

# Research Notes

ARM & HAMMER Animal Nutrition

## MEGALAC®-R New Study Shows Earlier Pregnancies, Improved Uterine Health

A summary of research data generated by the University of Arizona that compares the reproductive outcomes of dairy cows fed MEGALAC® (control group) versus MEGALAC®-R on a large commercial dairy. Visit [www.dairyrepro.com](http://www.dairyrepro.com) for the full *Research Bulletin*.

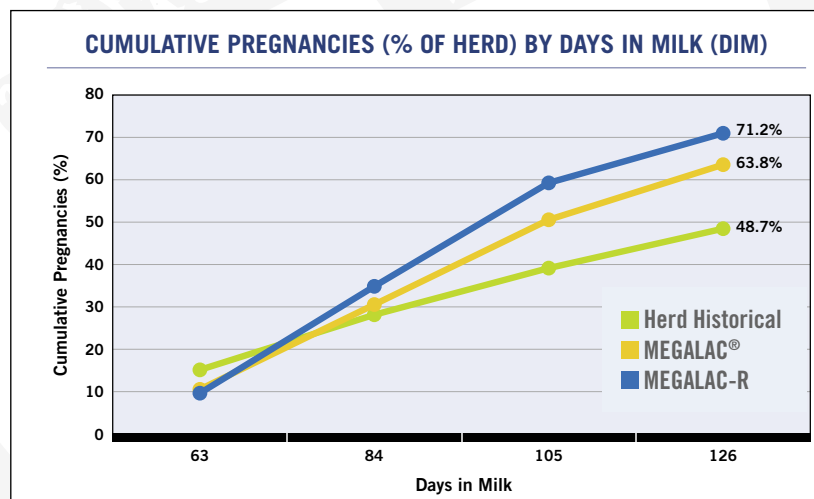
### STUDY OVERVIEW

- Two groups of Holstein cows grouped by lactation and production were fed identical rations supplemented with either MEGALAC Rumen Bypass Fat or MEGALAC-R Omega-3 and Omega-6 Essential Fatty Acids.
- Cows began an Ovsynch™ timed A.I. program at 50 to 56 days in milk, based on a 60-day voluntary waiting period.
- Ovulation was identified through ultrasound and/or weekly progesterone assays.
- Uterine health data were collected based on a veterinarian's postcalving examination. Abnormalities (uterine tone, metritis, retained placenta) were recorded and treated.

### RESULTS

The University of Arizona study verifies cows supplemented with MEGALAC-R Omega-3 and Omega-6 EFAs had better reproductive performance:<sup>1</sup>

- Better reproductive performance
- More pregnancies earlier in lactation
- Higher number of cumulative pregnancies at 126 DIM (see graph)



Significantly more MEGALAC-R-supplemented cows started cycling earlier after calving.

TABLE 1		Percent ovulations by 30 DIM.	
Parameter	Control n=63	MEGALAC-R n=57	
Ovulations by 30 DIM	17	28	
% ovulations	27 <sup>a</sup>	49 <sup>b</sup>	(↑ 81%)
Mean DIM at ultrasound	24.9	24.0	

<sup>a,b</sup> Superscripts differing within row indicate significant difference ( $P < 0.005$ ).

MEGALAC-R-supplemented cows had more cycles by the voluntary waiting period (60 DIM).

<b>TABLE 2</b>		Number of estrous cycles by 60 DIM.		
<b>Parameter</b>	<b>Control</b> n=18	<b>MEGALAC-R</b> n=17	<b>SEM</b>	<b>P-value</b>
Number of cycles 1st 60 DIM	2.0	2.76	0.24	≤ 0.031
Range in number of cycles	0 – 3	1 – 5		

MEGALAC-R-supplemented cows were treated less often for uterine abnormalities and infections.

<b>TABLE 3</b>		Number of cows treated with prostaglandin for uterine health issues.	
<b>Parameter</b>	<b>Control</b> treated/total	<b>MEGALAC-R</b> treated/total	
Number treated (1st case) for uterine abnormalities by 60 DIM	421/1312	186/708	
% treated	32.1 <sup>a</sup>	26.3 <sup>b</sup>	
Number retreated (2nd case) by 60 DIM	90/421	19/186	
% retreated	21.4 <sup>c</sup>	10.2 <sup>d</sup>	
Total treated by 60 DIM	511/1312	205/708	
Total % treated by 60 DIM	38.9 <sup>c</sup>	29.0 <sup>d</sup>	

<sup>a,b</sup> Superscripts differing within row indicate significant difference ( $P < 0.01$ ).

<sup>c,d</sup> Superscripts differing within row indicate significant difference ( $P < 0.005$ ).

## MEGALAC-R RESEARCH TO DATE

Previous studies<sup>2</sup> have established that cows fed MEGALAC-R experience improved reproduction.

- When fed prepartum, cows fed MEGALAC-R can see improved 21-day Pregnancy Rates (PR) of up to two points
- When fed postpartum, cows fed MEGALAC-R can experience improved 21-day PR of up to three points
- Cumulative benefits: incorporating MEGALAC-R in a pre- & postpartum nutrition program can result in improved PR of up to five points

This University of Arizona study confirms the following when comparing MEGALAC-R to MEGALAC (control group):

- MEGALAC-R fed cows began cycling sooner with an 81% increase in ovulations by 30 DIM
- MEGALAC-R fed cows had a higher number of cumulative pregnancies at 126 DIM—7.4% better than MEGALAC controls and 22.5% better than the herd historical
- MEGALAC-R fed cows were healthier postpartum with over 25% reduction in treatments by 60 DIM for uterine disorders



**ARM & HAMMER**  
Animal Nutrition

<sup>1</sup> Jones BE, Fish D, Martin A, Ax RL. Ovulation rates and improved uterine health in cows fed MEGALAC®-R compared to MEGALAC®. Paper presented at: ADSA-ASAS Joint Annual Meeting; July 11, 2006; Minneapolis, Minn.

<sup>2</sup> EFA Alert Research Summary. p.21: Trial #1. Church & Dwight Co., Inc. 2002.

