

Butterfat Percentage or Milk Yield: Which Is More Important for a Dairy Farm's Milk Income?



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As a dairy farmer, you know too well the impact butterfat percentage has on the monthly milk check. As butterfat percentage increases, pay price per hundredweight of milk increases. With increasing wholesale prices for butter and cream, prices received on-farm for butterfat have increased over historic levels, making one rethink if additional income can come from improvements in butterfat. The simple answer here is yes. Increasing or at least optimizing butterfat percent has a positive impact on pay price per hundredweight. However, to determine the best economic choice for one's dairy, one needs to remember that one's milk check is determined by a combination of the amount of skim milk and amount of butterfat marketed, not butterfat percentage alone. Thus, from an economic standpoint, optimizing both butterfat and yield are important.

Daily Milk Income per Cow					
Daily milk production (lbs/cow)	% butterfat				
	3.25	3.5	3.8	4.0	4.25
50	\$ 13.34	\$ 13.74	\$ 14.23	\$ 14.56	\$ 14.96
60	\$ 16.01	\$ 16.49	\$ 17.08	\$ 17.47	\$ 17.96
70	\$ 18.67	\$ 19.24	\$ 19.92	\$ 20.38	\$ 20.95
75	\$ 20.01	\$ 20.62	\$ 21.35	\$ 21.84	\$ 22.44
80	\$ 21.34	\$ 21.99	\$ 22.77	\$ 23.29	\$ 23.94
85	\$ 22.67	\$ 23.36	\$ 24.19	\$ 24.75	\$ 25.44
90	\$ 24.01	\$ 24.74	\$ 25.62	\$ 26.20	\$ 26.93
95	\$ 25.34	\$ 26.11	\$ 27.04	\$ 27.66	\$ 28.43
100	\$ 26.68	\$ 27.49	\$ 28.46	\$ 29.11	\$ 29.93
Calculations use uniform skim and butterfat prices for August 2022 in F.O. 5 of \$16.11/cwt skim and \$3.412/lb butterfat.					

Butterfat Accounts for Larger Percent of Milk Check

Prices paid for butterfat yield account for a larger proportion of milk checks in 2022 compared to the previous 2 years when the prices for butterfat were lower. Using uniform prices for skim and butterfat from August 2022 (F.O. 5- skim @ \$16.11/cwt, butterfat @ \$3.412/lb), skim milk yield accounted for 52 to 54% of the gross income of the milk check when butterfat is between 3.8 and 4.25%. (F.O. 7 -percentages are similar.) In 2020 and 2021, the skim milk portion of F.O. 5 marketed milk accounted for 66 to 72% of the Educational programs of Kentucky Cooperative Extension serve all people regardless of race, color, age, sex, religion, disability, or national origin.

gross income in the milk check. This pricing balance definitely reflects a change from the previous 2 years with a higher proportion of the milk check coming from the sale of butterfat.

Butterfat % versus Yield

One may ask, am I better off financially increasing the butterfat percentage of my milk at the expense of a few total pounds of milk shipped per cow? Even with butterfat yields accounting for a greater percentage of the final milk price in 2022, milk yield still is the biggest driver of milk price. Using uniform skim and butterfat prices from August 2022 (F.O. 5), a cow giving 77 lbs of milk at 4.0% butterfat generates approximately the same gross milk income compared to a cow that gives 75 lbs of milk at 4.25% butterfat. This same relationship holds when butterfat differentials are lower as seen in 2020 and 2021. Even if F.O. 5 and 7 change their payment scheme to reflect multiple component pricing, this same relationship holds.

Bottom Line

The take home message here is, don't chase butterfat percentage at the expense of milk yield. Of course, the best option would be to maximize both milk yield and butterfat percentage; this combination results in the highest gross milk income per cow or herd.