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# Dairy Lines

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**Upcoming Events**

Kansas State Fair
Hutchinson, Kansas

Sept. 5-9
Holstein and Jersey

Sept. 11-15
Milking Shorthorn, Brown Swiss, and Ayrshire

Sept. 13-17
State Fair of Oklahoma Dairy Show, Oklahoma City, Oklahoma

Sept. 26-29
Tulsa State Fair Dairy Show
Tulsa, Oklahoma



**DAIRY RESEARCH & EXTENSION NEWS**
http://www.oznet.ksu.edu/dp_ansi/dairylin.htm

## Drought Management for Dairy Producers

As the drought in Kansas and surrounding states continues, calls about drought management strategies are on the rise. Forage and grain prices have increased during the past few weeks, and silage harvest of drought-stricken corn is in full swing. The keys to sound drought management strategy include forage quality, forage quantity, forage cost, alternative forage crops, price protection on concentrates, and milk marketing.

### Forage Quality

Forage quality should be a major concern. It is a fact that lower forage quality reduces milk production. However, during drought conditions, forages are in shorter supply, more expensive, and generally of lower quality. Producers are always tempted to reduce quality standards to cut the per-ton price. Remember, quality forage still pays good returns. Step one is to obtain the best quality forage possible. Work with a nutrition consultant to determine the quantity and quality of forage needed for your operation. Producers may want to consider grouping strategies that allow higher quality forages to be used for higher-producing groups and lower quality for lower-producing groups. When purchasing hay, keep in mind that corn silage quality may be reduced, and reducing the quality of hay in the diet at the same time may significantly reduce milk yield.

### Drought-Stressed Corn Silage

Many producers are trying to determine the feed value of drought-stricken corn silage. In many areas, dryland corn will contain little or no grain. It is also much shorter than normal. Generally, it will yield 1 to 1.5 ton per acre per foot of plant height. So if corn plants are 5 feet tall on average, you can expect 5 to 7.5 tons of silage per acre. Fields containing little or no grain may hold only about 65 percent of the energy content of normal corn silage. The plants will store greater amounts of sugar and crude protein, but contain more fiber. This reduces the energy value of the forage.

If a field has a grain yield of 70 to 80 bushels per acre, the grain content may be similar to normal corn silage because reduced grain yield and forage yield are somewhat proportional. In this situation, the energy content may be only reduced 10 to 15 percent as compared to normal corn silage.

Based on the energy content, drought-stressed corn silage may be worth 65 to 90 percent that of normal corn silage. However, there are some other factors to consider. Making quality silage depends on forage maturity, forage moisture, pack density, filling time, inoculant use, chopping length and timing of cover placement. When drought stress is severe, forage maturity and moisture can vary greatly across a field and between fields.

Forage quality in the silo can vary greatly, making diet balancing difficult and resulting in variable cow performance. In addition, the temptation is to cut before the moisture content drops below 72 percent, creating unstable silage, or wait too long, yielding forage that is too dry. The ideal dry matter content is 30 to 35 percent. Dry silage does not pack well, and fermentation is hindered, result-

***Continued on page 2***

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ing in unstable silages that are more likely to contain mold. In summary, drought-damaged corn can be used for silage. But it is important to consider how the energy content, moisture level, and silo-filling techniques may further reduce corn silage quality.

Another consideration is the possible presence of nitrates in drought-stressed plants. Some samples have contained nitrate levels that could be toxic to cattle. The greatest concentrations of nitrates are found in the lower one-third of the stalk. One method to reduce nitrate concentration is to leave 8 to12 inches of stubble in the field. When corn forage is preserved as silage, nitrate levels are reduced 40 to 60 percent because of the fermentation process. When drought-ending rain occurs, nitrate levels may rise initially, but will decrease within two weeks. When this situation occurs, it is best to wait a couple of weeks before chopping to allow nitrate levels to decrease.

