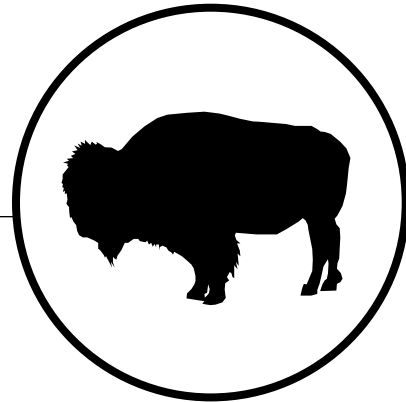


What's the Score: Bison

BODY CONDITION SCORING (BCS) GUIDE



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BODY CONDITION SCORING AND BISON

What's the Score.

BODY CONDITION SCORING CAN HELP BISON producers manage their herd for optimal health, production, and profitability. **Body condition** refers to the amount of fat that an animal is carrying. **Body condition scoring** is a system designed to estimate the amount the fat that the animal has. It is a useful management tool that helps farmers do a better job feeding their stock.

BODY CONDITION SCORING SYSTEMS

THE FIRST BODY CONDITION SCORING SYSTEM was developed for sheep because producers could not determine how fat or thin a ewe was when she was in fleece. The manual palpation method for determining BCS was developed to overcome this problem. This system was later adapted for use with beef and dairy cattle and later for bison.

The system presented for bison in this article has been adapted from the beef and dairy cattle five point scale. A body condition score (BCS) of 1 indicates that the animal is very thin. A BCS of 5 indicates that it is very fat.

Since bison are seldom caught in a squeeze to allow a “hands on” body condition scoring system, most of the criteria used to assess the animal are visual clues. While learning how to body condition score bison, it is helpful to feel the bison in a squeeze so that you can feel what you think you are seeing under their thick hair coat. Once a person is experienced in scoring bison, visual clues are adequate.

TARGET CONDITION SCORES

IDEAL CONDITION SCORE DEPENDS ON THE TIME OF year. Over the different seasons of a year it is normal for a bison's weight and body condition score to fluctuate. Most people aim to have their bison fat in the fall so that they do not require as much feed over the winter. Most experienced producers aim to have their bison lean in the spring because excess fat may lead to calving problems. By the beginning of breeding season, the cows should be back to a moderate to good body condition to ensure optimal conceptions rates.

TIME OF YEAR	IDEAL SCORE	RANGE
November	4	3-4+
April	2+	2-3
July	3+	3-3+

By knowing your herd's body condition score, you can adjust your feeding to meet the above targets. If the animals are too thin, increasing the amount or quality of feed and

supplements will increase their body condition score. If the animals are too fat, the opposite is possible and money can be saved in the winter feed bill.

One must be aware that any change in BCS should be gradual as rapid changes, either up or down, can cause health problems. Rapid weight loss in fat bison can precipitate a disease called “Fatty Liver Syndrome” and cause death. Rapid weight gains on grain diets are possible but this type of diet can cause digestive upsets and may cause death as well.

BCS AND BODY WEIGHT

IN BISON, ONE UNIT OF BCS IS ROUGHLY EQUIVALENT TO 90 pounds of live tissue weight. The approximate composition of this tissue would be 70% fat, 24% water, 6% protein and 1% mineral (adapted from dairy cow research by Otto and co-workers, 1991).

BCS AND REPRODUCTION

EXPERIENCE INDICATES THAT COWS THAT ARE too fat at calving (BCS >4), were more prone to reproductive diseases such as difficult calving than cows with lower BCS. Cows that are thin (BCS <2) experience reduced fertility.

ASSIGNING A BODY CONDITION SCORE

OFTEN AN ANIMAL BEING EVALUATED DOES NOT meet the exact criteria of a given BCS but falls somewhere between 2 scores. The evaluator can assign them a value with a “+” sign which indicates that they are slightly more than the score given but not at the level of the next score. For example a cow scoring between a BCS of 2 and a BCS of 3 may be scored as a BCS 2+.

WHY DO I NEED TO LOOK AT MORE THAN ONE AREA ON THE BISON?

