

High Oleic Soybeans & Dairy Cows

Opportunities to decrease purchased feed costs and increase cow performance

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2026 Four State Dairy Nutrition and Management Conference



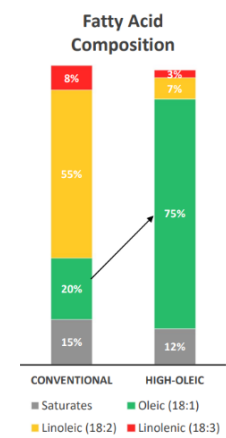
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Fatty Acid Profile of High Oleic Soybeans

| | | | |
|--|----------------------|--|---------------|
| | | Dairyland Laboratories P.O. Box 580 St. Cloud, MN 56302 Telephone: +1 320-240-1737 Fax: +1 320-240-1838 Email: info@dairylandlabs.com | |
| | | Employee-Owned | |
| Account No.: | Plenish 1.9 maturity | | |
| Sampled By: | Central MN | | |
| Sampled For: | | | |
| Moisture | 4.44% | | |
| Dry Matter | 95.56% | | |
| | | Dry Basis | 90% Range* |
| CP | %DM | 40.65 | 37.24 - 41.44 |
| Fat (EE) | %DM | 20.99 | 18.19 - 25.15 |
| Total fatty acids | %DM | 18.28 | 17.64 - 21.76 |
| 16:0 Palmitic | % TFA | 7.17 | 6.55 - 12.14 |
| 18:0 Stearic | % TFA | 3.83 | 3.57 - 4.55 |
| 18:1 Oleic | % TFA | 73.36 | 18.40 - 80.68 |
| 18:2 Linoleic | % TFA | 9.30 | 7.32 - 57.04 |
| 18:3 Linolenic | % TFA | 4.38 | 2.57 - 10.29 |
| Roasted soybeans statistics provided for comparison. | | | |

| | | | |
|-------------------|----------------------|--|---------------|
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| | | Employee-Owned | |
| Account No.: | Plenish 2.4 maturity | | |
| Sampled By: | Southeast MN | | |
| Sampled For: | | | |
| Moisture | 8.25% | | |
| Dry Matter | 91.75% | | |
| | | Dry Basis | 90% Range* |
| CP | %DM | 39.25 | 37.24 - 41.44 |
| Crude Fiber | %DM | 5.50 | 3.95 - 8.42 |
| Fat (EE) | %DM | 21.54 | 18.19 - 25.15 |
| Total fatty acids | %DM | 19.58 | 17.64 - 21.76 |
| 16:0 Palmitic | % TFA | 6.18 | 6.55 - 12.14 |
| 18:0 Stearic | % TFA | 3.68 | 3.57 - 4.55 |
| 18:1 Oleic | % TFA | 79.26 | 18.40 - 80.68 |
| 18:2 Linoleic | % TFA | 5.77 | 7.32 - 57.04 |
| 18:3 Linolenic | % TFA | 3.17 | 2.57 - 10.29 |

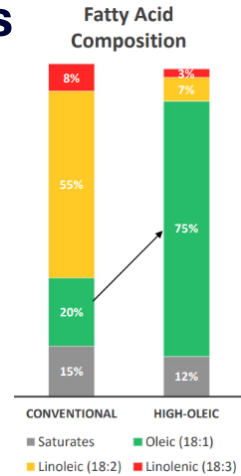


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Fatty Acid Profile of High Oleic Soybeans

- Lower maturity HOSB, or shortened growing days (delayed planting, early harvest, frost) can impact the total FA and oleic acid concentration
- Routinely analyze HOSB for DM, total fatty acids and oleic acid composition
- Lower oleic FA concentration may increase risk for milk fat depression and impact particle size



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Roasting Efficiency

- Protein Dispersibility Index (PDI) can be used to evaluate roasting quality
- HOSB fine ground for PDI assay
 - Particle size will not change PDI score
 - Particle size will change RUP
- Turn around time 4-10 days
- Farm experience: Cow performance unaffected when PDI <14
 - Consistent with Pioneer's data

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Email: info@dairylandlabs.com

Report Date: 02/16/2026
Sample No.: 5HJXS
Example: 71-239-873

Account No. [REDACTED]
Sampled By: [REDACTED]
Sampled For Description: [REDACTED]

