

STRATA START GUIDE

WHAT TO EXPECT WHEN BALANCING
OMEGA FATTY ACIDS IN THE EARLY
LACTATION DIETS

STRATA™
WITH EPA/DHA OMEGA-3S

- 1 What is Strata?
- 2 Feeding Recommendations
- 3 What to Expect
- 4 How Strata Works
- 5 Research Review

WHAT IS STRATA?

STRATA™
WITH EPA/DHA OMEGA-3s

High in EPA/DHA omega-3s, Strata is a calcium salt of fatty acids that significantly improves the omega balance in lactating diets, delivering more milk and improved reproductive performance.

Feed Strata up to .4 pounds in the fresh pen and .25 pounds in the early breeding pens to give your cows a fresh start with omega-balanced diets.

MORE MILK

MORE CALVES

MORE PROFIT

PRODUCT SPECIFICATIONS

STRATA™
WITH EPA/DHA OMEGA-3S

GUARANTEED ANALYSIS

| | |
|---|-------|
| Total Fat (min) | 80% |
| Calcium (min) | 9.3% |
| Calcium (max) | 11.1% |
| Unsaponifiable Matter (max) | 4.0% |
| Moisture (max) | 5.0% |
| Lipid (max not bound in a calcium salt) | 5.0% |
| Total EPA/DHA Omega-3 Fatty Acids (min) | 16.0% |

TYPICAL FATTY ACID PROFILE

| | |
|--|-----|
| Palmitic (C16:0) | 33% |
| Stearic (C18:0) | 15% |
| Oleic (18:1) | 25% |
| Linoleic (18:2) Omega-6 | 5% |
| Linolenic (18:3) ALA Plant-based Omega-3 | 2% |
| EPA, DHA Marine Oil Omega-3• | 16% |

16%
EPA/DHA
Omega-3

The effective omega-3s that significantly boost early milk and reproductive performance.

PRODUCT SPECIFICATIONS

STRATA™
WITH EPA/DHA OMEGA-3s



- 55 pound bags (25 kg)
- TDN: 255%
- NEL (dry basis): 2.89 Mcal/lb.
- Particle Type: Granular
- Palatability: Good
- Color: Tan
- Storage and Shelf Life: 6 months stored in cool, dry place

FEEDING RECOMMENDATIONS

STRATA™
WITH EPA/DHA OMEGA-3s

OMEGAS YOUR WAY

Choose the feeding rate that fits your herd's diets, grouping strategies and goals.

Fresh Pen
(1-30 DIM)

Plus Breeding Pens
(30-120 DIM)

Recommended Feeding Rate ●

.1 to .4 lb.

.25 lb.

Milk Benefits

2.7-10.8 lbs.

6.75 lbs.

Reproductive Improvement ●●

- ▲ 50% Embryo Retention
- ▲ 5+ Points Early Conception

- If your herd has just one TMR (no breeding groups), it is recommended to start at the .1 pound feeding rate.
- All reproductive data was observed at the ¼ lb. feeding rate of Strata G113. (Silvestre, et. al, 2008; Silvestre, et. al. 2001; Santos, et. al., 2005; Mattos, et. al., 2000; Juchem et. al., 2008)

FEEDING RECOMMENDATIONS

STRATA™
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DIETARY
ADJUSTMENTS

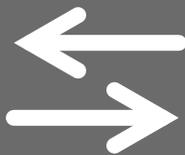
METHOD
OF
INCORPORATION

Option
1

Have Strata added to your fresh and/or high cow mineral mix to simplify feeding at the dairy.

Option
2

Add Strata via bags delivered to the farm. Be sure to add Strata with other dry mineral ingredients for even distribution in your mix.



Consult your nutritionist to determine if any of your current energy sources could be reduced or replaced when Strata is added. ●

- All Strata studies were iso-energetic and iso-lipidic, comparing equal amounts of Strata vs. EnerGII. Thus the benefits are not from adding more energy in the lactating diet, but rather directly from improving the ratio of omega-6s to omega-3s.

FEEDING RECOMMENDATIONS

STRATA™
WITH EPA/DHA OMEGA-3s



Ramp Up To ensure a smooth start-up, feed Strata at half rate for the first week, and then go to the full rate.



Every dairy's grouping is different!
Start with what fits your existing system, and then determine possible modifications to grouping to capture more value from omega-balanced diets.

WHAT TO EXPECT

STRATA™
WITH EPA/DHA OMEGA-3s



Improved Early Milk Production

Higher Early Conception Rates

Improved Embryo Retention

WHAT TO EXPECT

STRATA™
WITH EPA/DHA OMEGA-3s

Improved Early Milk Production

- Strata milk response is linear to the feeding rate, with **2.7 pounds of milk for every 1/10 lb. of Strata fed.**
- Expect to see improvements in early lactation performance **within the first 2-3 months.**
- Cows that start their lactation with Strata have the best response, whereas a cow that is already at 100-DIM will respond less.
- Thus, there is a **ramp-up to see the full milk response** as more cows in the herd start their lactation with an omega-balanced diet.

