



Drive Over Piles:
Many nutritionists utilize the "visual method":

1. Look at the slope of the pile and visualize how much of the slope would need to be "folded back" on top of itself until it made that half of the pile square, an invisible bunker wall - same for the other side.
2. You now have a square bunker - measure it
3. See bunker capacity chart (left) for approx. tonnage.

Use U of WI Extension Forage Resource Center worksheets.

Bunker Forage Capacity Chart (fresh tons)

Hgt (ft)	Avg width (ft)	Corn Silage, 65% (1.5 lb/cu ft)		Haylage, 60% (1.4 lb/cu ft)		HMC, 30% (4.5 lb/cu ft)		Earlage, 38% (3.0 lb/cu ft)		Snaplage, 42% (3.5 lb/cu ft)	
		60'	80'	60'	80'	60'	80'	60'	80'	60'	80'
8'	20'	206	287	369	301	309	431	553	233	277	495
	30'	308	429	550	449	462	643	825	347	416	742
	36'	503	721	939	767	755	1082	1409	568	799	1387
	60'	836	1198	1560	1274	2006	2546	3444	944	1330	2311
	16'	589	869	1148	938	883	1303	1722	665	829	1617
	60'	980	1444	1909	1559	1470	2167	2864	1106	1379	2688

Assumptions made: 2 ft of dome height above the wall ≤ 30' and 3 ft dome height above the wall ≥ 36' 2:1 front slope (included in the wall length) | Packing density as shown on the table Source: <http://uwex.edu/ces/crops/uforage/bunkersilovolume10-18-08.xls>.



Proper plant maturity, moisture, chop length, add Biotol Buchneri 500, rapid fill, PACK, PACK, PACK & cover. (Wait 60 days before feeding)

Biotol Buchneri 500 works great with all HMC, Snaplage & Earlage in all storage facilities.



Treat your HMC for about 7 cents per bushel!

Good Management is a MUST!

What is Biotol Buchneri 500?

A combination of Biotol's proprietary silage inoculant technologies and patented enzyme package:

- ▶ 100,000 CFU/g silage of *P. pentosaceus* 12455
- ▶ 400,000 CFU/g silage of *L. buchneri* 40788

Biotol Buchneri 500 adds a TOTAL of 500,000 CFU of bacteria/gram of forage.

How does Biotol Buchneri 500 work?

The LAB convert plant sugars to lactic acid dropping the pH rapidly for a faster, cooler fermentation improving DM recovery (4%). Color, smell and palatability are typically enhanced as well.

L. buchneri 40788 produces acetic acid that inhibits wild spoilage yeast leading to a more stable silage at the face and your TMR stays cooler, longer – maximizing DM intakes. There is less waste – more tons to feed, more consistent and of better quality.



"For improved aerobic stability of silage and high moisture corn stored for not less than 60 days"

The Power comes from within™



Biotol is registered trademark of Lallemand.

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BIOTAL



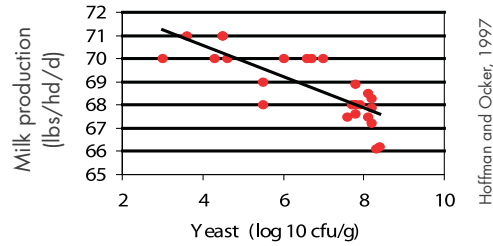
BIOTAL BUCHNERI 500
The most advanced silage inoculant technology available.



Designed for all forages; alfalfa, grass and corn silage(s), HMC, snaplage, earlage & baleages, in all your storage facilities.

REDUCING WILD SPOILAGE YEASTS IN YOUR SILAGES & HMC IS VERY IMPORTANT:

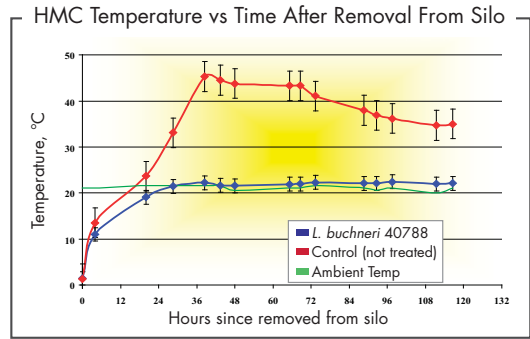
1. "Wild Spoilage Yeasts" can reduce your milk production.



