

## Fall Calf Health: Q and A

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Every fall, southern Ontario brings stocker calves off pasture and into feedlots for the winter. (By the time you read this article, your barn may already be full and this article is just humdrum reading for the long winter evenings.) Our industry is filled with talented, experienced stock men and women who do a remarkable job of managing their stockers through this transition. Even so, some of the same questions come up every fall. This article will take the form of a question and answer session. Details of vaccines and medications should be discussed directly with your vet.

*Are my cattle sick? They came to the salesbarn yesterday, were sold this morning, and came to my barn this evening. Why do they look so tired?*

Those cattle have been through a lot. Many of our calves are “weaned onto the truck” before we see them here in southern Ontario, which means that they were taken from a cow-calf herd on pasture, usually (very) far away, loaded on a truck, and brought to us. Those calves might be five or six weights, so the stress of being separated from their mothers may not seem so great by this age, but their overall stress is great because it is combined with the change in their:

1. social groups (they are often mingled with calves from other farms),
2. social hierarchy (instead of mama cow being there, the calf is on its own),
3. nutrition (whatever they are getting, it sure isn't the pasture grass where they were born),
4. environment (a transport truck and a salesbarn with many novel diseases swirling in the air that the calf has never encountered before), and
5. ambient temperature (with perhaps a draft or two thrown in there).

This list could be continued! No wonder they are worn out. The fatigue from being on a truck for hours and then having to adjust to new social groups is very difficult to measure, but those calves sure do have a good reason to look tired. A tired, worn-out calf with such a list of stressors is much, much more likely to get sick with pneumonia. When a calf gets sick with pneumonia within two or three weeks after arrival at the destination farm, we call that shipping fever. Shipping fever makes a calf look dull and depressed. The calf will go off feed and typically has a snotty nose, cough, and a fever. It's pretty easy to diagnose pneumonia in these cases.

We like to put calves into categories to help us have an idea of what to expect healthwise: low risk, medium risk, or high risk for getting shipping fever at their destination farm. Low risk calves, as the name suggests, should have very low rates of shipping fever. These calves have undergone a pre-conditioning period. They haven't been weaned onto the truck; in fact, neither have they travelled far or been mixed with calves from a different social group before they arrived at their destination farm. Perhaps these calves are also

heavier (for example, nine weights) and thus hardier. Low risk calves should only have one or two stressors.

Medium risk calves have also come from within the province and have also undergone some pre-conditioning, but they have one or two more stressors. For example, like low risk calves, they are moved from their birth farm and the group's social hierarchy changes, but in addition, they are commingled with calves from another farm.

High risk calves are the most common in Ontario. They come straight from a salesbarn or a long transport ride, or, most likely, both! The calves are already stressed because of being moved and mingled with other calves, and stress makes their immune system less efficient. When those calves breathe the air of the salesbarn, why, they are in a very effective disease mixing pot and end up with all manner of pneumonia bugs. High risk calves are at great risk of getting shipping fever. As a vet, I have seen groups of high risk calves with 30% shipping fever rates, and at least a 10% death rate in the group.

*What can I do to keep them from getting sick?*

The short answer: reducing stressors. It's impossible to eliminate all the stress. Here are some suggestions.

Local pre-conditioned calves, calves that have been vaccinated weeks before moving and then travel only a short distance to their destination farms, do well. But how would we have enough calves to fill our barns in the fall if we only bought pre-conditioned local cattle? We also treat calves "on arrival" (at the destination farm), both with injectable long-acting antibiotics that help prevent pneumonia over those first two weeks and with mixing medication in the feed for the first several weeks. We care about nutritional aspects and make sure the calf is getting a supplement of some sort that has the right vitamins and minerals to boost the calf's immunity. We consider timing of vaccinations and other procedures so that we don't over-stress a calf that is already stressed by movement/transport. We use excellent bedding and pay attention to barn hygiene to promote the cattle resting.

