

EnerGII Research Review

It's a Renaissance!

AGENDA

- What is Driving Demand?
- The Peer Reviewed Results: Then & Now
- A Closer Look at the Profile
- Digestibility Differences that Matter

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What is Driving Demand?

HIGHER
PRODUCING
COWS

+

HIGHER
FEED
COSTS

+

HEALTHY
MILK PRICE

=



More herds feeding EnerGII to support milk & milkfat, body condition and reproduction.



Higher feeding rates on average (.75–1 lb. more common)



Renewed (or new) focus on efficiency of production

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EnerGII Delivers

- ✓ Consistent value since 1996
- ✓ The **same** fatty acid profile every time
- ✓ Increased milk and milkfat
- ✓ Improved production efficiency
- ✓ Improved body condition

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The Studies

1 **SNIFFEN &
CHALUPA 2004**
FAT REVIEW

12-18 Studies
Feeding Rate:
1 lb.

2 **LEAN, ET AL.
SBSCIBUS 2011**
META-ANALYSIS

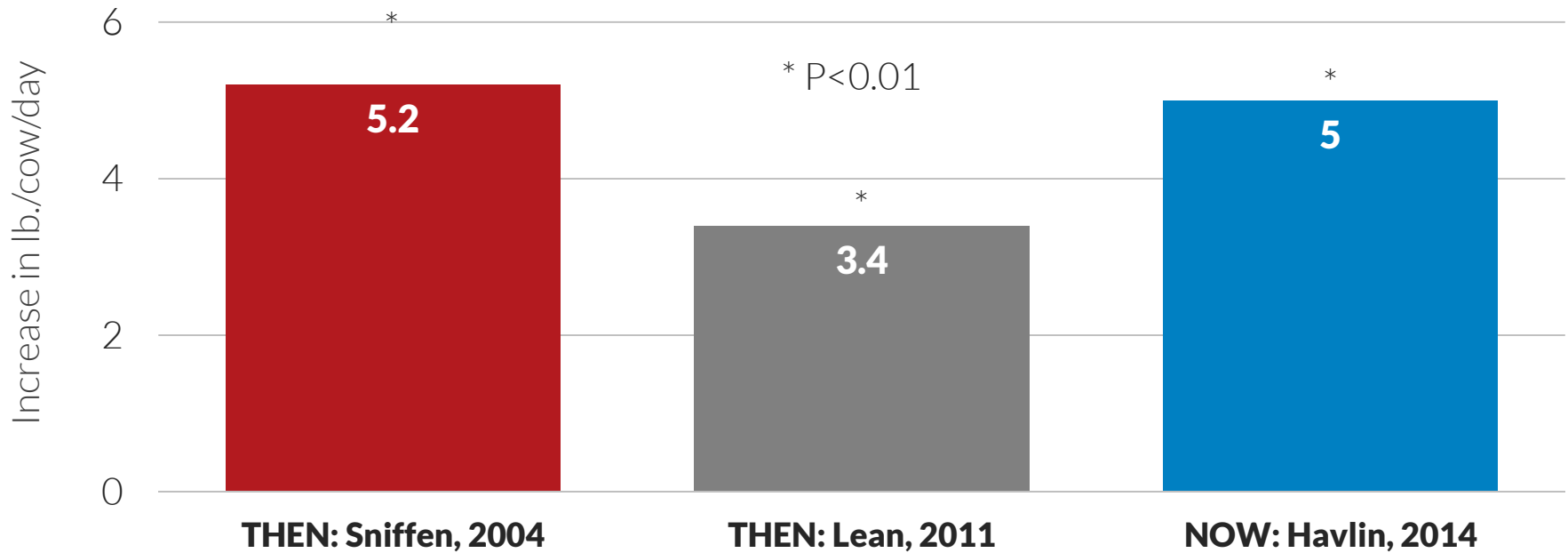
21-28 Studies
Feeding Rate:
1 lb.

3 **HAVLIN, ET. AL.
UC DAVIS 2014**
ENERGII VS. DISTILLERS

380 cows/treatment
Feeding Rate:
1 lb. adj.

