Milk butterfat content and forage characteristics

Greg Brickner

Oct 8th, 2019
- Breed choice
- Winter rations
- Cow comfort
- Pasture quality
- Summer ration
- Heat stress
- Breed choice.
Milk fat depression is an active process

- Short pasture
- Excess protein
- Abnormal pH

T10,c12 CLA
or
“bad” CLA

Milk Fat Depression
Alternative biohydrogenation pathways

**Healthy rumen fermentation**

CLA (c-9, t-11 C18:2)
“Rumenic acid” A desirable CLA accounting for 90% of the CLA in milk and linked to anti-cancer activity.

Vaccinic acid (t-11 C18:1)

**Linoleic Acid (C18:2)**
Polyunsaturated fatty acid in pasture

**Abnormal fermentation / Rumen acidosis**

CLA (t-10, c-12 C18:2)
Undesirable CLA linked to milk fat depression.

Stearic acid (C18:0)
Saturated fatty acid found in milk fat and used for energy by the cow.
<table>
<thead>
<tr>
<th>Short vs. Tall grass</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quantity of fresh grass (lbs./acre and height in inches)</strong></td>
</tr>
<tr>
<td><strong>May/June</strong></td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>4,200 lbs. 16”</td>
</tr>
</tbody>
</table>

- **4,200 lbs. 16”**
  - 18-20% CP
  - 50% NDF
  - 55+ % NDFd
- **1,800 lbs. 6”**
  - 23-28% CP
  - 40% NDF
  - 55+ % NDFd
- **600 lbs. 2”**

- **Number of days since end of grazing**
Brink, G. Growing high-quality grasses for dairy rations. USDA-ARS
3 LEAF