

Goals for heifer development?

- Get as many bred as possible
Target weight or condition
- Cost
- Lifetime production efficiency

Production Efficiency

Input: Feed (cost & amount)

Replacement Rate

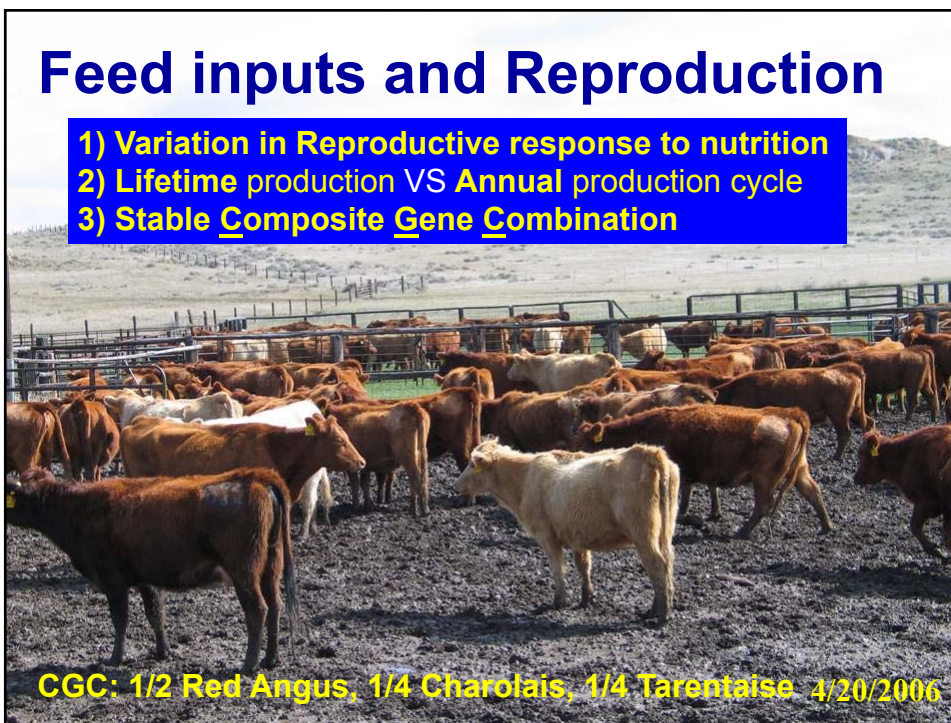
Output: Lifetime productivity

Nutrition and Reproduction

		<u>Reproduce?</u>	
		<u>Yes</u>	<u>No</u>
Heifers/ Cows	Recommended	90%	10%
	Reduced	85%	15%
Heifer Development/ Winter Feeding		5% ?	

Feed inputs and Reproduction

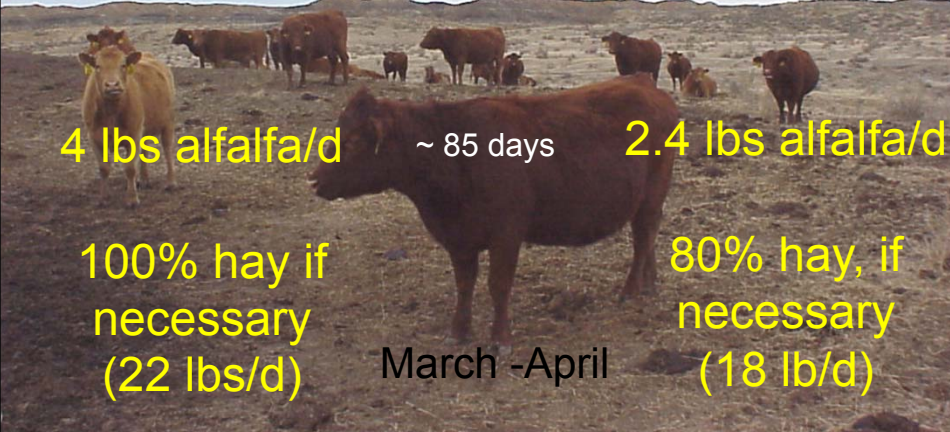
- 1) Variation in Reproductive response to nutrition
- 2) Lifetime production VS Annual production cycle
- 3) Stable Composite Gene Combination