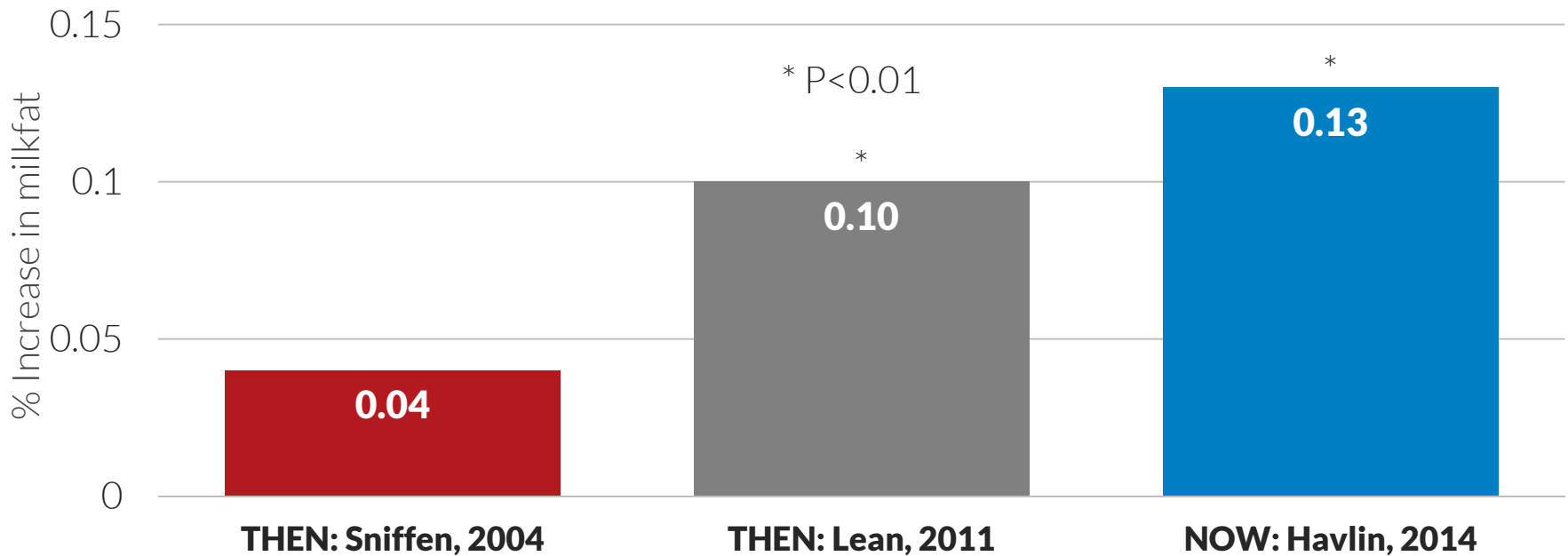
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The Results Milk Per Day



