

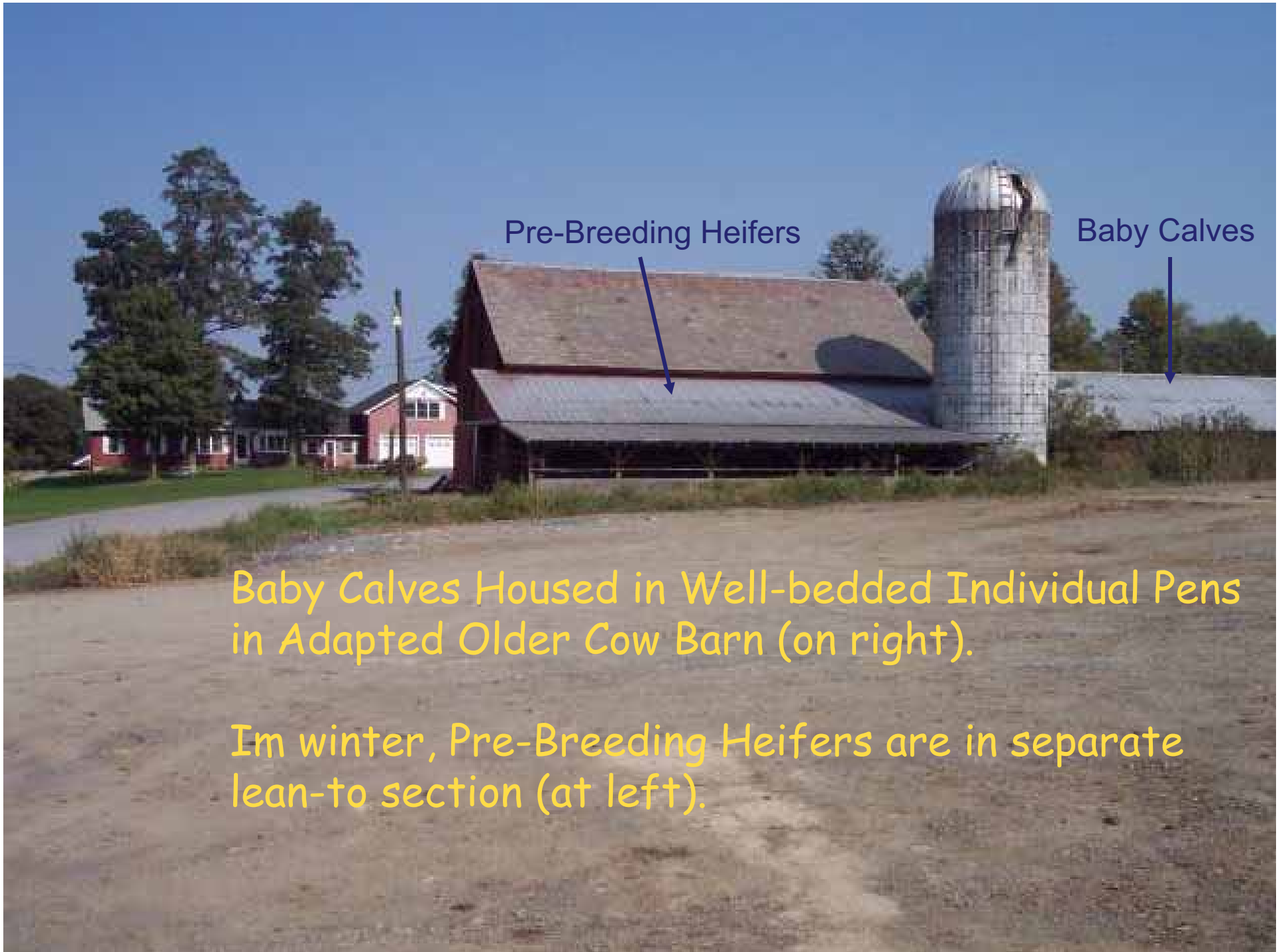
# Koval Brothers Dairy, Stillwater, NY

300 Cows  
235 Heifers



Adam

Chris



Pre-Breeding Heifers

Baby Calves

Baby Calves Housed in Well-bedded Individual Pens in Adapted Older Cow Barn (on right).

Im winter, Pre-Breeding Heifers are in separate lean-to section (at left).

A photograph of a newborn calf in a wooden 'jug' in a barn. The calf is black and white, lying on a bed of straw. The jug is made of dark wood and has a curved handle on top. The background shows other wooden stalls in the barn.

Newborn Calf "Jug"

- ◆ High Quality Colostrum -- huge priority!
  - sound dry program
  - fresh cows milked ASAP
  - cleanliness paramount
  - colostrometer tested, must meet standard
  - fresh only, discard before microbial growth

## Baby Calf Pen

- ◆ High Quality Milk Replacer
  - solids quantity adjusted for weather
  - bucket/bottle cleaning protocols in place to keep them dry and functionally “sterile”
- ◆ Clean Water, High Quality Grain
- ◆ “Walk-through” observation protocol
- ◆ Wean at 7 weeks

