

# QUALITY FORAGE

*A Wisconsin Dairyman's Perspective*

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## ECONOMIC FACTORS

- *Cost of shrink loss*
- *Cost of ration*
- *Cost of chopping*
- *Cost of larger feed pad*

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## SHRINK LOSS

- *Silage price range \$20-\$70*
- *Shrink range 5%-25%*

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*The Mid-South Ruminant Nutrition Conference does not support one product over another and any mention herein is meant as an example, not an endorsement.*




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3000 COW DAIRY  
30,000 TON CORN SILAGE  
\$20-\$70/TON  
5%-25% SHRINK LOSS

	\$20/ton	\$30/ton	\$40/ton	\$50/ton	\$60/ton	\$70/ton	
5%	\$30,000	\$45,000	\$60,000	\$75,000	\$90,000	\$105,000	
10%	\$60,000	\$90,000	\$120,000	\$150,000	\$180,000	\$210,000	
15%	\$90,000	\$135,000	\$180,000	\$225,000	\$270,000	\$315,000	
20%	\$120,000	\$180,000	\$240,000	\$300,000	\$360,000	\$420,000	
25%	\$150,000	\$225,000	\$300,000	\$375,000	\$450,000	\$525,000	

NOTE: \$20/TON REDUCTION IN ROLLED CORN PRICE NETS  
\$79,478.75/HERD/YEAR

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## COST OF RATION

- High Quality Silage
  - Starch 37.2%
- Low Quality Silage
  - Starch 21.6%
- Medium Quality Silage
  - Starch 30.3%

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## COMPARISON OF HIGH, MED AND LOW QUALITY SILAGE

CORN SILAGE - \$67/TON  
ROLLED CORN - \$288/TON  
DAIRY HAY - \$280/TON

HERD SIZE 3000

	# Silg	# Rolled Corn	# Dairy Hay	\$/cow/day	\$/cow/yr	\$/herd/yr
High	16.80	3.5	2.5	\$7.35	\$2682.75	\$8,048,250
Med	13.02	7.4	2.5	\$7.64	\$2788.60	\$8,365,800
Low	11.00	9.7	3.9	\$7.81	\$2850.65	\$8,551,950

NOTE: \$20/TON REDUCTION IN ROLLED CORN PRICE  
NETS \$79,478.75/HERD/YEAR

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## COST OF PRODUCTION LOSS

- Milk Price range \$12/cwt-\$20/cwt
- Production Loss 0-15#

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#### VARIABILITY IN CORN SILAGE QUALITY

CA 2012 SAMPLING

DM	ADF	NDF	Cellul. NDF	Starch	Starch Dig	Starch Dig	Milk/ton
39.6	36.2	40.8	53.7	36.2	74.6	26.9	3070
37.2	29.6	47.0	54.8	26.1	65.4	17.0	3180
38.6	36.2	41.2	55.6	32.3	75.3	24.3	3070
33.2	28.6	43.5	52.6	27.8	70.9	19.0	3180
36.3	26.9	43.0	52.6	33.2	74.6	25.2	3170
42.0	36.3	42.2	56.3	34.2	65.0	22.2	2941
30.2	34.0	52.4	53.9	28.4	77.2	15.2	3860
25.2	31.3	50.8	55.4	18.8	73.9	13.9	2970
30.9	26.3	44.2	58.4	32.2	73.1	23.2	3330
38.2	25.6	39.7	49.8	33.4	73.3	24.3	2930
38.4	28.4	42.2	51.2	30.2	61.2	18.0	2810
34.0	24.4	38.8	47.4	36.2	73.2	26.9	3342



#### 3000 COWS MILKING ANNUAL LOST MILK INCOME POTENTIAL

	\$12/cwt	\$14/cwt	\$16/cwt	\$18/cwt	\$20/cwt
0# loss	\$0	\$0	\$0	\$0	\$0
1# loss	\$109,500	\$127,750	\$146,000	\$164,250	\$182,500
2# loss	\$219,000	\$255,500	\$292,000	\$328,500	\$365,000
3# loss	\$328,500	\$383,250	\$438,000	\$492,750	\$547,500
4# loss	\$438,000	\$511,000	\$584,000	\$657,000	\$730,000
5# loss	\$547,500	\$638,750	\$730,000	\$821,250	\$912,500
6# loss	\$657,000	\$766,500	\$876,000	\$985,500	\$1,095,000

