



QUICK GUIDE TO FATTY ACIDS IN DAIRY FEED

SATURATED

16:0

PALMITIC

Supports milkfat more than milk yield
50% of Ca Salts

18:0

STEARIC

Unprotected 18:1-3 are converted to Stearic via rumen biohydrogenation
Too much = lower digestibility of **total** fatty acids

UNSATURATED

18:1

OLEIC

Enhances digestibility of **all** fatty acids via micelle formation for greater milk, body condition
35% of Ca Salts

18:2

LINOLEIC OMEGA-6

Found in corn, corn silage, distillers, Prequel
Inflammatory immune regulator
Too much = CLA milk fat inhibitors produced*

18:3

LINOLENIC ALA OMEGA-3

Found in alfalfa, fresh grass, flax
Anti-inflammatory immune regulator

20:5
22:6

EPA/DHA OMEGA-3

Found in fish meal, algae, Strata
Anti-inflammatory immune regulator
Significant milk and reproductive benefits

*18:1 and 18:3 have also been shown to affect production of CLA milk fat inhibitors, however typically at much lower contributions vs. 18:2.



FATTY ACID FLOW FOR TYPICAL DAIRY DIET

| | FATTY ACID | RUMEN INTAKE (g) | OUTFLOW TO SMALL INTESTINE (g) |
|-------------|------------------------------|------------------|--------------------------------|
| SATURATED | 16:0 PALMITIC | 150 | 150 |
| | 18:0 STEARIC | 35 | 620 |
| UNSATURATED | 18:1 OLEIC | 205 | 50 |
| | 18:2 LINOLEIC OMEGA-6 | 430 | 50 |
| | 18:3 LINOLENIC OMEGA-3 | 45 | 5 |
| | 20:5 EPA/DHA OMEGA-3 22:6 | 0 | 0 |