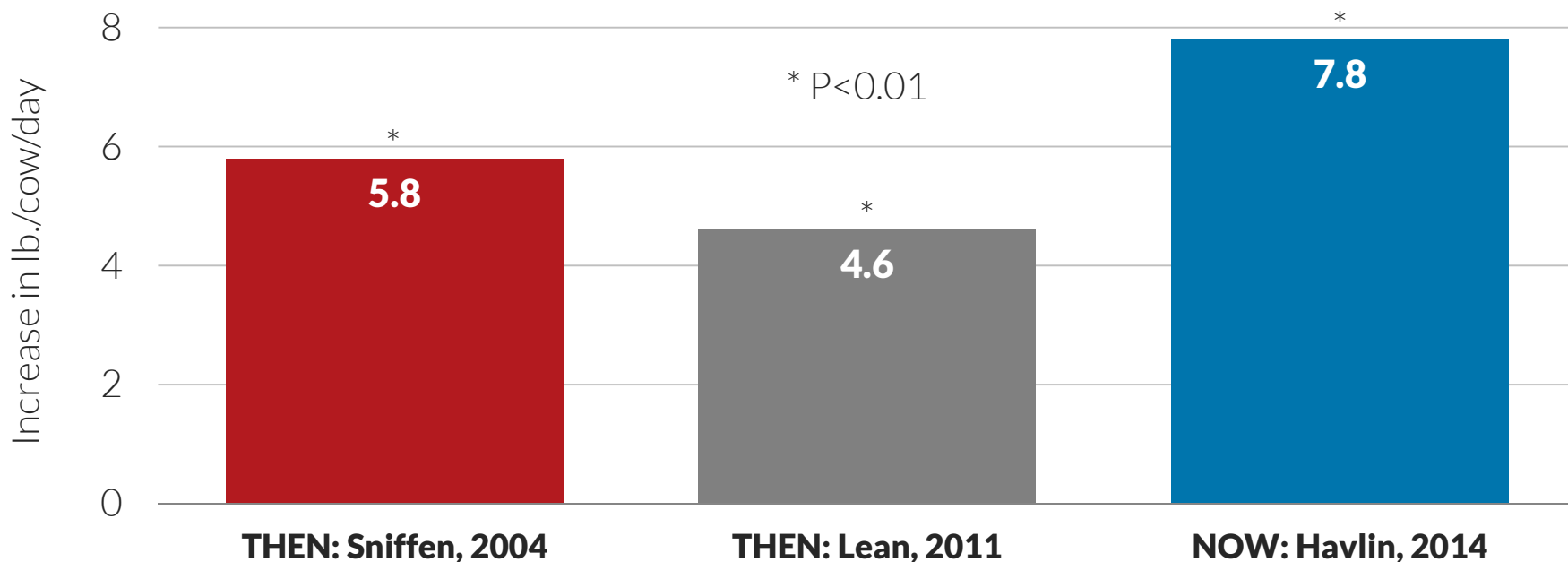
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The Results Milkfat %



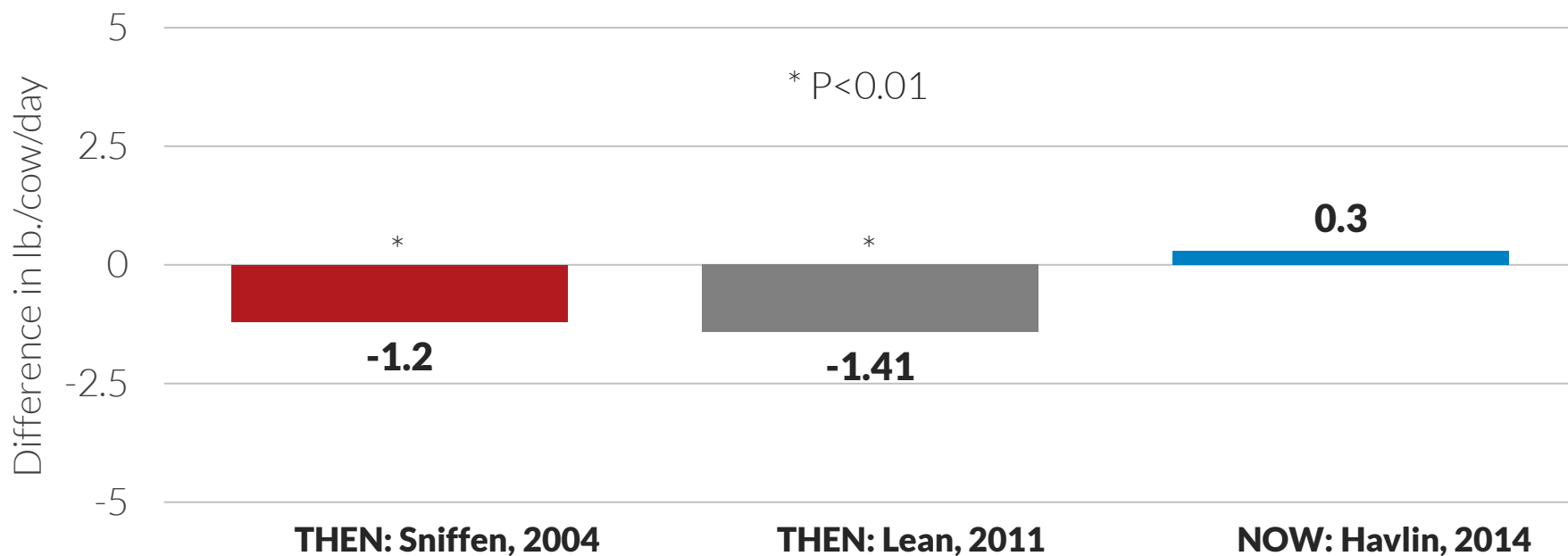
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The Results Fat Corrected Milk



