

A black cow with a blue ear tag is standing in a field of tall, dry grass. The cow is facing slightly to the right but looking towards the camera. The grass is a mix of green and brown, indicating it might be late summer or autumn. The background is a soft-focus field of similar grass.

A Systems Approach to Beef Production

Twig Marston

Know where you are
Know where you want to go



Beef Industry

- Consumer Driven
 - Targeted Products
 - Wholesome
 - Safe
- Cow/calf Production System
 - Sell Calves
 - Retain Ownership
- Goals - Production and Financial
 - Realistic
 - Sustainable
 - Economically Drive

Cow/Calf Producer w/o Goals



Profile of a Top Producer

	Below		Above
	Average	Average	Average
Annual cow cost	X		
Breakeven calf price	X		
Feed	X		
Interest	X		
General operating expenses	X		
Bulls		X	
Pasture		X	
Herd health		X	
Weaning weights			X
Reproductive performance			X
Pounds weaned per cow			X



Effect of Shortening the Calving Season

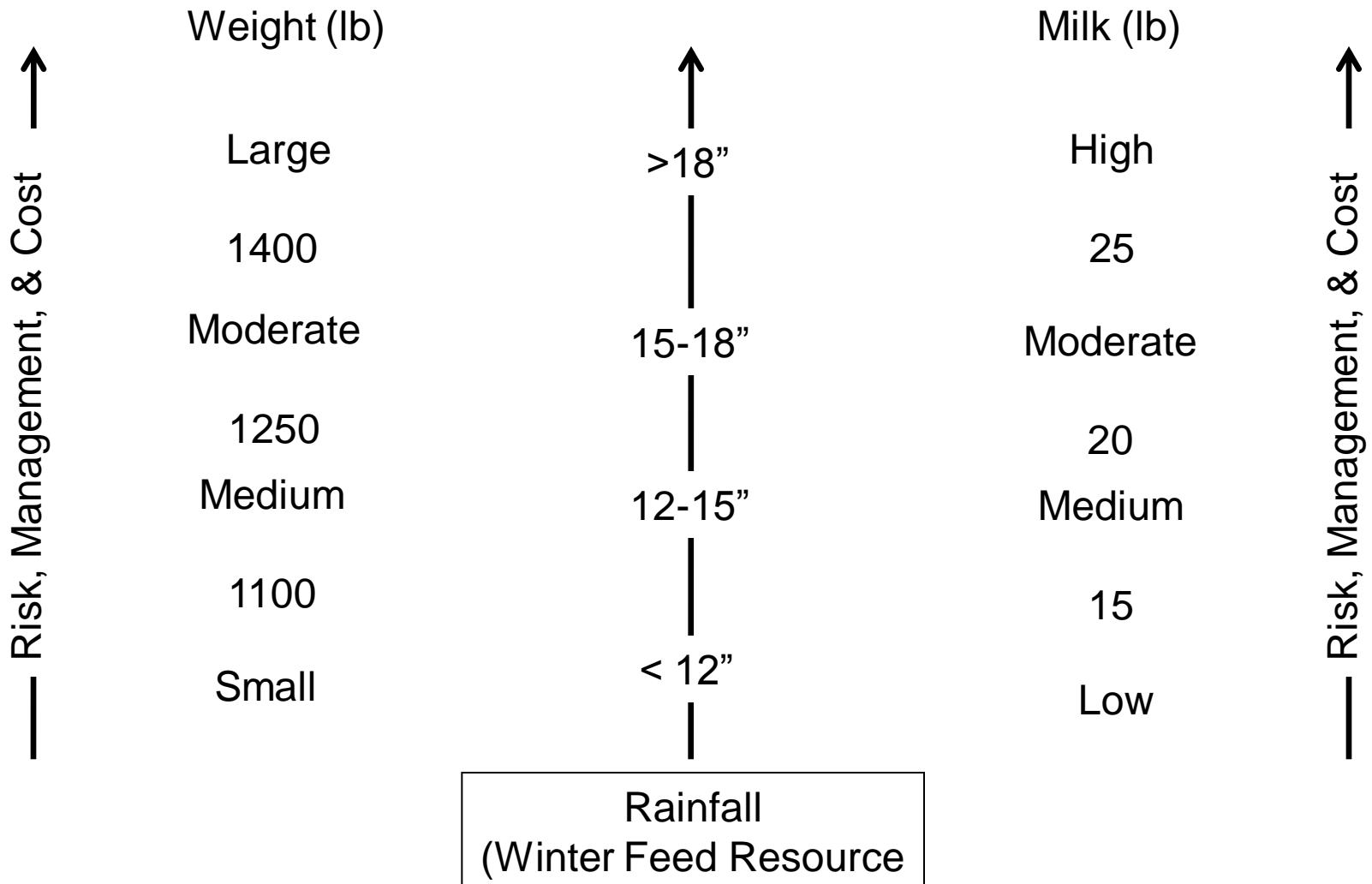
Year	No. Cow	No. Hfr	Length of Breeding Season (M)	% Calving in Desired Time	% Calf Crop	Weaning Weight 205 d	Lb of Calf per Cow Exposed
1st	74	0	11	38	69	400	272
2nd	63	3	7	62	85	432	295
3rd	52	17	3	89	86	452	405
4th	58	23	2	100	83	459	499

