

# Livestock Notes

	Rate CIMI per herd (%) <sup>a</sup>	Costs of decreased milk production and non-salable milk (\$)	Medication cost (\$)	Veterinary cost (\$)	Labor cost (\$)	Total cost per episode (\$)
Average	38	90	12	2	5	107
Range	16 to 64	44 to 114	1 to 27	9 to 5	1 to 5	46 to 142

<sup>a</sup>Rate = no. of clinical episodes x 100 / 305 days

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mastitis is defined as a single event which requires withholding milk from the bulk tank. Once milk is permitted into the bulk tank, additional withholding constitutes another episode.

ducer needs to collect is cow identification, starting date of withholding milk from bulk tank and date milk is allowed into bulk tank. Using this data, a very simple record-keeping system may be developed on 3 x 5 inch cards as indicated below:

Cow: 345	Calving date: 5/1/90	Start	Finish	Episode #	DDM	DDMLAC
		7-14-90	7-22-90	1	8	8
		8-21-90	8/25/90	2	4	12
		10-11-90	10-17-90	3	6	18
		10-25-90	11-10-90	4	16	34

DDM = Days of discarded milk  
DDMLAC = Days of discarded milk per lactation

The data should be entered after every milking to keep the records current. Using this system, the producer can answer two important questions.

### Herd Prevalence?

Tally up the number of cows with clinical mastitis and divide by the total number of calvings for time interval of interest. This indicates the percent of cows that have had clinical mastitis. Specific guidelines for typical rates are not available for Maryland but researchers in Ohio found 38% of all lactations experienced clinical mastitis and in Florida, D. Morse

reported 45 and 40% of Holstein and Jersey lactations were identified as clinical mastitis positive. These rates are on a per lactation basis, and thus, records need to be maintained for several months to accurately access the extent of clinical mastitis. A majority of clinical mastitis episodes are known to occur within the first 2 months of lactation, and thus, this has to be taken into consideration when reviewing the records.

### Cows Responsible for a Majority of Discarded Milk

The last column on the 3 x 5

card is a cumulative total of the days of the discarded milk per lactation from all episodes of clinical mastitis. Previous studies indicated that a small percentage of cows (1-16%) are responsible for up to 50% of the discarded milk. A record of the days of discarded milk is a good economic barometer since no payment is received for that milk. It is also known that cows with more than 5 episodes of clinical mastitis are often responsible for the bulk of discarded milk. Florida research has found that culling cows with 5 or more episodes of clinical mastitis (10% of herd), would eliminate 50% of the episodes. Accurate records on clinical mastitis will assist producers in identifying the problem mastitis cows.

### Summary

Maintaining a simple 3 x 5 inch card system on the occurrence of clinical mastitis can help the dairy producer determine the extent of clinical mastitis in the herd. Aver-

age rates of clinical mastitis range from 38% to 45%. Cows with 5 or more episodes of clinical mastitis usually account for 50% of the discarded milk in the herd, and thus, these cows should be culled.

### Economics Of Mastitis

Most dairy producers are aware that mastitis is the single largest disease cost in their herds. What producers may not realize, however, is the actual cost and the range of those costs.

Hoblet et al. from Ohio State University reported their findings of mastitis costs at the 1991 annual meeting of the National Mastitis Council held at Reno, Nevada from February 11 to 13. Their study consisted of nine well managed dairy herds near Wooster, Ohio. Eight Holstein herds and one Jersey herd (avg. size = 149 milking cows) averaged 19,386 lbs and 13,017 lb of milk, respectively at the start of the study. Bulk tank somatic cell counts averaged 265,000 for the year and greater than 80% of cows had low DHI somatic cell counts (Provo DHI records). All herds were housed in free-stall confinement with little or no access to pasture.

Thirty-eight percent of all lactations experienced at least one episode of clinical mastitis with an average cost of \$107 per episode (Table 1). Thus, on the average, a producer in this study would expect to lose \$6,058 annually to clinical mastitis (149 cows x .38 cases per year x \$107 per year).

Notice the tremendous range in costs. The lowest cost would be \$1097 (149 cows x .16 cases per year x \$46 per year) and the maximum would be \$13,541 (149 x .64 cases per year x \$142). During these times when milk prices are reduced, examination of the clinical mastitis records may reveal that this is an area where substantial savings could be realized. Those producers, in particular, with higher than average clinical rates and medication costs could save several thousand dollars each year.

The major cost (over 80%) of clinical mastitis is the unsalable milk and reduced milk yields (Table 1). Only about 20% of the cost was due to medication, veterinary cost and labor. Consequently, if clinical mastitis losses are to be reduced, then management practices must be evaluated so the rate of clinical episodes decline.


Hoblet et al. also quantified preventative mastitis costs (Table 2) and found a wide variation among producers in expenditures. The difference between high and low costs per cow were nearly 7 fold for teat dip, 2 fold for dry cow medication and 4.5 fold for paper towels. If the herd that spent \$20 per cow on teat dip and \$27 per cow on paper towels could reduce that cost to the average of \$10 per cow, the savings could amount to \$4,023 ((\$20-\$10 (teat dip) + \$27 - \$10 (paper towels)) x 149 cows = \$4,023). Thus, producers should also evaluate their expenditures on preventative mastitis products for potential savings.

Table 2. Average and range of costs on a per cow basis for teat dip, dry cow medication and paper towels among the 9 herds

Preventive item	Average cost	Range of costs among the herds	Range of costs for the average study herd (149 cows)
Teat dip	\$10	\$3 - \$20	\$447 - \$2,980
Dry cow medication	\$3	\$2 - \$ 4	\$298 - \$ 596
Paper towels	\$10	\$6 - \$27	\$894 - \$4,023

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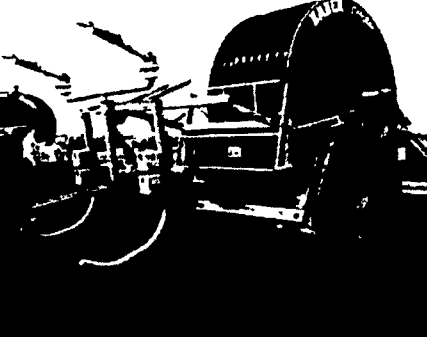
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82	3.0"x985'	250	SRW35	90 Ti	18,250.00	16,425.00
98	3.7"x985'	265	SRW35	110 Ti	22,250.00	20,025.00
110	3.9"x1150'	270	SRW35	125 T	27,250.00	24,525.00
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