company is now developing a forage harvester incorporating a shredder based on the Mastercracker system. Once that is on the market, the rest will follow," he says with a laugh.

Recovering costs

Benning very quickly earned back the 8,000 Euros that the Lacotec Mastercracker cost at the time. "Thanks to the improved feed quality, feed costs decreased by about one cent a litre, thanks solely to the improved shredder," he says with enthusiasm. "Whatever you can get out of your own land does not have to be bought from the feed supplier."

Protein utilisation

Unstable protein is digested in the cow's rumen, while stable protein is digested primarily in the intestine. "A highly productive cow requires both stable and unstable protein for a maximum yield," says dairy farmer Frens Benning. "For low-yield cows, stable protein utilisation is less important." The degree of protein utilisation by the cow depends on the quality of the feed. So as to release the stable starch from the maize and be fully utilised by the cow, it must be accessible in the intestines. "CCM, for example, only ends up in the rumen, while the stable protein is intended to provide energy in the intestines. Poor protein utilisation is evident in the manure, as well as when it is spread. There are undigested particles in the manure, which attracts the birds. "A good cracker in the forage harvester will break all the starch and protein in the maize completely open, getting the most out of it. And that is pure profit."



Report of visit

Contractor van den Heuvel
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Hans van den Heuvel

Dd November 19 2010

Contractor van den Heuvel operates 12 tractors, and 4 SPFH, all NH, to say a FX 50, 48, 38 and a NH 575.

Hans van den Heuvel did read about the new Cracker from LACOTEC. Through a friend in Belgium he made contact with the Dutch importers.

This salesman had nice stories, but experiences from the practice count heavier, are more important. Therefore Hans van den Heuvel visited a farmer who used the LACOTEC Cracker for more seasons already. He turned out to be a very professional farmer, calculating sharply his profit and loss account. This farmer explained with clear figures how he saved 1 Eurocent per liter milk on feeding costs. Due to the Cracker operation. The farmer feeds a lot of corn, the forage in fact proved to be of an extreme high quality.

Hans van den Heuvel strives to offer the most modern equipment to his customers, so he bought the LACOTEC MasterCracker to be mounted in his NH FX 50.

With the Cracker he harvested about 300 Ha. The chopping-length was chosen as 8 mm, and the Cracker at a gap of 3 mm. A longer chop is not needed, this forage has enough structure. His customers really are very satisfied with the harvested forage. All the corns are broken, in parts, at least two parts. Now the cows can profit of all energy in the forage.



Next year the farmers will have to pay a slightly higher tariff, they get much better feed offered from Hans van den Heuvel, the farmers do not need to invest in feed from the mill.

In 2011 a second SPFH will be equipped with the LACOTEC Cracker. From then the farmers have the choice: one harvester, or the other. The one with the better forage will be a little bit higher in tariff. For a shorter chop they already always had to pay a plus.

Van den Heuvel is convinced that the farmers counting properly will agree without any doubt to pay a little bit more, for much better forage. Count yourselves what the profit is per liter milk, how much milk do you produce, so.... .

Also Hans van den Heuvel himself is very happy with the cracker. He noticed a profit in fuel consumption of almost 5 Liter diesel per hectare. That profit is net in his pocket. He could measure that bonus exactly, as since many years already the fuel consumption per day was in the books. Hans likes to drive a SPFH, he noticed it himself, no doubt.

So, the Mastercracker surely is good for the farmer, and also very attractive for the contractor. That's why the next one will be installed for 2011 season.

Hans Stiekema



Report

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November 12, 2010

Arjan Sturris operates a Claas 870, from 2006, with which every year about 300 Ha is harvested. The rollers of the Kernel Processor were completely worn. That happens every 3- 4 years. The costs for replacing the rollers only mounted up to 4.000 Euro, and that is a lot.

Stories about good experiences from farmer Benning from Dwingeloo Holland, Sturris contacted the local dealer.

Here he got the confirmation of the special quality of forage to be achieved with LACOTEC Mastercracker, exactly as Benning said.

That now, fits with the companies' philosophy; we are advanced, dedicated to deliver a 200% quality absolutely. Our customers have no problem with our slightly higher tariff, they are sure that the delivered effort is good, is the best that can be done. That is why our Claas already was equipped with a cam and dotted plate, in order to process the corn as good as possible.