### Alternate Forages

Preserve the best quality forage you can from this summer and start planning for next year. It will rain again, and it may be sooner than you think. The plan may include small grain cereal crops such as winter wheat, winter barley, triticale, rye and spring oats. These crops may provide fall and spring pasture or forage for silage next spring. If harvested in the boot stage, yields often range from 5 to 7 tons per acre and the feed value is similar to corn silage. Harvesting at the correct stage of maturity and moisture content may be a challenge, but the small grain crop can be removed early and corn or another summer crop planted. This allows for two forage crops to be harvested in a single year. By doing this, you can minimize the effects of a poor forage year. Consider feeding limited quantities of crop residue, wheat straw, corn stalks, or milo stubble to dry cows and heifers, reserving additional higher quality forages for the lactating herd. It is important to feed these feeds in limited quantities so that the performance of dry cows and heifers is not reduced.

***"Preserve the best quality forage you can from this summer and start planning for next year. It will rain again, and it may be sooner than you think."***

### Alternate Feeds

Another consideration is the use of high fiber byproduct feeds such as whole cottonseed, corn gluten feed, hominy, soybean hulls and wheat middlings. While these feeds cannot totally replace the forage in a lactating cow diet, they will help stretch the forage. In some cases, producers may be able to purchase these feeds cheaper than other forages. Consult your nutritionist to determine which to use and the appropriate levels of alternative feeds for your herd.

### Price Protecting and Milk Marketing

Another issue is limiting financial risk through contracting or options on feed and milk. Operations that need or want to limit the risk to equity should consider forward contracting of feeds or taking positions in the option market. Through options, even corn silage price can be capped by simply taking a position on the equivalent bushels of corn grain contained in the amount of silage purchased. If a position, either through future contracts or options is taken on the feed side, producers should also consider forward contracting or taking a position on milk options. If a producer can lock in a profit by locking in contracts for feed and milk, the financial risk of the operation including changes in feed prices or milk prices, is eliminated. Options on feed and milk can be used to limit or cap the financial risk of a dairy operation.

### Summary

In many areas, forage will be limited this year. Concentrate on obtaining the best quality forages possible and allocating those forages to the appropriate groups of animals. Carefully consider the ramifications of purchasing drought-stressed forages and concentrate on excellent silage preservation techniques to prevent further losses in quality. Remember: Forage quality issues affect production for the next 12 months and beyond. You may want to consider alternative forage crops and alternative feeds for this winter. Consult your herd nutritionist for options.

It will rain again; be ready to capitalize on your opportunities.You do not have to wait until next year to take action. Taking protection through feed and milk contracts or options is an another way to limit the financial risk of drought. You'll find more information on our Web site at *www.oznet.ksu.edu/drought/*.

## *Preliminary Incubation Counts*

In response to calls regarding preliminary incubation counts (PIC), here is a brief review and some possible solutions to periodic flare-ups.

The PIC is a measurement of the psychrotrophic (cold-thriving) bacteria in a milk sample. These bacteria produce enzymes that cause the breakdown of protein and fat, which in turn causes off-flavors in milk and shortens shelf life. Pasteurization normally kills psychrotrophic bacteria; however, it does not destroy the enzymes they produce.

High PICs are most often associated with failure to thoroughly clean and sanitize either the milking system or the cows. Marginal cooling (i.e. milk that is held over 40° F) or prolonged storage times may also result in unacceptable PICs by allowing organisms that grow at refrigeration temperatures to multiply. High PICs can also be attributed to bulk tanks that are rinsed, but not washed and sanitized after each milk collection, worn inflations and milk hoses, or from not properly using sanitizer when cleaning the milking system.

If you have questions about PI counts on your farm, contact your local or state dairy extension specialist for other suggestions.

