

Dairy One introduces the **MASTER FORAGE PROBE**

by Janet Fallon

Last year, a long time business acquaintance told me about a feed salesman in Southeast Pennsylvania who had designed a really good silage probe. Since Dairy One is always looking for ways to make sampling easier and more accurate, I decided to give the guy a call. My friend was right and to make a long story short, Dairy One is now manufacturing and marketing it as the “**Master Forage Probe**”.

The Master Forage Probe was actually designed with two uses in mind. The first of course, was to improve the ease and accuracy of sampling. A good sample is the first step towards balancing a ration for optimum milk production. The second was to provide a tool to measure silage density in bunk silos. Adequate density is needed to keep oxygen out of the silage mass which in turn, enhances fermentation and reduces spoilage during storage and feedout. It also enhances dry matter intake by providing a stable and palatable feed. A measured density can also make it easier to determine silage inventory and feedout strategy.



Dennis Browell, salesperson for Don Fair Nutritional Consulting uses the Master Forage Probe to take a sample.

The Master Forage Probe is really quite simple. It is a stainless steel tube with an inside diameter just under 2 inches. It has a cutting edge on one end and an adapter to attach it to a cordless drill on the other. (An 18 volt 3/8 inch variable speed drill works best). A calibrated wooden plunger provided to push the sample out of the

tube doubles as a measuring device to measure the depth of the hole. The length and fresh weight from that sample allows the user to calculate the “as fed” density on the spot and the dry matter density can be calculated once the dry matter content is determined. A Master Forage Probe silage density calculator is available at www.dairyone.com to make the calculations a bit easier.

Below are some comments from a few folks who have been using the Master Forage Probe since last fall.

Donald Fair, Agri-Basics & Donald Fair Nutritional Consulting

“I’m very impressed by it; it does everything it claims to do! That’s why I bought two of them.....one for me and one for another salesperson who works with me. It probes hay a lot better than other probes I have used and the drill doesn’t bog down or die. You can probe into bunk silos and ag bags. I have only done 2 densities with it so far but it is very easy to do and the on line spreadsheet works very well.”



Jeff Tyson, Kaufman's Animal Health Products

“We used the Master Probe to trouble shoot a problem silage. We tried the probe with a cordless 12 volt drill first but it didn’t have quite enough “umph.” The farmer’s 18 volt cordless drill worked much better. I was surprised to see how much difference there really was in density from the top to the bottom of the bunk silo.....14 lbs per cubic foot at the top and 20 at the

bottom. They packed it really well using 600 pound hours of weight but the silage was a bit on the dry side which apparently made it tougher to pack. The probe was easy to use and we learned something in the process. The website worked slick to calculate the densities.”

George Jarrett, Renaissance Nutrition

“The Master Forage Probe has worked really well for me. I think it helps me do a better job sampling, especially with corn silage. Before, I would take 15-20 grab samples by hand; mix them up and sub-sample, being really careful not to lose the kernels. I think I was probably adding more kernels than I should have because now I am getting lower starch numbers that I think are more “believable”. It works great on haylage too but I really wish I had a bigger drill when I sample that! It is incredible on silage bags because it allows me to avoid sampling the face. I just punch through the plastic, go in about a foot and then patch it up and go to the next spot.” Renaissance Nutrition has ordered 6 probes to date.

Terry White, I.L. Richer

“Works really great on large round bale hay or silage.”

Most of us can spot a “trouble silage” when we see or smell it. But when it comes down to really tightening up on our management we need something we can measure over time. The Master Forage Probe provides that measurement tool. It can help us do a better job taking a sample for a complete forage analysis or fermentation profile and help us determine silage density. Armed with that knowledge, we can take steps to tighten up on management and improve profit potential on the dairy farm.

Check out our website at www.dairyone.com for more information on the Master Forage Probe or call 1-800-344-2697, Ext. 2172 if you would like to order one today!

You can find additional information on bunk silo management and density at the following websites:

University of Wisconsin – Extension Forage Resources
<http://www.uwex.edu/ces/crops/uwforage/storage.htm>

Silage Capacity Calculator
<http://www.agric.gov.ab.ca/app19/calc/volume/silageweight.jsp>

Table 1: Bunk Silo Density Goals

Bunk Silo	Density - lbs/cu.ft	
	<i>As Fed</i>	DM Basis
Corn Silage	40-50	14-15
Hay Crop Silage	35-43	14-15
Bagged Silage		12-13 *

Source; Muck & Holmes 1998-1999
 * Densities varied by machine and by operator

Table 2:

Dry Matter Loss as Influenced by Silage Density (Ruppel, 1992)

Density (lbs DM/ft ³)	Dry Matter Loss, 180 days (%)
10	20.2
14	16.8
15	15.9
16	15.1
18	13.4
22	10.0