DENSITY TESTING SILAGE FACES OF BUNKS, PITS AND DRIVE OVER PILES

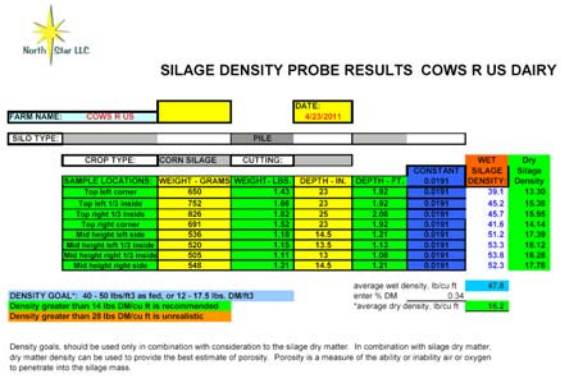
The primary concern when working around the face of a silage face should be safety. RESPECT THE SITUATION.!

Every face may fall and when it does it can bring tons of silage down and out the distance it is high or more! Use good judgment whenever near the face of any silage.

To measure density of the silage at the face, multiple holes must be drilled and corings removed and weighed. Locations are determined by practicality and safety.

The most accurate measurements of packing density will come from corings taken within the top few feet of the silage pile. Samples taken lower are affected by compaction.

The coring drill is a standard size so by knowing the depth of the hole and weight of the silage removed from the hole, density can be calculated using a spreadsheet



SILAGE DENSITY PROBE RESULTS COWS R US DAIRY

FARM NAME: COWS R US DATE: 4/22/2011

SILO TYPE: PILE

CROP TYPE: CORN SILAGE CUTTING:

SAMPLE LOCATIONS:	WEIGHT - GRAMS	WEIGHT - LBS	DEPTH - IN.	DEPTH - FT	CONSTANT 0.0191	WET SILAGE DENSITY	Dry Silage Density
Top left corner	650	1.43	23	1.92	0.0191	39.1	13.30
Top left 1/3 inside	752	1.66	23	1.92	0.0191	45.2	15.36
Top right 1/3 inside	826	1.82	25	2.08	0.0191	45.7	15.56
Top right corner	691	1.52	23	1.92	0.0191	41.6	14.14
Mid height left side	536	1.18	14.5	1.21	0.0191	51.2	17.39
Mid height left 1/3 inside	520	1.15	13.5	1.13	0.0191	53.3	18.12
Mid height right 1/3 inside	505	1.11	13	1.08	0.0191	53.8	18.28
Mid height right side	548	1.21	14.5	1.21	0.0191	52.3	17.78

DENSITY GOAL*: 40 - 50 lbs/ft3 as fed, or 12 - 17.5 lbs. DM/ft3

Density greater than 14 lbs DM/cu ft is recommended

Density greater than 28 lbs DM/cu ft is unrealistic

average wet density, lb/cu ft 47.8

enter % DM 0.34

*average dry density, lb/cu ft 16.2

Density goals, should be used only in combination with consideration to the silage dry matter. In combination with silage dry matter, dry matter density can be used to provide the best estimate of porosity. Porosity is a measure of the ability or inability air or oxygen to penetrate into the silage mass.

The silage dry matter, location, weight of material removed and depth of each hole is recorded and entered in the spreadsheet. Both As Fed and DM density per cubic foot are then calculated

North Star Services LLC 5540 Spur Lane Emmett, Idaho 83617 ph. 208-369-0549 e mail s.crosby@dairysilage.net