

Replacement Heifer Selection

1. Cull daughters of “bad mark” cows
- 2.
- 3.
- 4.
- 5.
- 6.

Jim Gosey, 2005

What are “Bad Mark” Cows* ?

1. Cows that need help calving
2. Cows that calve late (+42 days)
3. Cows that fail to wean a calf
4. Cows that have big teats/need help
5. Cows that wean a light wt. calf
6. Cows that have “attitude” problems

* assume opens are culled

Jim Gosey, 2005

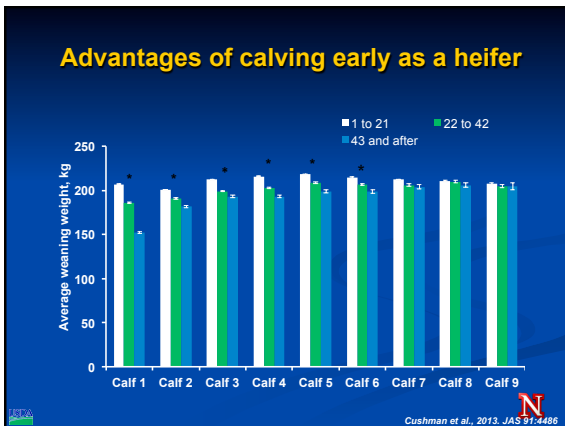
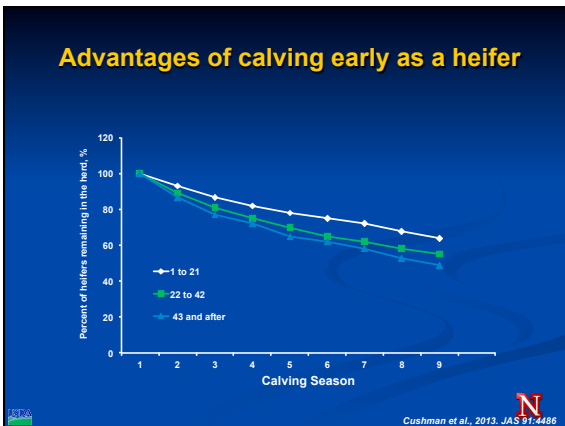
Replacement Heifer Selection

1. Cull daughters of “bad mark” cows
2. Cull light wts., big birth wt & 6 frame
3. Cull youngest (born +45 d. calving)
4. Select daughters of oldest cows
5. Optimum (not maximum) preg. rate
6. Pigmented eyes & udder
7. Form = depth rib, chest width, guts

Jim Gosey, 2005

Time of Calving Affects Heifer Progeny

Heifer calves (n = 1019)	Period of calving, 21 day periods		
	1 st	2 nd	3 rd
Prewaning ADG, lb	1.83	1.83	1.90
Weaning weight, lb	483	470	434
Prebreeding ADG, lb	.86	.90	.90
Prebreeding weight, lb	653	644	609
Cycling, %	70	58	39
Breeding ADG, lb	1.59	1.63	1.70
Pregnancy rate, %	90	86	78
Calved in 1 st 21 d	81	69	65

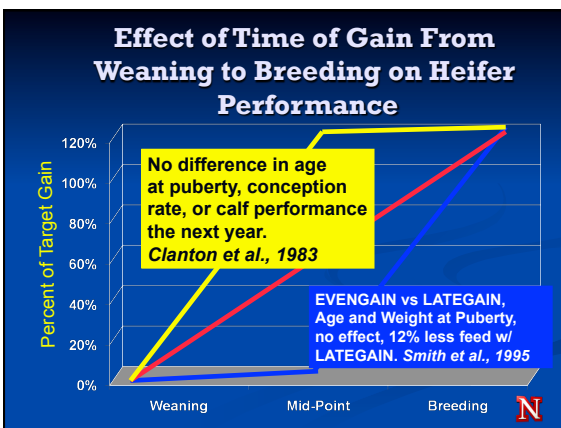


Feeding to a "Target Weight"