Month

1

BEGIN
STRATA

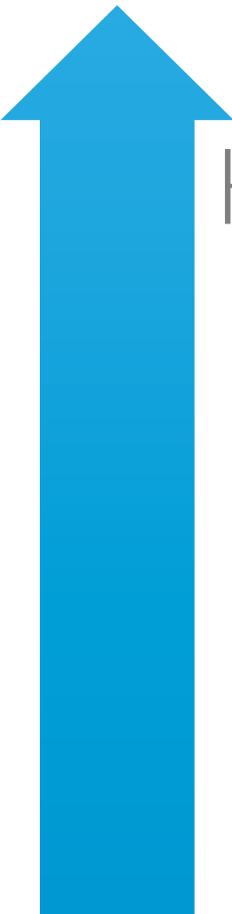
2

3

START OF STRATA
IMPACT

WHAT TO EXPECT

STRATA™
WITH EPA/DHA OMEGA-3s



Higher Early Conception Rates

- Strata **improves first and second service conception rates**, by improving the balance of omega-6s to omega-3s.
- As with any changes to improve breeding, the results take time to see in your records. **Three months must pass before you start having conception rate data to look at. Expect at least 6-9 months** to have enough time to see the improvements in your herd's reproductive performance.

DIM

1

FRESHENING

60

BREEDING

90

PREG CHECK

START
OF STRATA
IMPACT

WHAT TO EXPECT

STRATA™
WITH EPA/DHA OMEGA-3s

Improved Embryo Retention

- Strata **improves embryo retention** by creating a more **balanced immune status** and a better uterine environment for embryo viability.
- This area of Strata impact takes the longest to see in your herd performance trends, as cows need to first conceive, then be confirmed pregnant, and then allow enough time to lapse to accurately capture the early abort rate.
- A rule of thumb is to **wait 8 months before starting to calculate the early abort data in order to accurately reflect the results.**