NOTE: \$20/TON REDUCTION IN ROLLED CORN PRICE NETS  
\$79,478.75/HERD/YEAR

## PLANTING FACTORS

- Variety
  - Digestibility
  - Conventional vs BMR
- Maturity
- Density
  - High density yields lower digestibility
  - We use 30,000 to 32,000
  - Avoid narrow rows
  - Conflict of corn grower and dairy

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## HARVESTING FACTORS

- Pre-harvest meeting
- Chop length
- Processing
- Inoculant
- Monitoring

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## PRE-HARVEST MEETING

- Dairyman
- Operations manager
- Custom operator
- Nutritionist
- Crop advisor
- Scale-house attendant

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## CHOPPING GUIDELINES

- Chop length
  - Conventional 5/8-3/4 inch (17-19 mm)
- Processing
  - 1-3 mm plus monitoring
- Inoculant

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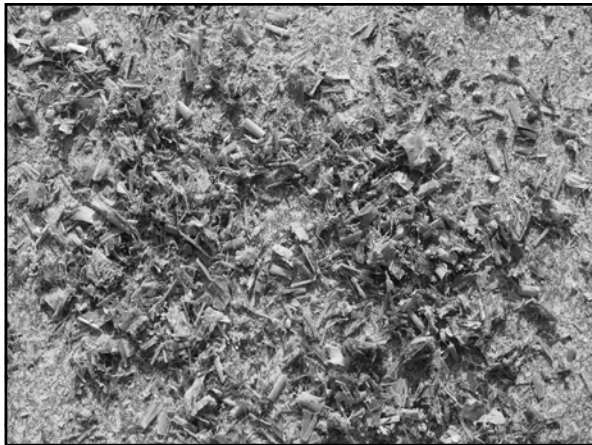
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## MONITORING

- DM % -scale-house
  - 33-35%
  - Half milk line
- Nutritionist (2x/harvest)
- “Silage cam”??
- Analysis
  - Starch >32%
  - Digestibility (30hr) >54%

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### PACKING FACTORS

- Tonnage of Iron
  - 2 units/chopper
- Push and pack non-stop
  - 2 directions
- Shape
  - 3-1 slope
  - No higher then extended pay-loader bucket
- Density
  - 15 #DM/cu ft top 3 feet

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SIDES TOO  
STEEP



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## STORING FACTORS

- When to cover
- How to cover
- Who will cover

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## WHEN TO COVER

- Immediately after packing
- Progressive
  - Daily?

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## HOW TO COVER

- Large rolls
- 2 layers of plastic
- 4' overlap
- Tire to tire
  - If tires slide, pile is too steep!

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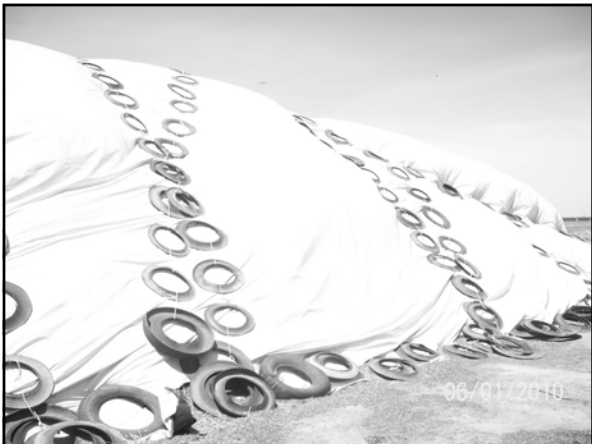
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## WHO TO COVER

- Off-duty labor
- Pay cash

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## FEED OUT FACTORS

- Uncover protocol - 2x weekly
- Pitch off as needed
- Face management
- Loose material protocol
- Safety

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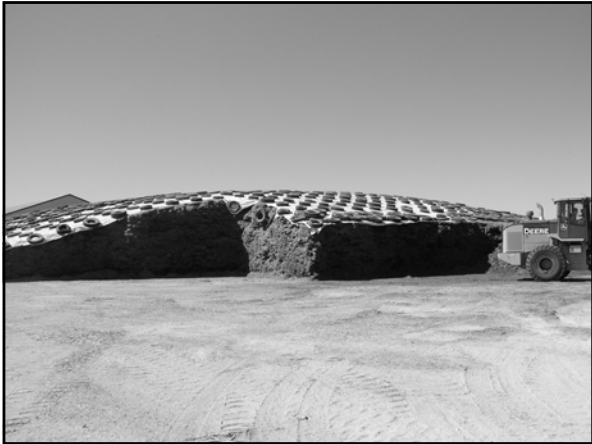
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