Item	% of Mature Wt @ breeding	
	55%	65%
Pre-breeding wt	600	683
Conception (21d)	30	62
August Pregnancy	63	90
October Pregnancy	50	87
Calving wt.	834	897
Calf birth wt.	71	73
Calving difficulty,%	46	36
Calf death loss,%	6	5

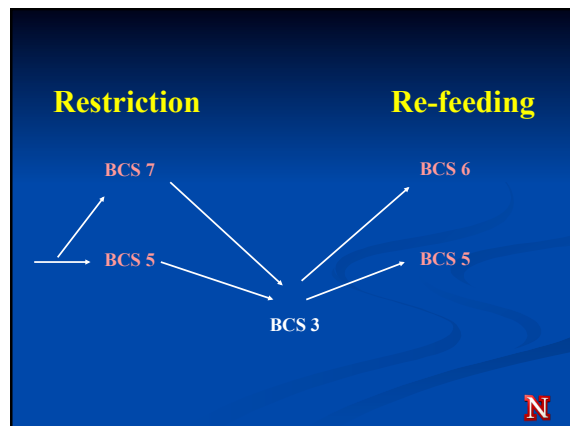
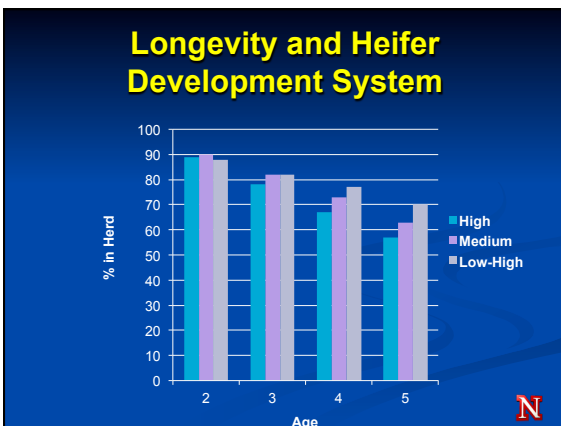
Target Weight Method

Heifer WW	Days/wt gain	Target BW
Nov. 1	180 d	May 1
500 lb	250 lb	750 lb
Gain needed	1.40 lb	




Timing of Gain and Reproductive Performance

Item	Even Gain	Late Gain
FSCR	56.4	71.1
Overall	87.5	87.5





What is the appropriate Target Weight??

- 3-year study
- MARC II heifers – 80 each year
- Developed to either 53 or 58% of mature weight
- Placed with bulls May 20 – 45 d
- Data collected through 4th pregnancy diagnosis



What is the appropriate Target Weight??


<u>% Mature Weight</u>	53	58
Pregnancy Rate – 1st	92	88
-2nd	91	91
-3rd	94	92
-4th	96	96

What is the appropriate Target Weight??

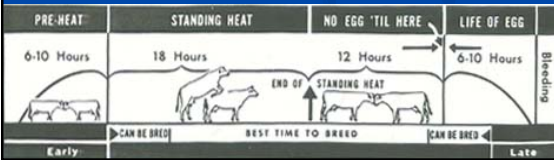
<u>% Mature Weight</u>	50	55
Breeding Season	60 d	45 d
Pregnancy Rate	87	90
Calve Date	3/15	3/9
Birth Weight	75	75
PG Wt. 2 nd Calf	903	926
2 nd Preg. Rate	91	92

(3 years - 261 head Creighton, et al. 2005)

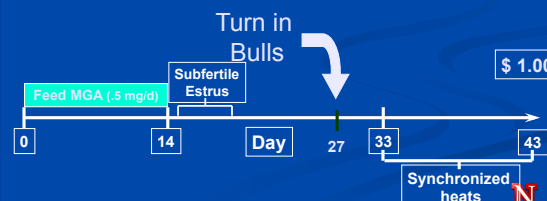



Fertility at Puberty

<u>Pregnancy %</u>	<u>Estrus</u>	
	1st	3rd
Following Natural Service	57	78
Following d 7 ET	13	53