MONTH

1

BEGIN
STRATA

2

3

4

5

6

7

8

BEGIN
EMBRYO
RETENTION
ANALYSIS

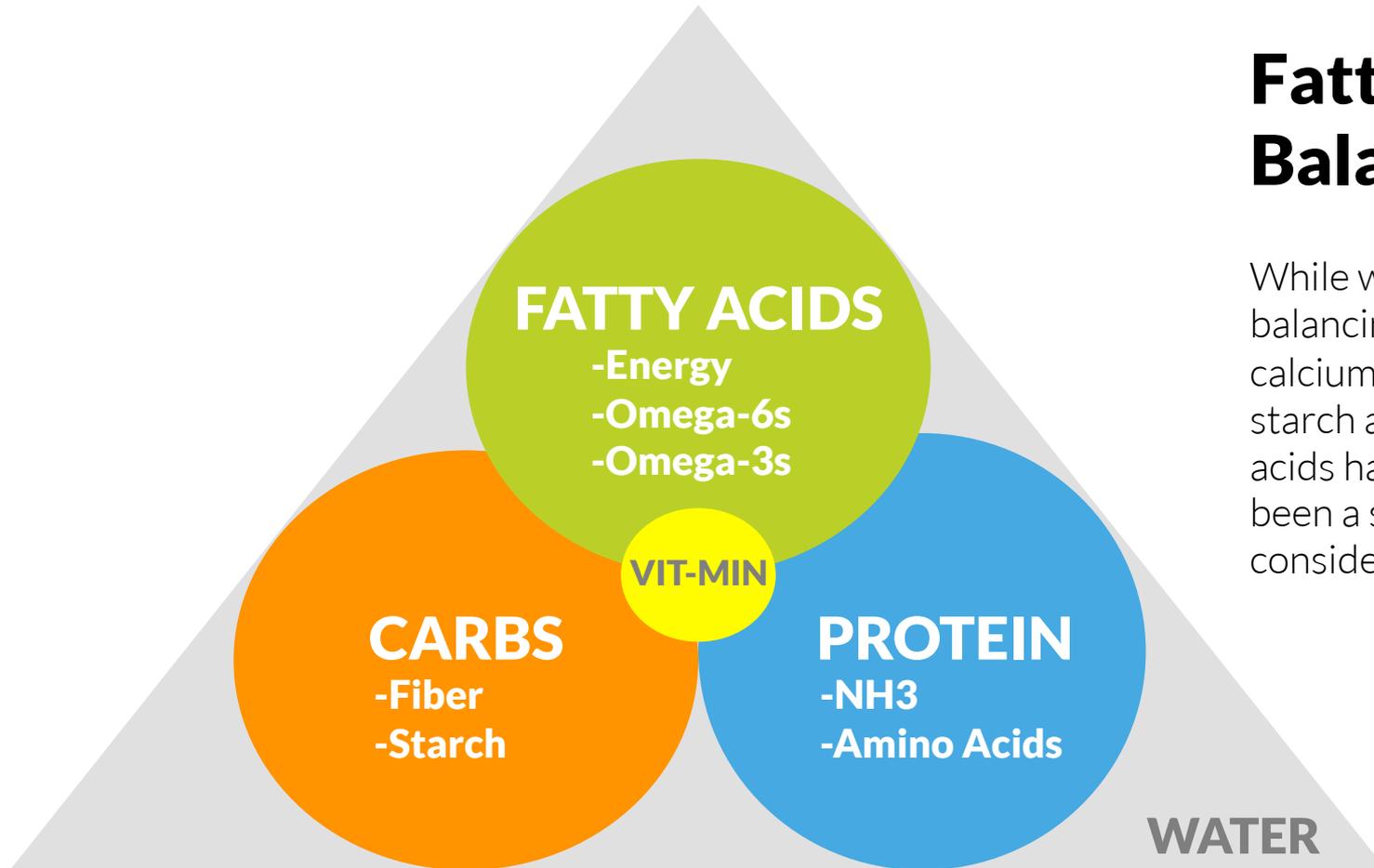
SUGGESTED COMMANDS DC305

STRATA™
WITH EPA/DHA OMEGA-3s

| KEY PERFORMANCE INDICATORS | COMMANDS | DESCRIPTION |
|-------------------------------------|--|---|
| 1 & 2 Service by Lactation Group | BREDSUM\XBD BY LCTGP | Prompts for dates - pull up multiple years (same months) for historical view. |
| 1st & 2nd Service by Calendar Month | BREDSUM\XBCD | Prompts for dates and then shows conception rates by calendar month. |
| Conception Rates by Week | BREDSUM\RD | Prompts for dates and then shows conception rates by week. |
| Start-up Milk | SUM WK4MK WK8MK FOR WK4MK>0 WK8MK>0 BY MOFSH | Look at the average week 4 milk and week 8 milk over the past year by month of freshening to track start-up performance. (Week 4 & 8 items need to exist in your DC305 program in order for this command to work) |
| 2nd Projection by Lactation | PLOT 2NDPJ FOR LACT>0 BY LCTGP \R | Estimate on <u>2nd Test Day</u> of what a cow will produce in the current lactation in the first 305 days based upon current lactation to date and current test weights. |
| Abortions | EGRAPH EC=12\GW10 | Graph abortions by DCC over the past 12 months to see when abortions are being detected and at what levels. |
| Abortions | BREDSUM\ERD | Calculate abortion percentage by cycle. Abortions per 21 day cycle/pregnancies during same period*100. Calculate average for first five cycles to look at 'early aborts.' |

HOW STRATA WORKS

STRATA™
WITH EPA/DHA OMEGA-3s



Fatty Acid Balancing

While we've been balancing amino acids, calcium-phosphorus, starch and fiber, fatty acids have historically been a secondary consideration.

Sources of Omega Fatty Acids

STRATA™
WITH EPA/DHA OMEGA-3s

Omega-6s

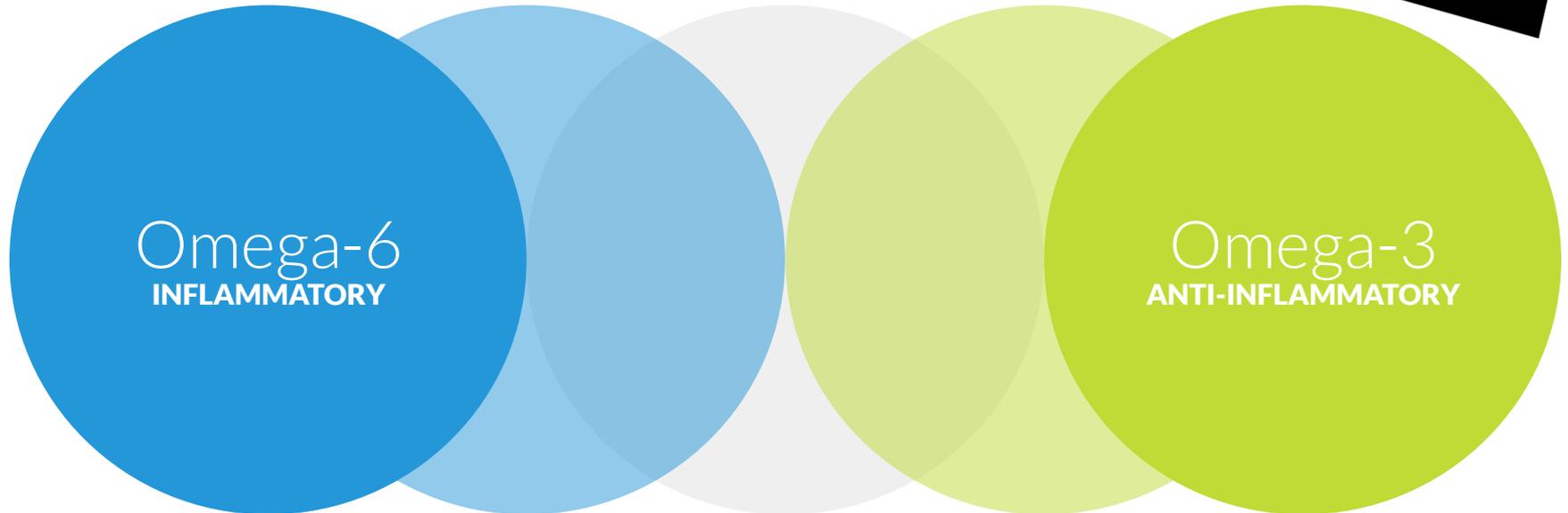
- Alfalfa hay and silage
- Corn silage
- Corn Grain
- Distillers grains
- Soybean meal
- Whole Cottonseed
- Whole Soybeans