Test Package:
PDI - Protein Dispersibility (Complete NASEM)
Feed Type: Oilseeds & byproducts
Sub Type: Roasted soybeans

| | | | |
|-------------------|--------|-----------|---------------|
| Moisture | 4.79% | | |
| Dry Matter | 95.21% | | |
| | | Dry Basis | 90% Range* |
| CP | %DM | 40.96 | 37.24 - 41.44 |
| Urease activity | ph | 0.02 | |
| PDI | | 13.19 | |
| Ross UCP | % CP | 10.23 | 1.26 - 17.53 |
| Fat (EE) | %DM | 20.67 | 18.19 - 25.15 |
| Total fatty acids | %DM | 17.52 | 17.64 - 21.76 |
| 16:0 Palmitic | % TFA | 7.19 | 6.55 - 12.14 |
| 18:0 Stearic | % TFA | 3.77 | 3.57 - 4.55 |
| 18:1 Oleic | % TFA | 73.46 | 18.40 - 80.68 |
| 18:2 Linoleic | % TFA | 9.02 | 7.32 - 57.04 |
| 18:3 Linolenic | % TFA | 4.62 | 2.57 - 10.29 |

Roasted soybeans statistics provided for comparison.

| Score | Interpretation | Comments |
|-----------|-----------------------------|---|
| PDI <9 | Potentially over roasted | Decrease heat; analyze lysine for heat damage |
| PDI 9-11 | High quality roast | Continue to monitor PDI, high RUP |
| PDI 11-14 | Marginally under roasted | Increase heat or steep time; monitor PDI |
| PDI >14 | Significantly under roasted | Evaluate UA, remove urea from diet if needed; will have significantly lower RUP |

Bold measurements were run by chemistry.

U.S. Dairy Forage Research Center, Madison, WI, has established the following table evaluating an optimally heat-processed soybean for lactating dairy cattle:

| PDI Range-Interpretation | Greater than 14 Underheated | 13.99 - 11.01 Slightly Underheated | 11.00 - 9.00 Optimum |
|--------------------------|-----------------------------|------------------------------------|----------------------|
| This sample | [REDACTED] | 13.19 | 11 |

In addition to an optimum PDI value, a properly heat-processed soybean will have an urease activity (pH unit rise) of less than .02.

The interpretation range on this report applies to roasted soybeans. It does not apply to other heat roasted soy products.



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Monitoring Roasting Quality - PDI, urease, 16-hr RUP



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Report Date: 04/14/2025
Sample No: SK328
Example: 71-257-651

Account No.:
Sampled By: H
Sampled For: S
Description1: HO soybeans
Description2: Sampled 4-6-25

Test Package:
PDI - Protein Digestibility/Complete NASEM
Feed Type: Oilseeds & byproducts
Sub Type: Roasted soybeans

Moisture: 5.01%
Dry Matter: 94.99%

CP: 39.88 %DM 37.24 - 41.44

Urease activity: 0.22

PDI: 10.43

Ross UCP: 11.40 % CP 1.26 - 17.53

FAI (EE): %DM 29.53 18.99-29.95

Total fatty acids: %DM 19.20 17.64 - 21.76

16:0 Palmitic: % TFA 8.47 6.95-12.54

18:0 Stearic: % TFA 3.75 3.27 - 4.55

18:1 Oleic: % TFA 77.50 18.40 - 80.68

18:2 Linoleic: % TFA 6.41 7.32 - 57.04

18:3 Linolenic: % TFA 3.70 2.57 - 10.29

Total sugars: %DM 0.00

Sucrose: %DM 0.00

Roasted soybeans statistics provided for comparison.

Bold measurements were run by chemistry.


U.S. Dairy Forage Research Center, Madison, WI, has established the following table evaluating an optimally heat-processed soybean for lactating dairy cattle:

PDI Range-Interpretation: Greater than 14 Underheated, 13.99 - 11.01 Slightly Underheated, 11.00 - 9.00 Optimum

This sample: 10.43

In addition to an optimum PDI value, a properly heat-processed soybean will have an urease activity (pH unit rise) of less than 0.2.

The interpretation range on this report applies to roasted soybeans. It does not apply to other heat roasted soy products.



