



# DPM Calculations

Prepared by Ashley Howlett

## Production Parameters

- **Average Number of Lactating Cows**- The number of lactating cows entered for current month plus the number of lactating cows for previous month divided by 2. The cow numbers entered should be as of the end of each month.
- **% Heifers Relative to Cows** – The percent of heifers relative to lactating and dry cows on the farm. Current and previous month’s number of heifers divided by the number of current and previous month’s lactating and dry cows
- **% Fat and % Protein**- Calculated by dividing the pounds of butterfat and protein by the total pounds shipped.
- **Lbs of Components per Day**- Total pounds of butterfat and protein shipped on a per head (average cow number) per day basis. Pounds of butterfat and protein divided by average number of lactating cows for the month.
- **Milk per Cow per Day** – Total pounds shipped divided by average number of lactating cows.
- **Fat and Protein Corrected Milk per Cow per Day** –  
$$\frac{(12.82*\text{Fat Pounds Sold}) + (7.13*\text{Protein Pounds Sold}) + (0.323*\text{Total Pounds Sold})}{\text{Average Number of Lactating Cows}}$$
- **% Cows in Milk** – The percent of mature cows that are lactating in the herd. Average number of lactating cows divided by average number of lactating and dry cows.

## Herd Parameters

- **Cull rate** - Number of cows sold and died over average lactating cows.
- **Fresh Cow Cull Rate** – Number of cow sold/died <60 DIM divided by average lactating herd.
- **% DA and % RP**- Number of incidences over number of animals fresh per month.
- **% DOA, Pregnancy Rate, Herd DIM, and Age at First Calving** – Calculated in by herd program utilized for the reports you use to enter data
  - For farms using pregnancy rate on the monitor report for Dairy Profit Monitor, they rate is an average of the last three months.
  - Age at first calving should be reported in months- DairyComp automatically rounds down the month, so the actual age at first calving may be skewed by half of a month.
- **Youngstock Cull Rates**- The number of sold and died animals (for the particular age range) over the average number of heifers for the month.

## Milk Check Analysis

- **Component Milk Income, Other premiums, Quality, and PPD** – calculate premiums on a per cwt basis.
- **Milk marketing expense/cwt**- All deductions entered in DPM on a per cwt basis, excluding contracting costs.



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- **Net milk price before contracting**- Milk income minus milk expenses, excluding any income or expense from contracting milk prices.
- **Net contracting loss/gain/cwt**- The gain or loss per cwt associated with contracting milk price.
- **Net Marketing Margin/cwt** – Income from quality, volume, other premiums and PPD minus milk marketing expense, excluding contracting income or costs.

### Efficiency Parameters

- **Worker equivalents**- hours entered in DPM divided by 230 hours per month (a standard worker equivalent)
- **Milk Sold per worker** – lbs of milk shipped divided by worker equivalents
- **Cows per worker**- number of lactating cows divided by worker equivalents
- **Lbs of ECM per lb of Dry Matter** – Fat and protein corrected milk/lactating cow/day divided by Lbs of dry matter fed per lactating cow
- **Dry Matter fed per cow** – Total pounds of dry matter fed per lactating cow per day calculated from the tons fed of feed and percent dry matter entered for each ingredient
- **Percent forage in the diet** – Dry matter tons of forage fed divided by dry matter tons fed.

### Financial Parameters

- **Purchase grain cost/cwt** – Total amount paid for grain over cwts sold for the month.
- **Lactating feed cost/cwt** – The total cost of the feed (including self-valued forages and grain) over cwts sold.
- **Lactating feed cost/hd/day** – Total cost of feed divided by average lactating cows divided by days in the month.
- **Lactating feed cost per lb DM** – Total cost of all feed divided by total pound of dry matter fed.
- **BST cost/cwt** – total cash paid for rBST for the month on a per cwt basis (if applicable)
- **Vet and Medicine Cost/cwt** – Total cash paid for vet services and medicine for the month on a per cwt basis
- **Bedding Cost/cwt** – Total cash paid for bedding on a per cwt basis.
- **NMIOPFC (Lactating, Actual)**- Net milk income minus purchased feed inputs (grain and forages)
- **NMIOPFC (Lactating, Fixed)** – Net milk income using a fixed milk price (3-year average on a per lb basis for fat, protein and other solids) minus purchased feed inputs
- **NMIOTFC (Lactating, Actual)** – Net milk income minus total feed costs, including grown forages.
- **NMIOTFC (Lactating, Fixed)** – Net milk income using a fixed milk price (3-year average on a per lb basis for fat, protein, and other solids) minus total feed costs.