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The Results Dry Matter Intake

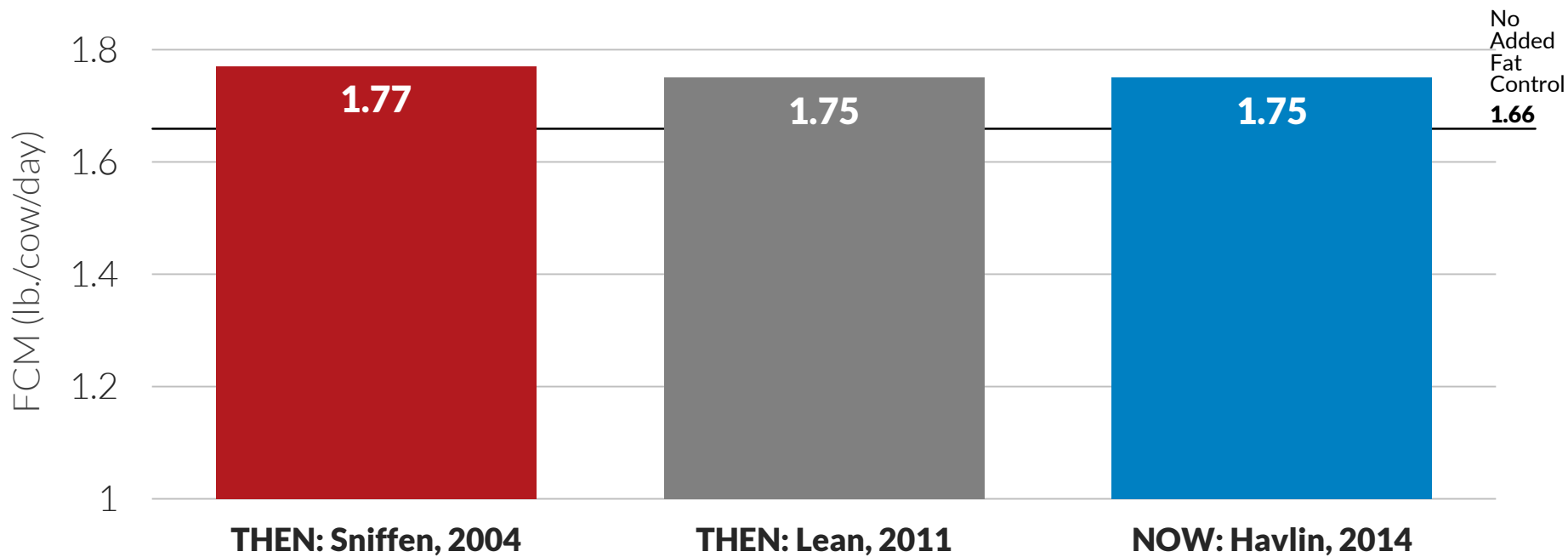


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The Results Feed Efficiency

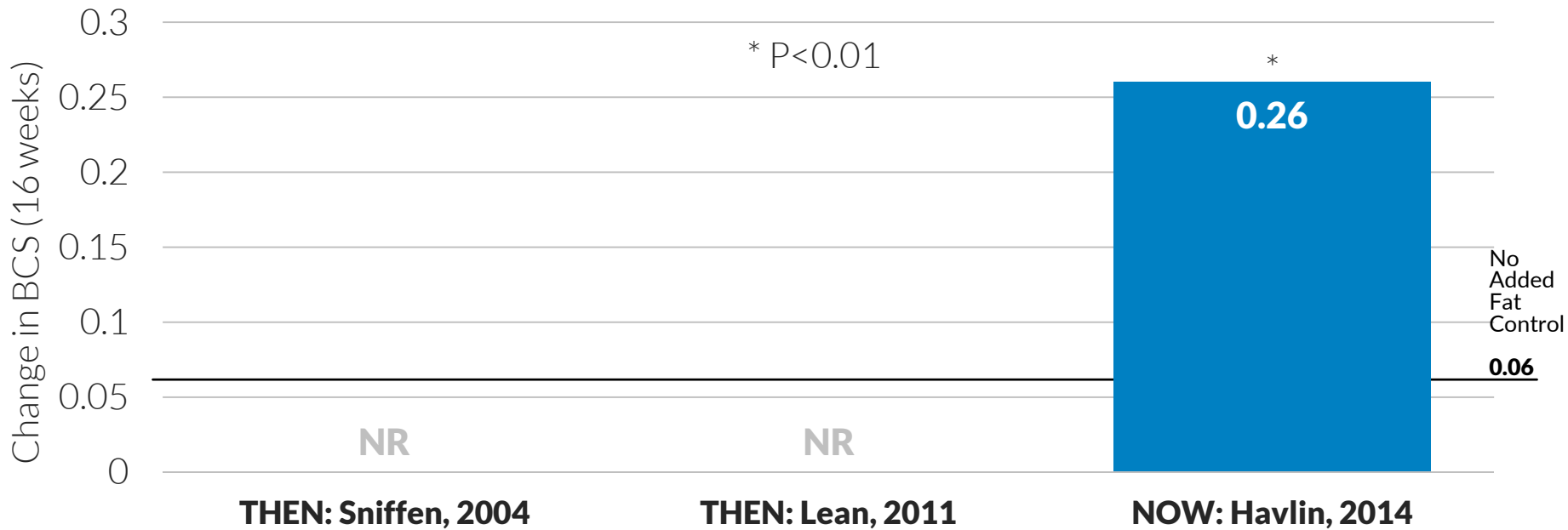


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The Results **Body Condition**



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THE **WHY** BEHIND THE RESULTS