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Form: 1
Name: 4
Account: 4

Client: Caprice Inc

Lab ID: 38028 624
Invoiced: 10/27/2025
Arrived: 10/30/2025
Completed: 11/06/2025
Reported: 11/06/2025

Evaluation of Heat-treated Soybeans

Moisture: 5.7
Dry Matter: 94.3

| ANALYSIS RESULTS | Year Sample | UCL Range | Interpretation |
|--------------------|-------------|---------------|----------------|
| Moisture | 5.7 | | |
| Dry Matter | 94.3 | | |
| Urease Activity, % | 0.22 | 0.20 - 0.25 | Underheated |
| PDI | 10.43 | 11.00 - 14.00 | Underheated |
| Ross UCP | 11.40 | 12.00 - 17.53 | Underheated |
| FAI (EE) | 29.53 | 29.95 - 34.00 | Underheated |
| Total fatty acids | 19.20 | 21.76 - 25.00 | Underheated |
| 16:0 Palmitic | 8.47 | 12.54 - 15.00 | Underheated |
| 18:0 Stearic | 3.75 | 4.55 - 6.00 | Underheated |
| 18:1 Oleic | 77.50 | 80.68 - 85.00 | Underheated |
| 18:2 Linoleic | 6.41 | 57.04 - 65.00 | Underheated |
| 18:3 Linolenic | 3.70 | 10.29 - 15.00 | Underheated |
| Total sugars | 0.00 | 0.00 - 0.50 | Underheated |
| Sucrose | 0.00 | 0.00 - 0.20 | Underheated |

Protein Digestibility Index, %: 10.7

Urease Activity, %: 0.01

KDM Solubility, %: 0.01

Typical Inhibitors (ppm): 0.01

U.S. Dairy Forage Research Center, Madison, WI has established the following guidelines for evaluation indices for lactating dairy cattle.

Received: 11/14/2025 Sampled: 11/12/2025

Moisture: 2.51
Dry Matter: 97.49 (Feed Avg = 95.95)