Spitzer

Matching Genetics to Environment

Feed Avail	Stress Level	Milk Prod	Mature Size	Do Ability	Resist Stress	Calving Ease	Lean Yield
High	Low	M-H	M-H	L-M	M	M-H	H
	High	M	L-H	L-M	H	H	M-H
Med	Low	M-H	M	M-H	M	M-H	M-H
	High	L-M	M	M	H	H	H
Low	Low	L-M	L-M	H	M	M-H	M
	High	L	L	H	H	H	L-M

Matching to Environment

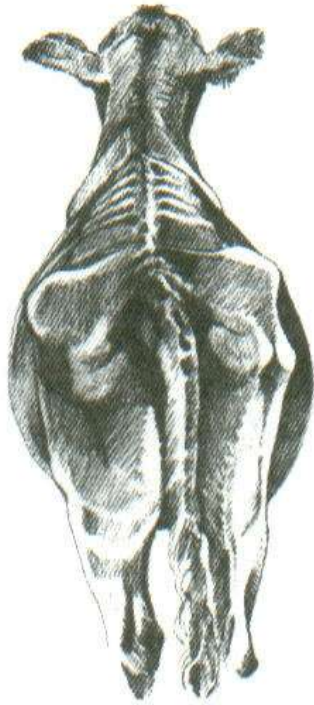


Three Factors Controlling Cycling (Reproduction)

