

Bison Management

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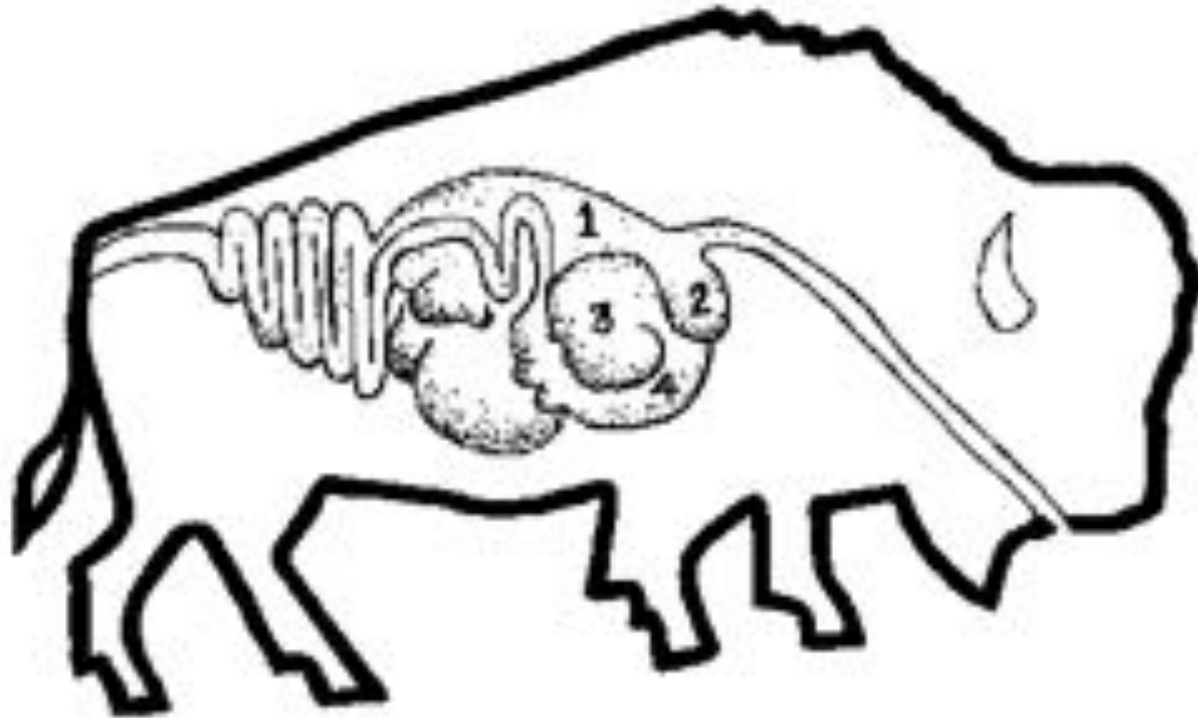
Data & Statistics

- 162,110: Number of bison in the United States residing on private ranches and farms according to the 2012 USDA census.
- 2,564: Number of private U.S. ranches and farms raising bison according to the 2012 USDA census.
- 9,855: Approximate number of bison in US federal herds (DOI 2014)
- 9,008: Bison in State and other Public herds (USFWS 2011)
- 15,000: Estimated bison on tribal lands
- 61,300: Approximate number of bison slaughtered under federal and state inspection in 2016 in the U.S. (By contrast US Beef slaughters about 125,000/day).