Now we mounted the Mastercracker, and are clearly different again, better than all the others. The higher tariff is proven to be worth it again.



The customers are really enthusiastic about the delivered forage. We adjusted the gap between the discs at 1 ½ mm. All the corns, every corn, is completely in parts. Sturris dares to declare that the corns are in 10 pieces each. All corns are super cracked, and that in combination with for as well the cow as the contractor healthy chop length of 9 mm.

Another remarkable feature is the enormous throwing power, the blast, of the Mastercracker. Never before we had such a nice, solid and stable flux of forage out of the chute.

The influence on the driving speed is difficult to be determined. We however drive at least at the same speed, if not faster, and do a better job at the same time.

Such a cracker proves to bring more advantages than better forage only.

Hans Stiekema



Report

Visit to
Friedrich Gottschalk
GSM 0049 1713750591

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Date: October 8th , 2010

The Agricultural contractor Gottschalk of Isselburg Germany operates 2 Krone Big X SPFH in the maize harvest.

The expected lifetime of the rollers in the crusher is about 2 to 3 years, in this region with extremely hard corn.

Friedrich Gottschalk declares that he was not satisfied with the effectiveness of the Krone crusher.

The crusher rollers are adjusted to a gap of 1 – 2 mm only, and still not all the kernels are properly crushed.

This is, nevertheless the great difference in revs of the crusher rollers.

„I'm convinced that all normal standard crushers in all standard SPFH encounter the same deficit. Every brand.

The Krone crusher in this respect could be one of the better, as the Krone crusher can operate with a difference in roller revs of up to 40%. But, the increasing capacity of the new modern forest harvesters, a still increasing capacity works very negative on the working of the crusher. The canal width is here the limitation. This really cannot go on this way” so declares Friedrich Gottschalk completely sure.

Furthermore Mr Gottshalk would like to declare:

„I searched for a solution, and really believed that the LACOTEC Cracker was a good alternative. The principles of the design pleased me, and I was so completely convinced that I installed a LACOTEC Master-Cracker in one of my Krone's for the season of 2010.



At the LACOTEC Master-Cracker is, due to the interlocking discs de effective length of the gap almost 3 times as long as the standard crushers'. With a controlled gap of as much as 3 – 4 mm we realized in the harvest of 2010 those results as I was looking for for my customers. I'm very pleased and satisfied with this. The fuel consumption must be lower than it used to be, as the gap is much bigger, so less resistance, and the revs are identical of the Cracker-discs, so less resistance and less wear. “

“I still did not inform my customers this year about the mounting of the LACOTEC Cracker, as I still have a second SPFH, with a normal standard crusher “only”.

From the moment I equipped also my second Krone SPFH with a LACOTEC Master-Cracker, I will make full publicity for the improvement.

“Nach einer Ernte und 500 ha Einsatz stelle ich keinen Verschleiß an den Scheiben fest!“

If my customers will be prepared to pay a slightly higher rate is doubtful, however the quality of the harvested cattle-feed is much higher. All the corns are fully opened and can be fully digested; all the energy can be profited.

In this area it is a great pity that price is a strong decisive argument” so Mr Friedrich Gottschalk states.

Hans Stiekema



Report

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Visited, November 3rd, 2010

Peter Wijntjes has taken over the business of Agricultural Contractor Vink some years ago. Peter worked with such contractor, and got the opportunity to start his own business. The original name of Vink was continued.

His customers had the opinion that the SPFH equipped with processors with rollers were good, but the process could be better by far. In order to react on the question and interest from his customers, Peter decided to search a solution, and improve the qualities of his foraging, getting better than his colleagues with their normal standard SPFH.

After questioning and searching Peter found the LACOTEC MasterCracker. His machinery dealer could supply such as a modification kit.

As a new SPFH has to be purchased for this season, the decision was taken that it had to be equipped with such surprising Cracker. His dealer of the SPFH was not immediately positive, as the original was supposed to be the absolute best in the market.

At the end a JD 7450 was ordered, with processor, but without the rollers. His machine dealer modified the processor unit, he mounted the Cracker discs. The final bill was only a fraction higher than as original.

Now however, Contractor Vink can deliver his customers better forage than they were used to, and better than all his colleagues.

At the older JD 7300 the processor got "tuned", the difference in revs was increased. But that turned out to be a failure; the stream from the chute was diffuse, where the power demand increased considerably at the same time.

