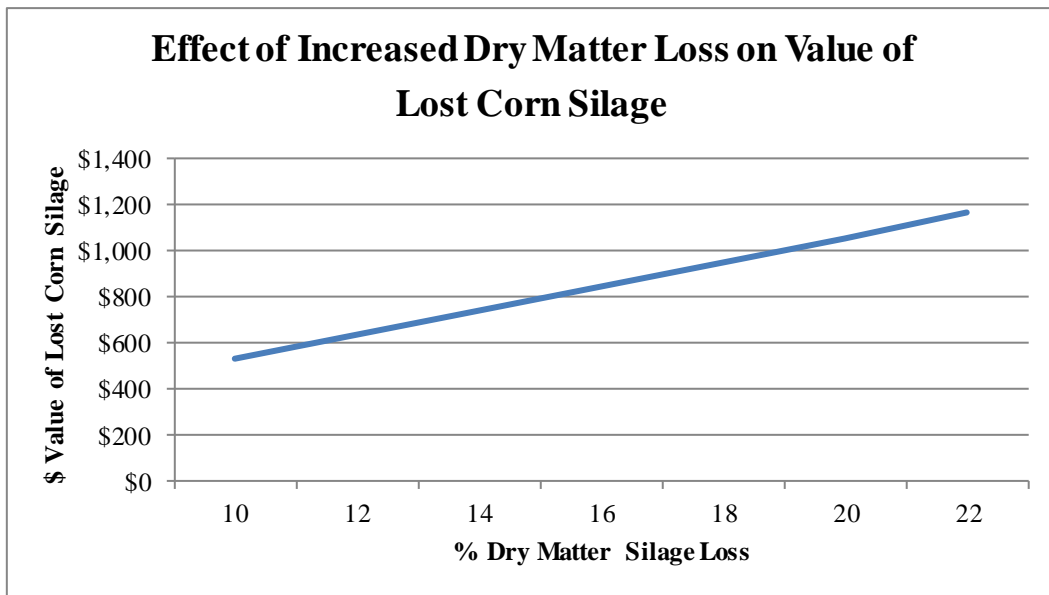


## Can it Pay to Cover Silage Bags with a Cover?

A question came up on the ANRE weekly Wisline on forages on Sept. 23 about the cost for covering a silage bag with a cover to help reduce dry matter loss due to bird damage. A study by University of Wisconsin agricultural engineers, Richard Muck and Brian Holmes, quantified dry matter densities and losses in silage bags. Total dry matter losses (gaseous, seepage, and spoilage) ranged from 0 to 38.2 percent. Average dry matter loss across all bags was 14.2 percent (similar to a well-managed bunker). However, if the worst three bags were eliminated, the average loss dropped to about 10 percent. Unnoticed bird damage to the top of one of the bags caused a spoilage loss of 22 percent.

If 10 percent dry matter loss is used as the “normal” loss for a silage bag and 22 percent dry matter loss is used as the “extreme” loss from bird damage, then heavy bird damage could cause a potential increased dry matter loss of 12 percent. A 9 foot by 100 foot silage bag has the capacity to store 67,800 pounds (or 33.9 tons) dry matter of silage. A 20 foot wide by 100 foot silage bag cover used to cover this silage bag would cost about \$500. It can be re-used, but no data on potential life span was found. If it could be used for just 5 years, then the cost per year would be \$100.

The value used for corn silage in this example is \$54.49 per ton at 65 percent moisture or \$155.98 per ton on a dry matter basis. A “normal” dry matter loss of 10 percent would result in a loss in value of the corn silage of \$528.78. An “extreme” dry matter loss of 22 percent would result in a loss in value of the corn silage of \$1,163.32. The difference in value of the lost corn silage between the “normal” and “extreme” corn silage is \$634.54. Thus, the silage bag cover valued at \$500 could have covered its purchase price in the first year in a case of “extreme” bird damage. See the chart below for how increased silage dry matter loss affects the value of lost corn silage.



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