Research Findings:
Impact of BCS on Reproductive Performance

Overview

Western Canadian beef research has identified the potential impact of Body Condition Score (BCS) on beef cow performance. These research findings show the importance of body condition monitoring and maintenance on herd performance. For more information on Body Condition Scoring in cattle: *https://www.beefresearch.ca/tools/body-condition/*

Takeaways

- Skinnier cows are more likely to be open at pregnancy testing, especially in a shorter breeding season, or to calve later in herds with a longer breeding season.
- Skinnier cows are more likely to experience abortion, stillbirth, or a hard pull.

i. Relative effect of BCS on open rates

(Garcia Guerra & Waldner 2013, Therio 79:1083-94)

< 2.5 vs 3 BCS → Increase Opens **+++**

2.5 vs 3 BCS → Increase Opens **+**

3.5 vs 3 BCS → Decrease Opens

4.0 vs 3 BCS → No Difference

Skinnier cows (BCS < 2.5/5) are more likely to be open at pregnancy testing than moderately conditioned cows (BCS = 3).

There was no significant different in pregnancy rates between moderately and more highly conditioned cows.

ii. Impacts of low BCS build over time especially with longer breeding seasons

Short Breeding Season → Increase Open Rate **++**

Longer Breeding Season → Open Rate **+**

→ Late Pregnancies **++**

In herds with a relatively shorter breeding season, skinnier cows are more likely to be open at pregnancy testing. In herds with a relatively longer breeding season, skinnier cows may be open, or calve later and be open the next year.

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iii. Effects of BCS on calf loss

Abortion Risk

(Garcia Guerra & Waldner 2013, Therio 79:1083-94)

< 3 vs 3 → Risk **+**

Stillbirth Risk

(Waldner 2014, Therio 81:840-48; Waldner 2014, Livestock Sc 163:126-39)

< 2 vs 3 → Risk **+++**

2 vs 3 → Risk **+**

NO increased risk for higher BCS

Skinnier cows are more likely to abort or experience stillbirth relative to moderately conditioned cows (BCS = 3). No increased risk was found for higher body condition.

iv. Effects of BCS on hard pulls

(Waldner 2014, Livestock Sc 163:126-39)

< 2.5 vs 3 → Risk **++**

2.5 vs 3 → No difference

3.5 vs 3 → Risk **+**

Skinnier cows are more likely to experience hard pulls relative to moderately conditioned cows (BCS = 3). Higher conditioned cows may also have an increased risk – but risk is less than for very thin cows.

References

Waldner, C.L., Garcia Guerra, A., 2013. Cow attributes, herd management, and reproductive history events associated with the risk of nonpregnancy in cow-calf herds in Western Canada. Theriogenology, 79:1083-1094.

Waldner, C. 2014. Cow attributes, herd management, and reproductive history events associated with abortion in cow-calf herds from Western Canada. Theriogenology, 81(6):840-848. doi: 10.1016/j.theriogenology.2013.12.016.

Waldner, C., 2014. Cow attributes, herd management and environmental factors associated with the risk of calf death at or within one hour of birth and the risk of dystocia in cow-calf herds in Western Canada. Livestock Science, 163:26-139. doi: 10.1016/j.livsci.2014.01.032

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