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Fatty Acid Profile Matters

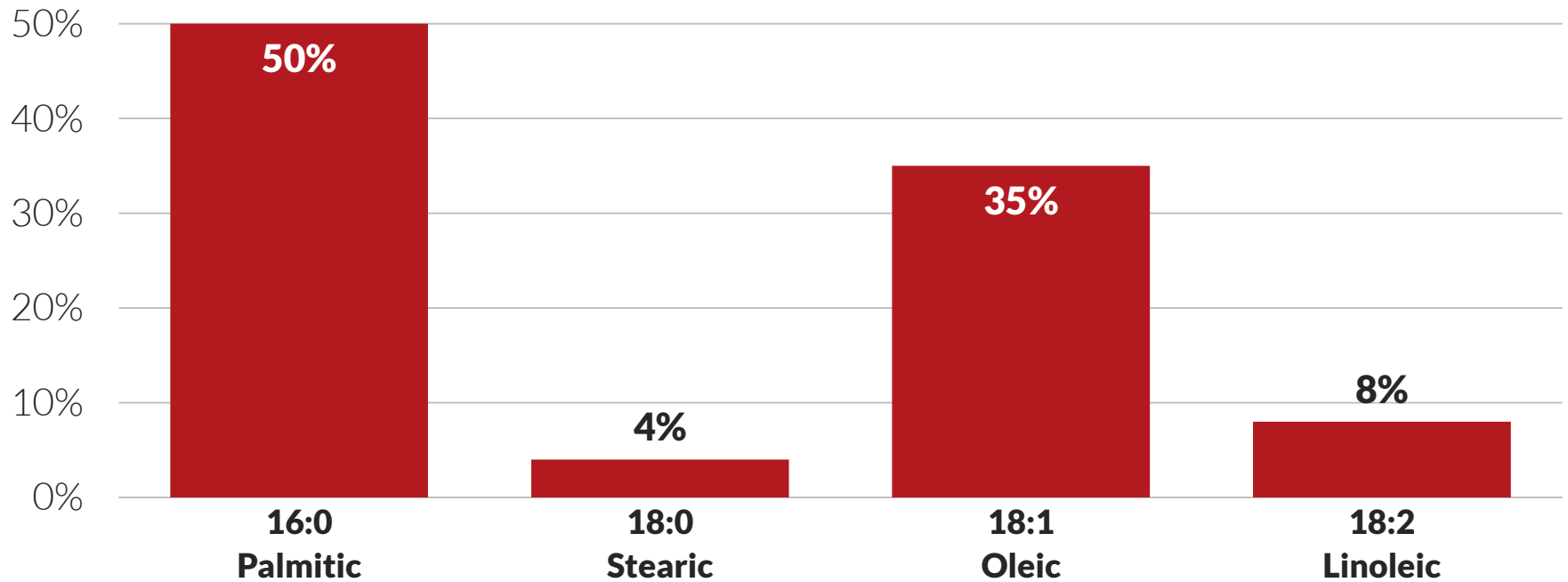
- Each fatty acid plays a unique role in the cow!
- Palmitic (16:0) & stearic (18:0) acids provide energy to the cow.
- Oleic (18:1) delivered to small intestine supports improved absorption of all fatty acids, including saturated.
- The balance of omega-6s vs. omega-3s is a key driver in immune regulation & energetics.