The processor was reset, and so not better than it was before.



The product from the LACOTEC MasterCracker is SUPER! All kernels are really open, completely apart. A single kernel passed the cracker, due to too quick, incorrect, mounting at delivery, but that will be solved later when there is more time.

The Cracker-gap is installed at a 1 ½ mm. With an 8-row we drive 4 - 5 km/h, and we consider that as fast. On wet lands a higher speed is attractive, in normal circumstances a high speed is not ideal; one could rather have more working-width. The Cracker proofed to demand few power, as we can drive this fast. So, also we as contractor are very satisfied with this cracker.

The forage has more structure, and the starch can be digested much better. Farmers with experience already, state that with this better forage, on the slurry much less foam is to be noticed. That is clear proof of an optimal digestibility. A better digestion is pure, is Nett, PROFIT. Less foam is an additional major advantage for the farmer.

The rollers of JD last here 3 seasons, so then the older JD will get its modification.

In the near future we drive here at Vink two SPFH, realizing a better job than all other contractors do. The price per hectare might get increased a little bit, as: a better product, a higher price.

We also expect to get more calls from more customers, cattle farmers, asking for more work to be done.

The customers asked for better forage, we can supply them now.

Hans Stiekema



Report

Visit to

Anne Dijk, General Manager
GSM 0031 6 46702080

Us Bilang Loonbedrijf
Schoterlandseweg 22
Hoornsterzwaag
Holland



Date: October 7th, 2010

Anne Dijk really is surprised, and enthusiastic, about the LACOTEC Mastercracker in his Claas 860.

That this unit results in so good cattle feed, that is what he hoped, but not expected.

Also his customers notice the great difference in crushing intensity. Really, the kernel is completely separated, it is in parts. Not just hit or crushed only as he was used to. The LACOTEC Cracker is adjusted to a gap of 4 mm.

Every kernel is cracked in several parts. The rumen of the cow and the intestines can profit of all the energy in the harvested maize.

Also with longer chopped harvest the crushing is perfect. A longer chop is good for the structure of the fodder, so good for the cud-chewer, and the economy. The disadvantage is that it is more difficult for compacting it on the silo.

A colleague contractor increased the difference in revs of the crusher rollers, but that however has a high demand on power, on fuel, and in the end it turns out to be not better than this LACOTEC Master-Cracker.

Anne Dijk expects that this LACOTEC Cracker demands less fuel than the normal standard crusher, but that still has to be proven and calculated.

He fears that next year he will be forced to operate all his forest harvesters with this Cracker.

If already it would not be attractive for himself, it will be requested by his customers.

He plans to ask a higher rate per hectare, the delivered product is clearly better, of a higher value. In that way he can recuperate the invested money.

It is quite possible that I can use the cracker-unit in wintertime as a mill. That should be possible regarding the effectiveness of the cracking. It is so good!

Hans Stiekema



Report
Message from the field

Contractor Anke en Klaus Blohm
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Contractor Tim Blohm is very enthusiastic about the LACOTEC Cracker in his Claas SPFH. A similar system of Cracker was known already, years ago he had a Case SPFH, and in those days a Unicracker from Schönebeck near Magdeburg was built in our Case. Then already the system impressed us of the perfect functioning. That is why now the choice was rapidly made to have a LACOTEC Cracker mounted in our Claas.

Now we experienced ourselves that with the LACOTEC in the Claas the harvested forage really is of a top-quality. Furthermore we can allow a longer chop and still have a very good and better quality of forage. This is how we as contractors gain in our working speed, or in fuel consumption. The farmers absolutely are astonished, and enthusiastic, about the quality we deliver, and that is not what we here often as contractor from our farming customers.