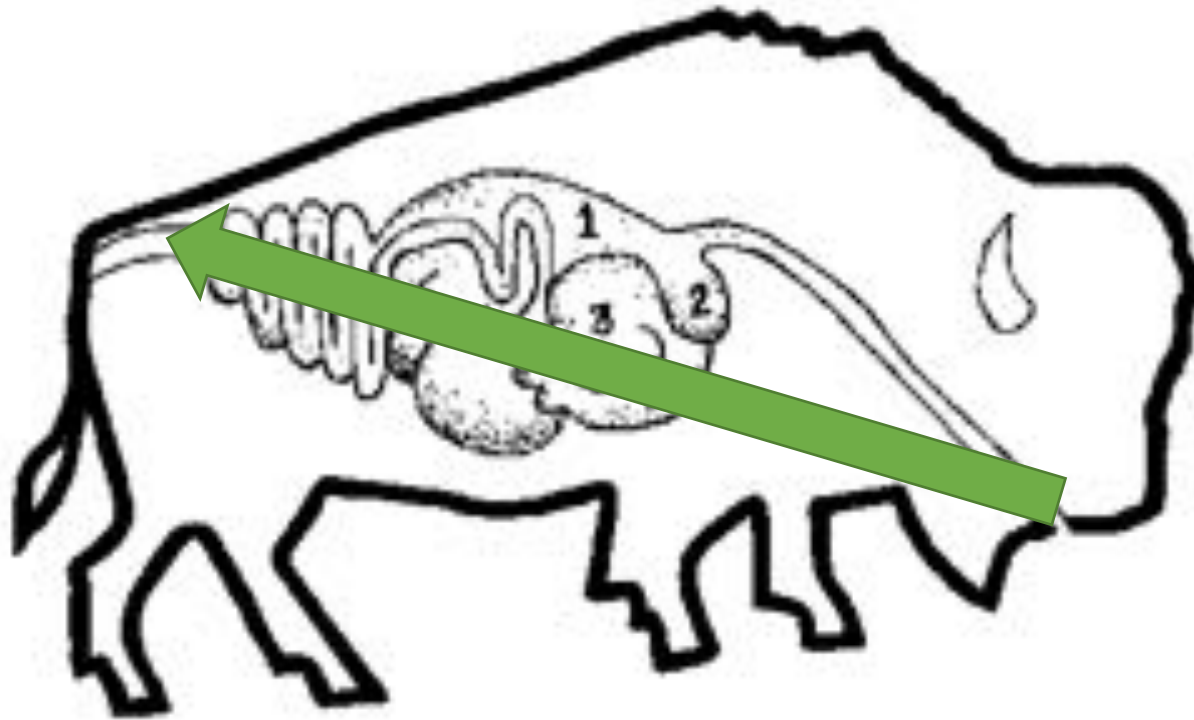
The Animal..

- Cows = 900 – 1200, Bulls = up to 2000
- 270-285: gestation period in days for a bison cow.
- 40-50 pounds: approximate weight of a new born calf.
- 20 years: average reproductive life span of the average bison cow.
- 20-30 months: age of a mature meat animal.

Bison Anatomy



Bison Anatomy



Rate of Passage = Time of ingestion to excretion

Beef Cattle > Bison

Reproduction & Nutrition

2

Priority

Function

1

Maintenance

2

Growth

3

Milk Production

4

Reproduction

Yates and Schoonover, 1982

Nutritional Requirements

Table 5. Estimated energy, crude protein, calcium and phosphorus requirements of bison.

Age	DMI (% BW)	TDN (%)	Crude Protein (%)	Calcium (%)	Phosphorus (%)
FEMALES					
6 mo - 1 yr	2.0 - 3.0	55 - 63	12 - 14	0.70	0.65
1 year	2.0 - 2.5	55 - 63	10 - 12	0.70	0.65
1.5 year	1.8 - 2.2	50 - 55	10 - 12	0.50	0.45
2 year	1.6 - 2.2	55 - 60	10 - 12	0.45	0.40
2.5 year	1.6 - 2.2	48 - 50	6 - 7	0.35	0.25
Late Gestation (April - May)	2.0 - 2.5	54 - 58	8 - 10	0.40	0.35
Lactation (May - November)	2.5 - 3.0	54 - 58	8 - 10	0.40	0.35
Maturity (Maintenance)	1.6 - 1.8	48 - 50	8	0.35	0.25
MALES					
6 mo - 1 yr	2.0 - 3.0	55 - 63	12 - 14	0.70	0.65
1 year	2.0 - 2.5	55 - 63	10 - 12	0.70	0.65
1.5 year	1.8 - 2.2	50 - 55	10 - 12	0.50	0.45
2 year	1.6 - 2.2	55 - 60	10 - 12	0.45	0.40
2.5 year	1.6 - 2.2	50 - 52	8	0.35	0.25
Maturity (Maintenance)	1.6 - 1.8	48 - 50	8	0.35	0.25

DMI = Dry Matter Intake. BW = Body Weight. TDN = Total Digestible Nutrients.