Overly Comfortable  
Cat



Electronic Scale with Double Gate Cage for Weighing Calves

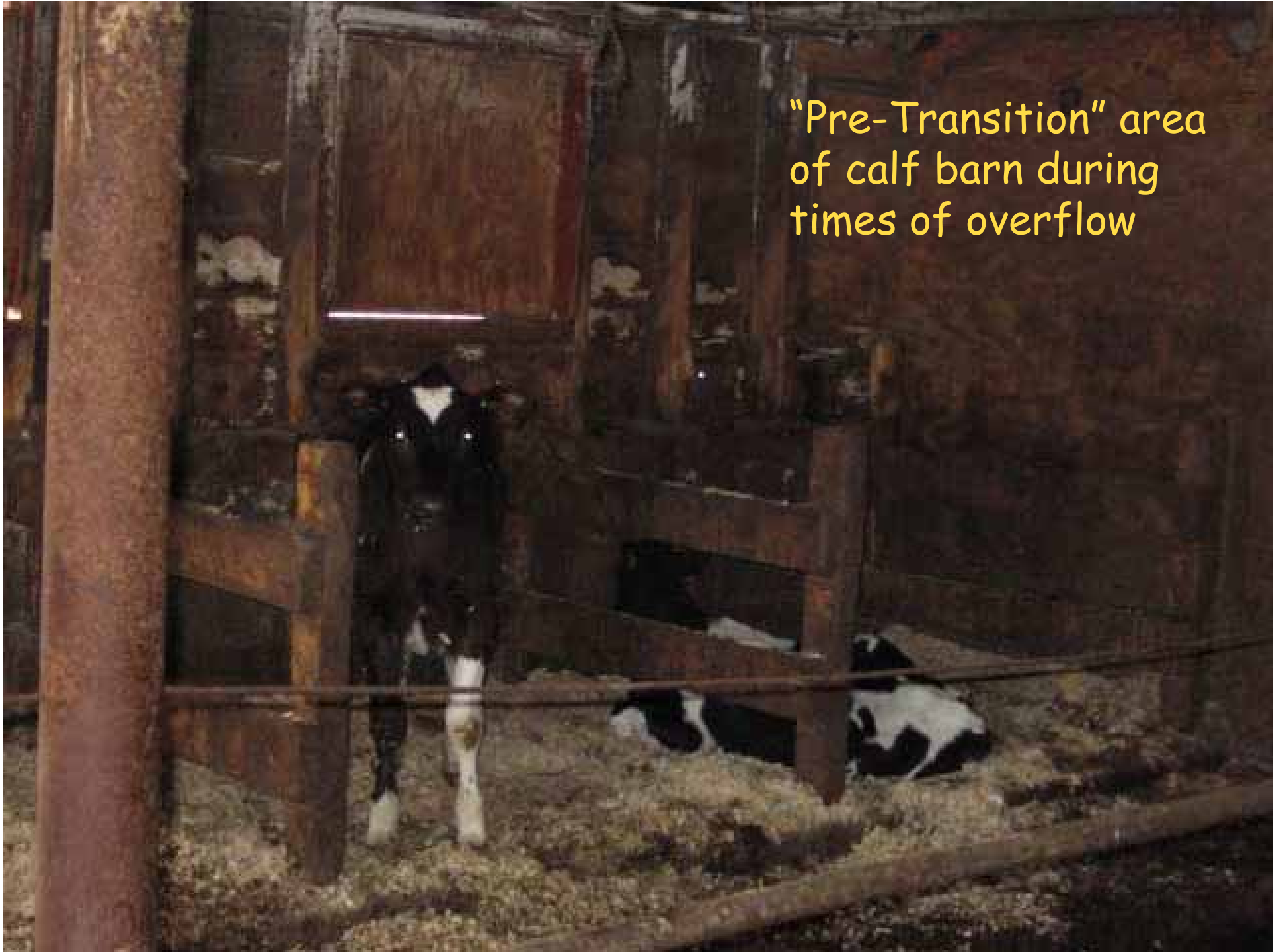




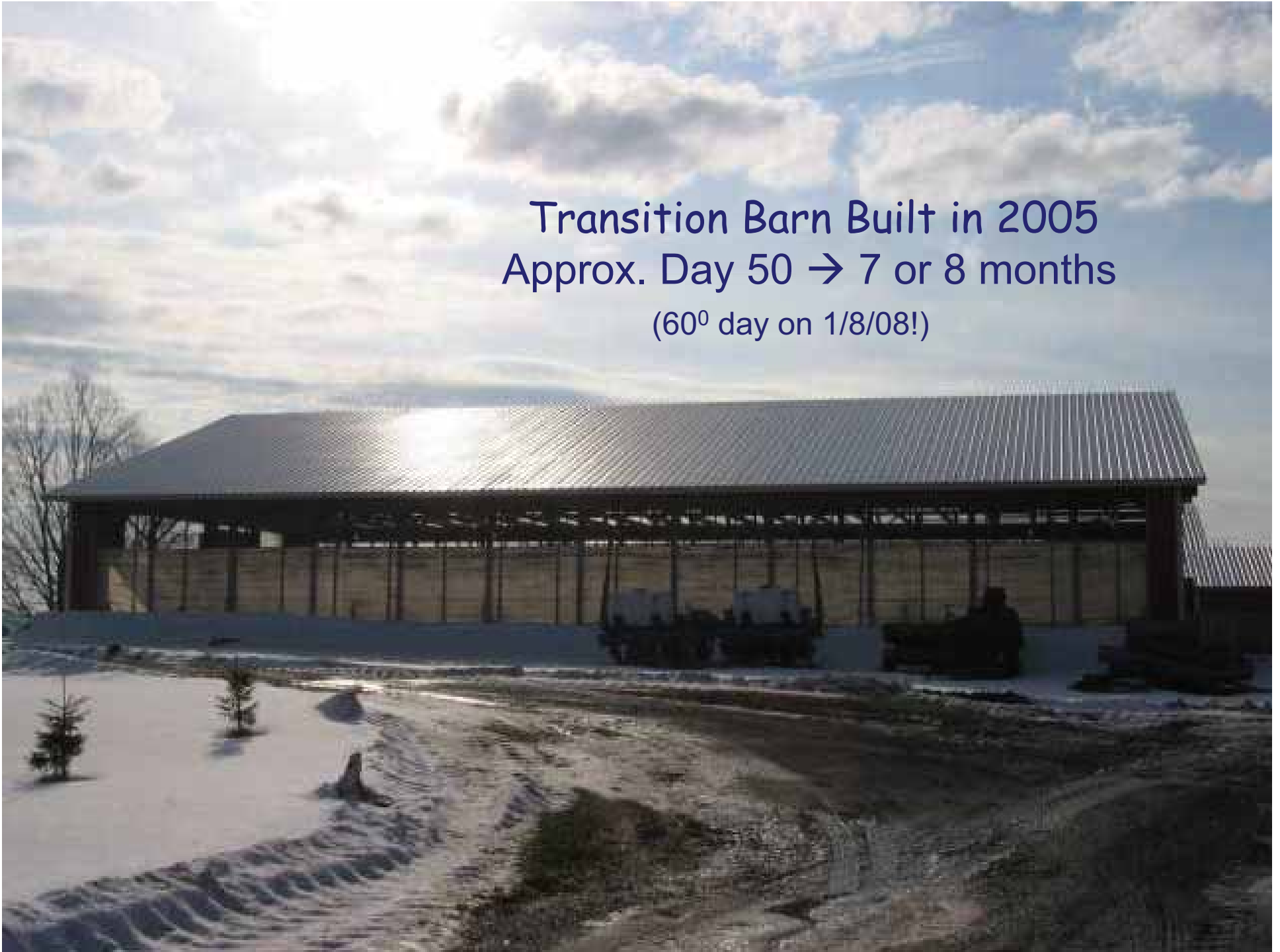
Hutches are backup  
to individual calf pen  
overflow.