Omega-3s

- Fresh grass
- Fresh alfalfa
- Flaxseed
- Fish meal (oil)
- Fish oil
- Algae

WHY STRATA WORKS

STRATA™
WITH EPA/DHA OMEGA-3s



IT'S ABOUT BALANCE.

Adding EPA / DHA omega-3s in early lactating lowers the omega ratio, supports a healthy immune status, and frees up energy to be redirected toward milk and reproduction.

HOW STRATA WORKS

STRATA™
WITH EPA/DHA OMEGA-3s



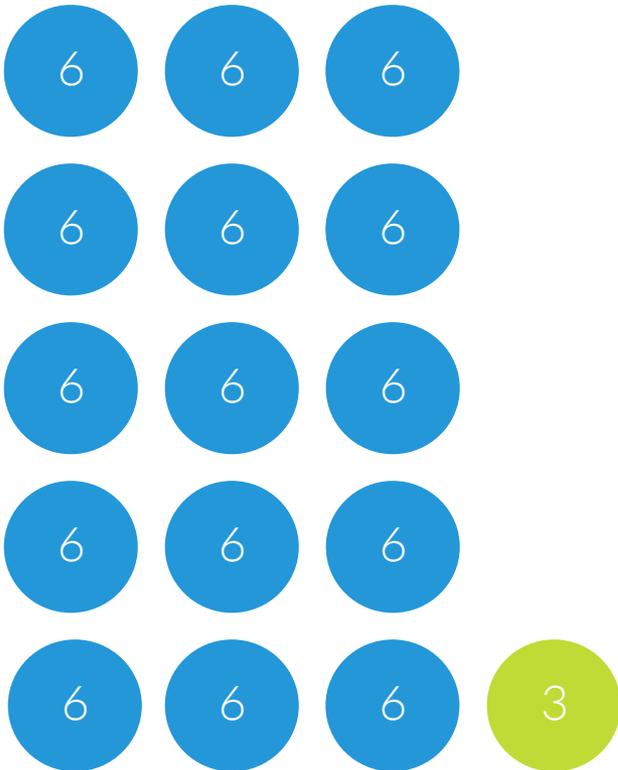
Lactating Diet Goal

For optimal performance, your goal is to balance your lactating diets at an Omega-6 : Omega-3 ratio of **5:1 or lower.**