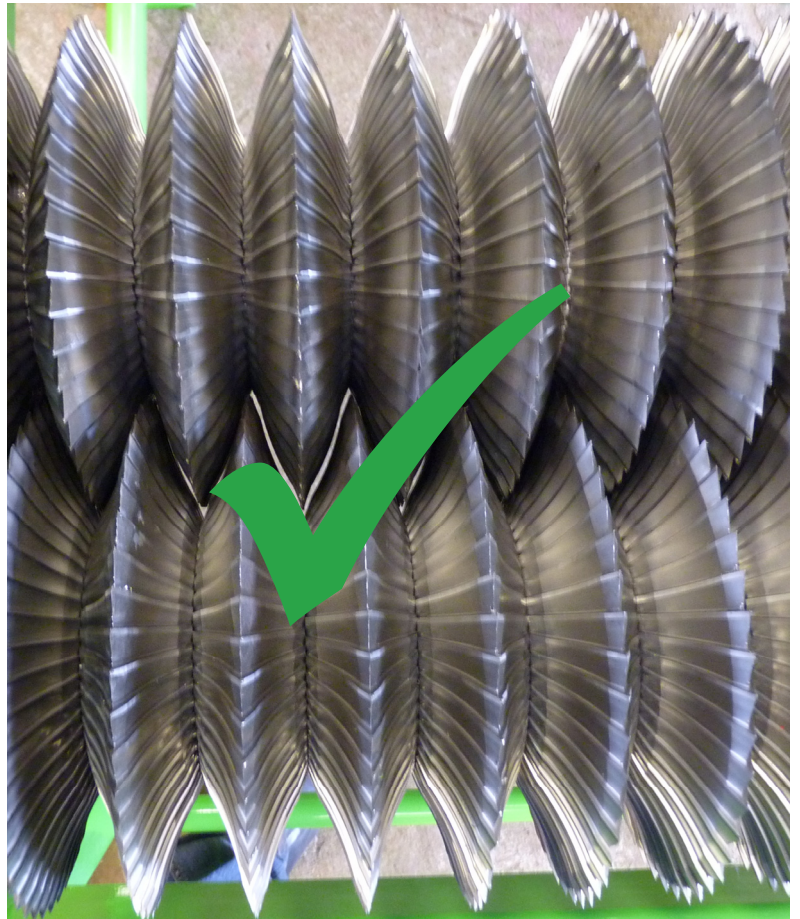
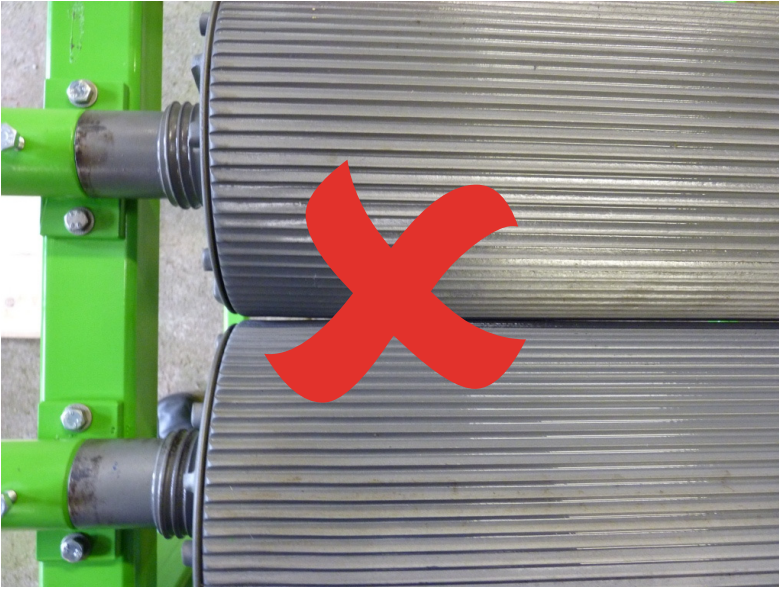
As we have quite a lot of work under contract for BIOGAS plants, we chop now with a length of 5 – 7 mm. The Cracker gap is tuned on about 1,5 – 2 mm, the delivered quality of product for the BIOGas plants is superb.

I cannot state that we save fuel because of the cracker, but I make the statement that our capacity increased considerably, we do drive much faster in the fields. That also is a great advantage for as well us as contractor, as it is for the plant resulting in a such good product. You have to understand that in BIOGas plants it is extremely important that all the corn is split, are in parts. That is exactly what we deliver now.

At our BIOGas customers we score very good marks, we are the preferred contractor by far. In this way we distinguish in quality in respect to our colleagues, and that all because of the LACOTEC Cracker.

Hans Stiekema





Report

December 16th 2010

Visit to dairy farmer Bert Haijtink, Laren, Holland.

Bert Haijtink owns a dairy farm with about 550.000 Kg Milk.

He noticed that:

The color of the silage was more yellow. Reason was, that all the corns were split, all of them in many small parts.