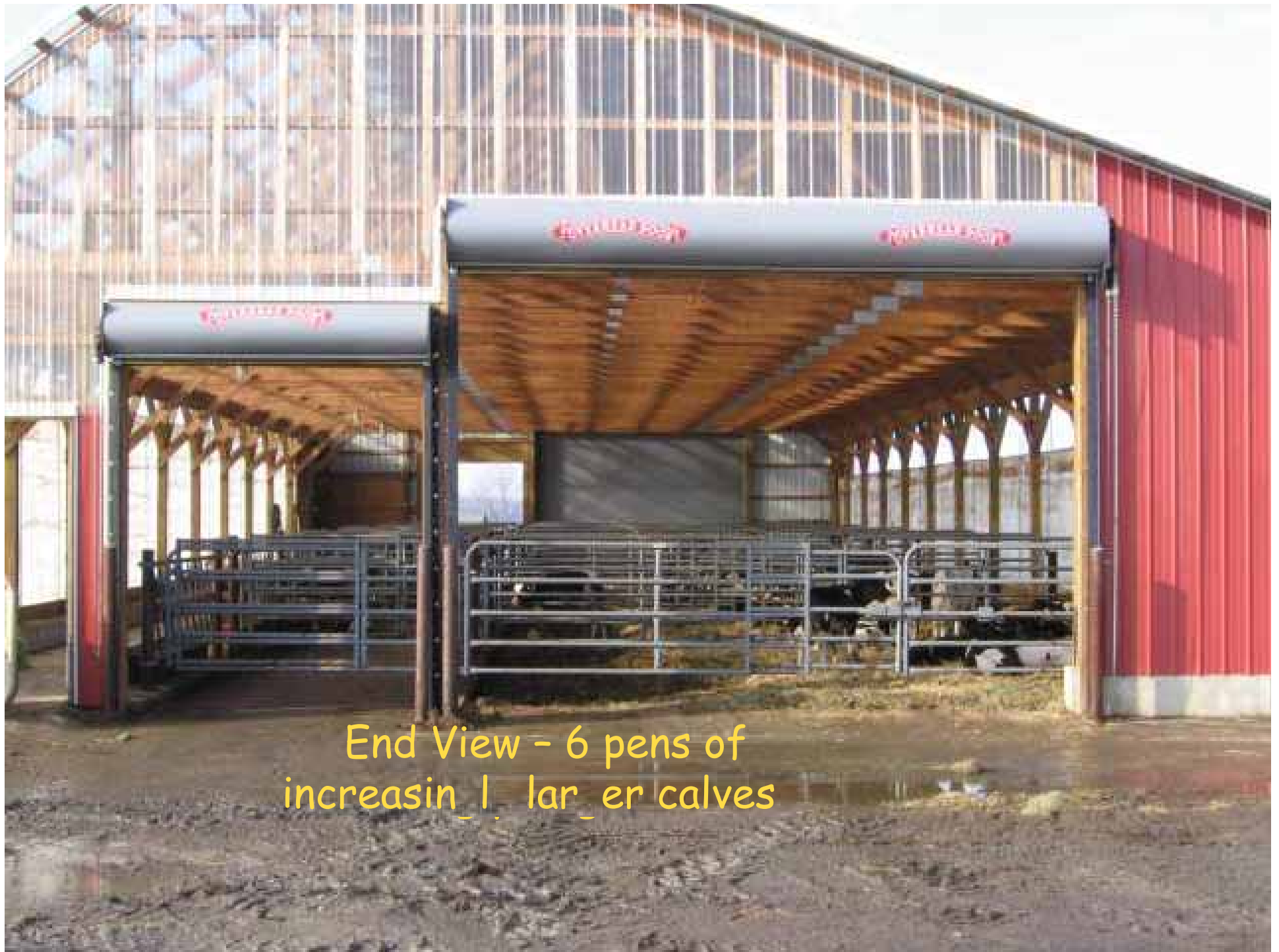
"Pre-Transition" area  
of calf barn during  
times of overflow



Transition Barn Built in 2005  
Approx. Day 50 → 7 or 8 months  
(60<sup>0</sup> day on 1/8/08!)







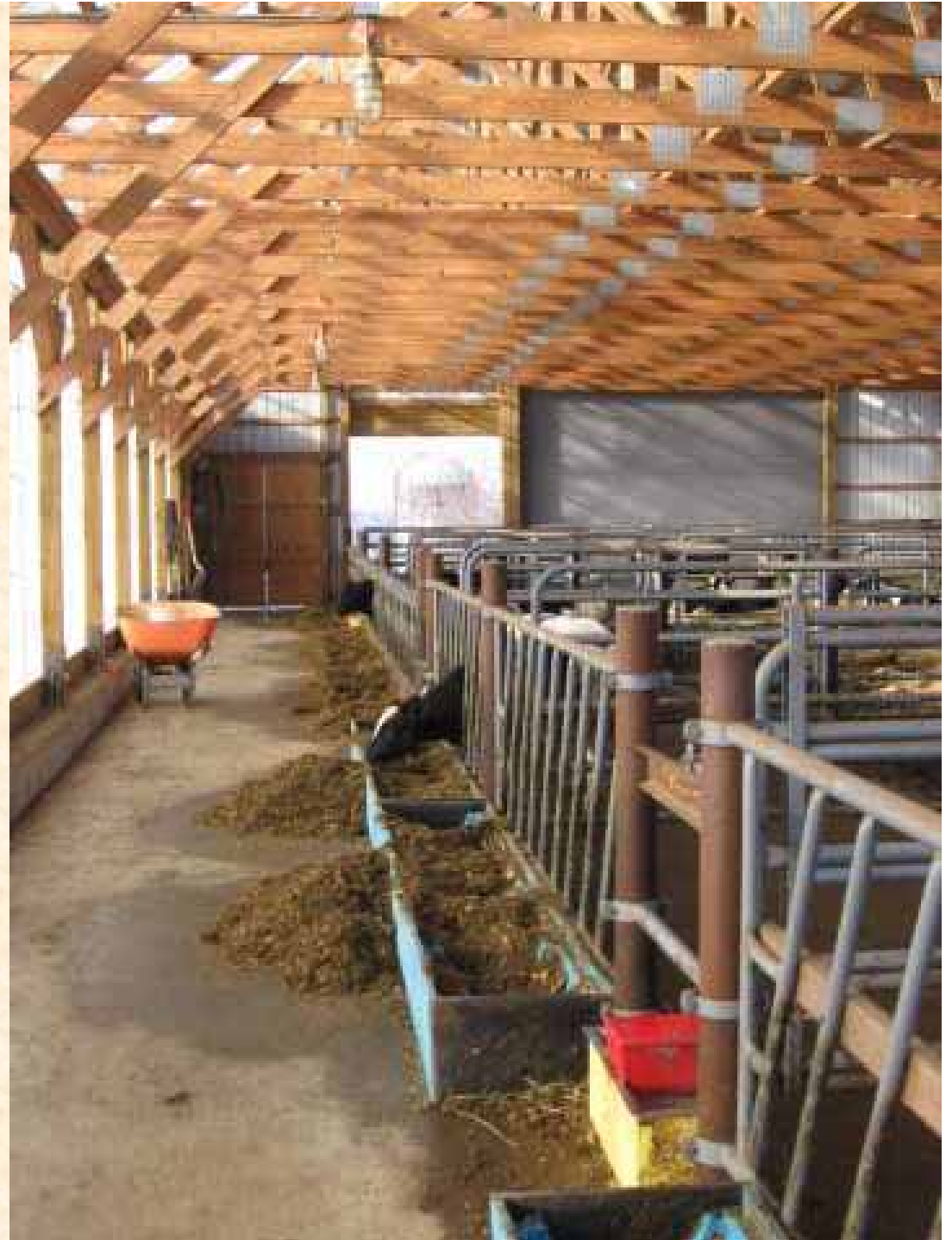
End View - 6 pens of  
increasing larger calves