THE BOTTOM LINE:

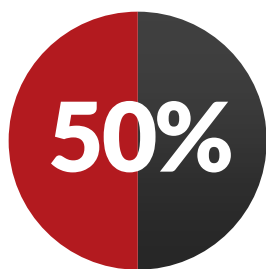
- Differing profiles are utilized differently depending on amount and stage of lactation.

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The Profile of EnerGII

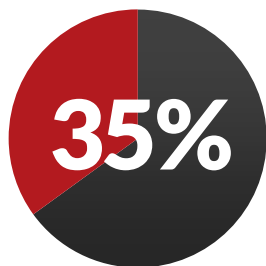


Why Profile Matters: Different Roles for Different Fatty Acids Balance is Key!



PALMITIC ACID

- It is well established* that Palmitic supports milkfat, and to a greater extent than milk flow.
- Balance is key as milkfat is not the only goal.

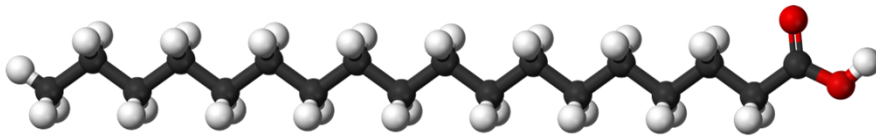


OLEIC ACID

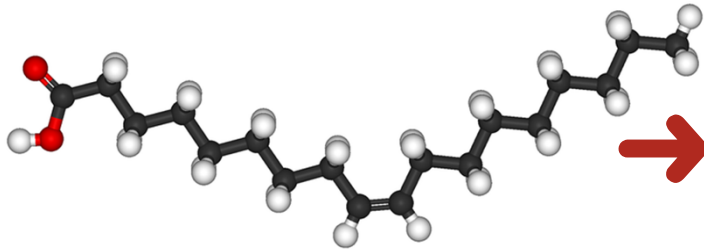
- Oleic acid enhances the digestibility of all fatty acids via micelle formation**, supporting milk flow, reproduction and body condition replenishment.

• Steele and Moore, 1968; Noble, 1969; Steele, 1969; Mosley, 2007; Warnjes, 2008; Rico, 2011; Lock, 2013; Piantoni, 2013
• Adapted from Lock & Bauman, 2006; Sniffen, 2004.

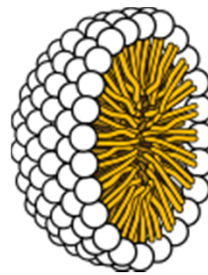
Why Profile Matters: Oleic Increases Digestibility of All Fatty Acids How it Works



Stearic
vs.
Oleic



Micelle



SHAPE MATTERS!