CGC: 1/2 Red Angus, 1/4 Charolais, 1/4 Tarentaise 4/20/2006

Dec 2001: CGC Composites split into 2 winter management groups

<u>“Adequate”</u> supplement	Dec - March	<u>“Marginal”</u> supplement
4 lbs alfalfa/d	~ 85 days	2.4 lbs alfalfa/d
100% hay if necessary (22 lbs/d)	March -April	80% hay, if necessary (18 lb/d)



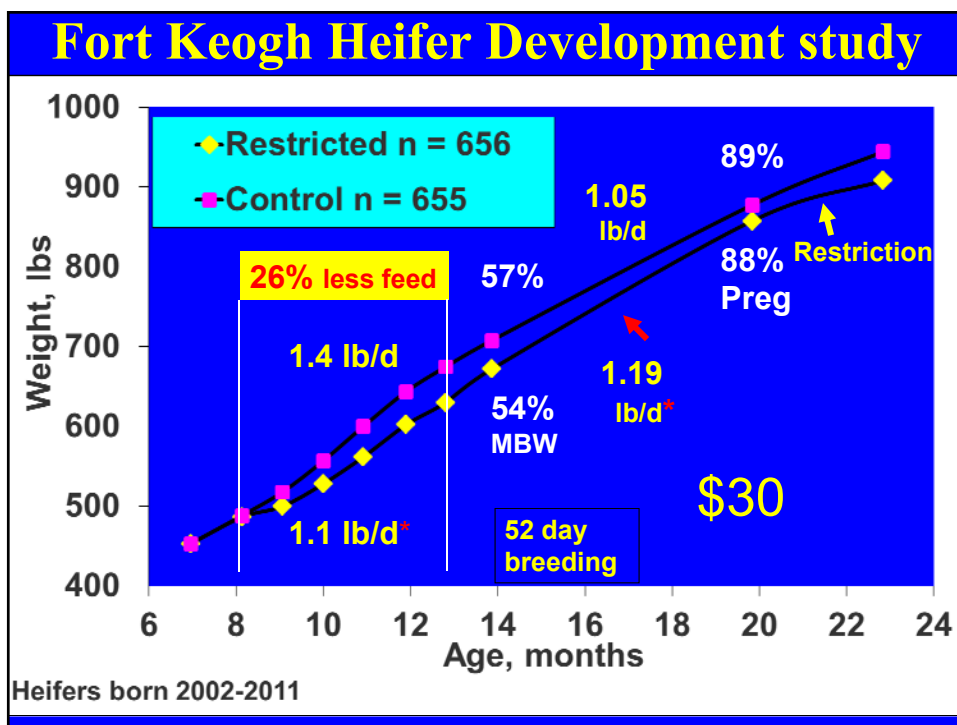
Pregnancy rates in cows

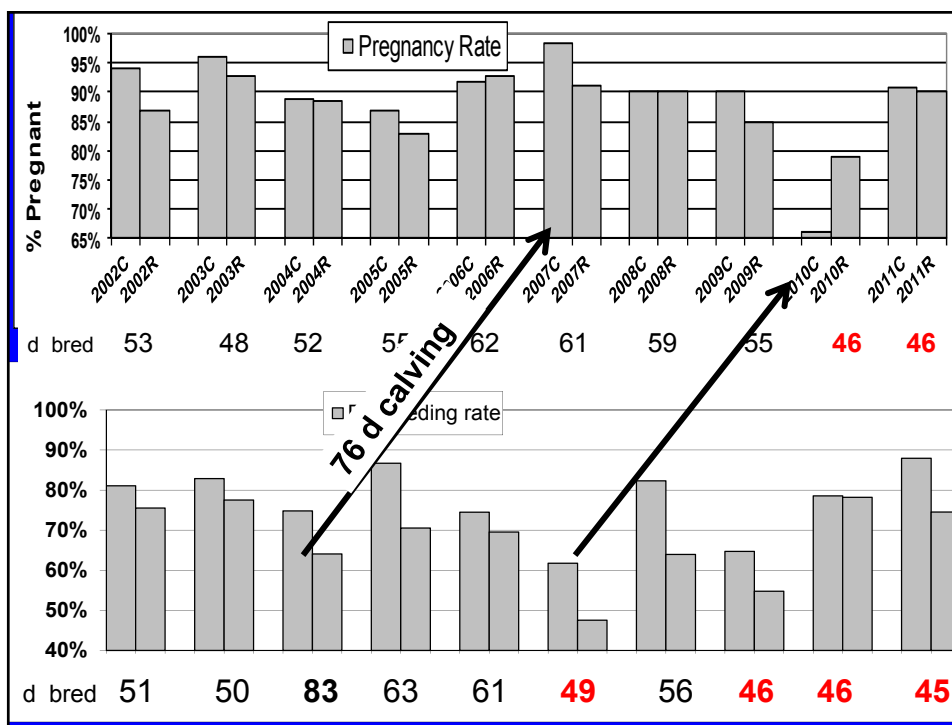
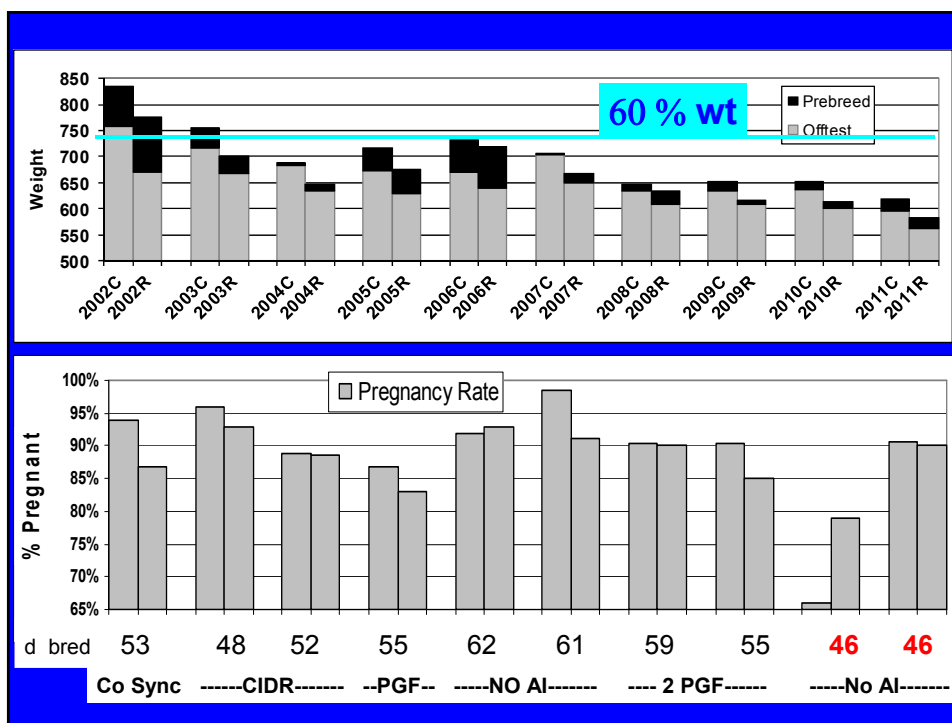
Adequate

- 90.4 %
- 962 hd

Marginal

- 88.9 %
- 1117 hd





Open vs. Pregnant heifers

- Born 4 days later (36 vs 47 % in 1st 21 d)
- BW 2 lbs heavier
- After wean: Eat less and grow slower (lighter, less fat, smaller REA)
- 17 & 43 lbs lighter at breeding & preg test, but no difference in hip ht.

Similar characteristics to open 2yr olds

Any desirable traits on open heifers?

YEAR biggest factor in almost everything measured!

Keep it flexible

Shorten breeding season ?

