

# Feeding with Milk Replacer

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Have you recently switched to feeding calves with milk replacer? Or, have you been feeding it for a while? I will not go into depth on the pros and cons of feeding milk replacer. As dairy producers need more and more milk some will switch from feeding whole milk to milk replacer. One of the keys to having success with milk replacer is consistency. **Calves thrive on consistency.** Now is a good time to review correct mixing preparation steps for feeding milk replacer. Although this is geared towards hand mixing milk replacer there are important concepts that can be applied to automated calf feeders as well.

## 1) Weigh the powder

It is best to have an accurate scale to measure out the correct powder amounts. Volume based measurements (ie. with a cup or scoop) can be highly inaccurate for two main reasons. First the volume to weight ratio can vary greatly. It can be different between batches, bags and even within a bag.

Secondly, there can be great variability in a “scoop” of milk replacer. This can be further amplified if multiple people are responsible for making the milk replacer.

## 2) Measure the water accurately

Use containers or pails that are calibrated and have markings for different volumes of water. If you are using a 20 litre pail with no markings where do you fill it too? What about the person who will feed the calves tonight? Do you fill it close to the top where it should be or a few inches below? Nobody wants to spill the milk replacer so more than likely there is only 18 litres in the pail. If you have added powder for 20 litres you have now increased the concentration by 10-15%. This can lead to scours.

## 3) Mixing Temperature

Follow manufacturing guidelines. Each brand of milk replacer could have different mixing directions. Have you read your milk replacer tag recently? Maybe the manufacturer has changed mixed directions. There are different methods used by the manufacturers to get the milk replacer to mix properly. Some require higher heat during the mixing stage and others have methods that require lower mixing temperatures. The milk replacer can be damaged or not mixed properly if improper mixing temperatures are used. So if you have recently switched to a new milk replacer or if you have been using the same one for the last 20 years read the label to make sure you are mixing correctly.

#### **4) Blending is adequate but not overdone**

Once again, follow the label directions. Typically you will add the powder to half the total water and then stir. Some milk replacers are fat encapsulated so they should not be over mixed as they can be broken down and then you can end up with an unbalanced product to feed to the calves. Drills with paint mixers are often used. Be careful not to over mix with them and use them at low speeds to prevent damage to the milk replacer.

#### **5) Mix bigger batches**

To minimize further variations try to mix in larger batches and then split up to feed multiple calves rather than mixing milk individually for calves. Create a feeding sheet, laminate it and post it by milk replacer mixing location. The feeding sheet will have number of calves, volume of water to mix milk replacer in, powder weight amount and finished volume. As calf inventory changes, you can easily adjust to new mixing amounts.

#### **6) Check final concentration regularly**

A brix refractometer can be used to check the concentration of the finished product. Too high of milk replacer concentrations or variations in concentrations between feedings can lead to scours and other digestive upsets. Too low concentrations can lead to underfed calves.

#### **7) Calibrate your automated feeder frequently**

Check the concentration, calibrate the water volume, water temperature and powder weight frequently. Ideally this is done daily but at a minimum weekly.

If you have further questions or need some guidance feel free to talk to your herd health veterinarian.

Happy calf rearing!