

Seasonal growth rates of Holstein heifer calves

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It is common knowledge for some but less well-known by others that seasonality has a significant impact on the performance of pre- and immediately post-weaned dairy heifer calves. Because of the important effect of seasonality, calf raisers should alter their management and feeding strategies through the seasons to ensure that calves are growing to their fullest potential, whether temperatures are 100 degrees F or 30-below.

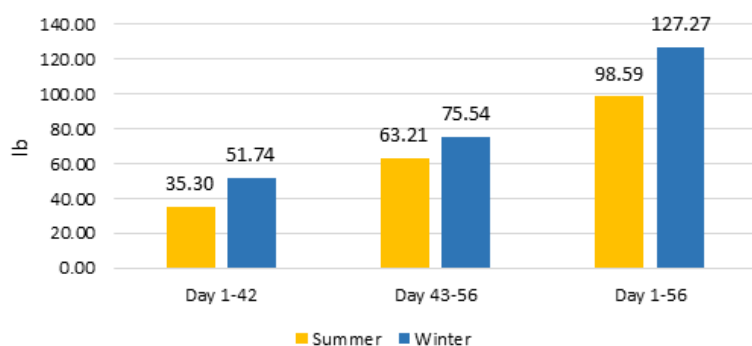
Under heat stress conditions, it is important to offer a high-quality, fresh and palatable calf starter such as [Elite 18](#) to encourage intake and promote rumen development. The importance of consistently providing calves with [fresh, clean water](#) year round is especially vital during the hot season when calves are heat stressed. Adding a [Rite-Lyte](#) electrolyte feeding on hot days can help calves stay hydrated and maintain healthy metabolic homeostasis. Flies can have a significant impact on calf performance, so consider implementing a [fly control strategy](#) in your calf feeding program to limit fly stress on your calves.

Cold weather feeding strategies to keep calves healthy and growing include: 1) Delivering more energy in the milk or milk replacer with a [fat supplement](#); 2) Feeding a higher-fat milk replacer formula; and/or 3) Feeding more milk volume of milk or milk replacer solution. More information on cold weather strategies can be found [here](#).

To understand seasonal growth differences of young calves, 8 years' worth of individual calf data from the University of Minnesota Southern Outreach and Research Center was compiled and analyzed under the following parameters and conditions:

1. All calves were fed Hubbard Feeds' [Elite 18 Texturized Calf Starter](#).
2. All calves were fed Hubbard Feeds' [Calf Beginner 20-20 milk replacer](#) at 10 oz. twice daily from days 1–35 and once daily from days 36–42 and were fully weaned by the end of day 42.
3. All calves were housed individually, with intake and performance measurements taken through 56 days.
4. Summer parameters = calves born in May, June or July.
5. Winter parameters = calves born in November, December or January.

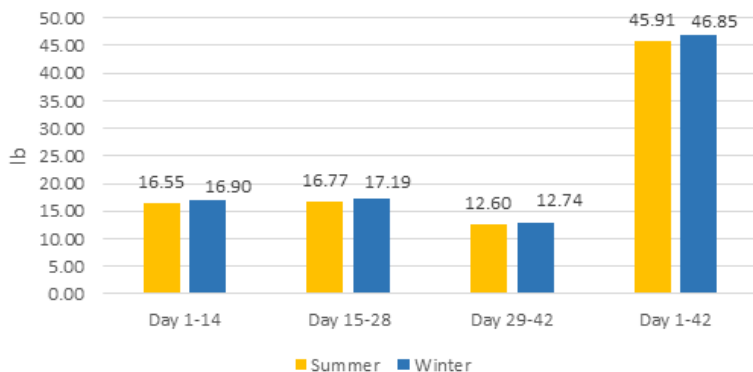
Table 1. Weekly starter intakes



Starter intake: As seen in Table 1, winter-born calves consumed 16 lb. more per week than summer-born calves in the pre-weaning period (days 1–42). This trend continued through the post-weaning period (days 43–56) and overall (days 1–56). To break this down to a daily starter intake basis, winter-born calves consumed just over half a pound more per day than summer-born calves in the first 56 days of life.