| Protein & Amino Acid | %DM | N/D | 4 yr | Carbohydrates | %DM | N/D | 4 yr | Fat | %DM | N/D | 4 yr |
|----------------------|-------|-------|-------|---------------|-------|-------|------|---------------------------|--------|--------|-------|
| Cross Protein | 37.88 | 37.02 | 31.11 | ADF | 8.42 | 6.70 | 6.39 | EE | 22.05 | 21.51 | 21.4 |
| Total Amino Acid | | | | NDF | 17.79 | 18.25 | 9.35 | Total Fatty Acid | 17.57 | 16.26 | 4.61 |
| For CP, % of CP | | | | Cellulose | | | | Acid Hydrolys | | | |
| NDF, % of CP | | | | Lignin | | | | Monoleic acids | 5.21 | 0.23 | 0.12 |
| NDF, % of DM | | | | Starch | | | | Polysaccharides | 6.15 | 6.15 | 8.97 |
| ADF, % of CP | | | | Sugar (ESC) | | | | Stearic acids | 2.62 | 2.59 | 3.41 |
| ADF, % of DM | | | | Sugar (WSC) | | | | Oleic acids | 75.40 | 75.02 | 30.72 |
| NDFP, % of CP | | | | Fructans | | | | Linolenic acids | 27.89 | 26.00 | 33.72 |
| Available CP | | | | Starch | | | | Linolenic polyunsaturates | 3.75 | 1.99 | 3.45 |
| Non-Protein Nitrogen | | | | Lactose | | | | RUFAL | 103.03 | 103.02 | 75.94 |
| Minerals | | | | Monoleic | | | | None | | | |
| Total Sugar | | | | Total Sugar | | | | None | | | |
| Cellulose | | | | Cellulose | 6.52 | 7.24 | 4.66 | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Sugar (ESC) | | | | Starch | | | | None | | | |
| Sugar (WSC) | | | | Starch | | | | None | | | |
| Fructans | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Lactose | | | | Starch | | | | None | | | |
| Monoleic | | | | Starch | | | | None | | | |
| Total Sugar | | | | Starch | | | | None | | | |
| Cellulose | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Sugar (ESC) | | | | Starch | | | | None | | | |
| Sugar (WSC) | | | | Starch | | | | None | | | |
| Fructans | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Lactose | | | | Starch | | | | None | | | |
| Monoleic | | | | Starch | | | | None | | | |
| Total Sugar | | | | Starch | | | | None | | | |
| Cellulose | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Sugar (ESC) | | | | Starch | | | | None | | | |
| Sugar (WSC) | | | | Starch | | | | None | | | |
| Fructans | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Lactose | | | | Starch | | | | None | | | |
| Monoleic | | | | Starch | | | | None | | | |
| Total Sugar | | | | Starch | | | | None | | | |
| Cellulose | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Sugar (ESC) | | | | Starch | | | | None | | | |
| Sugar (WSC) | | | | Starch | | | | None | | | |
| Fructans | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Lactose | | | | Starch | | | | None | | | |
| Monoleic | | | | Starch | | | | None | | | |
| Total Sugar | | | | Starch | | | | None | | | |
| Cellulose | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Sugar (ESC) | | | | Starch | | | | None | | | |
| Sugar (WSC) | | | | Starch | | | | None | | | |
| Fructans | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Lactose | | | | Starch | | | | None | | | |
| Monoleic | | | | Starch | | | | None | | | |
| Total Sugar | | | | Starch | | | | None | | | |
| Cellulose | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Sugar (ESC) | | | | Starch | | | | None | | | |
| Sugar (WSC) | | | | Starch | | | | None | | | |
| Fructans | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Lactose | | | | Starch | | | | None | | | |
| Monoleic | | | | Starch | | | | None | | | |
| Total Sugar | | | | Starch | | | | None | | | |
| Cellulose | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Sugar (ESC) | | | | Starch | | | | None | | | |
| Sugar (WSC) | | | | Starch | | | | None | | | |
| Fructans | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Lactose | | | | Starch | | | | None | | | |
| Monoleic | | | | Starch | | | | None | | | |
| Total Sugar | | | | Starch | | | | None | | | |
| Cellulose | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Sugar (ESC) | | | | Starch | | | | None | | | |
| Sugar (WSC) | | | | Starch | | | | None | | | |
| Fructans | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Lactose | | | | Starch | | | | None | | | |
| Monoleic | | | | Starch | | | | None | | | |
| Total Sugar | | | | Starch | | | | None | | | |
| Cellulose | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Sugar (ESC) | | | | Starch | | | | None | | | |
| Sugar (WSC) | | | | Starch | | | | None | | | |
| Fructans | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Lactose | | | | Starch | | | | None | | | |
| Monoleic | | | | Starch | | | | None | | | |
| Total Sugar | | | | Starch | | | | None | | | |
| Cellulose | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Sugar (ESC) | | | | Starch | | | | None | | | |
| Sugar (WSC) | | | | Starch | | | | None | | | |
| Fructans | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Lactose | | | | Starch | | | | None | | | |
| Monoleic | | | | Starch | | | | None | | | |
| Total Sugar | | | | Starch | | | | None | | | |
| Cellulose | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Sugar (ESC) | | | | Starch | | | | None | | | |
| Sugar (WSC) | | | | Starch | | | | None | | | |
| Fructans | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Lactose | | | | Starch | | | | None | | | |
| Monoleic | | | | Starch | | | | None | | | |
| Total Sugar | | | | Starch | | | | None | | | |
| Cellulose | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Sugar (ESC) | | | | Starch | | | | None | | | |
| Sugar (WSC) | | | | Starch | | | | None | | | |
| Fructans | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Lactose | | | | Starch | | | | None | | | |
| Monoleic | | | | Starch | | | | None | | | |
| Total Sugar | | | | Starch | | | | None | | | |
| Cellulose | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Sugar (ESC) | | | | Starch | | | | None | | | |
| Sugar (WSC) | | | | Starch | | | | None | | | |
| Fructans | | | | Starch | | | | None | | | |
| Starch | | | | Starch | | | | None | | | |
| Lactose | | | | Starch | | | | None | | | |
| Monoleic | | | | Starch | | | | None | | | |
| Total Sugar | | | | Starch | | | | None | | | |
| Cellulose | | | | Starch | | | | None | | | |
| St | | | | | | | | | | | |

Processing Roasted High Oleic Soybeans

- Roasted beans are dry and stable - Can be stored for several months
- Processing exposes the oil starting the shelf-life clock
- Too coarse – Increased fat concentration in manure
- Too fine – Higher risk MFD and reduce RUP value
- Particle size range between 650 to 750 microns seems to be working well on several farms



