Biotal Buchneri 500 helps achieve fast front-end forage fermentation and maintain aerobic stability to maximize the amount of top quality silage available at feedout. The high dose rate of *Lactobacillus buchneri* NCIMB 40788 in Biotal Buchneri 500 is the only silage inoculant available that has been reviewed by the FDA to allow claims for improved aerobic stability.

**What is in Biotal Buchneri 500?**

<table>
<thead>
<tr>
<th>Biotal Buchneri 500 Strains</th>
<th><em>Pediococcus pentosaceus</em> 12455</th>
<th><em>Lactobacillus buchneri</em> 40788</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Features</strong></td>
<td>Provides fast, efficient fermentation</td>
<td>Reduces heating and spoilage during feedout</td>
</tr>
<tr>
<td><strong>Colony Forming Units (CFU):</strong></td>
<td>100,000 CFU/g fresh forage</td>
<td>400,000 CFU/g fresh forage</td>
</tr>
<tr>
<td></td>
<td>150,000 CFU/g high-moisture corn</td>
<td>600,000 CFU/g high-moisture corn</td>
</tr>
</tbody>
</table>

Biotal Buchneri 500 is a patented inoculant formulation with high activity enzymes to help direct fermentation and increase fiber digestibility.

**Biotal Buchneri 500 is used for:**
- High moisture corn, earlage, snaplage, baleage
- Silages to be fed during warmer temperatures
- Crops that are exposed to conditions that cause yeast and mold growth in the field
- Haylages over 35% DM
- Corn silage above 30% DM
- Ensiling silage that will be transported or relocated

**ADVANTAGES**

As with all Biotal forage inoculants, the bacteria strains and enzymes found in Biotal Buchneri 500 have been specifically selected for their consistent performance through numerous lab and farm trials.

**Fast Fermentation**
- Improved DM Recovery
- Ideal Fermentation
- Better Protein Quality

**Improved Aerobic Stability**
- Less Spoilage
- Less Heating
- Less Molds
Our Guarantee - What is on the label is inside the package!

Lallemand Animal Nutrition’s Quality Control is among the best in the world. Production facilities follow a strict total quality management system to ensure product purity and quality.

References: Trial Summaries available upon request

**RESULTS**

1 **FASTER DROP IN pH (BELOW 5.0)**

In trials at UF-Gainesville, Biotal Buchneri 500 treated high moisture (78%) bermuda grass was below pH 5.0 in 3 days, compared to 30 days for the control, resulting in much better nutrient preservation. The haylage was also aerobically stable for 7 days.\(^1\)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Control</th>
<th>Biotal Buchneri 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time to get below pH 5.0</td>
<td>30 Days</td>
<td>3 Days</td>
</tr>
<tr>
<td>Final pH</td>
<td>4.1(^a)</td>
<td>3.5(^b)</td>
</tr>
<tr>
<td>Crude Protein (% DM)</td>
<td>10.1</td>
<td>13.5</td>
</tr>
<tr>
<td>Ammonia (% DM)</td>
<td>1.0(^a)</td>
<td>0.3(^b)</td>
</tr>
<tr>
<td>DOMD (% DM)</td>
<td>32.6</td>
<td>40.9</td>
</tr>
<tr>
<td>DM Recovery (%)</td>
<td>86.7(^a)</td>
<td>96.9(^b)</td>
</tr>
<tr>
<td>Butyric Acid (% DM)</td>
<td>2.3</td>
<td>0.0(^b)</td>
</tr>
</tbody>
</table>

\(^{a}\)Numbers in the same row with different superscripts are statistically significantly different \(P<0.05\).

2 **MORE DRY MATTER RECOVERY**

*P. pentosaceus* 12455 (found in Biotal Buchneri 500) consistently produced faster, more efficient ensiling fermentations that resulted in significant improvements in dry matter recovery over a wide range of conditions. The corn silage trials below averaged an extra 4.2 tons of dry matter per 100 tons ensiled.\(^1,6\)

3 **AEROBIC STABILITY OF HIGH MOISTURE CORN**

Biotal Buchneri 500 proved effective in maintaining aerobic stability of high moisture corn (27% moisture) compared to the untreated control.\(^7\)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Control</th>
<th>Biotal Buchneri 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating in aerobic stability tests</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^7\)Unpublished Data. University of Delaware.

4 **MAINTAIN TMR STABILITY**

Inoculating corn silage with *L. buchneri* NCIMB 40788 (found in Biotal Buchneri 500) provided better aerobic stability than treating the TMR later with propionic acid.\(^7\)

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**Notes:**

- Numbers in the same row with different superscripts are statistically significantly different \(P<0.05\).
- **OMRI Listed**
  - The use of any forage additive cannot be expected to overcome poor management. Proper storage and handling is important to forage inoculant performance. Products should be refrigerated, and the whole package should be used at one time. Visit [www.QualitySilage.com](http://www.QualitySilage.com) for the latest information on silage management practices.
  - The sample has been formulated for use in different geographical regions.
  - Contact your Biotal sales representative.

**References:**

- Trial Summaries available upon request
  - 1 Adesogan et al. (2004), J. Dairy Sci. 87:3407-3416. (BTUSE023)
  - 3 Muck, R. Unpublished. USDA Dairy Research Center. Madison, WI. (BTUSE027)
  - 4 Phipps, R. Unpublished. Centre for Dairy Research, Reading, UK. (BTUSE026)
  - 5 Scollan, N. Unpublished. IGER, Aberystwyth, UK. (BTUSE028)
  - 7 Unpublished Data. University of Delaware.

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