Clean & Comfortable - Sand Bedding in Summer

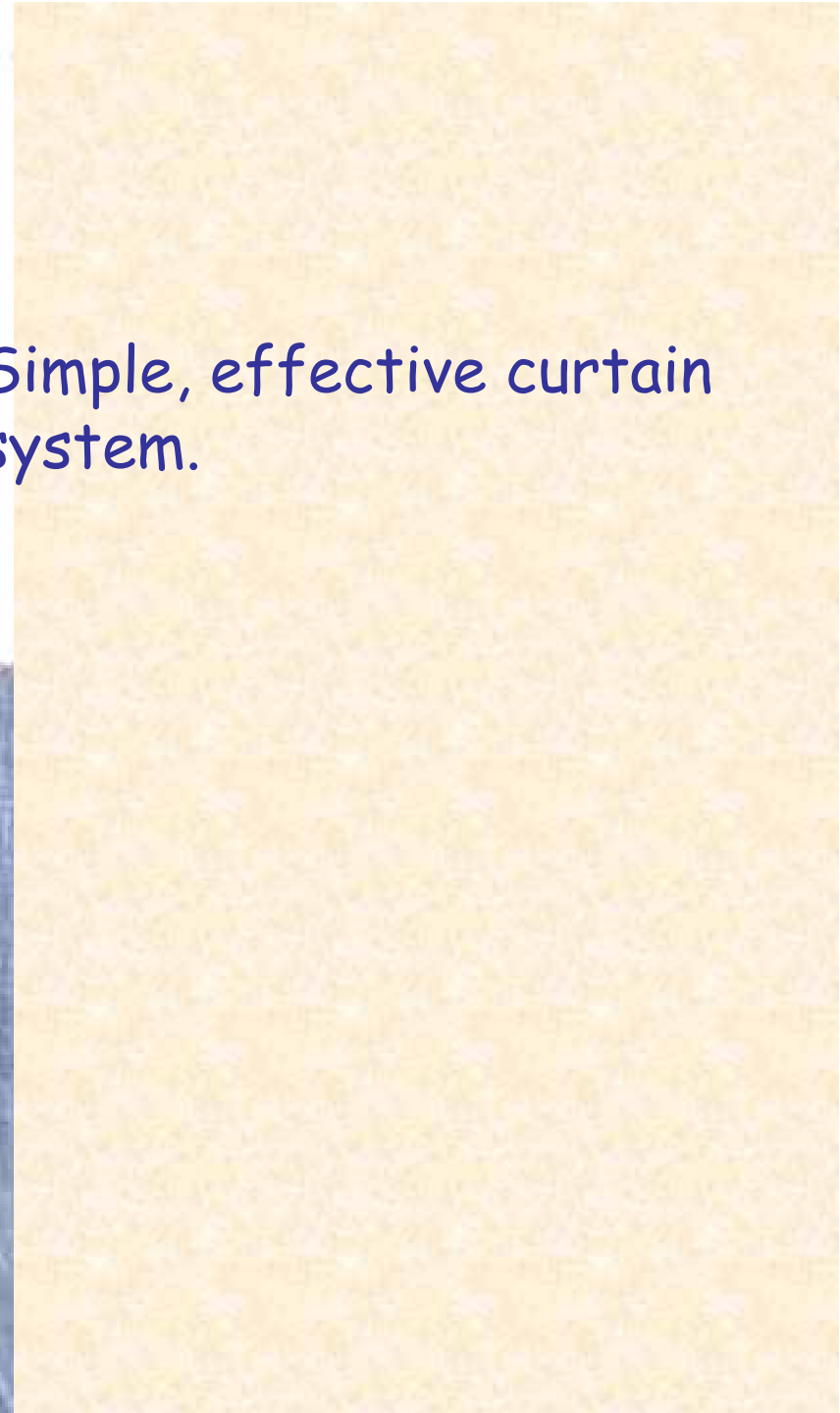
All Six Pens get 75% Haylage/25% Corn Silage Mix plus 3.5 lbs. grain.

Some good quality hay to the smallest calves in pens 1 & 2.





Simple, effective curtain system.



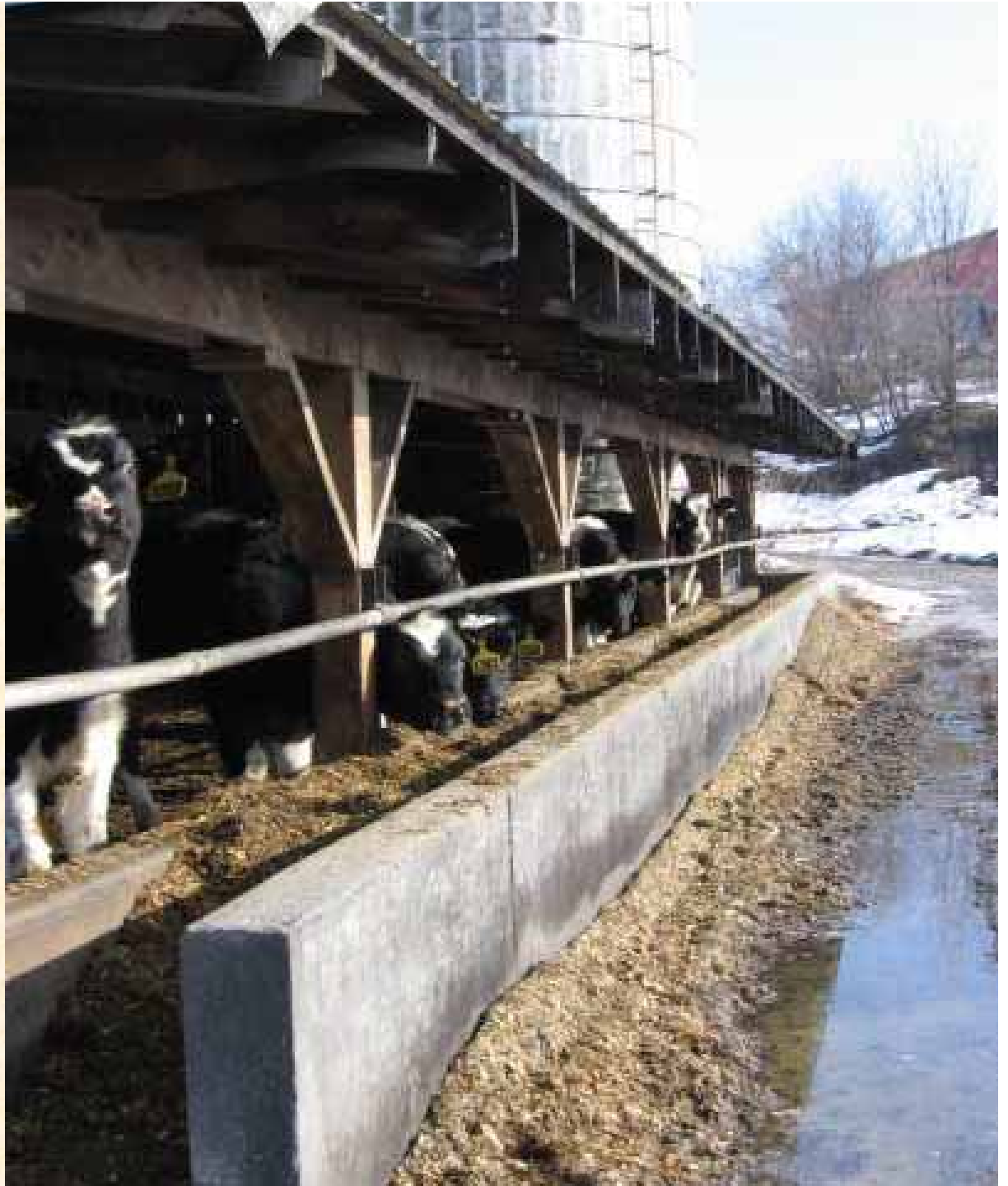
Approximately  
8 - 10½ months

"Winter Quarters"  
Pre-Breeding Group

Summer on Pasture;  
Supplemented as  
Needed



75% Haylage/25%  
Corn Silage Mix plus  
2 lbs. grain.