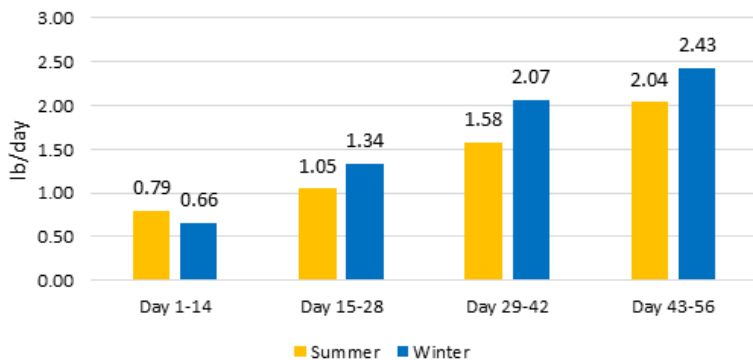
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Table 2. Bi-weekly milk replacer intakes



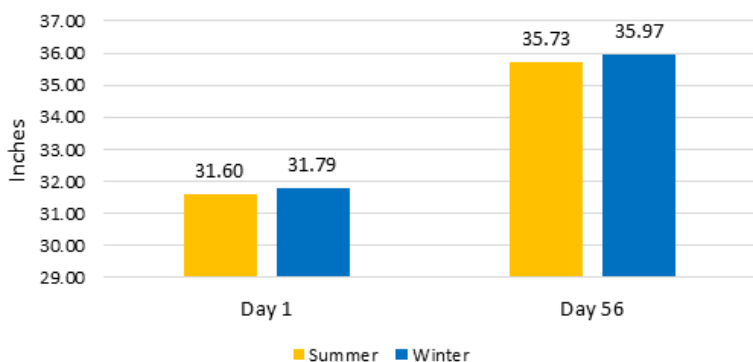
Milk replacer intake: Unsurprisingly, milk replacer intakes (Table 2) were relatively similar for both summer-born and winter-born calves, with winter-born calves consuming only 0.94 lb more milk replacer (dry matter basis) through 42 days. It is important to note that winter-fed calves were fed 20% more milk per feeding when temperatures dropped below 0 degrees F, and 40% more milk at temperatures of -10 degrees F and below.

Table 3. Bi-weekly ADG



Average daily gain (ADG): Table 3 depicts bi-weekly ADG of the calves. Interestingly, winter-born calves outperformed summer-born calves from days 15–56, although they lagged behind in the first 2 weeks of life. This is likely due to cold outdoor temperatures and the increase in the maintenance requirements of these young calves. With the limited starter intake in the first 2 weeks of life, winter-born calves do not perform as well as summer-born calves early on.

Table 4. Hip height



Hip height gain: Although drastic variations were seen in ADG, hip height gain differences (shown in Table 4) were minimal, suggesting that the performance differences could be attributed more to body weight and less to frame growth. Winter-born calves gained a total of 4.18 inches through 56 days of age, whereas summer-born calves were slightly lower, at 4.13 inches of hip height gain.

In short, calves born in the winter season gained, on average, 0.25 lb more per day than summer-born calves in the first 56 days of life, which equates to an additional 14 lb of total body weight gain. Winter-born calves also consumed more calf starter than summer-born calves in this period in order to meet the increased maintenance requirements brought on by cold stress.

It is important to not only recognize the impact that seasonality can have on calf performance, but also to understand how we can manage growing calves during these seasonal variations. Weighing calves, monitoring intakes and keeping organized calf health records are vital to benchmarking your calf program, which will allow you to make educated management decisions when the seasons begin to change. Work with your [Hubbard Feeds representative](#) to explore the products and services that could bring your calf program to the next level.