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Economics of HOSB - Opportunity Cost

- Soybeans at \$12.00 per bushel + \$1.00 premium
- 13% shrink
- Should you grow the soybeans and sell them in fall?
- Doesn't include the \$ per ton to roast
- What is your cost of production and potential selling price?
- Using 2 lb milk response, 0.20% fat increase and 0.05% protein increase

| Feeding Rate (lbs DM) | Cows | | | |
|-----------------------|---------------|---------------|---------------|-----------------|
| | 100 | 250 | 500 | 1000 |
| 4 | \$ 35,195.73 | \$ 87,989.33 | \$ 175,978.67 | \$ 351,957.33 |
| 6 | \$ 52,793.60 | \$ 131,984.00 | \$ 263,968.00 | \$ 527,936.00 |
| 8 | \$ 70,391.47 | \$ 175,978.67 | \$ 351,957.33 | \$ 703,914.67 |
| 10 | \$ 87,989.33 | \$ 219,973.33 | \$ 439,946.67 | \$ 879,893.33 |
| 12 | \$ 105,587.20 | \$ 263,968.00 | \$ 527,936.00 | \$ 1,055,872.00 |



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ROI on Cow Performance

| 1 Herd's Current Production | | | 2 Projected Response | | | 3 Projected \$ Value | | |
|-----------------------------|------------|--|----------------------|------------|--|----------------------|---------|----------|
| Milk Component (%) | lb/cow/day | | Milk Component (%) | lb/cow/day | | Price/lb | Product | |
| Milk | 92.000 | | Milk | +2.000 | | | | |
| 4.30 Fat | 3.956 | | 0.20 Fat | 0.274 | | \$3.3300 | Fat | \$0.9124 |
| 3.30 Pro | 3.036 | | 0.05 Pro | 0.113 | | \$1.7700 | Pro | \$0.2000 |
| 4.90 O.S. | 4.508 | | 0.00 O.S. | 0.098 | | \$0.2100 | O.S. | \$0.0206 |

| | | | |
|-----------------------|--|-------------------------|----------|
| Notes / Calculations: | | Total VALUE of Response | \$1,1330 |
| Components | | | |
| PAYBACK™ | | | |

| 4 Feeding Changes | | | | 5 Economic Analysis | | | |
|-----------------------------|--------|----------|--------------|---------------------|------------------------------|--------|------------|
| Feed | Amt-lb | price/lb | Cost/cow/day | R / I | \$/cow/day | \$/day | \$/mo. |
| feed | 1.00 | \$0.000 | | Returned Value | \$1,1330 | \$567 | \$17,278 |
| Labor | | | | Investment Cost | \$0.0000 | \$0 | \$0 |
| Equip. | | | | Net Return | \$1,1330 | \$567 | \$17,278 |
| Misc | | | | R O I | : 1.00 | | |
| Total COST of Ration Change | | | \$0.0000 | \$1.13 | PROFITABILITY | | \$17,278 |
| | | | (\$/cow/day) | | (\$/cow/day of Ration Change | | (\$/month) |

| Feeding Rate (lbs DM) | Value | Notes | Value |
|-----------------------|---------------|----------------------|-----------|
| 4 | \$ 175,978.67 | | |
| 6 | \$ 263,968.00 | Amino+, SBM replaced | \$191,625 |
| 8 | \$ 351,957.33 | Production response | \$207,336 |
| 10 | \$ 439,946.67 | | |
| 12 | \$ 527,936.00 | | |

Profit on 500 cows \$134,993/yr as compared over selling soybeans



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Dietary Strategies with HOSB

- Take advantage of RUP and oleic FA provided by roasted HOSB
- Protein
 - Reduce RUP sources - blood meal, heat treated soy products, corn distillers
 - Reduce primary protein source – SBM and canola meal
- Energy
 - Reduce bypass fat sources – Palm fat, calcium salts, other blends
 - Reduce or remove cottonseed
 - May be able to reduce carbohydrate sources depending on feeding rates
- Feeding range 3 to 8 lbs; most common 4-6 lbs



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Herd A Example – HOSB 6.5 lbs/hd/day