The bend in the unsaturated Oleic allows it to form micelle structures, increasing digestibility of all of the fatty acids in the small intestine (saturated and unsaturated).

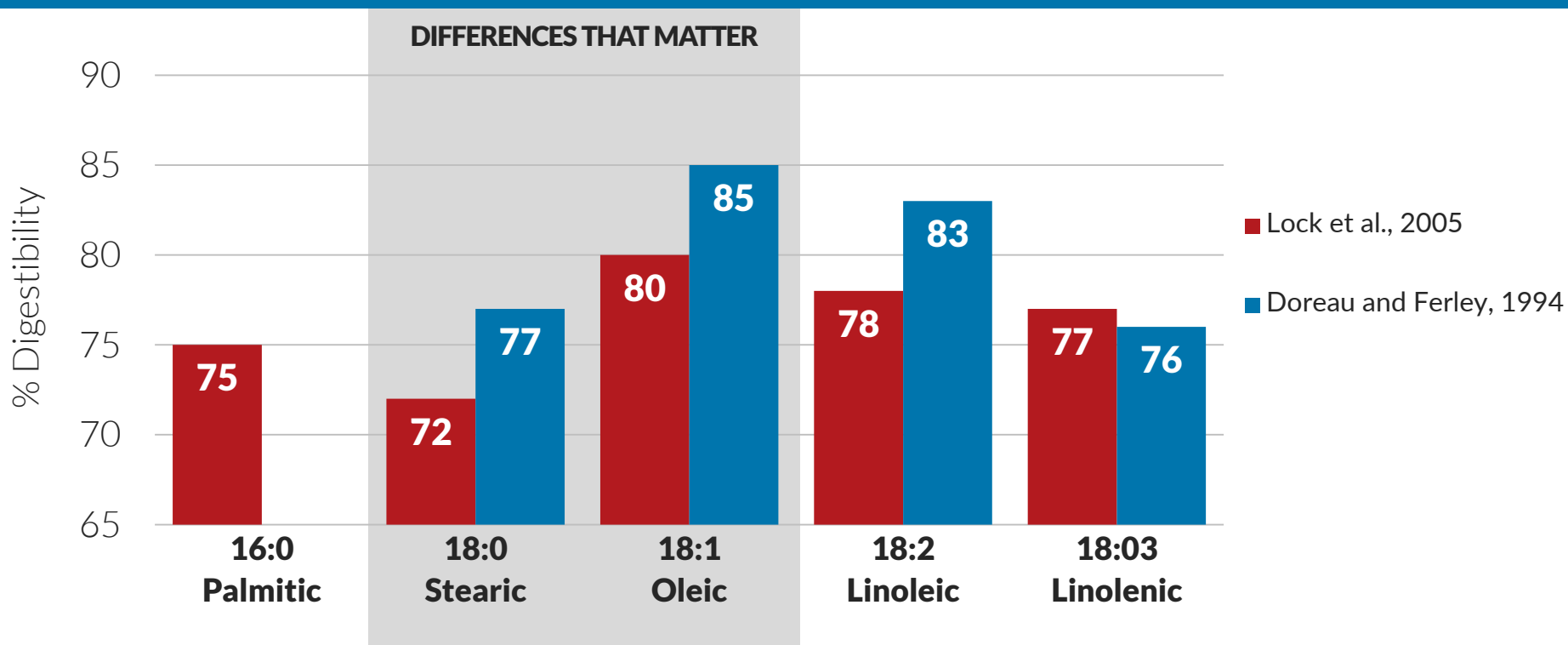
• Adapted from Lock & Bauman, 2006; Sniffen, 2004.

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Digestibility Differences



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Points to Remember

- EnerGII has a **balanced fatty acid profile with palmitic and oleic** that consistently delivers **more milk, milkfat and body condition**.
- The consistent gains in production efficiency are due primarily to the **greater digestibility of ALL fatty acids in the EnerGII diet, enhanced by the delivery of more oleic to the small intestine**.
- While milkfat is an easy indicator of responses on farm, be sure to account **for energy corrected milk and production efficiency** as they are critical in determining true profitability of dietary changes.