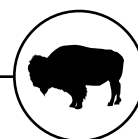
There is variation between animals in how they deposit fat. Factors such as age, sex, subspecies differences, and even individual animal variation will affect the score that they exhibit at each of the scoring areas of the body. By scoring several areas and averaging the scores we get a much more accurate overall body condition score for the animal than just using one area. For example an old bison cow may look like a BCS of 2 when looking at her ribs but the other areas indicate that she is a 3. This cow would get an overall score of 3. The following table can be used to score bison in the field.



BODY CONDITION SCORING GUIDE FOR BISON

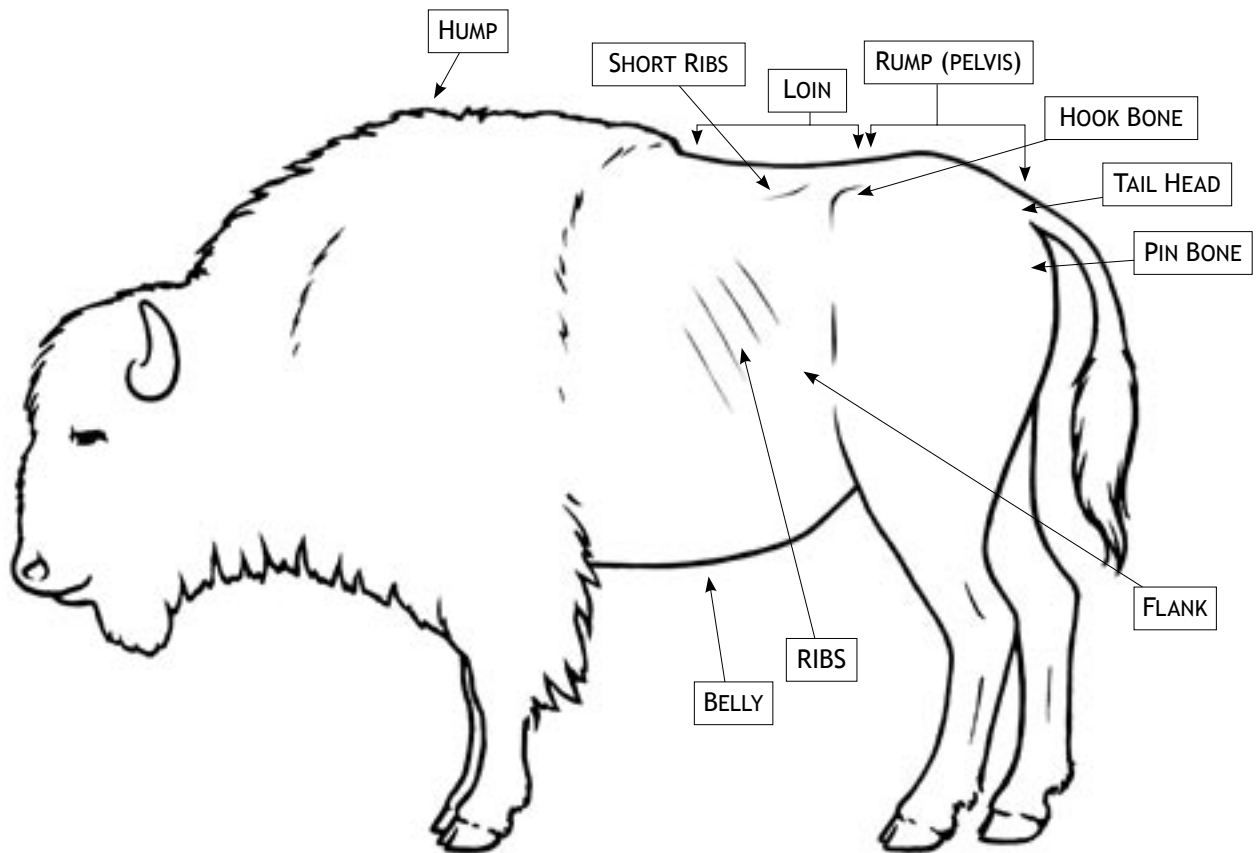
This table can be used to score bison in the field.