- Body condition score
- Parity
- Days postpartum

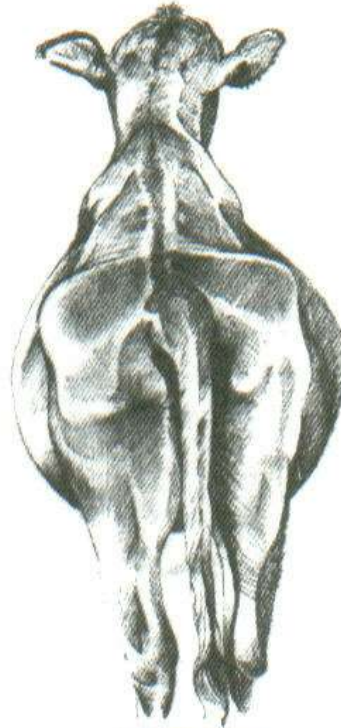
Body Condition Score

BCS = 3



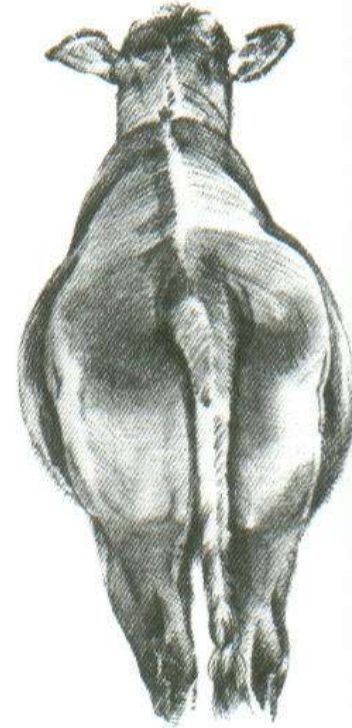
**980 lbs.
8%**

BCS = 5



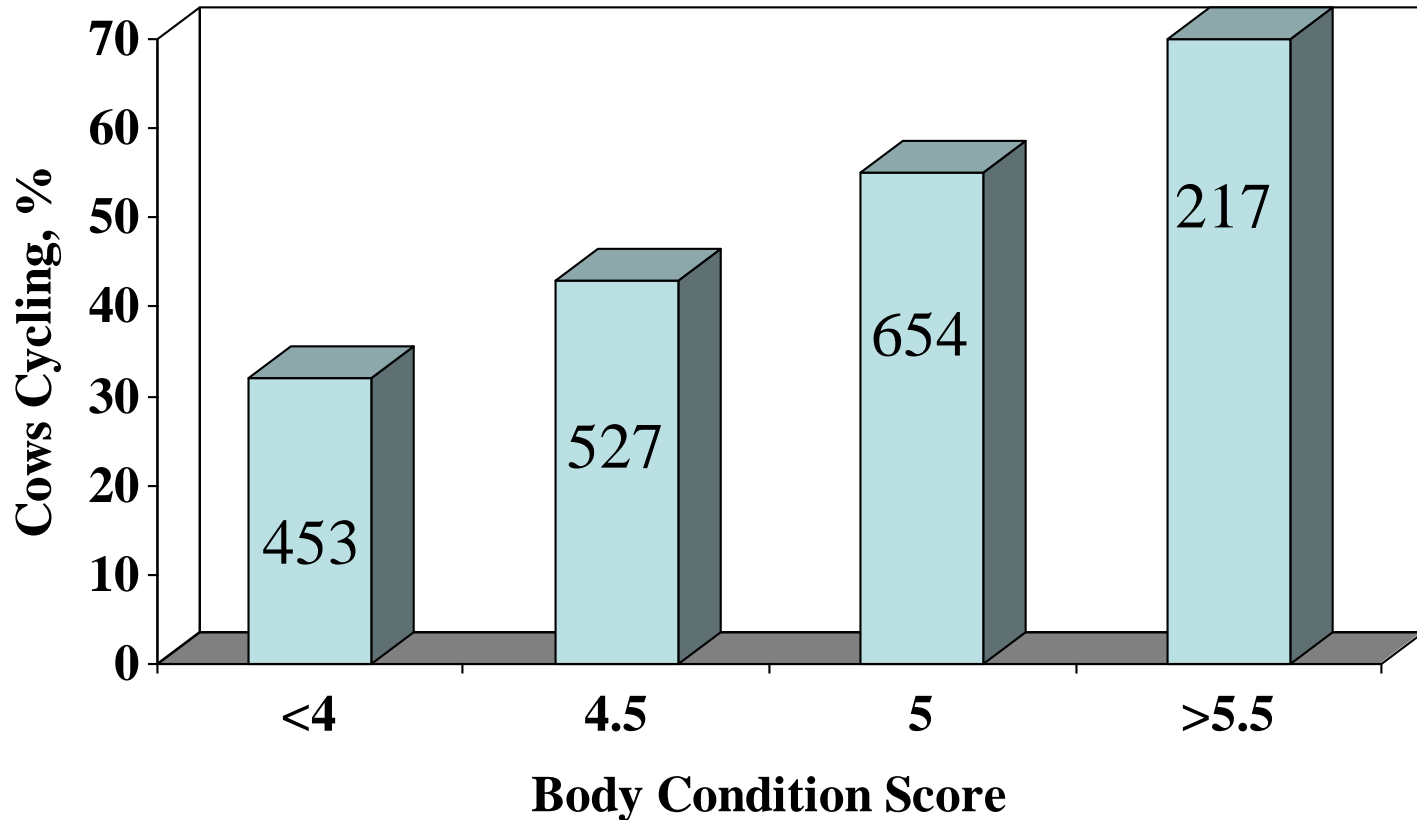
**1130 lbs.
16%**

BCS = 7



**1280 lbs.
24%**

BCS on Reproduction



(\approx 18% increase with each condition score)

Stevenson, 2003



Calving Distribution Indicates Herd Reproductive Performance

Age	21 day period			Open
	1	2	3	
2	60	30	5	5
3	40	35	15	10
>4	60	25	10	5
2	50	35	10	5
3	15	30	30	20
>4	40	25	20	15

Spring Calving Distribution Report

Cow Age	No. Cows	Spring Calving Period			Avg. Day Calving
		1	2	3+	
2	79	55	27	16	24
3	62	29	43	27	33
4	44	43	36	20	26
5+	70	60	21	19	26
Total	225	48	31	20	26
Milk EPD		5.0	3.9	4.1	4.4
Wt.		1243	1234	1233	1240
Ht.		51.9	52.2	51.9	52.0
W/H		23.9	23.6	23.9	23.8

Spring Calving Distribution Report

Cow Age	No. Cows	Spring Calving Period			Avg. Day Calving
		1	2	3+	
2	79	55	27	16	24
3	62	29	43	27	33
4	44	43	36	20	26
5+	70	60	21	19	26
Total	225	48	31	20	26

Milk EPD	5.0	3.9	4.1	4.4
Wt.	1243	1234	1233	1240
Ht.	51.9	52.2	51.9	52.0
W/H	23.9	23.6	23.9	23.8

Fall Calving Distribution Report

Cow Age	No. Cows	Fall Calving Period			Avg. Day Calving
		1	2	3+	
2	33	45	39	15	26
3	34	47	23	29	31
4	22	27	50	22	31
5+	52	29	40	31	33
Total	141	36	37	25	30

Milk EPD	4.0	4.8	6.6	4.9
Wt.	1281	1304	1247	1280
Ht.	52.3	52.4	52.4	52.4
W/H	24.5	24.9	23.8	24.4

Fall Calving Distribution Report

Cow Age	No. Cows	Fall Calving Period			Avg. Day Calving
		1	2	3+	
2	33	45	39	15	26
3	34	47	23	29	31
4	22	27	50	22	31
5+	52	29	40	31	33
Total	141	36	37	25	30

Milk EPD	4.0	4.8	6.6	4.9
Wt.	1281	1304	1247	1280
Ht.	52.3	52.4	52.4	52.4
W/H	24.5	24.9	23.8	24.4

Recommendations

- Use production analysis, determine customer's need, focus on improvements
- Use ERTs, EPDs for selection
- Record cost and income data
- Integrate genetic and management information to make strategic decisions
- Take advantage of profit opportunities