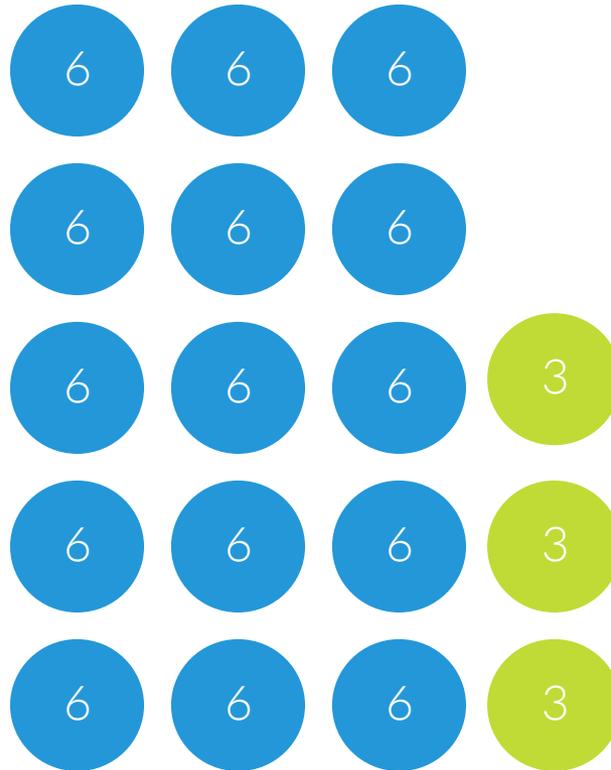
HOW STRATA WORKS

STRATA™
WITH EPA/DHA OMEGA-3s

Typical
Lactating
Diet
>15:1



With
Strata
<5:1



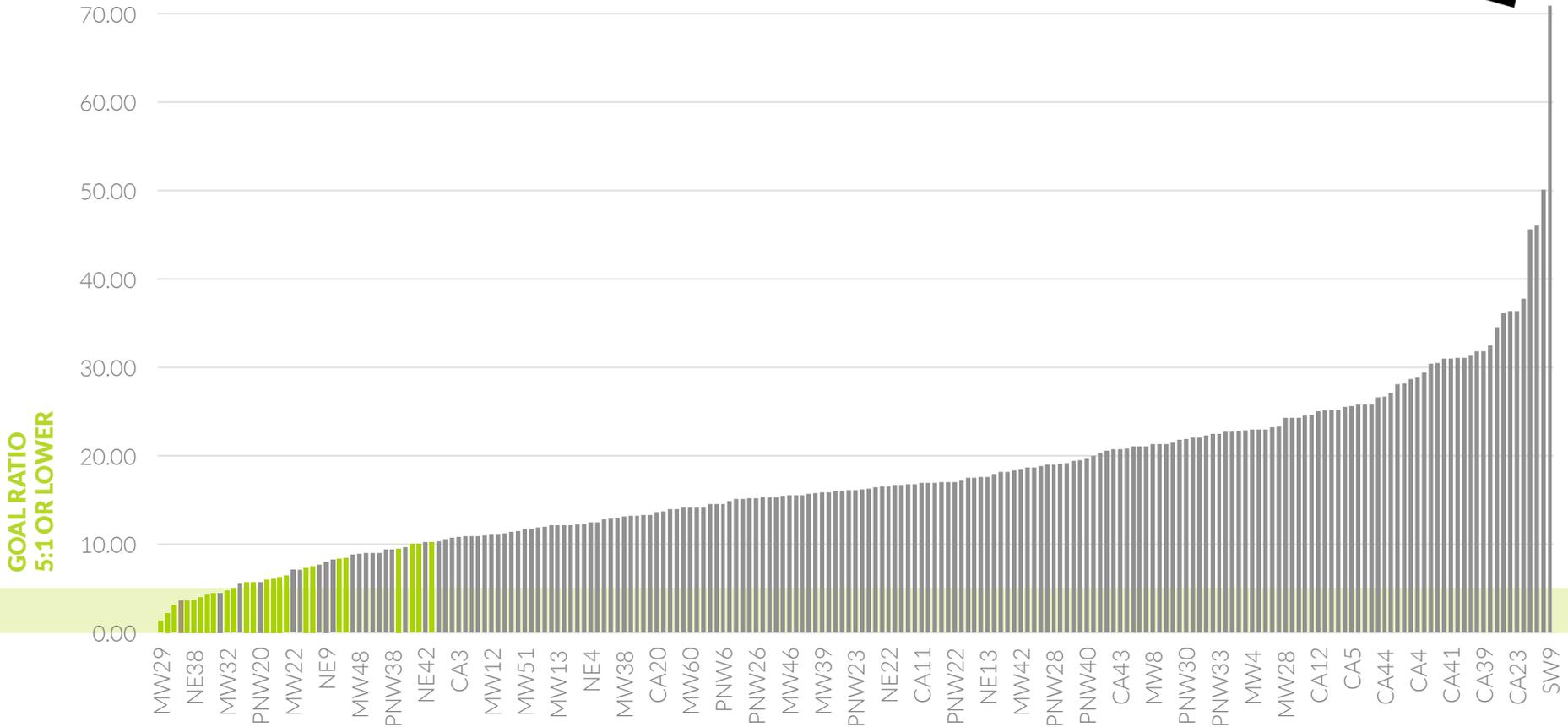
IMPROVES OMEGA BALANCE

Strata significantly lowers the omega ratio, allowing the cow to redirect energy toward milk and reproduction.

HOW STRATA WORKS

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HIGH COW TMR OMEGA-6 : OMEGA-3 Ratio (N=211)

