

Managing Silage Shrink

There are two main areas of the silage process where shrink occurs:

1. At storage and ensiling, and
2. At feed-out.

These areas of shrink can be minimized through proper silage management practices.

Minimizing Shrink at Storage and Ensiling

Shrink at this point of the silage process can be reduced by forcing out as much of oxygen as possible from the forage mass before the aerobic (oxygen consuming) micro-organisms can utilize it. This is achieved by good packing processes as the crop is delivered to the storage site. High density silage means minimal oxygen is included.

This is done by managing the following during harvest:

- a. Crop moisture/Stage of maturity
- b. Chop length
- c. Compaction/Adequate silo (size/structure)
- d. Sealing to eliminate oxygen and ensure no oxygen re-enters the silage mass
- e. Proper face management

Using a good quality, research proven inoculant will also help to ensure that the ensiling fermentation is dominated by homolactic lactic bacteria, minimizing the potential for less efficient microbes to take control, thereby increasing waste.

Minimizing Shrink During Feed-out

Silage shrink occurs at feed-out with any silage storage system. While an anaerobic (oxygen free) environment can be maintained, silage will remain stable and no shrink will occur.

Immediately when the silage is re-exposed (open) to oxygen dry matter losses (shrink) will begin to occur.

The use of *Lactobacillus buchneri* 40788 (available in Biotol Buchneri 40788 and Biotol Buchneri 500), maintaining a firm silage face, avoiding leaving silage sitting in piles (compost heaps), and feeding out at appropriate rates will all help to reduce shrink at this point, helping your bottom line and helping you to avoid running out of feed!

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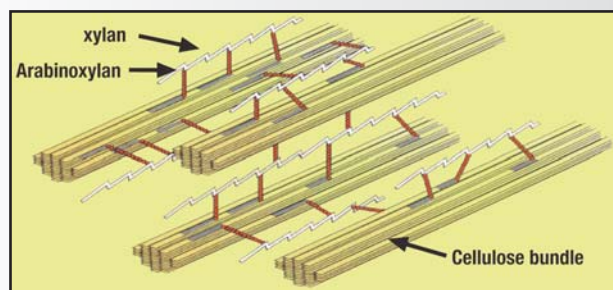


Leachate is a visible sign of silage shrink - a direct loss of dry matter in your valuable silages.

High Feed Prices Make Fiber Digestibility More Important Than Ever

With skyrocketing feed prices, producers must squeeze every drop of available fiber from their forages. One way to maximize your forages is to protect them with Biotol Forage inoculants. These patented mixtures of enzymes and elite lactic acid producing bacteria help get pH in line quickly, and prevent further losses at feedout due to yeasts and heating.

In addition, Biotol's patented enzyme combinations help improve your forage's fiber digestibility by "opening up" the cellulose bundles in the silage. The enzymes release the fiber portion of the feedstuffs thereby making it more available for digestion, ie improving the fiber content of your forages.



Forage specialist joins Lallemand team

Renato Schmidt, Ph.D., has joined Lallemand Animal Nutrition, North America as Forage Products Specialist.

Dr. Schmidt earned his doctorate in Animal Sciences from the University of Delaware under Dr.



Limin Kung. He worked on innumerable experiments with silage fermentation and specifically developed a PCR assay to identify and quantify *Lactobacillus buchneri* in silage samples and another molecular technique to understand the dynamics of the lactic acid bacteria population in silages.

“Dr. Schmidt brings additional credibility to our already prestigious silage team. Having studied at a premier dairy research university under a recognized silage scholar such as Dr. Kung, Dr. Schmidt will work closely with our partners in advancing forage technology,” Vince Myerly, Executive Director.



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Ask the Silage Doctor

Got a question?

Ask the Silage Doctor at www.QualitySilage.com. This new feature allows users to submit questions pertaining to silage management, feedout, aerobic stability and forages to a PhD microbiologist. The Silage Doctor answers every question and popular topics are posted to the web site.

FDA REVIEWED!

Only Biotal Buchneri 500 and Biotal Buchneri 40788 are FDA Reviewed for “increased aerobic stability of silage and high moisture corn stored for not less than 60 days.”

Silage Shrink *continued from page 1*

How much is shrink costing you?

1,000t silage bunker @ current shrink of 20% = 200t of shrink Silage at \$50/ton = \$10,000!

If shrink is reduced to 8%, the overall loss is reduced to 80t @ \$50/t = \$4,000.

Not only is this a monetary loss, the cost of the total silage is now spread over less tons. For example, 1000t @ \$50/t = \$50,000.

Shrink 20% of \$50,000 = \$10,000 over 800t = \$12.50/t of silage fed

Shrink 10% of \$50,000 = \$5,000 over 900t = \$5.55/t of silage fed.

You may also need to grow more crop or buy other feed sources to cover this shrink loss in your feed budget. Generally the cheapest source of feed available is that which you can produce, and preserve, on your own facility. You need to keep on top of shrink, and silage quality, to reduce your dependence on purchased feed and to maximize your profitability

Remember these important points to help reduce your shrink levels:

1. Crop moisture 66-72% for precision chopped forage
2. Length of cut (theoretical chop length) 10-16mm
3. Silage pit / bunker design matched to feeding regime
4. Rapid harvesting and filling and air tight sealing.
remove oxygen quickly
packing equipment to achieve 220-240kg DM/m²
wedge shaped filling technique
5. Inoculate with a proven product, like Biotal
6. Cover with high quality silage plastic to seal out oxygen. Consider new Silostop high oxygen barrier plastic film.
7. Use suitable weights to prevent oxygen from re-entering the silage mass.
8. Proper face management.

You should always keep in mind that high shrink losses can cost you a lot of money both in silage quantity and quality, and in animal performance. The better you can manage your silage quality and reduce your shrink the more money you will make and save.

Bibliography – 1. Penn State University. 1993. “Harvesting and Utilizing Forage,” Circular 296. State College, P.A.

For more information, visit www.QualitySilage.com