M. Fiest et. al.

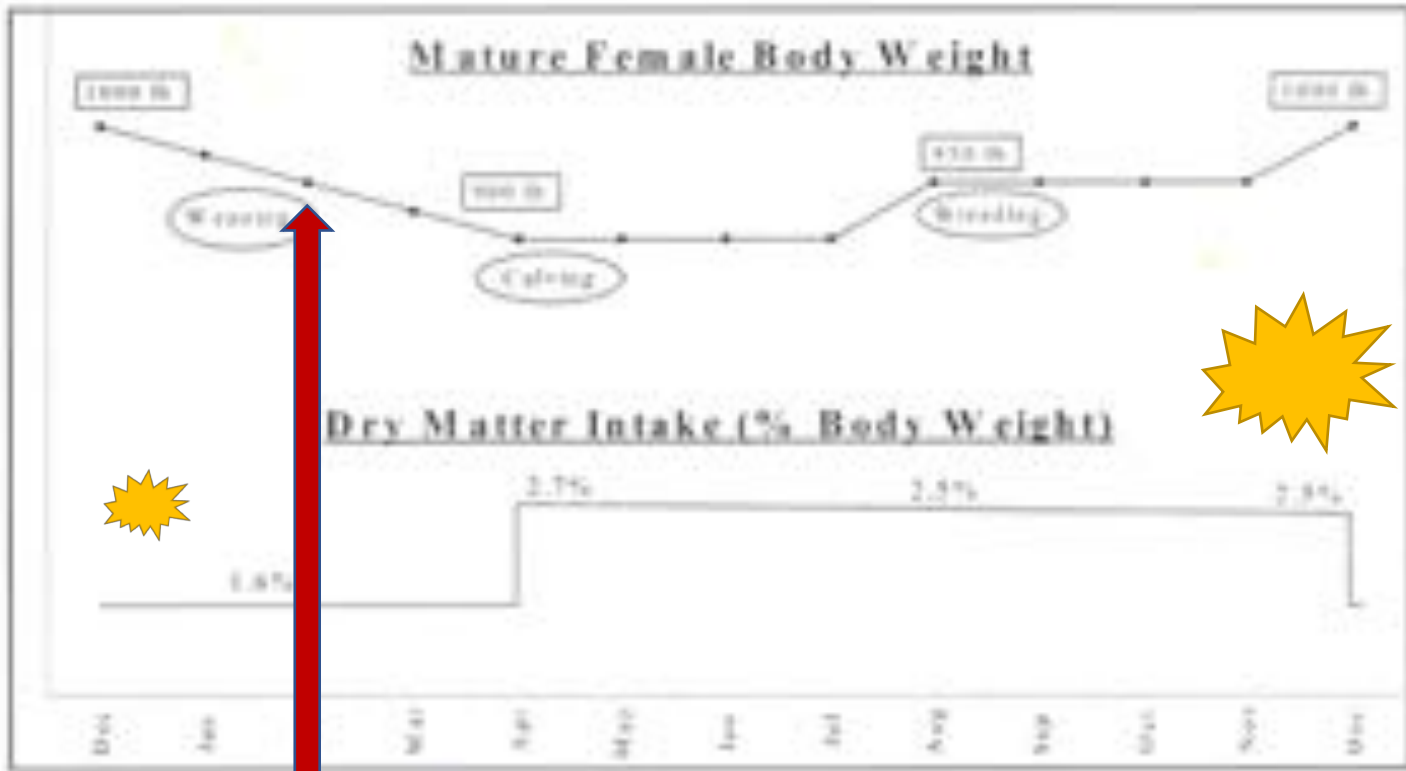


Figure 2. Seasonal weight changes of mature female bison.

Supplement???

M. Fiest et. al.,

Supplementation Consideration

- Too much winter weight loss will result in poor calf and reproductive performance.