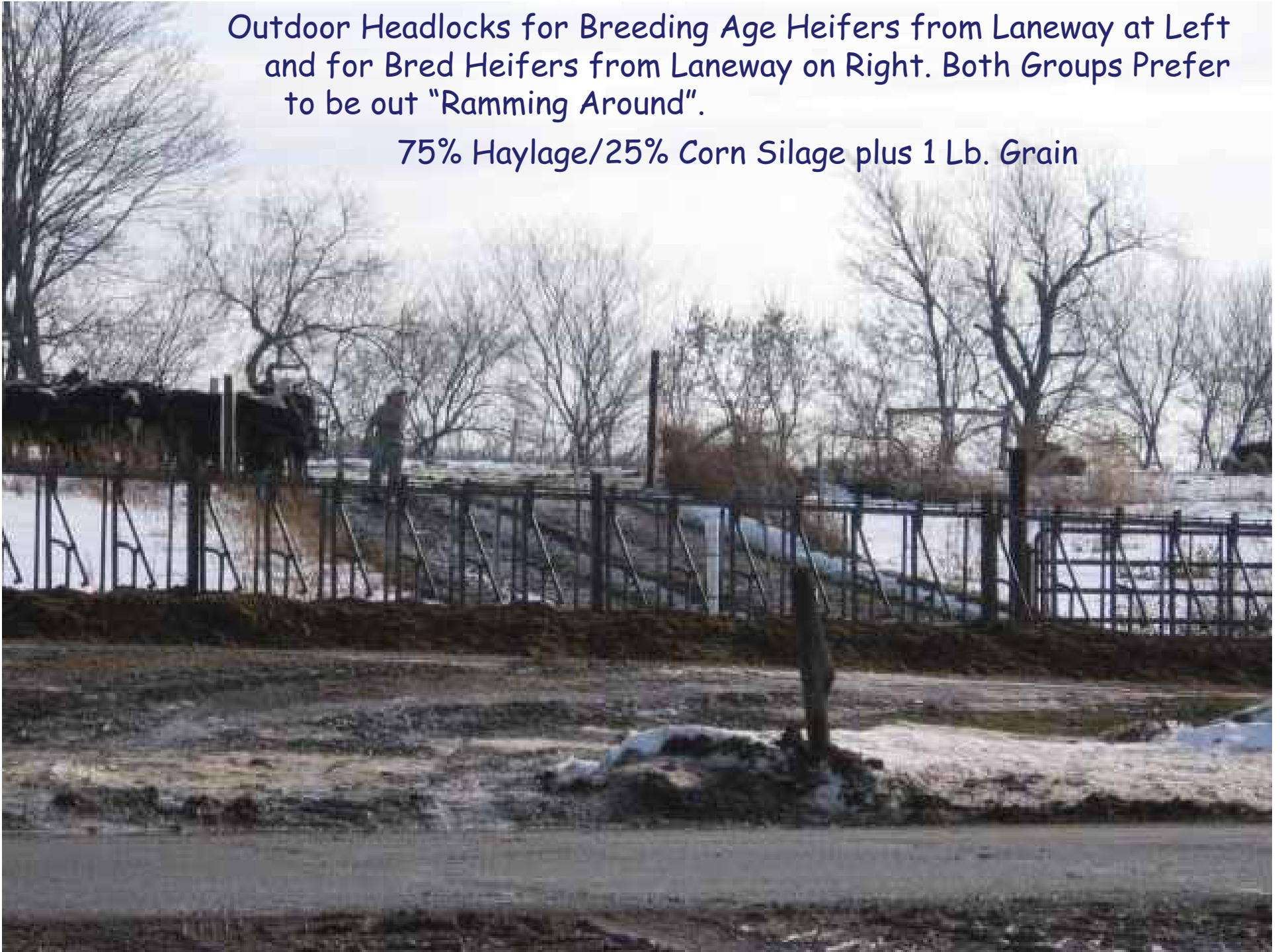
Open to South, Cold Housing, Protected from Wind/Draft *Most* of the Time

"Airy", Clean Bedded Pack  
for Breeding Heifer Group



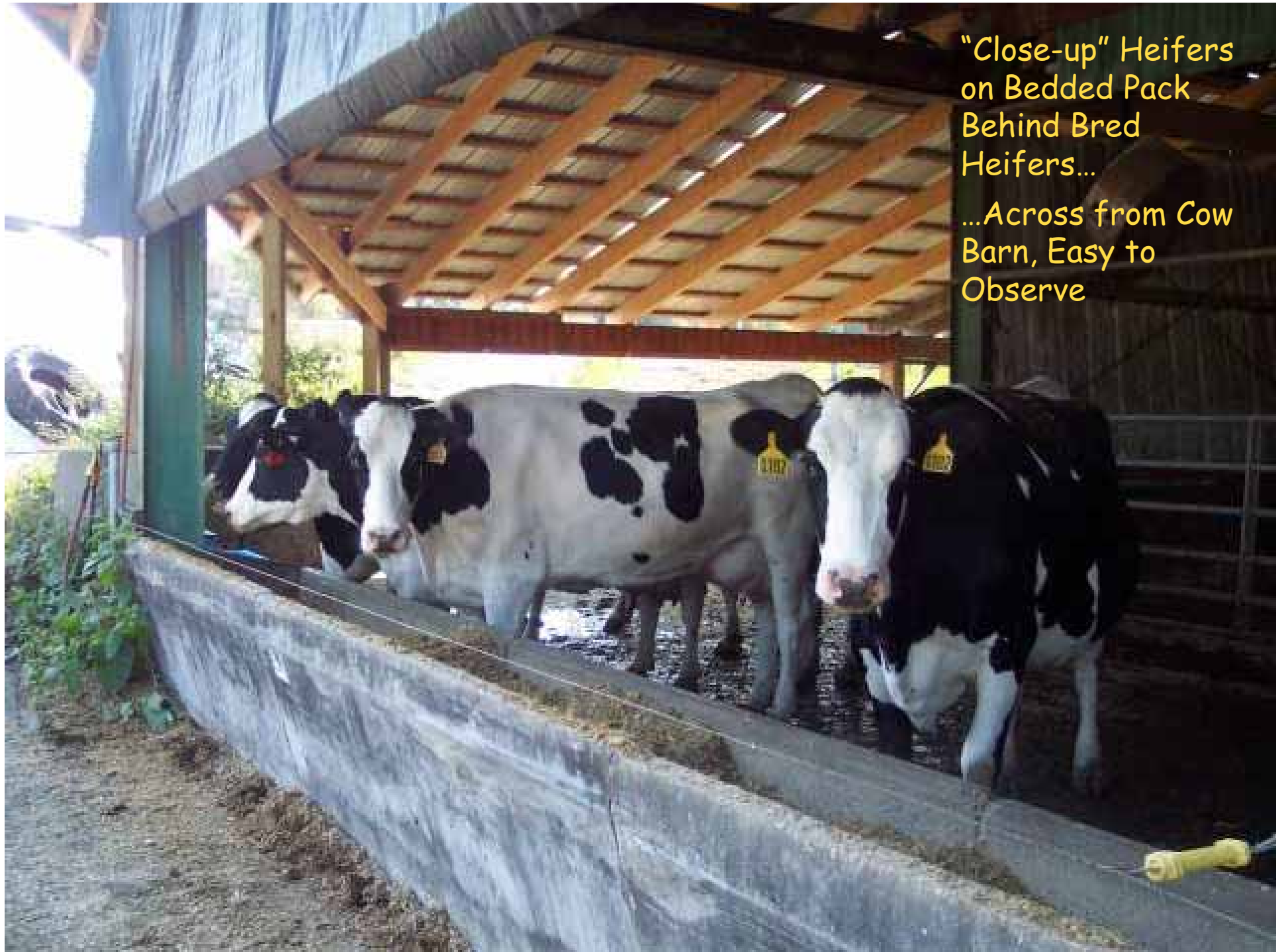
Outdoor Headlocks for Breeding Age Heifers from Laneway at Left and for Bred Heifers from Laneway on Right. Both Groups Prefer to be out "Ramming Around".

