AKEY Dairy Nutrition Newsletter September 2013

Recommendations to Successfully Harvest Shredlage®

Making Shredlage® is a novel way to harvest corn silage. To make shredlage the conventional processor in a forage harvester is being replaced by a Shredlage processor. The biggest difference with conventional corn silage is that stalks and leaves are torn apart besides being cut. As a side effect a shredder does a very good job in processing corn kernels. Last season's comments from the field seem to support the excellent processing done with the Shredlage processors. Many samples have been well into the 70's on corn silage processing score done at DairyLand Labs. Sorting has not been reported to be an issue if the moisture was over 60%, the processing length was not over 30 mm, and the shredder was set correctly. Below are some recommendations to set the shredlage processor correctly and harvest shredlage successfully.

The Shredlage unit can be used to process corn silage at a conventional theoretical length of cut (17-21 mm TLC) extremely well. To ensure a processing score > 70 is obtained a simple field test could be done. Out of a 32 oz. cup of corn silage, there should be no whole kernels left. Many pieces should be in between ⅛ and ¼ of kernel. If there are kernels that look unprocessed flip them over and examine to see if they are shredder gouged. The corn silage should have no "cigarette butts" or any pieces of the rind attached to the pith of the stalk. Penn State Particle Separator (PSPS) results should be around 10% on the top screen and > 60% on the second screen. If the amount of forage DM in the diet from corn silage in the diet is less than 65% this length is usually good.

When using the Shredlage® processor to make Shredlage® 26-30 mm, the processing score should be over 70. The same rules for the kernel processing apply as described above. PSPS results should be about 30% on the top screen and > 40% on the second screen. The forage should have no thickness to any of the pieces and almost no Rhine attached to the pith of the stalk. All pieces should be "fluffy" in appearance and should be thin enough that they are bendable with very little pressure. There should be no obvious cigarette butts in the corn silage. Experience shows that reduced stock shredding quality will occur before reduced kernel damage takes place and becomes inadequate. In ***Figure 1*** two good examples of well processed unfermented and fermented Shredlage.

Figure 1.

Examples of well processed unfermented (a) and fermented (b) corn silage

a.) Unfermented corn silage

b.) Fermented corn silage

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In a perfect world it would be recommended to harvest at 65-67% moisture, with more than ½ milk line. In all cases try to avoid shredding plants that have less than 62% moisture. It is suggested not starting to harvest before plant moisture is below 69%. Table 1 is meant as a guideline to start with making Shredlage corn. When harvest conditions changes the settings should be adjusted. During harvesting a person should be responsible for checking kernel processing and forage shredding quality. If the above listed guidelines are not met the shredder settings should be adjusted.

If shredding BMR corn silage the shredder rolls need to be set about ½ MM closer than suggested in table 1. This is due to the sponginess of the BMR stalks.

Table 1.

Shredder settings for different moisture plant levels and different TLC.

Forage Moisture (%)	TLC (MM)	Shredder settings* (MM)
70	26	3.00
69	26	3.00
68	26	2.75
67	26	2.75
66	26	2.75
65	26	2.50
64	26	2.50
63	26	2.50
62	23	2.25
61	23	2.25
60	23	2.00

*Caution the shredder will be set at 4 MM from the factory
*BMR needs to be set about ½ MM closer.

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