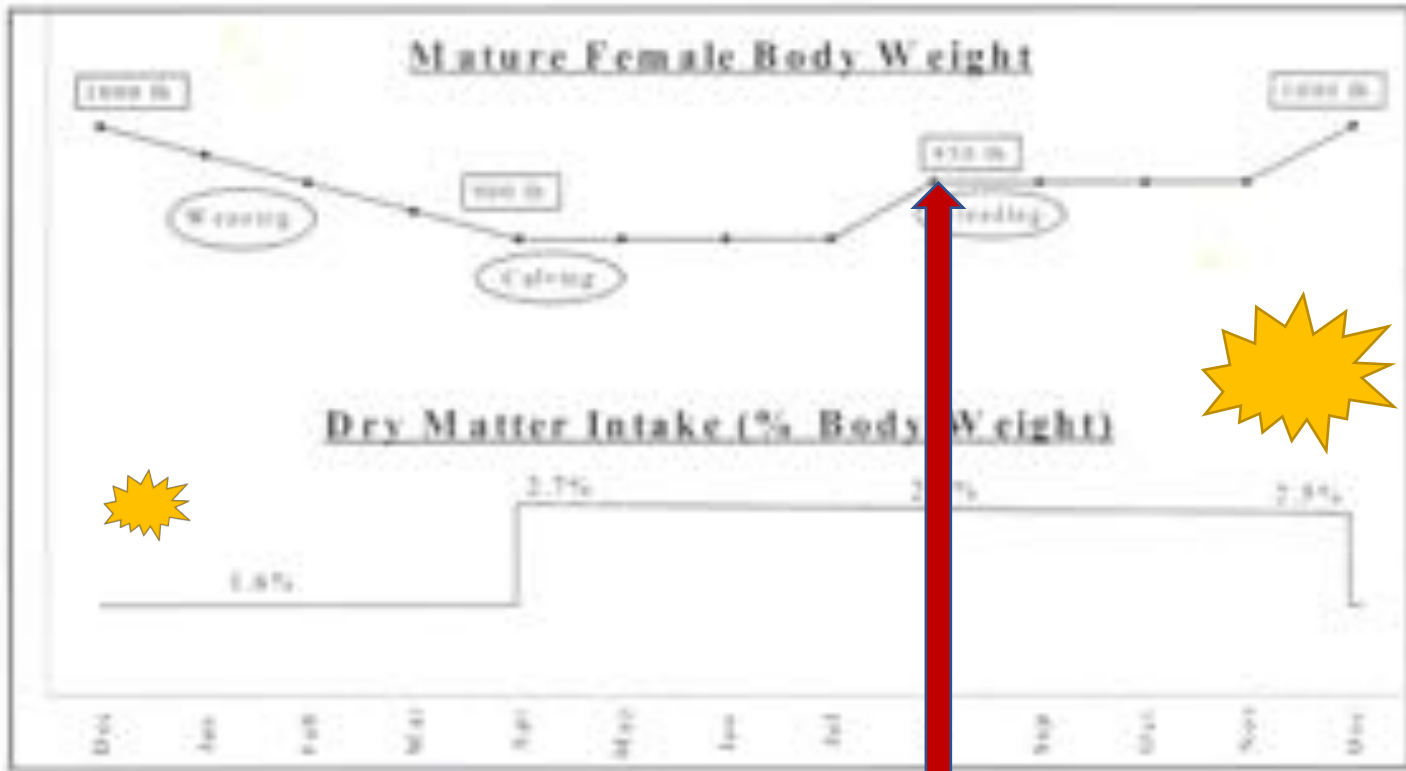


Figure 2. Seasonal weight changes of mature female bison.

Supplement???

M. Fiest et. al.,

Supplementation Consideration

- Bulls can lose up to 15% of their BW during breeding season
- Difficult to regain before winter



Grazing Management

- 1 Bison AUM = 1 Beef Cow AUM
- Rotational grazing fits their natural behavior best, but rainfall and pasture size will dictate the success of this system.



Grazing Management - Considerations

- Time of rut
- Time of calving
- Social grouping
- Preferred grazing areas
- Stress of moving
 - Abortions
 - Interrupt breeding



Grazing Management - Considerations

- Ample access for entire social/herding group
- If dominant animal leaves, the others will follow without watering
- Maintain water quality



In Summary

- Bison have similar requirements as cattle
- More sensitive to day length
- More sensitive to stressors
- Travel and utilize available forage better than cattle



In Summary

- Supplementation may be needed to minimize weight loss.
- Unique marketing opportunities.
- Special handling facilitates sometimes needed.
- Experienced handlers needed.



Thank You!



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