75% Haylage/25% Corn Silage plus 1 Lb. Grain



Short-bred Heifers on Pasture in Season





"Close-up" Heifers  
on Bedded Pack  
Behind Bred  
Heifers...

...Across from Cow  
Barn, Easy to  
Observe



Bedded Pack "Around the Corner"



Sun's out , lent , of feed room  
to ram, clean and dry place to  
lie...

Life is Good!





# Koval

Breakdown of Costs of Raising Heifers by Stage of Growth				
Koval				
Per Pound of Gain	Stage of Growth			
	Birth to 200 Lbs	201 to 700 Lbs	701 to 850 Lbs	851 to Calving
Feed	\$1.003	\$0.472	\$0.791	\$0.790
Labor	\$1.045	\$0.169	\$0.177	\$0.091
All Other Costs	\$0.633	\$0.477	\$0.804	\$0.413
<b>Total</b>	<b>\$2.681</b>	<b>\$1.118</b>	<b>\$1.773</b>	<b>\$1.295</b>
Total Investment	Stage of Growth			
	Birth to 200 Lbs	201 to 700 Lbs	701 to 850 Lbs	851 to Calving
Feed	\$110.3	\$236.2	\$118.7	\$355.6
Labor	\$115.0	\$84.3	\$26.0	\$40.0
All Other Costs	\$69.6	\$238.3	\$120.6	\$186.0
<b>Total</b>	<b>\$294.9</b>	<b>\$558.8</b>	<b>\$265.9</b>	<b>\$582.5</b>
% of Total Costs	15.8%	30.0%	14.3%	31.2%
% of Total Growth	8%	38%	12%	35%

## Koval



Age Leaving Replacement Program	24.0	Months
Weight Leaving Replacement Program	1317	Lbs.
Average Daily Rate of Gain	1.69	Lbs.
All Heifers per Labor Hour, On Farm Only	33.10	
Pre-Weaned Heifers per Labor Hour	6.22	
Post Weaned Heifers per Labor Hour	54.6	
Total Investment in Animal	\$1,907.00	
% Dairy Replacement Cull Rate	5.02%	
% Non-Completion Rate, Based on Animals Entering System	9.55%	

**Koval**



	Average Cost		Per Animal	Percent
	Per day per Animal	Per Pound of Gain	Completing Program 103.9 wks	
Feed	\$1.150	\$0.681	\$835.85	47.6%
Labor	\$0.381	\$0.226	\$276.77	15.8%
Bedding	\$0.088	\$0.052	\$63.99	3.6%
Health	\$0.036	\$0.021	\$26.33	1.5%
Breeding	\$0.094	\$0.056	\$68.24	3.9%
Trucking	\$0.005	\$0.003	\$3.75	0.2%
Insurance	\$0.008	\$0.004	\$5.50	0.3%
Machinery Operation	\$0.093	\$0.055	\$67.67	3.7%
Machinery Ownership	\$0.029	\$0.017	\$21.28	1.2%
Building Operation	\$0.038	\$0.022	\$27.40	1.6%
Building Ownership	\$0.168	\$0.100	\$122.15	7.0%
Manure Storage Operation	\$0.000	\$0.000	\$0.00	0.0%
Manure Storage Ownership	\$0.000	\$0.000	\$0.00	0.0%
Manure Spreading	\$0.053	\$0.032	\$38.77	2.2%
Custom Boarding	\$0.000	\$0.000	\$0.00	0.0%
Professional Services & Fees	\$0.000	\$0.000	\$0.00	0.0%
Non-Performance Expense	\$0.070	\$0.041	\$50.91	2.9%
Interest on Daily Investment	\$0.204	\$0.121	\$148.41	8.4%
Total	\$2.417	\$1.432	\$1,757.00	100.0%

# Health Program

Koval 07



	Per Animal per Day	Per Pound of Gain	Per Animal
<b>Group 1</b>			
Preventative	\$0.23	\$0.13	\$12.50
Treatment	\$0.07	\$0.04	\$3.78
Veterinary	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$0.30</b>	<b>\$0.16</b>	<b>\$16.28</b>

	Per Animal per Day	Per Pound of Gain	Per Animal
<b>Group 7</b>			
Preventative	\$0.00	\$0.00	\$0.00
Treatment	\$0.00	\$0.00	\$0.00
Veterinary	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>

<b>Group 2</b>			
Preventative	\$0.02	\$0.01	\$3.93
Treatment	\$0.02	\$0.01	\$3.85
Veterinary	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$0.05</b>	<b>\$0.02</b>	<b>\$7.78</b>

<b>Group 8</b>			
Preventative	\$0.00	\$0.00	\$0.00
Treatment	\$0.00	\$0.00	\$0.00
Veterinary	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>

<b>Group 3</b>			
Preventative	\$0.00	\$0.00	\$0.00
Treatment	\$0.00	\$0.00	\$0.00
Veterinary	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>

<b>Group 9</b>			
Preventative	\$0.00	\$0.00	\$0.00
Treatment	\$0.00	\$0.00	\$0.00
Veterinary	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>

<b>Group 4</b>			
Preventative	\$0.00	\$0.00	\$0.00
Treatment	\$0.00	\$0.00	\$0.00
Veterinary	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>

<b>Group 10</b>			
Preventative	\$0.00	\$0.00	\$0.00
Treatment	\$0.00	\$0.00	\$0.00
Veterinary	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>

<b>Group 5</b>			
Preventative	\$0.01	\$0.01	\$2.27
Treatment	\$0.00	\$0.00	\$0.00
Veterinary	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$0.01</b>	<b>\$0.01</b>	<b>\$2.27</b>

<b>Group 11</b>			
Preventative	\$0.00	\$0.00	\$0.00
Treatment	\$0.00	\$0.00	\$0.00
Veterinary	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>

