Achieving Excellence in Dairying

Moving from 25L to 45L

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Dr. Gordie Jones
• 15 years Dairy Practice
• 10 years Dairy Nutrition / Facility /Cow Comfort consulting
• 3 years Monsanto (BST) consulting
• 6 years designed & managed Fair Oaks Dairy Farms (20,000 cows)
• 5 years build and manage my dairy farm!

Location: Wisconsin Golden Sands Area
Sign seen in Nekoosa, WI Last Sept

- Ice Fishing Practice
- Wed Evening 7 PM
- Nekoosa, High School

Trends in the Dairy Industry over the last 25 years can be best described by the term:

CHANGE

Member
Red Barn Club
since 1977

PM Fricke, Ph.D.
Remember we are here because we love cows!
“Pleistocene Mega fauna”

-Born during the last Ice Age

The First Farmers

- Were in Mesopotamia
- Modern day Iraq
- Large headed grains
- Wheat, Barley, Triticale
- A stick in the sand
- A little water and we were farmers!

The First Farmers

- Our First fences
- Were to keep the wild cows out!!
- She opened the gate
- And we now had a cow!

Only 11 species were able to be domesticated.

- Our Cow is the star!
- She Provided POWER, Protein, & Fertilizer
- She truly is the foundation of civilization.
- The foster mother of the human race
- All of the domesticated animals are "herd" species - looking for a leader
- Except the Cat!!
Covenant:
To care for, and keep

Guns, Germs & Steel
Jarred Diamond

Vaccine
• First vaccine....
• Small Pox
• Cow Pox
• Latin Vacca = Cow
• Vaccinate
Cow-inate!!!

Dairy Products!

Milk - Dairy Products
- Weight Loss
- Muscle recovery & Muscle building
- Potent cancer preventer - CLA’s

Weight Loss
- Reported this year on Yahoo!
- 2-3 servings low fat dairy products
- Yogurt & cottage cheese
- Lose weight faster / longer
- Lose more from abdomen
Exercise Recovery & Muscle Building

- Casein and whey proteins
- Taken within 30 minutes of exercise rebuilds X% of muscle
- Now used on the Olympic Training tables

GREAT TASTE. HIGH PROTEIN. SIMPLE INGREDIENTS.

Provides a +20% increase in muscle recovery \( \frac{1}{2} \) hour after exercise

Efficiency of Production

- Since WWII
- Ave milk/cow is up 400% (7L-28L)
- A car would have to have gone from 18mpg to 72mpg to have that success
- Carbon footprint of dairy production is + 40% smaller since WWII
- JDS June 2009
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- 3,500 milk cows, 600 dry cows
- 4 row freestall barns
- 64 - 74 # (29-34L) /cow/day
- 72 Cow Rotary
- Calve 300+ cows per month
- 6 row dry cow barn
- Methane digester
- Sand bedding & 125-150,000 SCC
Rules that still apply

• Cow Comfort is first
• Forage is king
• And Better Forage is better
• Preg rates means you keep cows
• Dry Cow program stops early fresh cow losses
• Milk Quality is EVERYTHING !!!

Rules that still apply

• Nutrition
• Dry Cow program
• Cow Comfort
• Reproduction
• People get everything done above!
BOTTLENECK
A rate limiting problem

WATER IN A PIPE: Problems

Bottlenecks
• Rate limiting problem
• Interferes with achieving Dairyman's goal
• Any improvement pays off in better output
• Before it is completely "fixed", something else will become the bottleneck
Improving the Dairy

- Survey the status and performance trends of the dairy farm’s performance.
- Compare to benchmarks of industry performance and personal goals.
- Identify bottlenecks.
- Open them up.
- Repeat the process.

Books on “Dairy Management”

- “The Goal” by Goldratt
- “The E myth” Revisited by “Gerber”

Milk Production

- Fresh Cow / Dry Cow
- Youngstock
- Milk Quality
- Reproduction
- Ration
- Feed Bunk Management
- Cow Comfort

Cow Comfort

Milk Production
3 things a Cows Should Do!

- Stand to EAT & DRINK
- Stand to MILK
- LAY DOWN

“Cows Don’t Normally Just Stand Around”

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“Concentric Consistency”

24 Hours
What does a day look like?

• Times milked
• Time in parlor
• When is she fed
• How long is she locked up
• Etc.
Maternity Pen

What does a year look like?
- Group changes
- Rations
- When bred
- Pen moves
- How long is she dry
- Etc.
What does two years look like?

- Maternity pen
- Hutches
- Weaning group
- Rations
- Group changes
- When bred
- Etc.
Value of SOP's

- Dairy personal are certified in their position!
- Every person knows and understands their job!
- Every person that is certified, has passed an exam (oral or written) about their job.
Management, Environment & Herd Performance

47 herds with similar genetics were fed same TMR
- Milk yield varied by 29 lb/d (45-74 #) (20-34L)
- Non-dietary factors accounted for 58% of variation in milk yield
  - Feeding management
    - Feeding for refusals (84.1 vs 60.8 lb/d)
    - Feed push-ups (63.7 vs 55 lb/d)
  - Stall design and management
    - Stalls per cow
  - Age at first calving

(Bach et al., 2008)

Relationship Between Resting and Milk Yield

Miner Institute database

Increased resting time with greater DMI, milk yield

(Bach et al., 2010)

~3.7 lb/d (1.7L) more milk for each extra hour

y = 49.2 ± 3.7
r² = 0.31

(2 to 3.5 lb/cow)
4 reasons freestalls fail

- Lack Of Cushion
- Neck Rail Placement
- Lunge Space Limitations
- Lack of Fresh Air / Vision
3 things a Cows Should Do!

- Stand to MILK
- Stand to EAT & DRINK
- LAY DOWN

“Milk is the Absence of stress!!!”

Get it correct!! And it looks like this!

Get it wrong!! And it looks like this!
Unlocking dairy performance - thinking like a cow

Components of a Cattle Handling System
- The design and maintenance of the facilities
- The cattle handling skills of the people

Low Stress Handling Systems
- Informally, this is how to work cattle with low-stress methods
- Formally, this is the study of cow behavior and her stress response
  - Apply the sciences of behavior analysis and stress biology
Stockmanship Principles

• Pressure area surrounds the flight zone

• Apply pressure to animals properly
Stockmanship

• Cattle want to follow other cattle
• Cows want to return to where they came from
• Always put them in where you want them to come out
• These are the concepts behind the Bud Box
The Bud Box

Bud Box Design

- 14 x 20 to load a chute
- 14 x 30 to load a truck
- Same size
  - Regardless of the animal size
  - Regardless of the number of animals
- Exit opening wide enough for 1 animal
- Person working properly is more important than the size details
Questions? Thoughts?

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