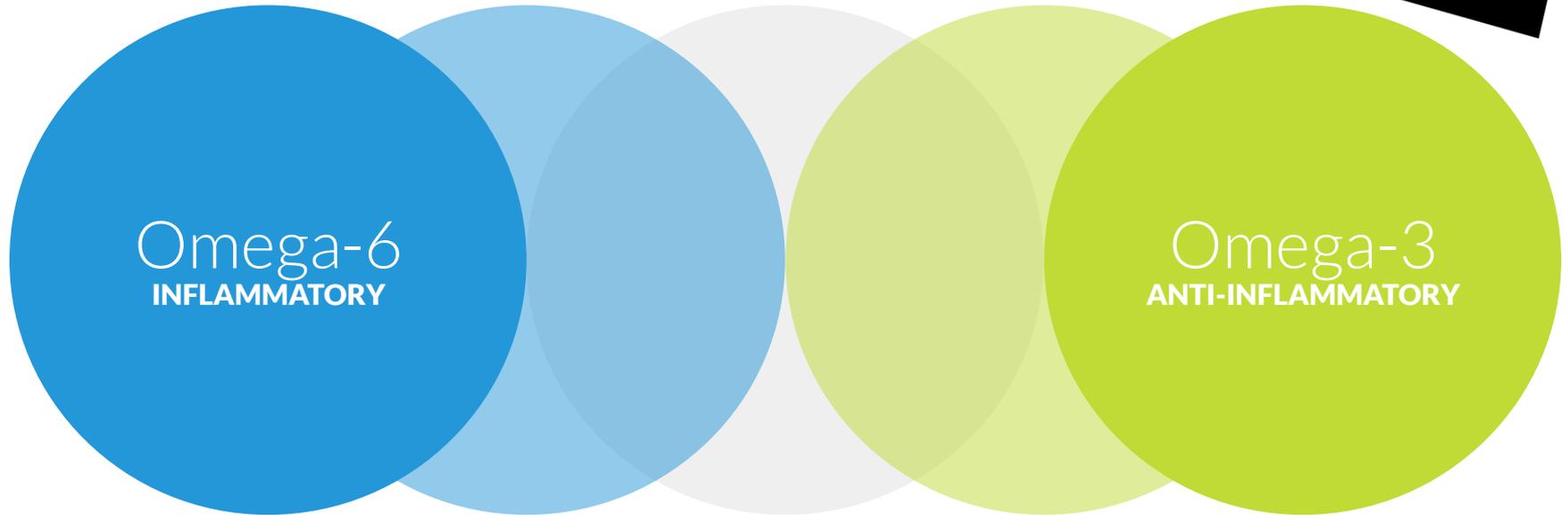


● No Strata ● With Strata

Adapted from the Virtus Nutrition Fatty Acid Profile Project, 2013

WHY STRATA WORKS

STRATA™
WITH EPA/DHA OMEGA-3s



IT'S ABOUT BALANCE.