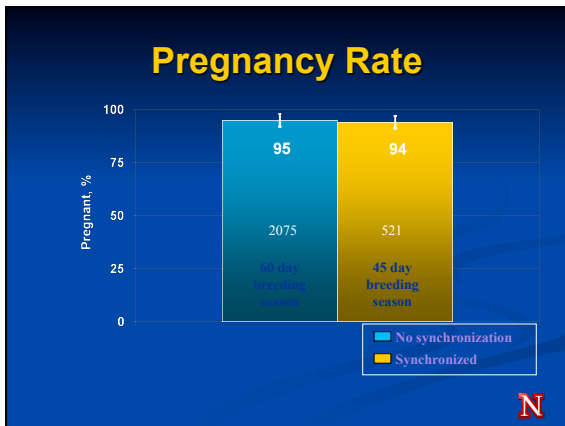
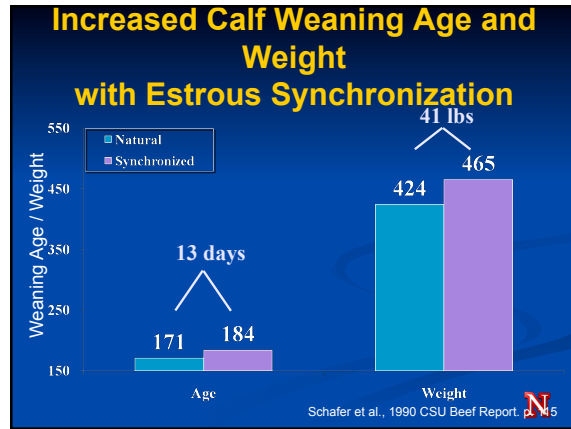
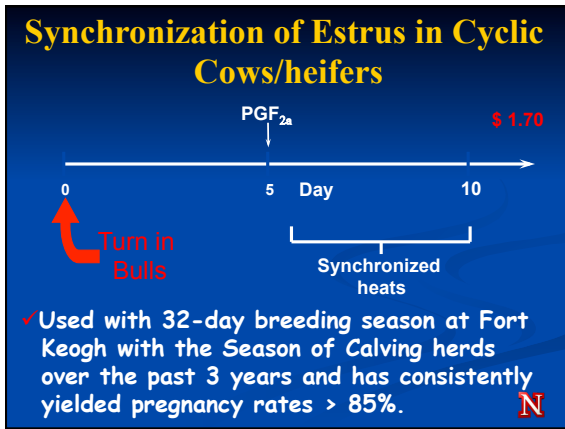
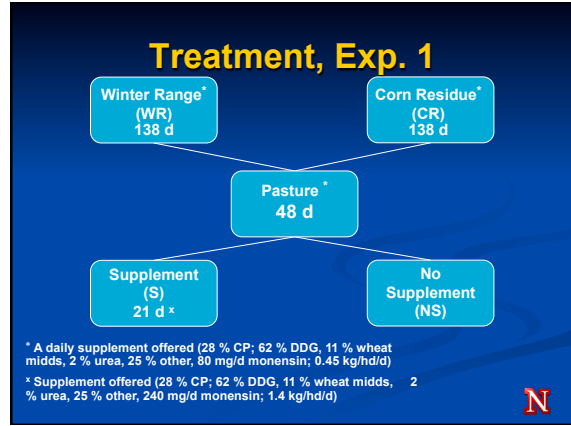
Estrous Synchronization with Natural Service for Heifers

