

Using Ammonia Strips to Evaluate Calf Air Quality

Directions for use are on the back of the ammonia strips package.

1. Tear off a 2-inch piece of ammonia strip.
2. Wet 1 inch of the strip with clean water.
3. Wave the strip 1 foot above bedded pack area for 20 to 30 seconds (Image 1).
4. Wait 15 seconds and compare the strip color with the color chart on package (Image 2).
5. The target is <5 ppm ammonia in calf facilities.
 - If reading is 5-10 ppm, calf feed efficiency will be decreased.
 - If reading is >10 ppm, calves have significantly increased risk for respiratory infection.

Consider the following to decrease ammonia:

- Decrease stocking density to achieve at least 35 sq ft/calf lying area and 600 cubic feet of air volume/calf.
- Increase frequency of bedding removal and replacement.
- Ensure minimum air exchanges are occurring:
 - Target 4 air changes/hour during the winter.
 - Target 15-20 air changes/hour in the summer.
 - Evaluate positive pressure tube use and curtain management.
- Increase drainage:
 - Concrete floors: Slope floor toward drains and make sure drains are free to accept water.
 - Non-concrete floors: Use sand or limestone screenings under straw bedding.
- Evaluate dietary protein intake/calf/d. Consuming excessive protein intake will significantly increase urine output and nitrogen concentration.
- Consider using a starter grain that results in firmer manure (slows down rate of passage and increases nutrient digestion).

Image 1.

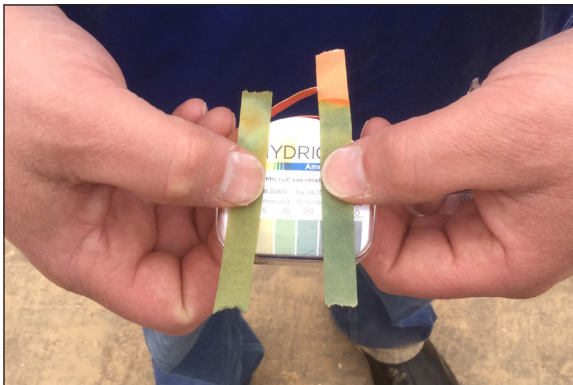


Image 2.



An Employee-Owned Company

www.vitaplus.com • 1.800.362.8334