*Dan N. Waldner, OSU Extension Dairy Specialist*

## Heart of America Dairy Herd Improvement Summary

| | Quartiles | | | | Your Herd |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | |
| **Ayrshire** | | | | | |
| Rolling Herd Average | 18,385 | 17,179 | 15,024 | 11,879 | |
| Summit Milk Yield 1st | 64.0 | 63.5 | 27.5 | 37.0 | |
| Summit Milk Yield 2nd | 39.0 | 70.0 | 70.5 | 41.0 | |
| Summit Milk Yield 3rd | 42.5 | 36.0 | 71.5 | 63.6 | |
| Summit Milk Yield Avg. | 71.0 | 69.0 | 68.0 | 58.3 | |
| Income/Feed Cost | 1,669 | 1,408 | 914 | 1,333 | |
| SCC Average | 194 | 297 | 279 | 289 | |
| Days to 1st Service | 0 | 48 | 122 | 18 | |
| Days Open | 122 | 121 | 129 | 126 | |
| Projected Calving Interval | 13.2 | 13.2 | 13.4 | 13.3 | |
| **Brown Swiss** | | | | | |
| Rolling Herd Average | 19,848 | 17,556 | 15,791 | 12,813 | |
| Summit Milk Yield 1st | 59.3 | 56.5 | 53.3 | 42.6 | |
| Summit Milk Yield 2nd | 81.0 | 71.5 | 69.3 | 56.5 | |
| Summit Milk Yield 3rd | 86.6 | 64.6 | 73.5 | 53.8 | |
| Summit Milk Yield Avg. | 75.8 | 67.5 | 64.8 | 55.0 | |
| Income/Feed Cost | 1,784 | 1,857 | 1,467 | 1,213 | |
| SCC Average | 390 | 370 | 371 | 461 | |
| Days to 1st Service | 95 | 30 | 83 | 58 | |
| Days Open | 172 | 155 | 162 | 214 | |
| Projected Calving Interval | 14.8 | 14.3 | 14.5 | 16.2 | |
| **Guernsey** | | | | | |
| Rolling Herd Average | 15,893 | 14,168 | 13,401 | 12,672 | |
| Summit Milk Yield 1st | 52.0 | 46.0 | 47.0 | 50.0 | |
| Summit Milk Yield 2nd | 64.5 | 57.5 | 54.5 | 60.0 | |
| Summit Milk Yield 3rd | 64.0 | 59.5 | 59.0 | 60.0 | |
| Summit Milk Yield Avg. | 60.5 | 54.5 | 54.5 | 56.0 | |
| Income/Feed Cost | 1,653 | 1,189 | 1,171 | 1,224 | |
| SCC Average | 325 | 173 | 223 | 435 | |
| Days to 1st Service | 120 | 98.5 | 106 | 96 | |
| Days Open | 191 | 199 | 221 | 175 | |
| Projected Calving Interval | 15.5 | 15.7 | 16.4 | 15.0 | |
| **Holstein** | | | | | |
| Rolling Herd Average | 23,177 | 20,250 | 17,967 | 14,704 | |
| Summit Milk Yield 1st | 74.2 | 67.0 | 61.2 | 52.9 | |
| Summit Milk Yield 2nd | 95.9 | 85.8 | 75.6 | 64.7 | |
| Summit Milk Yield 3rd | 101 | 91.6 | 82.6 | 70.7 | |
| Summit Milk Yield Avg. | 89.0 | 80.6 | 73.8 | 64.4 | |
| Income/Feed Cost | 2,125 | 1,758 | 1,542 | 1,156 | |
| SCC Average | 354 | 390 | 402 | 555 | |
| Days to 1st Service | 88 | 92 | 93 | 91 | |
| Days Open | 168 | 168 | 176 | 212 | |
| Projected Calving Interval | 14.7 | 14.7 | 15.0 | 16.2 | |
| **Jersey** | | | | | |
| Rolling Herd Average | 18,152 | 14,717 | 13,057 | 10,608 | |
| Summit Milk Yield 1st | 56.8 | 50.5 | 42.8 | 41.3 | |
| Summit Milk Yield 2nd | 70.0 | 62.2 | 55.8 | 50.5 | |
| Summit Milk Yield 3rd | 65.7 | 66.4 | 56.1 | 48.6 | |
| Summit Milk Yield Avg. | 66.5 | 59.3 | 56.1 | 48.8 | |
| Income/Feed Cost | 2,122 | 1,621 | 1,231 | 939 | |
| SCC Average | 339 | 328 | 398 | 641 | |
| Days to 1st Service | 91 | 76.7 | 84 | 108 | |
| Days Open | 149 | 129 | 160 | 230 | |
| Projected Calving Interval | 14.1 | 13.4 | 14.4 | 16.8 | |
| **Milking Shorthorn** | | | | | |
| Rolling Herd Average | 15,665 | 14,997 | 14,150 | 7,755 | |
| Summit Milk Yield 1st | 54.5 | 54.0 | 59.0 | 48.0 | |
| Summit Milk Yield 2nd | 69.5 | 63.0 | 70.0 | 55.0 | |
| Summit Milk Yield 3rd | 80.5 | 78.0 | 71.5 | 25.5 | |
| Summit Milk Yield Avg. | 71.5 | 67.5 | 66.5 | 49.5 | |
| Income/Feed Cost | 1,286 | 1,444 | 1,202 | 345 | |
| SCC Average | 340 | 191 | 307 | 594 | |
| Days to 1st Service | 36.5 | 98 | 76 | 105 | |
| Days Open | 218 | 147 | 132 | 325 | |
| Projected Calving Interval | 16.4 | 14.0 | 13.5 | 20 | |

