ARM & HAMMER ANIMAL NUTRITION
Fast track for life.
OVERVIEW

• New Name, Same Formula
• The ESSENTIOM™ Advantage
• Next Lap: Omega Health
• Pregnancy Wins. Diseases Loses.
• Get the Job Done Right
• Fast Track to Increased Production
• Results Are In: Productivity Wins
• ESSENTIOM Drives On-Farm Results
• Fuel Up: Recommended Feeding Rates
NEW NAME, SAME FORMULA

• MEGALAC®-R is now ESSENTIOOM
  • New name explains the product’s true benefits: Essential Omegas
  • Creates greater distance from MEGALAC to avoid confusion around product characteristics and benefits
  • Same great product you know and trust
  • Benefits go beyond reproduction—also support immune function and uterine health
THE ESSENTIOM ADVANTAGE

• A bypass source of both Omega-3 and Omega-6 Essential Fatty Acids (EFAs)
• Concentrated energy direct to the intestine for absorption$^{1–6}$

START-UP MILK WINS

- Improves immune health and reproductive performance
- Minimizes postcalving recovery time and likelihood of postpartum health-related stress
- Reduces the incidence or risk of clinical and subclinical disorders like DAs, RPs, milk fever, ketosis and metritis
- Encourages easier start-up milk
- Helps cows return to cycling sooner for more timely breeding
OMEGAS GET THE JOB DONE

- Cows cannot naturally produce the Omega-3 and Omega-6 EFAs
- They must be supplemented through the diet
- When fed in combination, Omega-3 and Omega-6 are proven to improve:
  - Immune function
  - Uterine health
  - Reproductive success
  - Production performance
NEXT LAP: OMEGA HEALTH

**OMEGA-3**
- Aids production of prostaglandins
- Fosters embryonic survival
- Balances functions of Omega-6

**OMEGA-6**
- Aids production of prostaglandins
- Promotes ovulation and sperm capacitation
- Aids in oviduct contraction
- Maintains embryo development
Absorption is the key. The bypass properties and particle size\textsuperscript{†} of ESSENTIOM allow more Omegas to reach and be absorbed in the small intestine.

\textsuperscript{†} Block E, Evans E, Sniffen C, Clark N. Effects of Particle Size of Calcium Salts of Fatty Acids on Biohydrogenation and Disappearance of Essential Fatty Acids, \textit{in sacco}. Presented at the 2008 ADSA Annual Meeting, Indianapolis, Indiana.
NEXT LAP: OMEGA HEALTH

WINNING PERFORMANCE
OMEGA-3 AND OMEGA-6 ARE THE ONLY EFAs PROVEN IN RESEARCH TO IMPROVE REPRODUCTION

TAKES A WRONG TURN
HAVE BEEN SHOWN TO REDUCE FEED INTAKE, MILK PRODUCTION AND COMPONENTS†‡∆Ω

BREAKS DOWN
ALTERED IN RUMEN (BIOHYDROGENATE); MOST DO NOT REACH THE INTESTINE FOR ABSORPTION◊


Ask for ESSENTIOM by name. Unlike competitors, ESSENTIOM is the only consistently formulated EFA source that delivers both Omega-3 and Omega-6 EFAs. When fed in combination, your herd is on the road to immune health and reproductive success.

PREGNANCY WINS. DISEASE LOSES.

- University research†‡ compared uterine health and reproductive performance between cows fed MEGALAC (control) and cows fed ESSENTIOM (treatment)
- Cows fed ESSENTIOM experience:
  - Improved uterine health
  - Increased ovarian activity
  - Better reproductive performance

† Bowen AJ. The Effects of Dietary Linoleic and Linolenic Acids on Reproductive Performance in Holstein Cows. [Master’s thesis]. Department of Animal Sciences, University of Arizona; 2008.

Superscripts differing within category indicate significant difference (P<0.05)
Improved pregnancies at 126 DIM compared to herd historical and the control group †

• Metritis is expensive, and can affect as much as 20% of the herd
• ESSENTIOM helps improve immune function, driving successful reproduction and minimizing the threat of postpartum metabolic issues

Overton M, Fetrow J. Metritis Costs Us a Bundle. Hoard’s Dairyman July 2010;471.
GET THE JOB DONE RIGHT

- Cows fed ESSENTIOM can experience additional performance benefits:
  - Improved heat detection and conception†
  - Larger, higher-quality embryos‡
  - Fewer days to first service, services per conception and days open∆
  - Improved pregnancy maintenance†
  - Higher cumulative pregnancies∆
  - Fewer postcalving disorders†Ω

FAST TRACK TO INCREASED PRODUCTION

• A University of Florida trial† evaluated the impact of different fat sources on lactating cow performance
• Postfresh cows fed ESSENTIOM:
  • Produced 7.27 lbs. more milk and 8.82 lbs. additional fat-corrected milk compared to cows fed saturated fatty acids
  • Increased milk fat percent to 3.70% compared to 3.54% in the saturated fatty acid group

MILK PRODUCTION IMPROVEMENT

- Saturated Fatty Acid (SFA)
- ESSENTIOM

<table>
<thead>
<tr>
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<th>Lbs./Day</th>
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<tbody>
<tr>
<td>Milk Production</td>
<td>88.85</td>
</tr>
<tr>
<td>Fat-Corrected Milk Production</td>
<td>91.27</td>
</tr>
<tr>
<td></td>
<td>96.12</td>
</tr>
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<td></td>
<td>100.09</td>
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</table>
MILK FAT IMPROVEMENT