High Heifer Diet - 1500 Holstein cows

| Ingredients | Cost/ton | No HOSB Ration | | | | Half Rate HOSB | | | | Full Rate HOSB Ration 12-19-25 | | | |
|---------------------------|------------|----------------|--------------|-------|---------------|----------------|--------------|-------|--------|--------------------------------|--------------|-------|---------------|
| | | lbs fed | lbs DM | DM% | cost | lbs fed | lbs DM | DM % | cost | lbs fed | lbs DM | DM% | cost |
| Com Silage | \$38.86 | 60.94 | 19.50 | 32.00 | \$1.18 | 60.94 | 19.50 | 32.00 | \$1.18 | 65.45 | 21.60 | 33.00 | \$1.27 |
| Haylage | \$82.13 | 15.12 | 6.50 | 43.00 | \$0.62 | 15.12 | 6.50 | 43.00 | \$0.62 | 16.34 | 6.70 | 41.00 | \$0.67 |
| Com | \$150.68 | 18.6 | 16.00 | 86.00 | \$1.40 | 18.31 | 15.75 | 86.00 | \$1.38 | 16.86 | 14.50 | 86.00 | \$1.27 |
| Cottonseed | \$435.00 | 3.09 | 2.80 | 90.50 | \$0.67 | 2.21 | 2.00 | 90.50 | \$0.48 | | | | |
| Soybean Meal | \$276.00 | 4.72 | 4.20 | 89.00 | \$0.65 | 3.09 | 2.75 | 89.00 | \$0.43 | 1.91 | 1.70 | 89.00 | \$0.26 |
| High Oleic Soybeans | \$450.00 | | | | | 3.19 | 3.00 | 94.00 | \$0.72 | 6.12 | 5.75 | 94.00 | \$1.38 |
| Lact Base Mix - Pre HOSB | \$1,184.78 | 4.2 | 4.00 | 95.24 | \$2.49 | | | | | | | | |
| Lact Base Mix - Half HOSB | \$1,248.76 | | | | | 3.65 | 3.50 | 95.89 | \$2.28 | | | | |
| Lact Base Mix - Full HOSB | \$1,431.47 | | | | | | | | | 2.83 | 2.75 | 97.21 | \$2.02 |
| Total | | 106.67 | 52.99 | | | 106.51 | 53.00 | | | 109.51 | 53.00 | | |
| Total Ration cost/hd/day | | | | | \$7.02 | | | | \$7.09 | | | | \$6.88 |
| Purchased Feed Cost | | | | | \$5.21 | | | | \$5.28 | | | | \$4.93 |
| Cost/lb DM | | \$0.132 | | | | \$0.134 | | | | \$0.130 | | | |

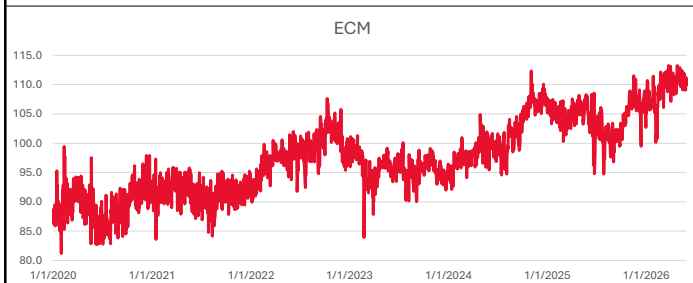
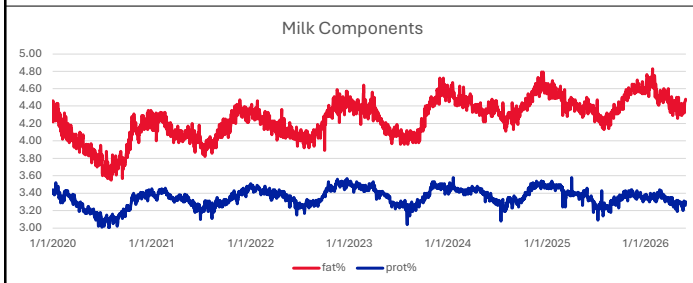
Cost savings \$0.14/hd/day



