

Capacity Charts

As-fed upright silo capacity

| Size, ft (diameter x height) | Corn silage & haylage | | | HMSC | Ground HMSC | Ground HM ear corn |
|------------------------------------|-----------------------|-------|-------|-------|----------------|--------------------------|
| | 70% | 60% | 50% | 30% | 30% | 30% |
| Moisture content | 70% | 60% | 50% | 30% | 30% | 30% |
| 12x30 | 80 | 65 | 50 | 89 | 95 | 70 |
| 12x40 | 115 | 90 | 70 | 120 | 128 | 94 |
| 12x50 | 155 | 120 | 95 | 151 | 160 | 120 |
| 14x40 | 160 | 120 | 96 | 165 | 172 | 128 |
| 14x50 | 213 | 160 | 127 | 208 | 220 | 163 |
| 14x60 | 266 | 200 | 160 | 251 | 264 | 198 |
| 16x30 | 146 | 110 | 88 | 150 | 166 | 123 |
| 16x40 | 209 | 156 | 125 | 220 | 224 | 167 |
| 16x50 | 278 | 208 | 167 | 274 | 285 | 213 |
| 16x60 | 347 | 260 | 208 | 330 | 345 | 259 |
| 18x40 | 265 | 198 | 159 | 270 | 284 | 211 |
| 18x50 | 352 | 264 | 211 | 350 | 360 | 269 |
| 18x60 | 440 | 330 | 264 | 422 | 437 | 328 |
| 18x70 | 530 | 398 | 318 | 496 | 520 | 389 |
| 20x40 | 326 | 245 | 196 | 340 | 350 | 260 |
| 20x50 | 435 | 326 | 261 | 428 | 445 | 332 |
| 20x60 | 543 | 407 | 326 | 525 | 540 | 404 |
| 20x70 | 655 | 491 | 393 | 617 | 638 | 480 |
| 20x80 | 767 | 575 | 460 | 708 | 736 | 557 |
| 24x50 | 626 | 470 | 375 | 600 | 640 | 478 |
| 24x60 | 782 | 587 | 469 | 763 | 776 | 582 |
| 24x70 | 943 | 707 | 565 | 897 | 918 | 692 |
| 24x80 | 1,104 | 828 | 662 | 1,032 | 1,060 | 801 |
| 24x90 | 1,275 | 955 | 764 | 1,165 | 1,209 | 920 |
| 30x80 | 1,725 | 1,293 | 1,035 | 1,628 | 1,656 | 1,252 |
| 30x90 | 1,990 | 1,493 | 1,195 | 1,840 | 1,888 | 1,434 |

Wagon capacity

| Depth, ft | Approximate tons (as-is basis) | | | | | | | |
|-----------|--------------------------------|------|------|------|---------------------------|-----|-----|------|
| | Length, ft (65% moisture) | | | | Length, ft (55% moisture) | | | |
| | 14 | 16 | 18 | 20 | 14 | 16 | 18 | 20 |
| 3 | 3.5 | 4.0 | 4.5 | 5.0 | 2.5 | 3.0 | 3.5 | 4.0 |
| 4 | 4.5 | 5.5 | 6.0 | 6.5 | 3.5 | 4.0 | 4.5 | 5.0 |
| 5 | 6.0 | 6.5 | 7.5 | 8.5 | 4.5 | 5.0 | 5.5 | 6.5 |
| 6 | 7.0 | 8.0 | 9.0 | 10.0 | 5.5 | 6.0 | 7.0 | 7.5 |
| 7 | 8.0 | 9.5 | 10.5 | 12.0 | 6.0 | 7.0 | 8.0 | 9.0 |
| 8 | 9.5 | 11.0 | 12.0 | 13.5 | 7.0 | 8.0 | 9.0 | 10.0 |

Bag capacity*

| Bag size, ft | Tons (fresh) |
|--------------|--------------|
| 8 | 1 |
| 9 | 1.25 |
| 10 | 1.5 |
| 11 | 1.75 |
| 12 | 2.25 |
| 14 | 2.75 |

*Estimates shown are for corn silage.

Ratio for bag chart

| Type of crop, moisture | Relation to 65% corn silage tonnage |
|------------------------|-------------------------------------|
| Haylage, 60% | 100% |
| HMSC, 30% | 130% |
| Earlage, 35% | 120% |
| Snaplage, 40% | 130% |

Estimated as-fed capacity for bunkers and piles

| | |
|----------------------|--|
| Enter avg width* | 1. _____ ft |
| Enter avg length | 2. _____ ft |
| Enter avg height | 3. _____ ft |
| Multiply 1x2x3 | 4. _____ lb/ft ³ in structure |
| Est as-fed density** | 5. _____ lb/ft ³ |
| Multiply 4x5 | 6. _____ lb as-fed in structure |
| Divide by 2,000 | 7. _____ tons as-fed in structure |

*To determine dimensions for piles, look at the slopes of each side of the pile. Visualize how much of the slope would need to be "folded back" on itself to square up the sides of the pile to determine average width.