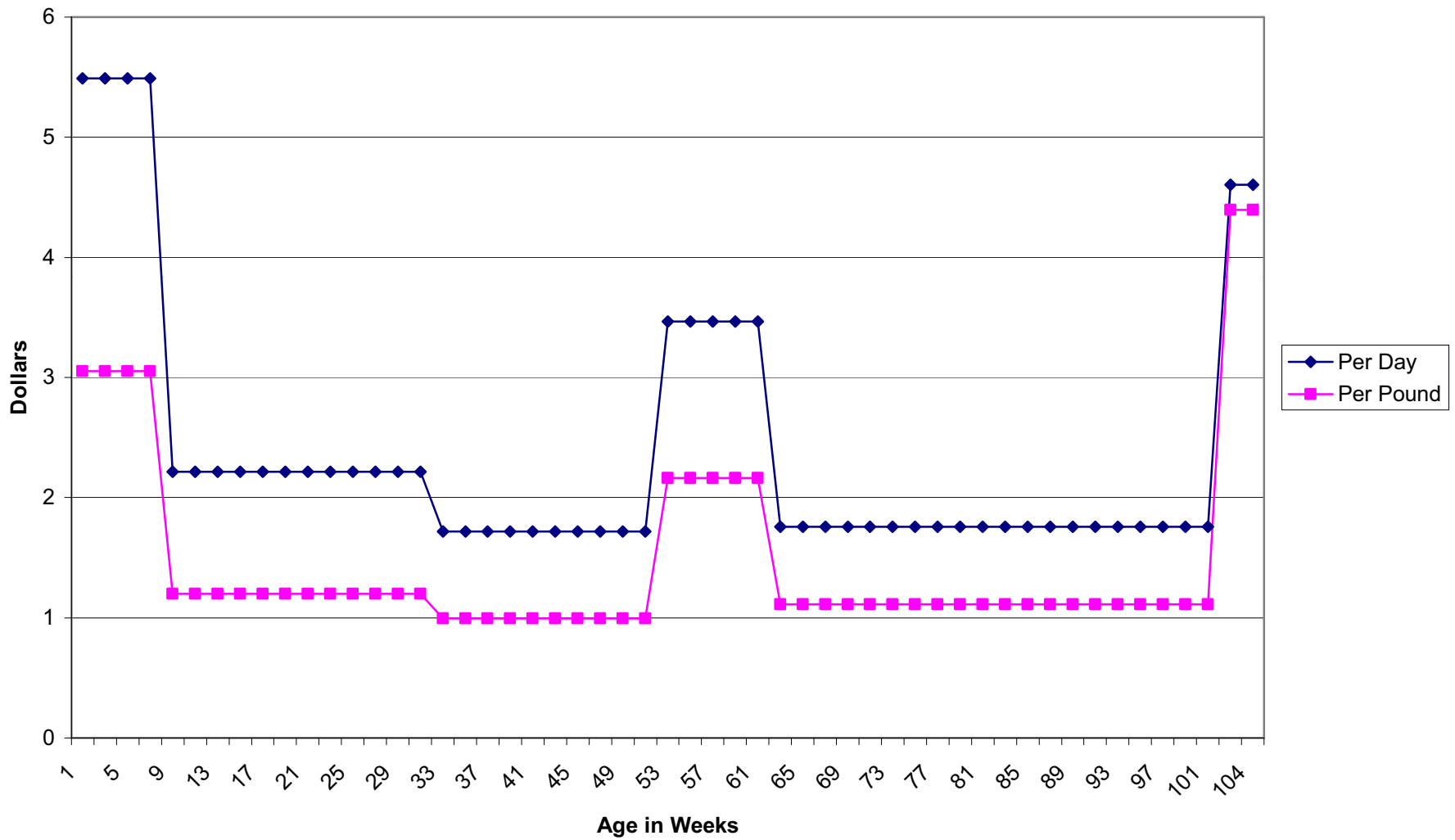
<b>Group 6</b>			
Preventative	\$0.00	\$0.00	\$0.00
Treatment	\$0.00	\$0.00	\$0.00
Veterinary	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>

<b>Group 12</b>			
Preventative	\$0.00	\$0.00	\$0.00
Treatment	\$0.00	\$0.00	\$0.00
Veterinary	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>

<b>Summary</b>			
<b>All Groups</b>	Per Animal per Day	Per Pound of Gain	Per Animal
Preventative	\$0.03	\$0.02	\$18.70
Treatment	\$0.01	\$0.01	\$7.63
Veterinary	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$0.04</b>	<b>\$0.02</b>	<b>\$26.33</b>



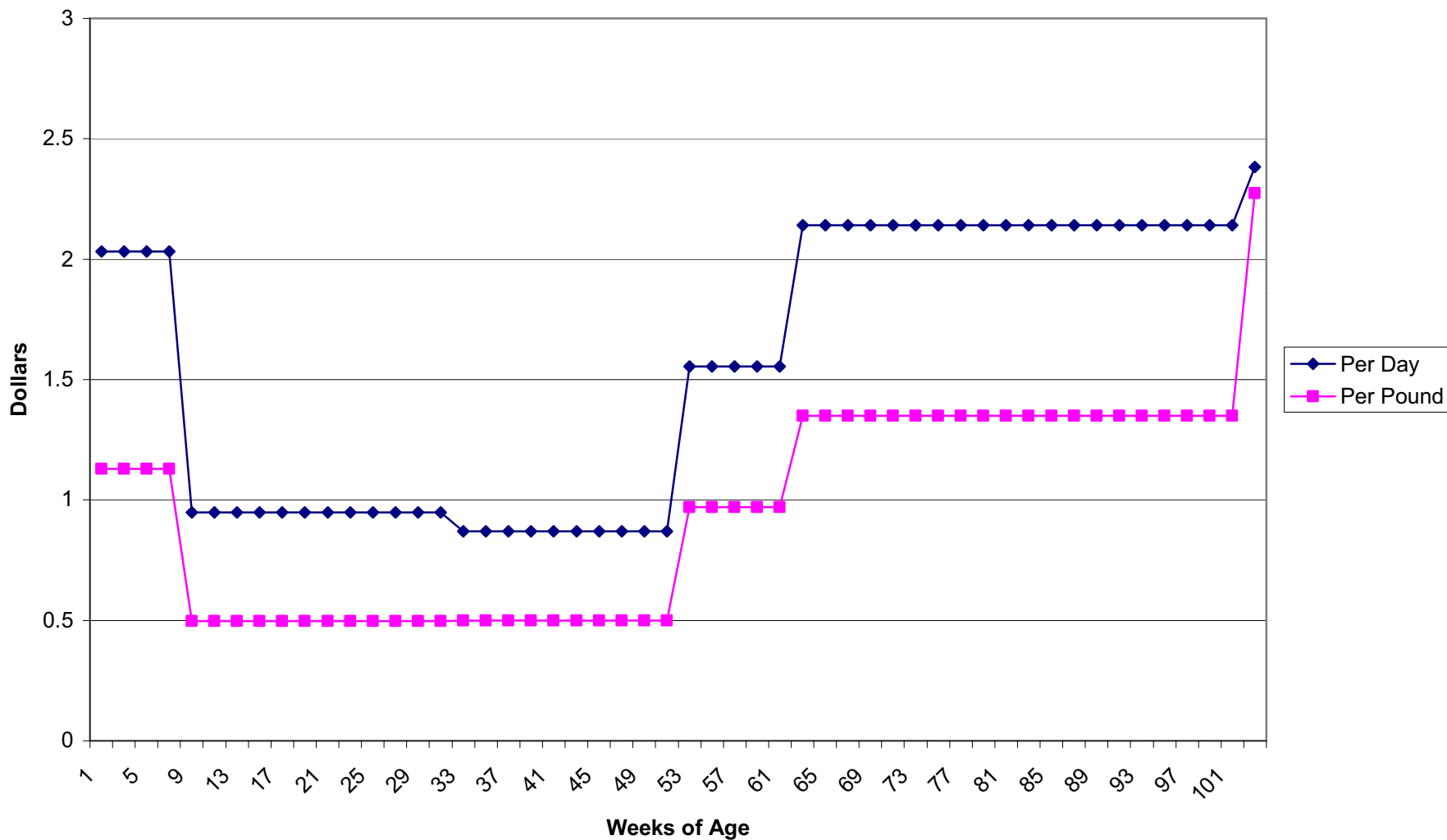
## Koval Brothers Dairy 1 Star Heifer Raising Costs