After feeding no undigested corn was found in the slurry.

The silage as such was of a very high quality.

Haijtink drilled and harvested the Maize variety LG 30.218.

In order to be sure about the quality of the cattle feed he stored in the silo, he had samples tested in the famous Dutch BLGG Laboratories.

The result was that his rating was far above the national average; moreover, the qualities were far better than expected.

The percentage of starch in the samples was far above the average of this year. Haijtink leads this back to the use of the LACOTEC MasterCracker in the contractors SPFH.

His overall statement:

The silage is „Prima“, and that is better than „Good“.

For Bert Haijtink the decision is made already: Next year the same contractor has to do the harvest, with a SPFH equipped with a MasterCracker.

Hans Stiekema



Report

Visit at Henk-Jan Eggink, Silage Sample Tester
at BLGG Laboratories Oosterbeek, Netherlands.

Laren, December 16th, 2010

First of all Mr Eggink stated that the measured qualities of the samples of 2010 Silos turned out to be very different.

The variation in nutritional qualities was larger than normal.

Furthermore Mr Eggink had to admit that the silos made with SPFH equipped with the LACOTEC MasterCracker were clearly different to the ones made with a standard Kernel Processor.

- The silos with harvest treated by the MasterCracker showed:
- All kernels were good processed, also leafs were seriously hit.
- All kernels are ideally split (at least in 3-6 parts)
- Much less hard particles are found in the silo.
- The silo as entity is weaker, softer.
- No complete kernels can be seen, not any.
- The silo as such is more homogeneous.
- The silo could get compacted easier and better,
- Less air-inclusion, less heating in the silo, less mildew.

As there are less hard particles, objects, the covering foil remains intact, no perforations, no heating on the spot.

When stepping on the foil when covering the silo with an extra foil, sand or tires, it proved to have caused very few perforations only.

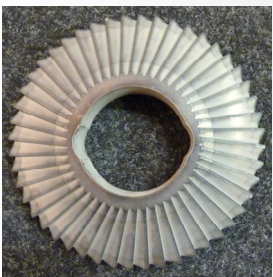
Also Mr Eggink wanted to make the statement that silos, made with lower performance SPFH, say HP ranging up to 450 HP, proved to measure a better fodder than the silos made with big and powerful SPFH. This is probably due to the higher output, hence shortage of compaction capacity on the silo. A second reason could be the restricted KP capacity, due to the combination of higher output and the same size of KP.

In general these big and heavy SPFH cause deeper tracks, unwanted soil compaction, depending on local circumstances. The properties of the capillary system are disturbed there.

The harvest can get reduced in mass and quality with impressive percentages as a result.

Hans Stiekema





Visit to dairy farmer Teun Koeslag, Laren Holland
December 16th, 2010

Farmer Teun Koeslag owns a dairy farm with about 700.000 Kg Milk.
His farm includes 9,5 Ha Maize, and 1,5 Ha hired.

His first sight in the silo of the 2010 harvest showed that not a single corn exists in the silo.
The milk producing ladies, the cows, can extract and profit of all the energy in the maize.

The visiting cattle feed consultant, from a feed supplier, could determine immediately that the shown silo was made by a Harvester equipped with a LACOTEC MasterCracker.
Also the apprentice accompanying him, got the explanation of the higher quality of the silage, he said: „ Here you see typical MasterCracker Silage, you notice it to the perfect processing of the corn, in all layers of the silo.”

Teun Koeslag had the impression that the SPFH from the operating contractor was slightly faster driving than in the previous years.....

„The nutricional values are very good, however it has been harvested a bit early, but yes, sometimes one hast to do things, simply because due to the circumstances you have to“
Reading the results of the samples tested at the laboratories, it proved that the share in starch was very good, better than expected.

In the end we have a far better silo than we expected.