Heifers developed to 50% mature weight

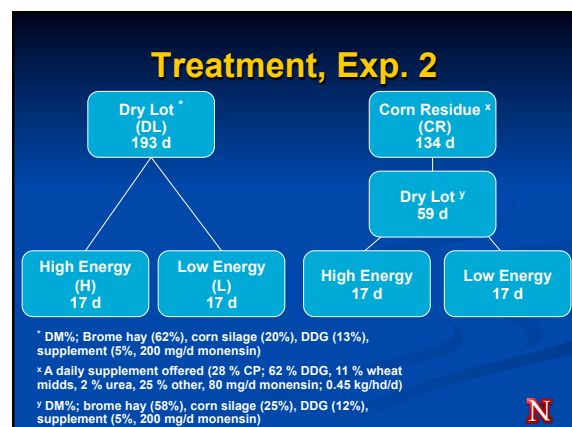
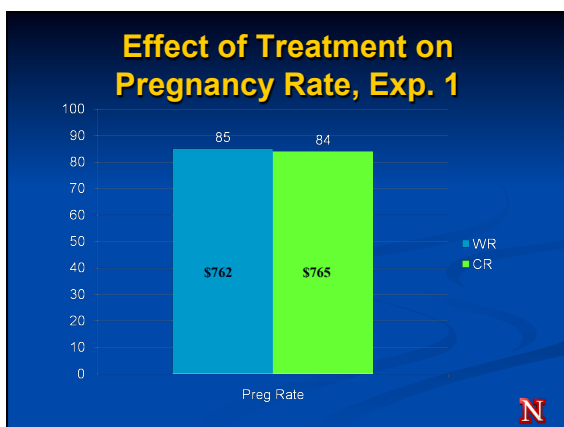
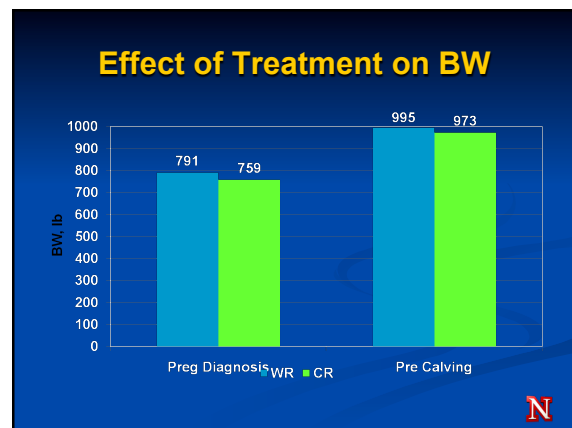
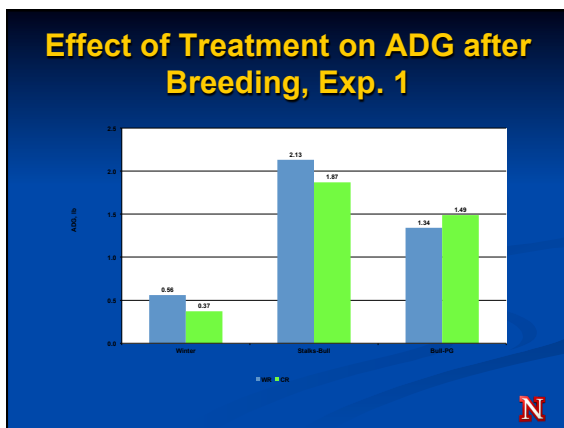
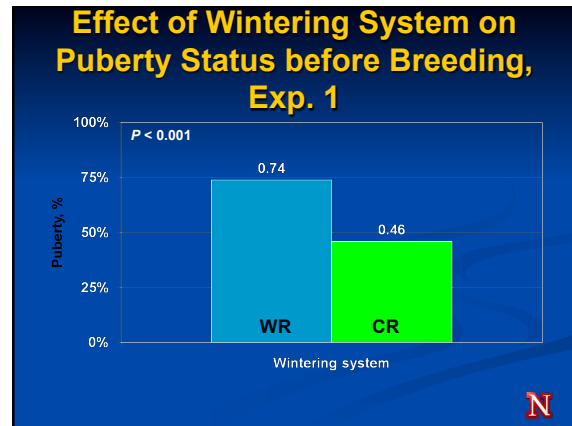
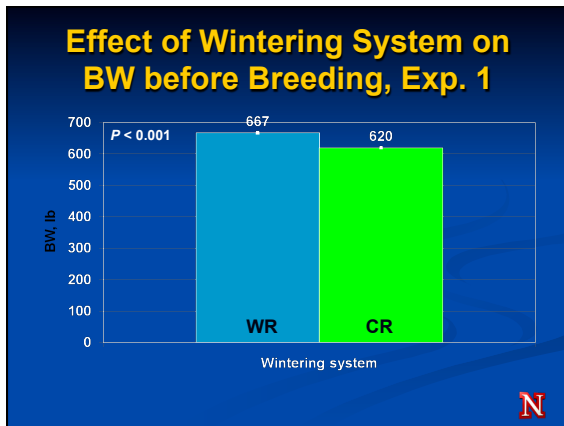
	MGA	No MGA
April 24	577	577
Cycling, %	83	78
45 d preg, %	90	90
Wt. Preg check, lb	795	785
Calving Date	3/8/05	3/6/05