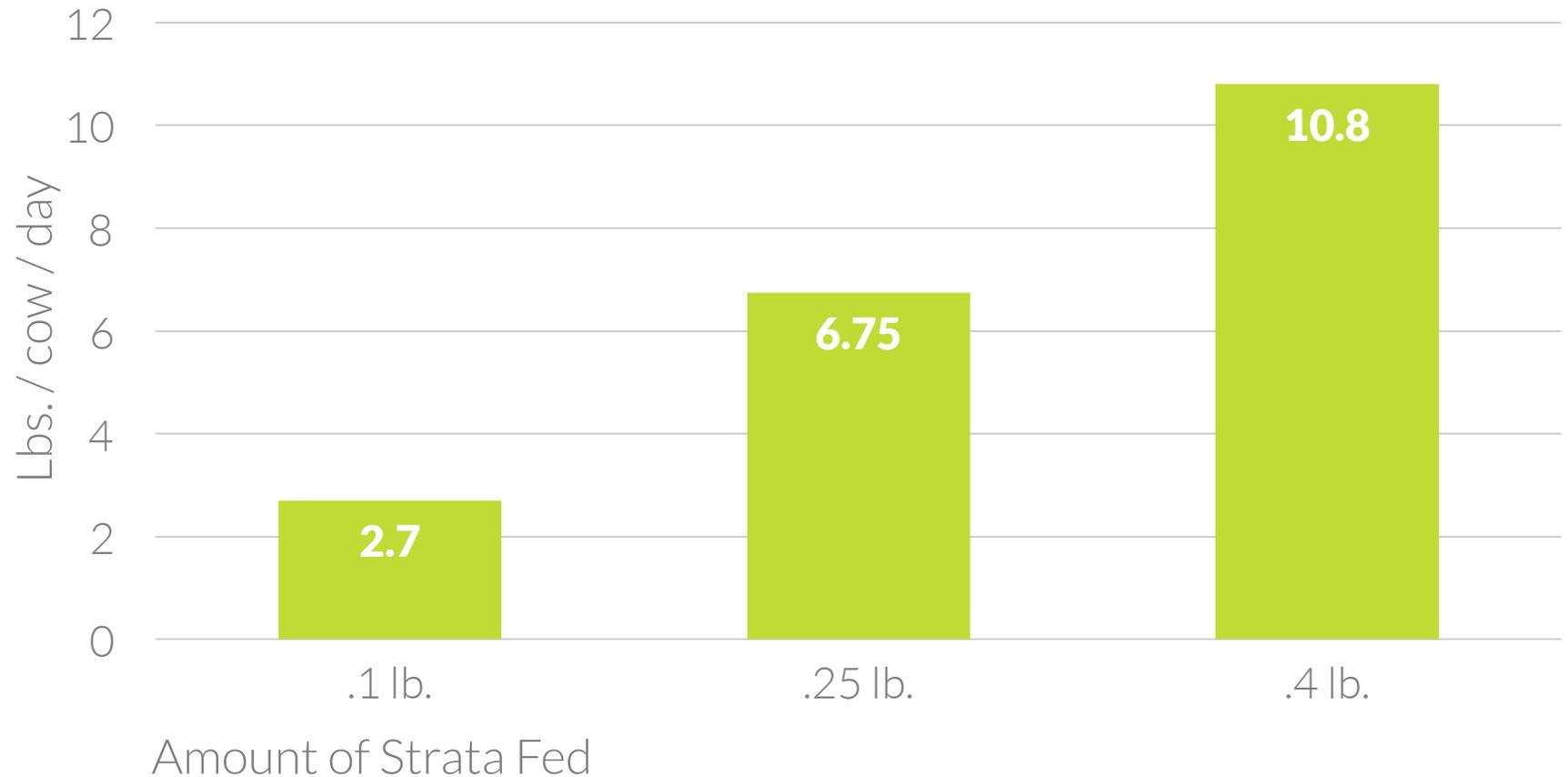


To learn what your Omega Ratio is, visit
OMEGABALANCER.COM

MILK RESEARCH SUMMARY

STRATA™
WITH EPA/DHA OMEGA-3s

MILK RESPONSE AT VARIOUS FEEDING RATES OF STRATA G113 ●



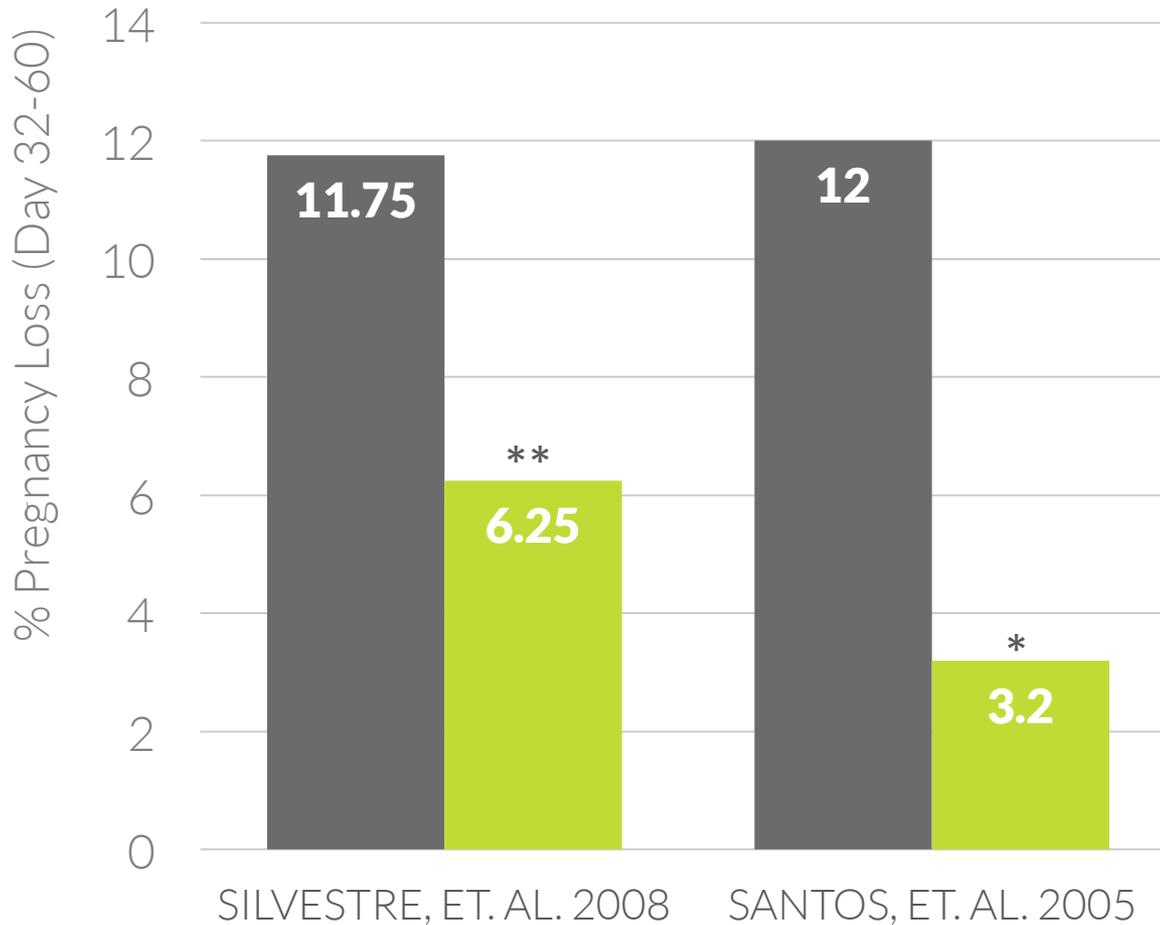
● Adapted from Bilby, et. al., University of FL, 2006; Moussavi, et. al., Cornell University, 2007; Santos, Greco, et. al., University of FL, 2013.

Trt P<.01, Linear P<.01

⊕ PLUS REPRODUCTIVE GAINS

STRATA™
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IMPROVED EMBRYO RETENTION