*Medicating all the cattle? I've been hearing that mass medication is a poor use of antibiotics.*

Yes, at the risk of stirring up a hornet's nest, medicating all the cattle. Treating the group on arrival can be a good use of antibiotics. The risk of disease is so very high for many of our calves that some kind of treatment, especially for the lighter calves, is a must. A rule of thumb is that any group of calves under 800 pounds should get special consideration for group medication. Following a well-managed medication schedule for your incoming calves has not been shown to be a harmful use of antibiotics. This schedule should be drawn up with your farm vet's input. Together, you will choose the best treatments that will have maximum effect while still being cost-efficient. What's more, this is required by the current legislation in order to promote wise use of antibiotics in Ontario's cattle.

*Could I be building antibiotic resistance?*

Using the right medication at the right dose for the right period of time... has NOT been shown to build antibiotic resistance. Yes, we should be concerned about the antibiotic resistance issue, and it is good to be critical of our antibiotic usage protocols. There are right and wrong ways to use antibiotics. One example of long-term harm, specifically from medicating the feed, is when a producer uses too low a dose of feed medication for months and months, thinking it will “help stave off the coughing.” This has been shown to contribute to antibiotic resistance; the bacteria gain resistance (they are not as responsive) to that feed medication. There are trends in how well medication works on a given group during any given season. It is useful to keep good records of any and all medication that the calves ever get; at the very least, this will help keep track of meat withdrawal times before shipping the cattle to slaughter. This is important for food safety, as well.

*Any tips on feed medication?*

My soapbox again--the “right dose” idea. Many of our feed medications have a labelled dose that can be difficult to understand, and, as it turns out, the labelled doses are low and can lead to antibiotic resistance. It is valuable to discuss the dosages with your vet. Depending on your ration, it is difficult to properly mix the medication into the feed. Top dressing the medication on starter ration (just hay and pellets) can lead to the tiny medication granules sifting through the stalks of hay and being left in the bunk after the cattle have eaten. If you top dress, make sure the medication stays in the feed; the feed needs something damp, like silage or distiller’s grains, so the medication “sticks” to the feed. Mixing medication directly into a starter pellet (a service that is offered by the good feedmills of Ontario) or mixing the medication in your TMR are efficient methods of properly mixing medicated feed.

When a calf is sick and not eating properly, it won’t be getting the proper amount of feed medication. (Wrong dosage again!) One solution to this is using a water medication, since a calf that has poor feed intake may still have good water intake. In some cases, though, there is no alternative to giving injectables to a sick calf.

*What health performance should I expect?*

So many different factors! The “quality” of cattle, the risk level, the medication (or lack thereof) on arrival, quality of feed and whether it includes medication, environment, and the list goes on. Should you expect some sick cattle? (Yes. Have medication on hand so that sick ones can be treated immediately—this is a welfare concern.) How many sick calves should you expect? Twenty percent? Five percent? Is it possible to get that percentage down, to, say, one percent? How do you know whether you are using the correct medication? These modern medications cost an arm and a leg, but many are supposed to be effective with just one dose. Will you still have to retreat an animal that you treated three days ago and just isn’t coming around? (Unfortunately, yes, this happens.) What is a reasonable expectation of these “repulls”? What percentage of repulls recover? What is the best medication to use?

There is no one right answer, just like there is no one perfect group of cattle! This is where I put in a plug for my profession. This underscores the importance of the ongoing professional relationship you have with your farm vet. These questions have answers tailored to you—this will be an easy, open conversation if your vet understands your cattle operation. You can find plenty of ways to improve the calves' welfare over the fall transition time.

Other herd managers can explain what has worked or hasn't worked for cattle comfort. Take the time to discuss whether a small change, such as a new style of fan to provide air movement without creating a draft, can improve your production. See what weight gains other producers are finding with, say, grooving the floor by the feed trough. Do they see a good return on investment with a change in bedding type?

Nutritionists are an excellent resource, as well. They can offer you tailor-made ration programs, or they can provide an excellent starter ration that their mill already sells. Sometimes there's no need to re-invent the wheel.

It may help to have some written expectations before the calves arrive, and compare them with your calf health records after the season.

Perhaps the most important fact is this: there are answers! But no one person has them all. Find people who are good enough to be experts in their field and humble enough to be willing to share their expertise--that's how you can find the answers.