**Use known as-fed density when possible. Otherwise, start with these average densities: 40 lb for haylage and corn silage; 60 lb for HMSC; and 45 lb for earlage/snaplage. Use higher or lower numbers for well packed or poorly packed units, respectively.

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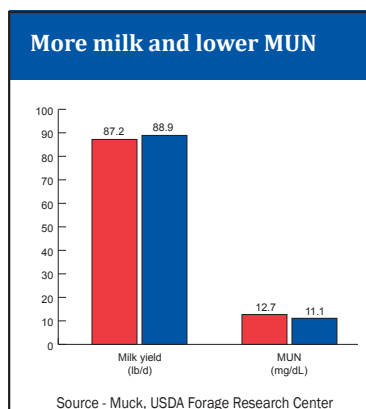
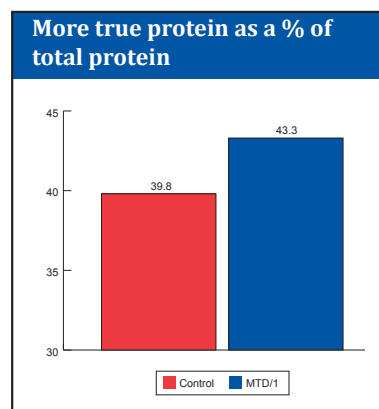
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Producing high-quality forage is a risky proposition that can be reduced with a forage inoculant that is not only proven by science, but also tested by time.

Crop-N-Rich inoculant with MTD/1 is not just another run-of-the-mill *L. plantarum* bacterial inoculant, but a specific and unique strain of *L. plantarum* that is able to outperform other products.

New USDA research shows that Crop-N-Rich-treated alfalfa haylage results in better quality protein. Because of higher quality protein, researchers saw less protein degradation and fewer biogenic amines that cause reduced protein utilization by the animal. These all culminate into improvements in protein digestion and retention in the rumen, higher milk production, and lower MUN.



Earlier studies on Crop-N-Rich inoculant with MTD/1 done in the U.S. and Europe led to this comment from researchers at the University of Delaware:

“Probably the most impressive data set for a single inoculant is that of animal experiments conducted using *L. plantarum* MTD/1.”

Other features

- 1 g per ton application rate
- Same 1 g rate for haylage, corn silage or high moisture grain
- Applies a minimum 100,000 cfu *L. plantarum* MTD/1 per g of feed
- Available canisters for 100-, 500- and 1,000-ton liquid application as well as 25-lb bag of granular product for dry application
- Three-year shelf life at room temperature (excluding granular product)
- Works at pH 3.5-7.5; no need for multiple strains
- Powerful upfront fermenter, resulting in high lactic acid production
- Thrives in aerobic and anaerobic conditions
- Best tank mix viability and temperature tolerance available
- Great mixing characteristics
- Active under high and low DM conditions
- Highly controlled continuous culture bacteria production process

To date, 15 independent dairy cow trials have been conducted worldwide, all carried out at recognized university and government research institutes in the U.S., Canada, UK, Eire, Holland, Germany and Japan. On average, MTD/1 treatment increased silage dry matter intake by 4 percent and milk yield by 2.6 pounds per cow per day (shown below). Improvements were also seen in milk constituent output and bodyweight change.

Production results from 15 Crop-N-Rich inoculant with MTD/1 trials

| (lb per day) | Untreated | MTD/1 |
|--------------------|-----------|-------|
| Silage DM intake | 23.6 | 24.5 |
| Milk yield | 57.8 | 60.4* |
| Milk fat | 2.17 | 2.98* |
| Milk protein | 1.80 | 1.87* |
| Milk lactose | 2.51 | 2.60* |
| Body weight change | +0.53 | +0.77 |

*Statistically significant difference

Impressive corn silage results compared to the competition

| | % improvement over untreated | |
|-----------------------|----------------------------------|-------------|
| | All inoculants (including MTD/1) | MTD/1 alone |
| DM recovery | 1.6 | 2.1 |
| DM intake | 0.9 | 2.8 |
| Daily liveweight gain | 2.7 | 7.4 |
| Feed:Gain | 1.4 | 4.4 |
| Gain per ton ensiled | 3.4 | 7.5 |

Source: Bolsen, Kansas State University