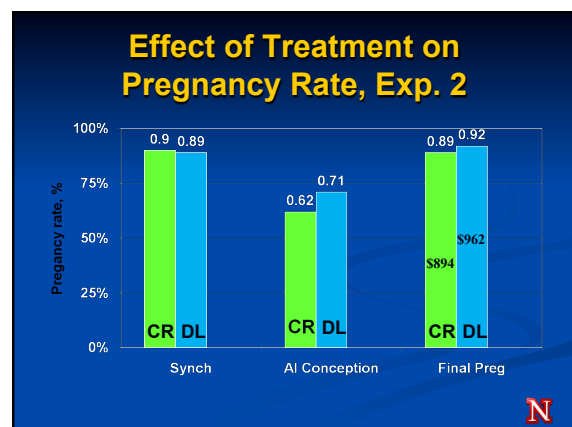
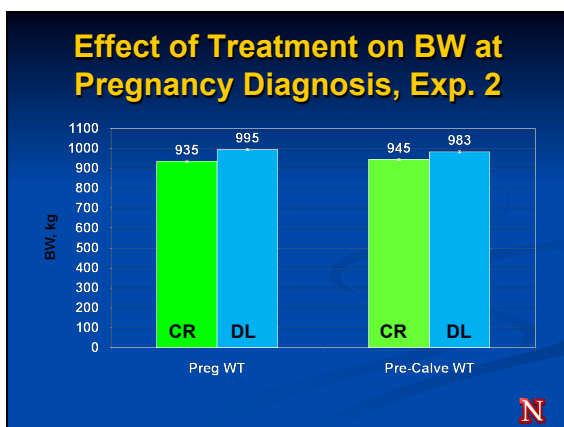
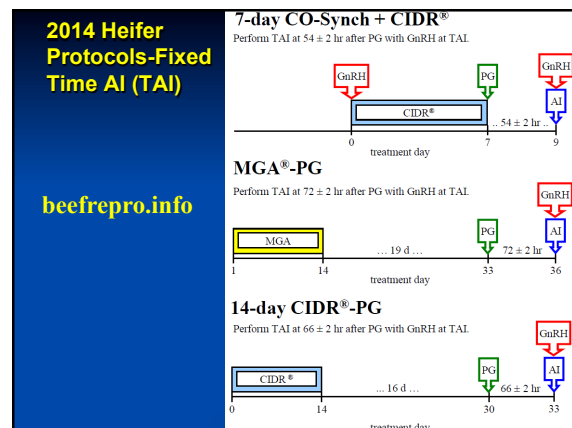
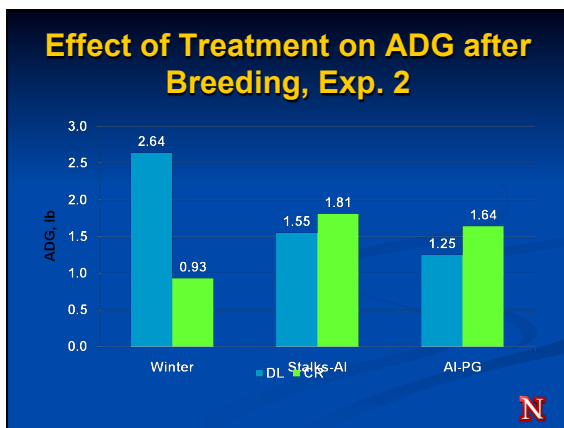
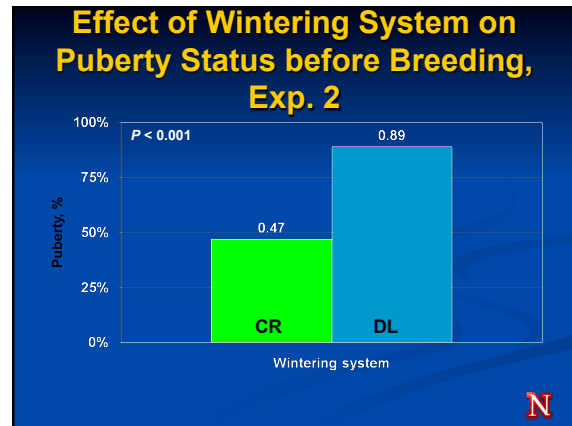
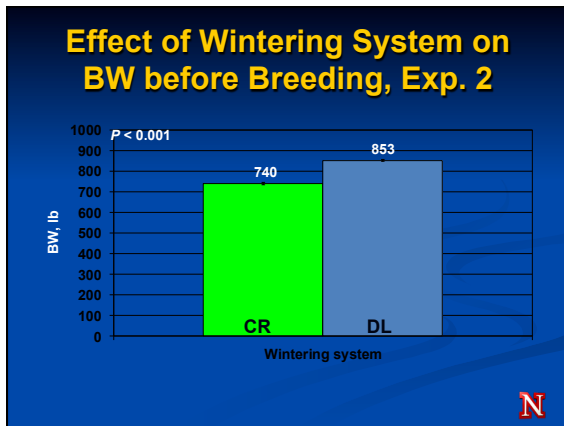