Level of harvested feed input and production

COW

Daughter

Adequate

Control

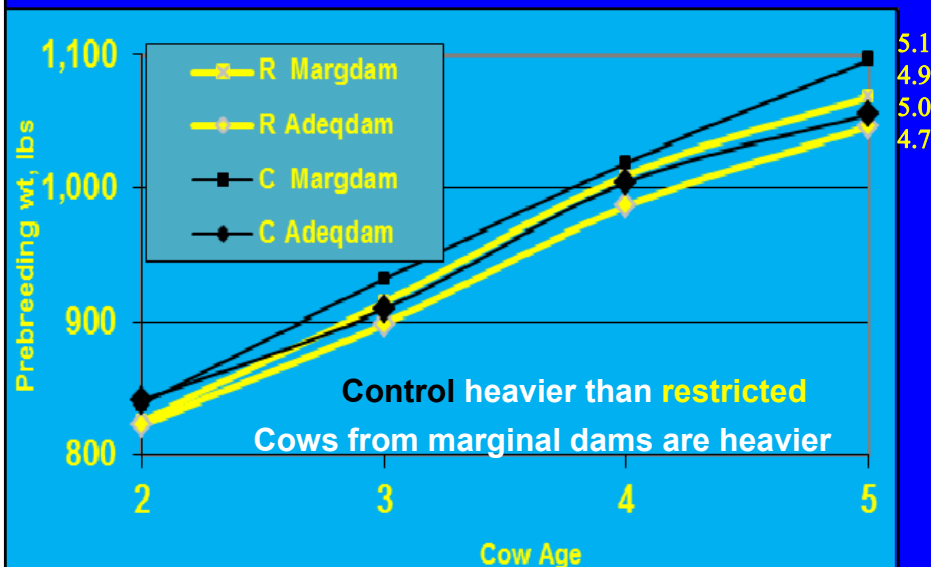
Restricted

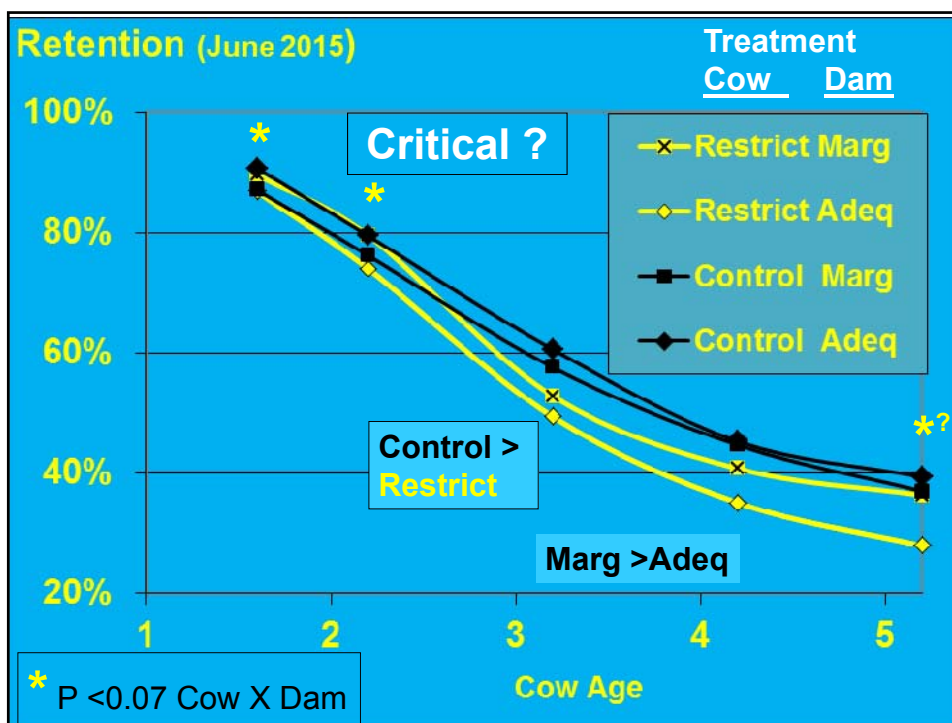
Marginal

Control

Restricted

Fetal Programming





Level of harvested feed input and production

Dam treatment	Cow treatment	Calf birth wt	Calf wean wt
Adequate	Control	77	449
Marginal	Control	77	442
Adequate	Restricted	77	444
Marginal	Restricted	74	431

Fetal Programming ?????

How we feed our cows this winter can affect how their offspring responds to nutritional limitations.



Heifer development on range vs. feedlot (2012-2017)

Feedlot: wean into feedlot, develop in lots

Range: fenceline wean, develop on range with 4 lbs cake/d (**Range+Cake**) or with self-fed protein supplement in GrowSafe bunks (**Range+Protein**)



Fence line weaning