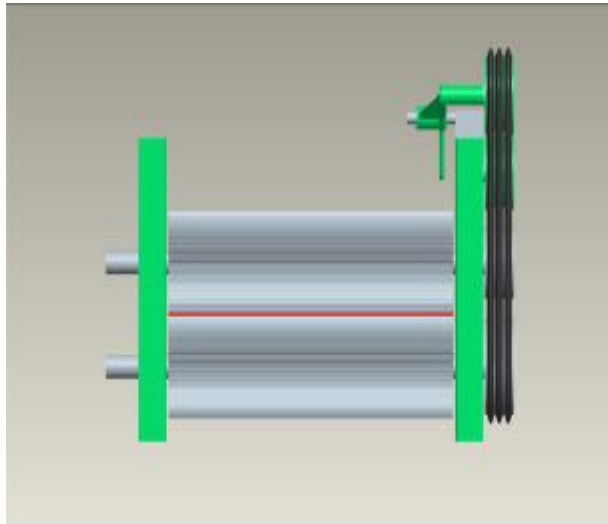
The contractor is not the cheapest, but he gives me the best he can, he is reliable, and strives to always make the best of it.

Next year the same contractor will be invited again, under the precaution that his SPFH is equipped with the MasterCracker.

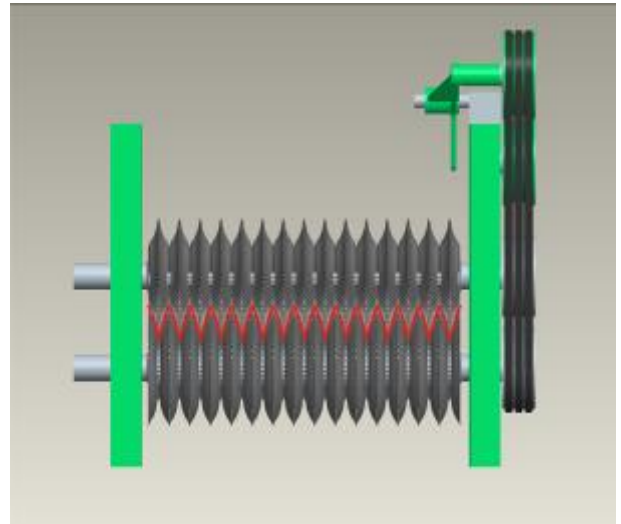
Hans Stiekema



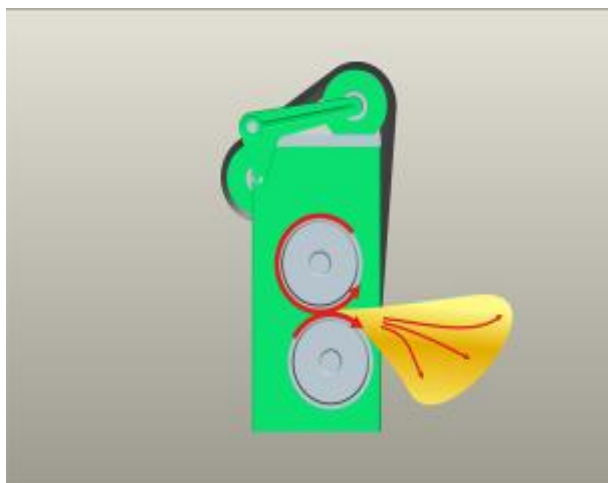
Convincing advantages !



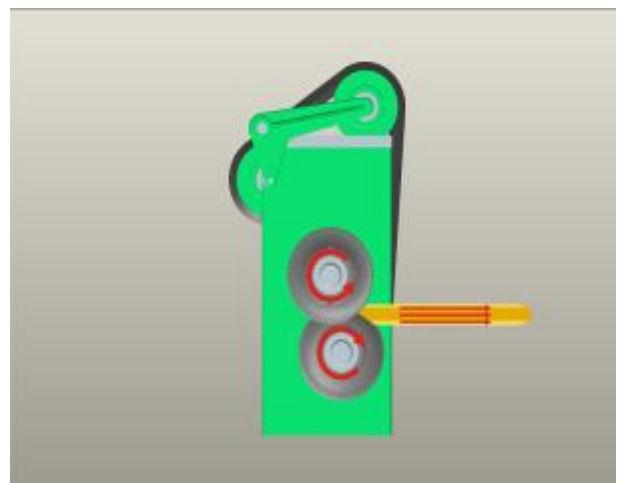
Roller Cracker
Crackergap
Length= 600 mm
Working width = 100%



Mastercracker
Crackergap
Length = 1620 mm
Working width = 270%



Roller Cracker =
Up to 40% differences in the rotational speeds
of the cracker shafts !
Bad forage stream !
High power consumption !



Mastercracker
Same rotational speeds of the cracker shafts !
Improved forage stream !
Lower power consumption !



Also for your harvester ?





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