BCS	RIBS	SPINE (backbone)	HIP BONE	TAIL HEAD	HUMP
1 very thin	prominent in summer; many ribs visible; in winter, visible but less distinct	very sharp; angle of muscle is steep	prominent and edges are very sharp; rump muscles are caved in	devoid of fat; deep sunken depressions on either side of the tailhead; no fat palpable if bison is in a squeeze	sharp topline; narrow with flat sides when viewed from the front; sharp contrast between the hump and shoulder when viewed from the side
2 moderately thin	some ribs visible in summer and winter	evident but not sharp; angle of muscle is steep	readily seen and edges are sharp; rump muscles caved in slightly	sunken depressions on both sides of the tailhead; small amount of fat palpable if bison is in a squeeze	hump is narrow but not sharp; sides are flat when viewed from the front; distinct contrast between the hump and the shoulder
3 moderate	may be visible in summer but not sharp or distinct; edges round and covered in flesh; not visible in winter	not prominent but can be seen; angle of the muscle has a moderate slope similar to the roof of a tent	visible but not sharp; rump muscles are flat and angular	slight hollowing on either side of the tailhead; some fat palpable if bison is in a squeeze	well developed but not bulging; noticeable distinction between the hump and shoulder
4 moderately fat	may be visible in summer but not sharp or distinct; edges round and covered in flesh; not visible in winter	not readily seen; angle of the muscle has a gentle slope	barely visible; muscles are full but not bulging	slight depression in bulls and no depression in cows	full hump when viewed from the front but not round and bulging; little distinction between the hump and shoulder when viewed from the side.
5 very fat	not visible in winter or summer; covered in fat	not visible and is buried in fat; angle of muscle has little slope and is flat	covered in fat and is not seen; rump is rounded out and full	no depression (bulls) or bulging with fat (cows) on both sides of the tailhead	thick with rounded top when viewed from the front; blends into the shoulder when viewed from the side



LABELLED ILLUSTRATION OF A BISON

Illustration of a Bison with a BCS score of 3.



CROSS SECTION OF THE LOIN AREA

Generic Cross Section of the Loin Area.

BCS 1 _____



BCS 2 _____



BCS 3 _____



BCS 4 _____



BCS 5 _____



BODY CONDITION SCORES FOR BISON

Overview of all the body condition scores for Bison

BCS 1

WHOLE BODY

- Thin

RIBS

- Prominent, many ribs visible in summer
- Visible but less distinct in winter

SPINE

- Backbone very sharp
- Steep angle of muscle

HIP BONE AND RUMP

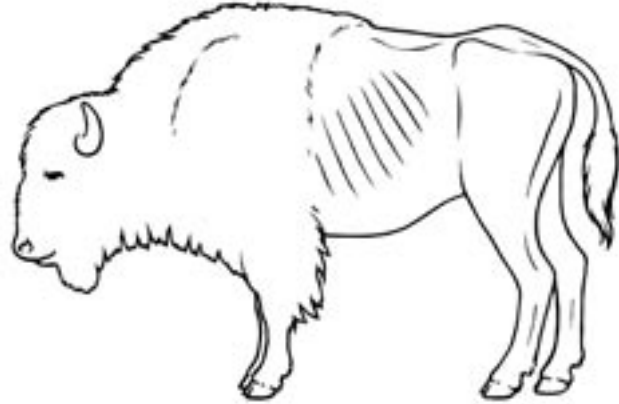
- Hip bone prominent, edges very sharp
- Rump muscles caved in

TAIL HEAD

- Devoid of fat
- Deep, sunken depressions on either side of tail head
- No fat palpable if bison in squeeze

HUMP

- Sharp top line
- Narrow with flat sides when viewed from front
- Sharp contrast between hump and shoulder when viewed from side