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Herd A Example – HOSB 6.5 lbs/hd/day



| | BF % | Prot % | ECM |
|--|------|--------|-------|
| Jun-25 | 4.37 | 3.32 | 102.6 |
| Jul-25 | 4.27 | 3.24 | 101.7 |
| Aug-25 | 4.24 | 3.25 | 101.1 |
| Sep-25 | 4.35 | 3.32 | 100.8 |
| Oct-25 | 4.49 | 3.37 | 103.9 |
| HOSB half rate Oct 15, full rate Oct 28 | | | |
| Nov-25 | 4.59 | 3.39 | 107.9 |
| Dec-25 | 4.60 | 3.37 | 106.1 |
| Jan-26 | 4.66 | 3.35 | 107.8 |
| Feb-26 | 4.54 | 3.37 | 107.1 |
| Mar-26 | 4.50 | 3.35 | 110.6 |
| Apr-26 | 4.40 | 3.28 | 110.5 |
| May-26 | 4.38 | 3.28 | 111.1 |

4.34% BF
3.30% Prot
102.0 ECM

4.58% BF
3.37% Prot
107.9 ECM



1500 Holstein cows

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Herd B Example – HOSB 5.5 lbs/hd/day

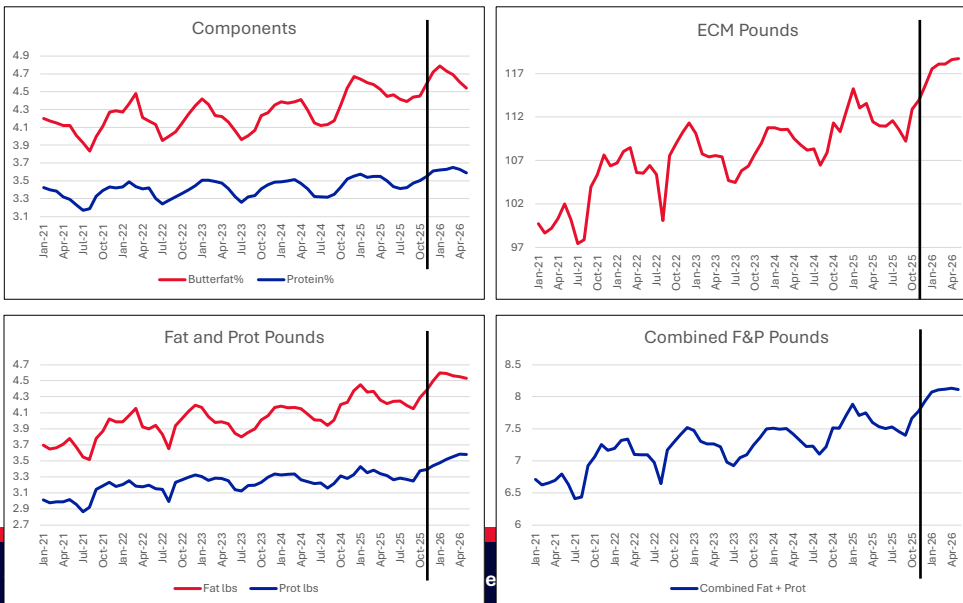
- 2500 Holstein cows, 2-row cross vent barn, sand bedded
- HOSB feeding range 5 to 6 lbs/hd/day depending on group
- Reduced Palm & Ca Salt fat about 0.5 lb/hd/day
- Reduced Amino+, blood meal, SBM
- Half rate HOSB mid Oct 2025 and full rate by end of the month
- Cost saving ranged from \$0.05 to \$0.08/hd/day
- Confounded by new CSL and addition of whey past couple months



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Herd B Example – HOSB 5.5 lbs/hd/day



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High Oleic Soybeans

Pros

- Reduce purchased feed costs
- Potential to raise a large portion of purchased protein and fat
- Improve milk and milk fat yield
- Crop rotation
- Less risk and harvest management compared to other protein crops such as alfalfa

Cons

- Relatively new seed technology
 - Current seed limited on herbicide and pesticide options – More in future
 - Lowest maturity is 1.9 on Plenish beans
- Opportunity costs
- Logistics of storing, roasting and processing high oleic soybeans
 - Can only be used for animal feed



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Summary

- Nothing magical about HOSB's – They are NOT a “silver bullet”
- Cost saving and performance depends on starting point of current ration (RUP levels, supplemental fat)
 - Basic diets with little or no supplemental fat and/or RUP sources typically see best results with little or no cost savings
 - Need to work through partial budgets as they relate to individual farm
 - Purchasing or raising ?
- On-farm roasting is not for everyone
 - It takes management and continuous monitoring
- Potential agronomic challenges



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