## Hay Prices*—Kansas

| | Location | Quality | Price ($/ton) |
|---|---|---|---|
| Alfalfa | Southwestern Kansas | Supreme | 110-125 |
| Alfalfa | Southwestern Kansas | Premium | 100-115 |
| Alfalfa | Southwestern Kansas | Good | 80-100 |
| Alfalfa | South Central Kansas | Supreme | 100-120 |
| Alfalfa | South Central Kansas | Premium | 95-110 |
| Alfalfa | South Central Kansas | Good | — |
| Alfalfa | Southeastern Kansas | Supreme | 105 |
| Alfalfa | Southeastern Kansas | Premium | 95-100 |
| Alfalfa | Southeastern Kansas | Good | 75-90 |
| Alfalfa | Northwestern Kansas | Supreme | 100-125 |
| Alfalfa | Northwestern Kansas | Premium | 90-110 |
| Alfalfa | Northwestern Kansas | Good | — |
| Alfalfa | North Central Kansas | Supreme | 100-120 |
| Alfalfa | North Central Kansas | Premium | 90-110 |
| Alfalfa | North Central Kansas | Good | 85-95 |

Supreme = over 180 RFV (less than 27 ADF)
Premium = 150–180 RFV (27–30 ADF)
Good = 125–150 RFV (30–32 ADF)

***Source:*** USDA Kansas Dept. of Ag Market News Service Report, July 16, 2002

## Hay Prices—Oklahoma

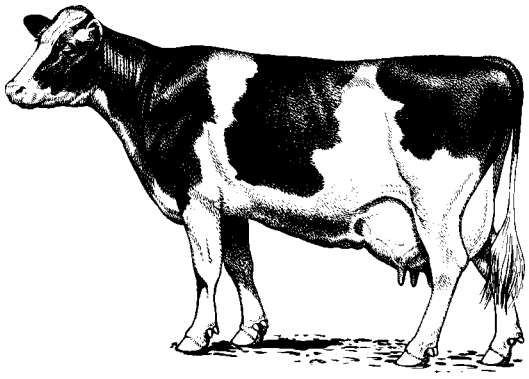
| | Location | Quality | Price ($/ton) |
|---|---|---|---|
| Alfalfa | Central/Western, OK | Premium | 95-110 |
| Alfalfa | Central/Western, OK | Good | 70-85 |
| Alfalfa | Panhandle, OK | Premium | — |
| Alfalfa | Panhandle, OK | Good | — |

**Source:** Oklahoma Department of Ag-USDA Market News Service, July 18, 2002

## Feed Stuffs Prices

| | Location | Price ($/ton) |
|---|---|---|
| Blood Meal | Central US | 320 |
| Corn Gluten Feed | Kansas City | 63-70 |
| Corn Gluten Meal | Kansas City | 275-285 |
| Corn Hominy | Kansas City | 76-80 |
| Cotton Seed Meal | Kansas City | 175-180 |
| Whole Cotton Seed | Memphis | 106 |
| Distillers Grains | Nebraska | 84-95 |
| Pork—Meat and Bone Meal | Texas Panhandle | 160-165 |
| SBM 48% | Kansas City | 202 |
| Wheat Middlings | Kansas City | 52-56 |

**Source:** USDA Market News Service, July 17, 2002



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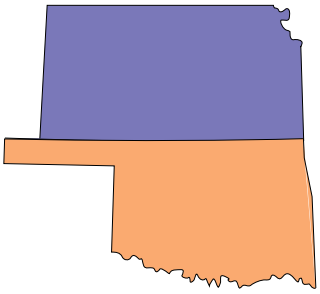

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