BCS 2

WHOLE BODY

- Moderately thin

RIBS

- Some ribs visible in summer and winter

SPINE

- Backbone evident, but not sharp
- Steep angle of muscle

HIP BONE AND RUMP

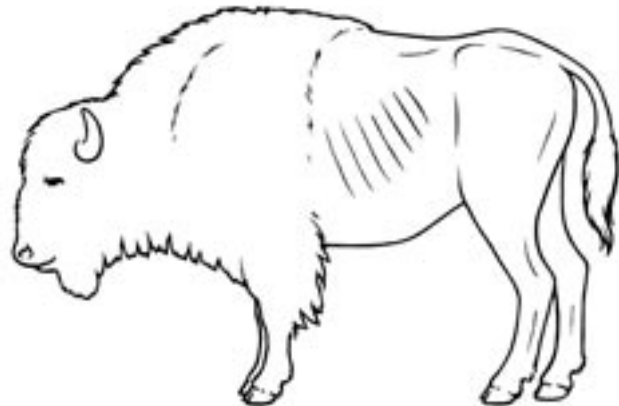
- Hip bone readily seen, edges sharp
- Rump muscles cave in slightly

TAIL HEAD

- Sunken depressions on both sides of tail head
- Small amount of fat palpable if bison in squeeze

HUMP

- Hump is narrow, but not sharp
- Sides flat when viewed from front
- Distinct contrast between hump and shoulder



BCS 3

WHOLE BODY

- Moderate

RIBS

- Edges round, covered in flesh
- May be visible, but not sharp or distinct in summer
- Not visible in winter

SPINE

- Backbone visible, but not prominent
- Angle of muscle has moderate slope, similar to roof of tent

HIP BONE AND RUMP

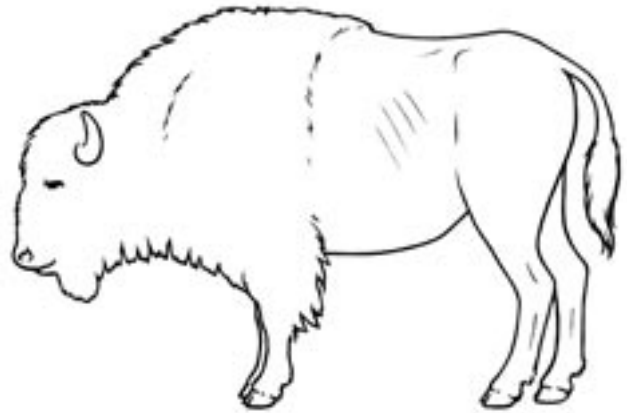
- Hip bone visible, but not sharp
- Rump muscles flat and angular

TAIL HEAD

- Slight hollowing on either side of tail head
- Some fat palpable if bison in squeeze

HUMP

- Well-developed but not bulging
- Noticeable distinction between hump and shoulder



BCS 4

WHOLE BODY

- Moderately fat

RIBS

- Individual ribs generally not visible in summer
- Not visible in winter

SPINE

- Backbone not readily seen
- Angle of muscle has gentle slope

HIP BONE AND RUMP

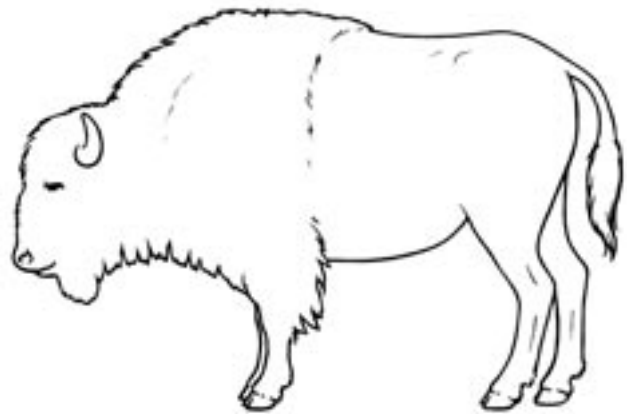
- Hip bone barely visible
- Muscles full, but not bulging

TAIL HEAD

- Slight depression in bulls
- No depression in cows

HUMP

- Full hump when viewed from front, but not round and bulging
- Little distinction between hump and shoulder when viewed from side



BCS 5

WHOLE BODY

- Fat

RIBS

- Covered in fat
- Not visible in summer or winter

SPINE

- Buried in fat
- Backbone not visible
- Angle of muscle has little slope, flat

HIP BONE AND RUMP

- Hip bone covered in fat, not visible
- Rump rounded out, full

TAIL HEAD

- In bulls, no depression on either side of tail head
- Either side is bulging with fat in cows

HUMP

- Thick, rounded top when viewed from front
- Blends into the shoulder when viewed from side

