

Weaning Grain-fed Veal Calves



Weaning, or transitioning a calf from a milk-based to a solid feed diet, is one of the most stressful times in a calf's life. Weaning stress can lead to reduced growth (or even weight loss), impaired immunity, and calves displaying signs of hunger and stress. As such, weaning stress decreases productivity, health, and welfare. Being free from fear and distress are important aspects of good animal welfare. Therefore, it's important for producers to take steps to reduce weaning stress as much as possible. This article will discuss a few strategies producers can use to make weaning less stressful for calves.



First, avoid "stacking stressors" for calves. For example, do not regroup calves at weaning or wean sick calves. These, along with any other potentially stressful procedures, should occur at least two weeks apart. This allows the calf to slowly adapt to each change.

Gradual weaning

Abrupt weaning is removing milk from a calf's diet all at once. Gradual weaning involves reducing the amount of milk offered to calves by making meals smaller or offering fewer meals throughout the day over a period of several days. Weaning calves gradually over five to 14 days is recommended by the National Farm Animal Care Council's "Code of Practice for the Care and Handling of Dairy Cattle". A recent survey of Ontario veal producers conducted in June, 2016 by Veal Farmers of Ontario found that 60 per cent of Ontario veal producers wean calves gradually, with the majority weaning calves off milk over five to nine days.

When compared to calves weaned abruptly, calves weaned gradually typically experience:

- Increased solid feed intake
- Better weight gain
- No weight loss during and after weaning
- Reduced cross sucking
- Fewer behavioural signs of hunger or stress

Gradually reducing the milk allowed at each feeding is preferred over reducing the number of meals or by diluting milk with water. Gradual weaning is especially important for calves fed high milk allowances (more than ten per cent of bodyweight). These calves will experience far more stress when abruptly weaned than calves on a lower milk allowance.

To calculate a gradual weaning schedule, divide the amount of milk given to calves by the number of days in the weaning period. Reduce the amount of milk given each day by this amount.

For example:

Milk amount fed before weaning	Duration of weaning		Milk reduced per day (in litres)
12 litres	14 days	$12 \div 14 =$	0.9
8 litres	Five days	$8 \div 5 =$	1.6

Age of weaning

Calves weaned at an older age typically experience less weaning stress. For example, calves who were weaned gradually from seven to eight weeks of age have higher productivity and increased welfare compared to calves weaned from five to six weeks of age. At older ages, calves are better able to increase their starter intake in response to a reduced milk allowance.

Calves weaned at seven weeks of age or sooner typically experience a decrease in immune function. If calves in your barn seem to "go backwards" or become sick around weaning, this may indicate that weaning stress is impacting calf health and growth, and you may need to adjust your weaning program. This effect is even greater for calves weaned at younger ages.

Almost 60 per cent of Ontario veal producers wean calves at eight weeks of age or later. Based on the current research, these producers may see improved health, productivity, and welfare from feeding milk to calves longer.

Weaning based on feed intake

Young calves will eat some calf starter. However, for the first two to three weeks of life, calves are "pre-ruminants" and cannot fully digest the starter. When calves are pre-ruminants, the majority of their nutrients are obtained from milk or milk replacer. Removing milk from the diet before calves are able to properly digest starter causes weight loss, and

stalls growth, because the calves are unable to get enough nutrients from the starter. Calves need to be consuming starter for at least three to four weeks in order to develop their rumen and begin fully digesting it. Offering calves free access to fresh, clean water from birth or arrival on the veal farm will encourage calves to consume more starter. In a 2008 study, A.F. Kertz found that fresh water can increase starter intake by up to half a kilogram per day. Offering calves no water reduced their starter intake by 31 per cent, leading to a 38 per cent reduction in growth from birth to four weeks of age.

Weaning calves from milk once they are consuming a sufficient amount of feed (1 to 1.4 kg/day for a minimum of three days for a Holstein) also reduces weaning stress. Remember, smaller and weaker calves or calves that were sick may start eating grain at a later age than the rest of a group.

Summary

Taking steps to reduce stress during weaning is important for health, welfare, and productivity. Talk to your herd veterinarian or nutritionist to ensure your weaning program is designed to create a smooth transition to solid feed for your calves. Gradual weaning at eight weeks of age or later increases calf health, productivity, and welfare by reducing weaning stressed experienced by calves. ■

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