### Koval Brothers Dairy Heifer Feed Costs, Off Pasture



## Koval Bros. Case Farm

### Passive Immunity Achievement

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- Blood IgG >10mg/ml or  
Blood serum protein ✓  
> 5.0 g/dl  
(at 48 hours of life)  
≥85% achieving  
(95% is achievable)  
(59%\* Koval)

*\*spurred improvements  
in colostrum mgmt.*

### Optimize Pre- Weaning Gains

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- Double birth weight  
In 56 days  
≥90% achieving  
1.90 x  
33% achieve  
(using group avg.)  
↓  
93 lbs. → 173 lbs.  
1.86 x  
(Koval)

# Koval Bros. Case Farm

## Nail Biological Growth Targets

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- 55% mature weight @ breeding
- 82 - 85% mature weight @ 1<sup>st</sup> calving
- ≥90% achieving
- \*Breeding: Avg. 56% MW (67% Achieving)
- \*Calving: Avg. 79% ..... (67% Achieving) (Koval)

## What Makes a “Quality Heifer” -- (Koval) Maintaining Management Momentum

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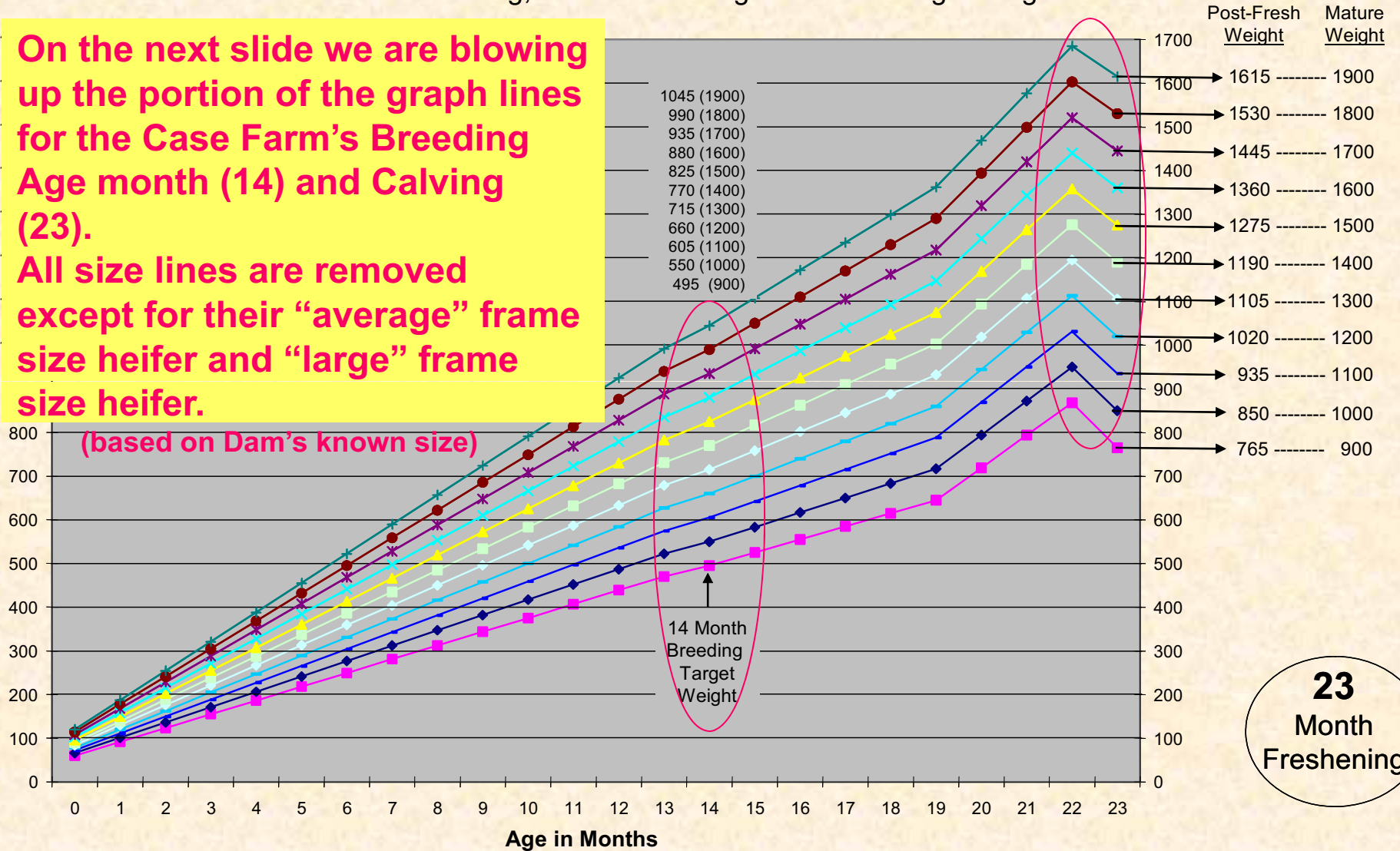
- 1<sup>st</sup> Calf “Treated” as Calf/Heifer\* ≤ 30% ?  
24 hrs. → 3 mos. \_\_\_\_\_ 4 mos. → fresh \_\_\_\_\_
- DOAs in first calf heifers ≤ 9% 7.5%  
Male DOAs 7% Female DOAs 8%
- 1<sup>st</sup> Calf avg. peak ≥ 80% of Mature 77%  
or total lactation ≥ 80% of Mature 85%
- 1<sup>st</sup> Calf Culls ≤ 60 Days in Milk ≤ 5% 3%
- 1<sup>st</sup> Calf ME's ≥ Mature > (+601)
- 1<sup>st</sup> Calf “Treated” in Lactation\* ≤ 15% ?
- ≥ 85% retention (any herd) to 2<sup>nd</sup> lactation 88%
- **Reduce** #1 reason for 1<sup>st</sup> lactation culls (continuous improvement) **Mastitis**

## Heifer Growth Lines with Breeding, Post-Freshening & Mature Weight Targets

On the next slide we are blowing up the portion of the graph lines for the Case Farm's Breeding Age month (14) and Calving (23). All size lines are removed except for their "average" frame size heifer and "large" frame size heifer.

Lbs. Bodyweight

(based on Dam's known size)



**23**  
Month  
Freshening

