

FORAGER



Agronomics with livestock in mind!



Managing bunks well increases profits

Some of the best quality forage comes from well-managed bunks. At the same time some of the worst forage comes from some poorly managed bunks. With this year's forage challenges, most farms do not need any further deterioration in forage quality.

Achieving good fermentation in a bunk depends on proper filling management. Bunks should be filled quickly, but not so quickly that the forage is not packed adequately as it is being put in. If a bunk is not packed densely enough, either the filling rate or packing rate (time or weight of tractor) should be changed to achieve a minimum silage density of 14 lbs of DM/cubic ft of silage. The equation below can help to determine the packing tractor weight, or the filling rate on a farm:

Packing tractor weight (lbs) = filling rate (tons/hr) X 800

Optimum filling rate (tons/hr) = tractor weight (lbs)/800
-Lallemand Silage Management Handbook

Other factors, including moisture and length of cut, affect the packing density of silage. Dry silage is often hard to pack in a bunk. Putting up silage at the recommended moisture contents (haylage 60-65% and corn silage 65-70%) in bunker silos will help ease packing. Long particles are also hard to pack. If necessary, shorten up the theoretical length of cut to ease packing.

Achieving a packing density of at least 14 lbs of DM/cubic ft can have a significant impact on the quality of silage. A Cornell Cooperative Extension study of 14 silos in Lewis County, NY showed that silage packed to above average density at a 1 ft depth produced 400 pounds more milk per ton of silage than silage with below average density (see Figure 1).

Covering silage in bunks is also important. Research has

consistently shown a significant return on investment from covering silage (taking into account labor and cost of materials for covering a bunker silo). In the same Lewis County study by Cornell Extension seven covered and seven uncovered bunks were compared. Forage from the uncovered bunks was 6-8°F warmer and had poorer aerobic stability than forage in the covered bunks. Uncovered bunks also showed average butyric acid levels above the maximum desired level (<0.05%), whereas the covered bunks did not. Further more silage from the covered bunks had lower fiber, higher starch, energy, and digestibility than silage from uncovered bunks in the top 3 ft of silage. This data shows that covering bunks benefits feed quality.

Recently a debate on the performance of white versus black plastic for covering bunks has sparked some questions. Some research done at Cornell University by Terry

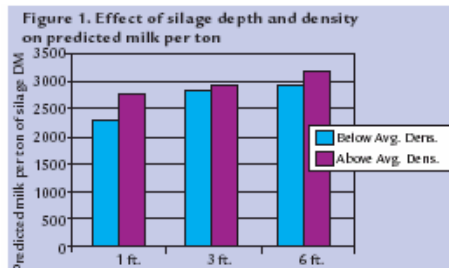
Batchelder shows that white plastic may reflect more solar energy helping to maintain better forage quality. Bunks of second

cutting alfalfa were used in the study. Analysis of forage sampled from 7 to 24 inch depths was similar. However, at 6 inches the forage quality of the haylage under the white cover was better. A diet using haylage solely from the top 6 inches to make up half of the 55%



forage in the ration, showed that the white covered forage could support 3 lbs more milk than the black covered forage.

Managing bunker silos properly can add significant profits to a dairy's bottom line. The importance of quality forage should not be underestimated in a feeding program.



-Frans Vokey, *Make money with better bunk silo management*