Calf Production

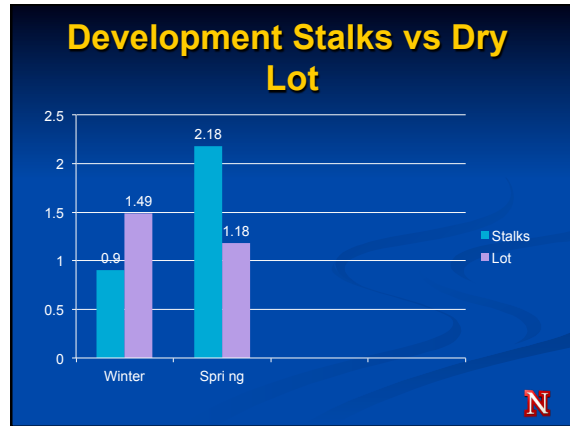
	Length of breeding season	
	60 days	45 days
	No Synch	Synch
Calved in 1 st 21 d, %	61	73
Calf birth date, Julian day	86	85
Calf birth BW, lb	84	81
Calf weaning BW, lb	483	503
Calf value, \$/calf	870	905





Heifer Development

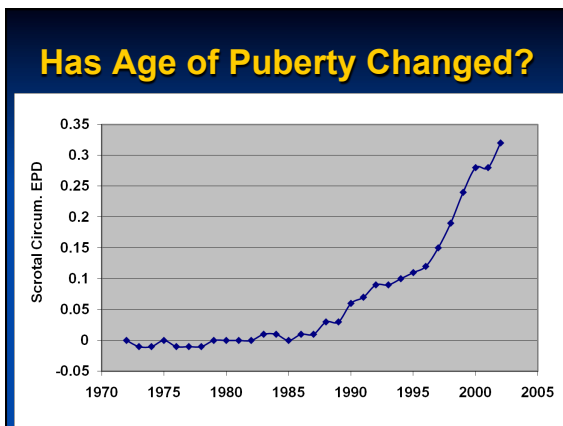
■ Weight, lb	665	727
■ ADG Wean -> Pre.84	1.23	
■ AI Pregnancy rate, %	86	58
■ WHY ?		
■ ADG Pre	1.4	2.14
■ ADG Post	1.27	.81



- ### Extensive heifer development systems
- Lower Development Costs \$100 +
 - Selling open heifers was profitable
 - Determine adaptability early?
 - Short breeding season
 - Lighter breeding weights
 - Lighter mature weights?
 - Must continue to grow through calving

A word of caution Later calving herds

Trt	Weight	Preg
Hay	840	64
Meadow	768	53
H/NS	805	62.5
H/S	776	81
M/NS	732	56
M/S	748	82



Applied Reproductive Strategies in Beef Cattle
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