* P<0.05 ** P<0.01



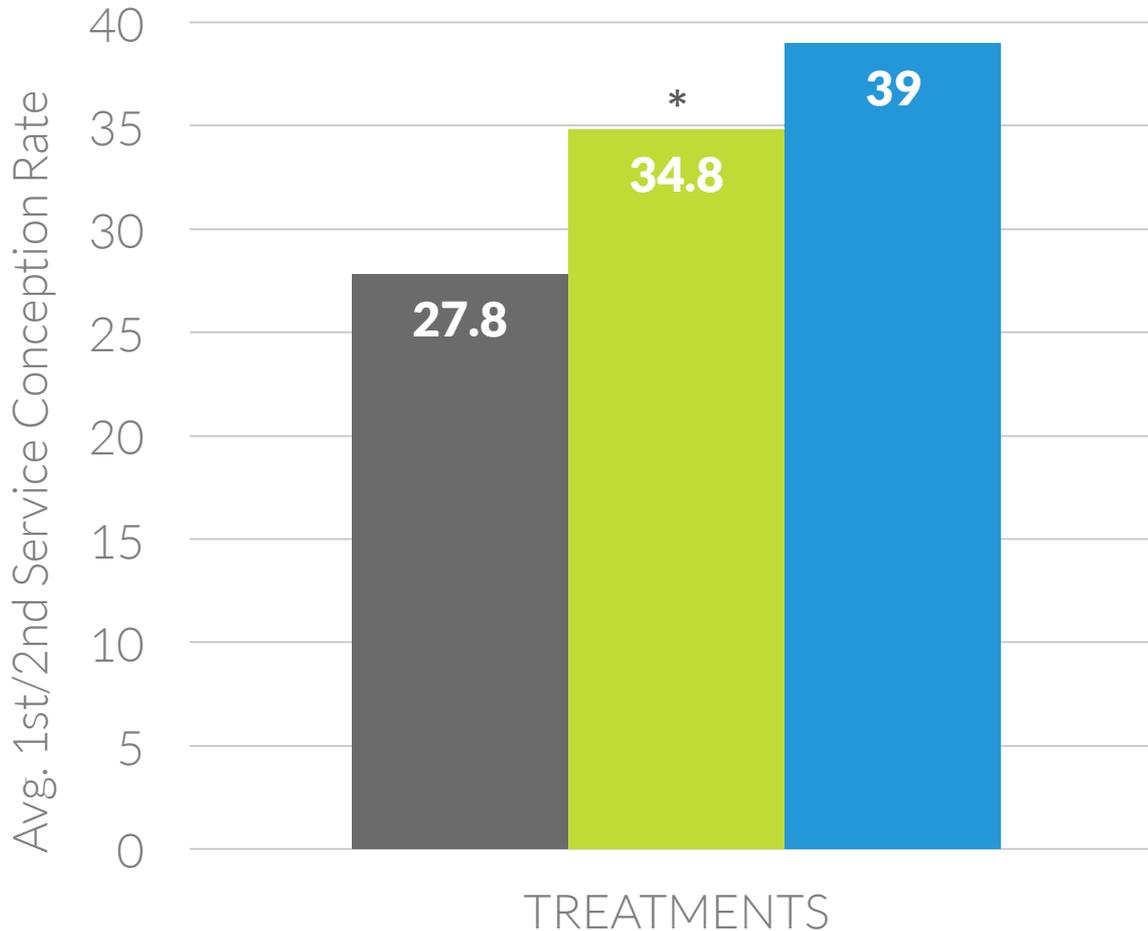
50% Greater Embryo Retention compared to diets fed the same energy from bypass fat (EnerGII)

■ CONTROL (ENERGII)
■ STRATA

⊕ PLUS REPRODUCTIVE GAINS

STRATA™
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IMPROVED CONCEPTION RATES



5+ Points

Increase in Early Conception Rates

Incremental gains by setting cows up for success with Prequel omega-6s in the close-up pen, followed by Strata in fresh and breeding pens

- CONTROL (ENERGI)
- STRATA
- PREQUEL + STRATA

* P<0.01 Chart adapted from Silvestre, et. al, 2008

SIMPLE STRATA MATH

| STRATA FEEDING RATE | .25 LB. | .4 LB. |
|-------------------------------------|---------------|---------------|
| Milk Response | 6.75 | 10.8 |
| Milk Price | \$18.00 | \$18.00 |
| Income/Cow/Day | \$1.21 | \$1.94 |
| Minus Strata* Cost/Cow/Day | - 25¢ | - 40¢ |
| Profit/Cow/Day on Milk Alone | \$0.96 | \$1.54 |
| Breakeven Milk Response | 1.4 lb. | 2.2 lb. |

STRATA™
WITH EPA/DHA OMEGA-3s

The
math
works
on milk
alone.

+ PLUS REPRODUCTIVE GAINS



* This is an approximate replacement cost for feeding Strata G113, after replacing an equal amount of EnerGII calcium salts of fatty acids. Please see your local distributor of Virtus Nutrition products for exact pricing of products for your dairy.

POINTS TO REMEMBER

STRATA™
WITH EPA/DHA OMEGA-3s

- Most lactating diets have **less than ideal ratios of omega-6s to omega-3s**, with very few omega-3s fed.
- Just **.1 to .4 pound of Strata** can shift the omega-6 to omega-3 ratio to **less than 5:1**, freeing up more energy to be redirected for milk and reproduction.
- This response is **beyond simply adding energy**, as all treatments had equal amounts of energy and total bypass fat.
- **Strata math works on milk alone**—at \$18 milk, it takes 1.4 pounds of milk to pay for Strata (.25 lb. rate)—yielding 6.7 pounds of early milk production, and significant reproductive gains.