

QUALITY

QUALITY CONTROL

Products are independently tested to ensure manufacturing quality is maintained. Lallemand Animal Nutrition production facilities follow a strict Total Quality Management System to ensure product purity and quality.

All Biotol Forage Inoculants are manufactured at our facility in Milwaukee, WI under the following internationally recognized quality accreditation systems: ISO 9001: 2000; AIB GMP certification; AFIA Safe Feed/Safe Food Certification; FAMI-QS.

**WHAT IS ON THE LABEL
IS WHAT IS INSIDE THE PACKAGE.**



Production of good quality forage requires good management practices. The use of any forage additive cannot be expected to overcome bad management.

PRODUCT STORAGE AND APPLICATION

Store unopened packages in a cool, dry place. Refrigeration at or below 40°F is recommended. Shelf life is 18 months from date of manufacture when stored as recommended. Can be applied using any suitable applicator. Ensure that the applicator is properly cleaned and calibrated.

All Biotol Forage Inoculants include a proprietary blend of stabilizers to both maintain viability in the package and to enhance stability following rehydration of the product. Once rehydrated with potable (drinking quality) water, the product will maintain viability for 3-4 days in the applicator tank, when kept cool and out of direct sunlight.

Biotol Forage Inoculants are not affected by chlorine up to potable water standards (1 ppm).

Some of the essential product stabilizers are finely divided, insoluble powders (1-3% by weight). This may result in a small residue of fine white powder in the bottom of the applicator.

SPECIFICATIONS

BIOTAL BUCHNERI 40788

Contains live viable cells of *Lactobacillus buchneri* 40788 at a level to deliver 400,000 CFU/g silage or haylage or 600,000 CFU/g high moisture corn or grain.

Contains specific enzymes, flow enhancers, nutrients, stabilizers and indicator dye. This proprietary formula is preserved in US Military specification foil to ensure:

- ☑ Shelf life stability
- ☑ Optimum flow characteristics
- ☑ Easy dispersion in cold water
- ☑ Rapid activation of ingredients
- ☑ Viability following rehydration

BENEFITS

- ☑ Less mold
- ☑ Less heating
- ☑ Improved stability
- ☑ Less waste
- ☑ Improved intake and performance
- ☑ Improved production efficiency from field to milk tank

PACKAGE SIZES

Supplied in 250g and 1kg packages of water soluble concentrate to treat 50 and 200 tons of forage or haylage or 33 and 133 tons of high moisture corn or grains, respectively.

For more information visit
www.biotol.com • www.QualitySilage.com

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**BIOTAL®
BUCHNERI 40788**



FORAGE INOCULANT

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

Patent #
6,326,037



The Power Comes
From Within.™
DNA Fingerprinted for Purity



THE POWER COMES FROM WITHIN.™

THE POWER COMES FROM WITHIN

Lactobacillus buchneri 40788 was originally isolated and proven by world-leading forage scientists (ID-DLO, Holland and USDA FRC) and has been FDA reviewed for efficacy in preventing heating and spoilage.

Lactobacillus buchneri 40788 consistently reduces heating and spoilage by yeasts and molds in a range of forages. Forages and Total Mixed Rations (TMRs) made with treated forages are more stable, meaning less waste, more forage to feed, better intakes and better hygienic feed quality.

BIOTAL BUCHNERI 40788

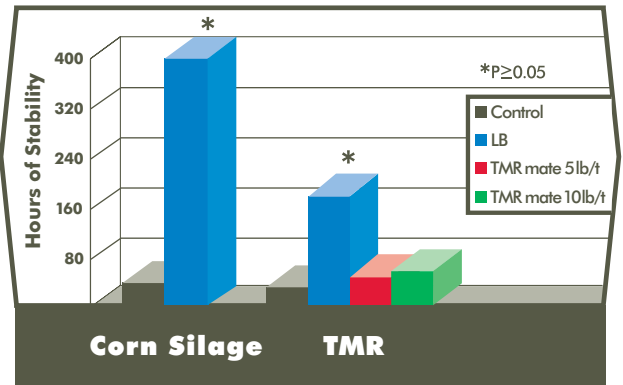
Biotol® Buchneri 40788 has been trialed and tested in a wide range of crops to ensure on-farm efficacy for:

- ☑ Consistent reduction of yeast and mold spoilage
- ☑ Less waste
- ☑ Increased dry matter and nutrient retention
- ☑ More forage to feed
- ☑ Better hygienic feed quality
- ☑ Improved stability at feedout
- ☑ Improved production efficiency from field to milk tank

AEROBIC STABILITY – University Of Delaware

Whole Plant Corn Silage and TMR

Aerobic stability of the BIOTAL BUCHNERI 40788 treated silage and TMR was significantly better.

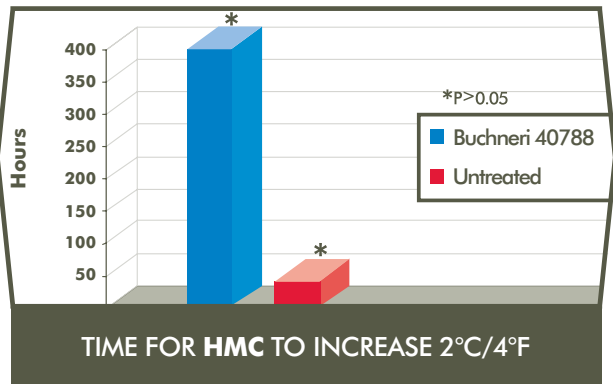


Schmidt and Kung, 2006

LESS HEATING, MORE ENERGY MAINTAINED IN THE FEED!

High Moisture Corn University of Delaware

BIOTAL BUCHNERI 40788 is highly effective in preventing heating in high value feed.



Numbers with different superscripts are statistically significantly different P < 0.05.

CORN SILAGE AEROBIC STABILITY: META ANALYSIS

University of Delaware

Item	Control	Buchneri 40788
Lactate, %	6.6	4.8
Acetate, %	2.2 ^b	3.9 ^a
Aerobic stability, h	25 ^b	503 ^a

Meta analysis of data from 26 published and citable comparisons (journal articles and meeting abstracts) of effects of *L. buchneri* on fermentation and aerobic stability of corn silage.

^{ab}Means in a row with unlike differ P < 0.05. Kleinschmit and Kung, 2006.

IMPROVED MILK PRODUCTION BAGGED ALFALFA SILAGE University of Delaware

Cows fed BIOTAL BUCHNERI 40788 treated silage produced more milk than cows fed untreated silage.

Item	Control	Buchneri 40788
DMI, lb/d	55.2	55.9
Milk, lb/d	87.8 ^b	89.5 ^a
Milk fat, %	3.37	3.43
Milk fat, lb	2.95	3.04
Milk protein, %	3.07	3.27
Milk protein, lb	2.68	2.97
Lactose, %	4.82	4.84
3.5% FCM, lb/d	85.6 ^d	88.0 ^c
Milk production efficiency (lb/FCM/lb DMI)	1.55	1.57

^{ab} Means in rows with unlike superscripts differ P < 0.05
^{cd} Means in rows with unlike superscripts differ P < 0.10

Steers Fed Wheat Silage ADAS, UK

Item	Buchneri 40788
Average Daily Gain (ADG)	+5.6%
Feed Conversion Efficiency (FCE)	+3.9%



FOR MAXIMUM FEED OUT STABILITY AND MINIMUM SPOILAGE LOSSES