DM intakes remained the same, yet milk production dropped. *Wild Yeasts: a silent, invisible thief.*

2. Fewer "Wild Yeasts" in your silages & HMC = a more stable, cooler TMR.

Treating a hot TMR can be very costly, and milk production can be compromised.



L. buchneri 40788 treated HMC did not heat, and the untreated HMC heated significantly.



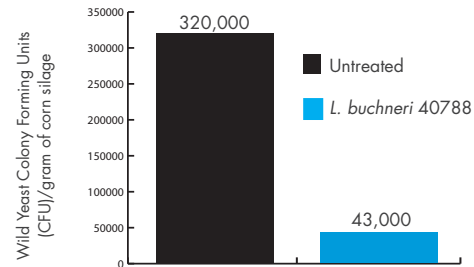
Biotol Buchneri 500 works great on haylage.

3. Silage heating means less energy is available for milk production:

- ▶ 1 ton of silage heated 30° F = 12.64 Mcal.
- ▶ 0.31 Mcal required to produce 1 lb of milk.
- ▶ 1 ton of silage heating 30° F = 40.8 lbs of lost milk production (12.64/0.31) = \$6.11 in lost milk production per ton of silage heating 30° F (milk @ \$15/cwt).

4. 2007 - 31 Midwest corn silages were compared; 16 corn silages treated with *L. buchneri* 40788 compared to 15 untreated.

- ▶ Treated silages had less spoilage yeasts and stayed cooler, longer, preserving valuable milk producing energy.



Research Proven

Biotol's *L. buchneri* 40788 is the most researched *L. buchneri* product available.

Biotol's *L. buchneri* 40788 has more than 70 published independent trials.

BIOTAL BUCHNERI 500 RETURN ON INVESTMENT

4% More nutritious DM saved:

Research has shown the LAB in Biotol Buchneri 500 preserves 4% more DM in both alfalfa and corn silages via a faster, cooler fermentation:

- ▶ **\$65/t Corn Silage; +4% DM = \$2.60/t**
- ▶ **\$80/t Haylage; +4% DM = \$3.20/t**

The DM you save is the most digestible, nutrient dense portion of the plant. You more than pay for the Biotol Buchneri 500 with 4% DM savings alone, before back end/feed out benefits are considered.



Improved milk production:

The two proprietary inoculant technologies contained in Biotol Buchneri 500 have shown improved milk production vs. untreated:

- ▶ ***L. buchneri* 40788 treated alfalfa haylage; +2.4 lbs/hd/d (U of DE, 2003).**
- ▶ ***P. pentosaceus* 12455 treated corn silage; +2.4 lbs/hd/d (Wye College, 1993).**

Biotol Buchneri 500 supplies the FDA reviewed/recommended rates of *L. buchneri* 40788:

- ▶ 400,000 CFU/g of forage(s).
- ▶ 600,000 CFU/g of HMC.



Ratio for Bag Chart

Relation to 65% corn silage tonnage in upright silos	100%
Type of Crop, Moisture	130%
Haylage, 60%	120%
HMC (grnd), 30%	130%
Earlage, 35%	130%
Snaplage, 40%	130%



Bag Capacity (fresh tons)

Per foot	Tons
8'	1
9'	1.25
10'	1.5
11'	1.75
12'	2.25
14'	2.75

Estimates shown are for corn silage. Source: The 3M's of Silage. Appendix B page 14, Ag-Bag International, Ltd.

Upright Concrete Silo Forage Capacity Chart (fresh tons)

Dia (ft)	Hght (ft)	Corn Silage		HMC (ground)		Snaplage 40%	
		60%	65%	25%	30%	Earlage 35%	Snaplage 40%
16	60	227	259	317	356	316	343
16	65	248	284	345	387	345	374
18	60	293	335	404	454	406	439
18	70	387	349	475	533	478	518
20	60	410	369	503	564	506	548
20	80	434	511	679	763	685	743
24	70	563	743	860	965	849	971
24	90	760	1001	1115	1254	1135	1231

Source: Savoie, Philippe, and Jan C. Joffriet. "Silage Storage." Silage Science and Technology, Vol. 42. Madison: American Society of Agronomy, 2003. 419. Print. Agronomy.