Tube-Feeding a Calf

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Why Tube-Feed?

- Ensure that newborn calves receive colostrum within 24 hours of birth. Ideally, calves should have colostrum within 1–2 hours after birth. After 24 hours, a calf's intestines cannot absorb antibodies (Waechter-Mead, 2022).
- Provide milk if calves are unable to nurse or suck from the nipple bottle.
- Provide electrolytes when sick.

Materials

Various types of tubes are available for tube-feeding (Figure 1).

- **Esophageal tubes**
- Shorter, extending just past the larynx (throat).
- You can feel the rounded end in the esophagus.
- **Foal tubes**
- Longer, passing through the esophagus and into the stomach.
- Reduces the chance of getting fluid in the lungs.

Tube-Feeding Steps

Figure 1. *Various Types of Tubes*

1. Restrain the calf.

- Position a standing calf between your legs and guide it backward into a corner, ensuring its head remains upright.
- If the calf is unable to stand but can still swallow, place the calf on its sternum, and support its head to keep it elevated.

2. Measure the tube.

- Distance should be measured from the tip of the nose to the elbow and **marked on the tube**. This is the approximate length at which it should be inserted. See Figure 2 (McGill, 2023).

3. Insert the tube.

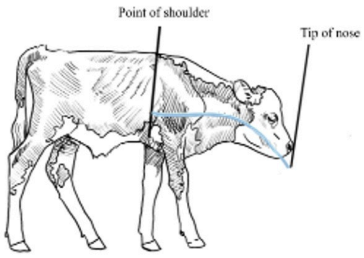

Figure 2. *Measure the Distance Between Tip of Nose and Point of Shoulder, Then Mark the Tube*

- Keep the tube free from fluids during insertion.
- Lubricate the probe with a small amount of vegetable oil, mineral oil, or veterinary-grade obstetrical lubricant.
- Raise the calf's head and squeeze the sides of the mouth gently to open its mouth. The calf's head should be in a neutral position. If it is too extended,

the feeding tube has a greater chance of entering the trachea, which leads to the lungs. If fluid enters the trachea, the calf can aspirate.
- Slowly push the tube to the back of the mouth, aiming for the left of the throat.
- Wait for the calf to swallow.
- Once the calf swallows the end of the feeder, slide the tube gently down the esophagus to the mark made previously on the tube.
- Stop immediately if you feel any resistance; pull the tube out slightly, and redirect. **Never force the tube**.
- When the tube is in the correct place, the calf should appear comfortable and be able to swallow (Figure 3; Malacco et al., 2023).

4. Check the tube.

- Palpate the left side of the calf's neck to ensure proper tube placement.
- When the tube is in the correct position, you will feel two tube-like structures (windpipe and esophagus with the feeding tube).
- The trachea is firm and has ridges obvious to the touch.
- The esophagus is soft and collapsible and can only be felt with a tube inserted.
- If only one tubular structure can be felt, the tube is in the trachea; you might also feel air escaping the tube. Remove the tube and insert it again following the steps previously mentioned.

5. Administer fluids.

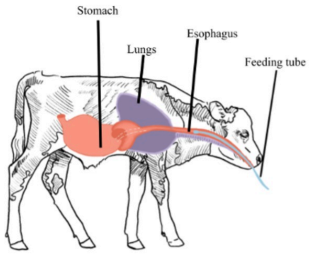

Figure 3. *Diagram of Proper Tube Placement*

- If the calf is comfortable and the tube has been placed correctly, the fluid can be introduced.
- Liquid should be body temperature, 98 °F to 100 °F.
- Allow the fluid to flow by gravity. The calf may move around when it feels pressure in the rumen (stomach).
- Administer the colostrum by raising the bag above the calf and allowing the fluid to flow by gravity. Never squeeze the bag to hurry the process (Arnold, n.d.).
- Feed 1.5–2 quarts. Split the feeding into smaller volumes if it's uncertain how much the calf has consumed.

6. Remove and clean the tube.

- Wait until all liquid has exited the tube and passed down the esophagus.
- Kink the feeding tube to stop the flow of fluid.
- Hold the calf still and gently pull out the tube in one swift motion.
- Clean the feeding tube immediately so it is ready for the next use.
- Rinse with cold water and then wash in hot, soapy water.
- Follow with a chlorine and hot water rinse.
- Hang the tube to drain and dry.

Illustration Credit

Rebekah Esplin, USU Extension, provided the illustrations in this fact sheet.

References

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