- Saturated Fatty Acid (SFA)
- ESSENTIOM

Percent [%]

Milk Fat

- 3.54% (Saturated Fatty Acid)
- 3.70% (ESSENTIOM)
RESULTS ARE IN: PRODUCTIVITY WINS

- Multiple on-farm demonstrations prove the value ESSENTIOM can deliver

<table>
<thead>
<tr>
<th>Parameter</th>
<th>New York</th>
<th>Idaho</th>
<th>California</th>
<th>Wisconsin</th>
<th>Wisconsin</th>
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<tbody>
<tr>
<td>1st Linear Score</td>
<td>3.09</td>
<td>1.93</td>
<td>2.58</td>
<td>N/A</td>
<td>2.24</td>
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<tr>
<td></td>
<td>2.73 [-12%]*</td>
<td>1.84 [-5%]*</td>
<td>2.24 [-13%]*</td>
<td>N/A</td>
<td>2.08 [-8%]*</td>
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<tr>
<td>First 305-d Proj. [lb.]</td>
<td>N/A</td>
<td>14,032</td>
<td>28,728</td>
<td>N/A</td>
<td>27,054</td>
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<tr>
<td></td>
<td></td>
<td>14,127[1%]*</td>
<td>29,503 [3%]*</td>
<td>N/A</td>
<td>28,273 [5%]*</td>
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<tr>
<td>Monthly EED [n]</td>
<td>7.6</td>
<td>11.5</td>
<td>13.6</td>
<td>5.0</td>
<td>6.6</td>
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<tr>
<td></td>
<td>2.5 [-67%]*</td>
<td>4.6 [-60%]</td>
<td>3.0 [-78%]*</td>
<td>3.0 [-40%]*</td>
<td>4.3 [-53%]*</td>
</tr>
<tr>
<td>Conception Rate (%)</td>
<td>35.6</td>
<td>28.8</td>
<td>26.9</td>
<td>31.2</td>
<td>29.9</td>
</tr>
<tr>
<td></td>
<td>38.2 [7%]*</td>
<td>31.6 [10%]</td>
<td>30.9 [15%]</td>
<td>33.5 [7%]*</td>
<td>32.1 [7%]</td>
</tr>
<tr>
<td>Pregnancy Rate (%)</td>
<td>23.8</td>
<td>18.1</td>
<td>17.4</td>
<td>19.6</td>
<td>18.1</td>
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<tr>
<td></td>
<td>25.9 [9%]</td>
<td>19.7 [9%]*</td>
<td>20.1 [16%]</td>
<td>21.0 [7%]*</td>
<td>19.4 [7%]</td>
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<tr>
<td>Net Profit Per Cow</td>
<td>$176</td>
<td>$49</td>
<td>$212</td>
<td>$28</td>
<td>$248</td>
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</tbody>
</table>

*Differing within category indicates significant difference [P<0.05]

ESSENTIOM DRIVES ON-FARM RESULTS

• Improved immune function:
  • Significant decrease in Somatic Cell Score (1st linear Score)
  • Reduced Early Embryonic Death (EED)†
  • BHBA‡ reduced by 44% in one herd where it was measured

• Increased milk production:
  • First 305-day projected milk (lbs.) improved in the three herds that reported milk

† EED defined as animals returning to service at 35 days postinsemination following a diagnosis of pregnancy.
‡ Measured at day 7 postpartum.
ESSENTIOM DRIVES ON-FARM RESULTS

• Reproduction improvements:
  • Conception rate improved from 7% – 15% across herds
  • Pregnancy rate increased from 7% – 16% across herds

• Net profit increased on all dairies,† ranging from $28 to $248 per cow per year based on improved performance

† Profit range due to inability to collect milk production data on all dairies.
FUEL UP: RECOMMENDED FEEDING RATES

- Three weeks prepartum
  - Feed 0.25 lbs. to 0.33 lbs. per day or 1.1 to 1.3% of ration dry matter
- Postpartum through confirmed pregnancy
  - Feed 0.75 lbs. to 1 lb. per day or 1.5 to 1.8% ration dry matter
Navigate the life cycle journey with ESSENTIOM.
Navigate the life cycle journey with ESSENTIOM.

More products to help you get the job done:

- A-MAX™: Entire life cycle
- BG-MAX™: Day 50 to Day 365
- BIO-CHLOR™: Day -21 to Day 0
- CELMANAX™: Entire life cycle
- DCAD +™: Day 0 to Day 365
- FERMENTEN™: Entire life cycle
- MEGALAC +™: Day 0 to Day 365
- MEGAMINE-L™: Day 0 to Day 365
- SODIUM BICARB: Day 0 to Day 365
- SQ-810™: Day 0 to Day 365

It’s about ANIMALS FIRST. PRODUCTIVITY ALWAYS. See more at AHanimalnutrition.com
QUESTIONS?

To learn more about ESSENTIOM, your pit crew is standing by: contact your nutritionist, veterinarian or Arm & Hammer Animal Nutrition representative or fuel up at AHamanimalnutrition.com.
THANK YOU!