

OBSERVATION PROTOCOLS

Freshening Facility Observations

- Ammonia level – bedded pack – walk area to pick up odor; free-stalls – walk alleys; individual calving pens – walk around in at least one pen.
- Ammonia level – if ammonia level is easily detectable use toxic gas detector to get a quantitative level.
- **Ammonia level scoring**
 - 0 = No detectable odor throughout the facility
 - 1 = Occasional odor detected in limited locations
 - 2 = Easily detectable odor, moderate, less than 5ppm
 - 3 = Easily detectable odor, ≥ 5 ppm
- **Air movement** – can use anemometer
 - 0 = Easily detected and steady movement
 - 1 = Easily detected movement, intermittent
 - 2 = Only occasional detectable movement
 - 3 = Still air
- **Overcrowding: free stalls**
 - 0 = ≤ 80 percent stocking
 - 1 = 81-90 percent stocking
 - 2 = 91-100 percent stocking
 - 3 = > 100 percent stocking
- **Overcrowding: bedded pack**
 - 0 = ≥ 100 square feet per cow
 - 1 = 90-99 square feet per cow
 - 2 = 80-89 square feet per cow
 - 3 = < 80 square feet per cow
- **Bedding: bedded pack if this is where calves are born**
 - 0 = Uniformly clean and dry
 - 1 = Occasional spots are dirty and wet
 - 2 = Less than one-half area is dirty and wet
 - 3 = Most of the area is dirty and wet

- **Bedding: calving pens if this is where calves are born**
 - 0 = bedding changed between each calving
 - 1 = bedding changed as needed to keep it looking clean
 - 2 = bedding changed occasionally, not clean
 - 3 = bedding changed infrequently, dirty and wet

Calf Pens/Hutches:

- Using the combination thermometer/hygrometer unit get one set of readings from a shaded observation point outside the calf housing and one set of readings from inside the calf barn (or an empty hutch). If in doubt about the uniformity of conditions inside a barn take several readings and average them. A 5-gallon pail

set upside down in the middle of the work alley is a repeatable site for observation.

- Air movement – hutches – observe only in situations where ambient temperatures are above 70 F.
- Air movement – pens/hutches
 - 0 = easily detected and steady movement
 - 1 = easily detected movement, intermittent
 - 2 = only occasional detectable movement
 - 3 = still air
- Ammonia – find calves about four weeks old. Check for soiled and/or wet bedding. If present, get into hutch or pen and check for odor in the resting area about 4” above the bedding.
 - 0 = no detectable odor in pens/hutches or in facility
 - 1 = occasional odor in a few pens/hutches
 - 2 = easily detectable odor, moderate, <5ppm measured
 - 3 = easily detectable odor, strong, ≥5ppm measured
- Calf Bedding
 - 0 = Uniformly clean and dry
 - 1 = Occasional spots are dirty and wet
 - 2 = Less than one-half area is dirty and wet
 - 3 = Most of the area is dirty and wet

Respiratory Risk Assessment and Fecal Scoring:

- Observe calves greater than one day old through all calves being fed milk.
- Do not include weaned calves.
- Check with calf care person for any marking system showing calves already being treated for respiratory illness. Show a * for these calves until we figure out how to deal with them in the database. Do not include them in the score>4 count.
- Use the Univ. Wisc. Picture guide
- Record using the Univ. Wisc. Data sheets (1) nasal discharge status, (2) ocular discharge status, (3) ear position, (4) spontaneous coughing and (5) fecal composition.
- For all calves with positive respiratory risk scores, note calf ID as you are observing.
- Sum respiratory risk scores – for all the calves with scores of 2, 3 and 4 go back and check for induced cough and temperature.
- Re-sum scores.
- Count and record number of calves with:
 - Respiratory scores of greater than 4
 - Fecal scores of 2 or greater
 - Total number of calves observed

Pick up frozen colostrum samples

- Check out sample ID's
- If bottle has popped open bag it separately.
- Label all bags with farm name.
- If farm personnel have not collected samples of "as-fed" colostrum, try to find stored colostrum that can be sampled on the visit day. Using sterile bottles collect five samples to substitute for the ones that should have been collected.
- Put all bagged samples in the cooler.

Blood serum total protein samples

If the farm has already done BSTP's, abstract data. Goal is to have ~~10~~¹² samples at each visit if the farm has enough calves born since the last visit.

If the farm has not drawn blood, select up to ~~10~~¹² calves between one and seven days of age (give preference to younger calves if more than ~~10~~ are available). Follow procedures outlined in "Testing for Passive Transfer" draw blood and store samples for analysis.

Weighing calves (using weight tape):

- Only for farms that choose to collect birth weights.
- Use the farm-specific protocol for identifying calves for additional weighing.
- At each visit check to see if sample calves are in calf housing.
- For all calves greater and equal to two weeks of age on the day of our farm visit use the Holstein calf weight tape to estimate their weights.
- When using the calf weight tape – with the tape around the heart girth pull the tape tightly enough only to firmly compress the hair coat.
- Record calf ID and weight on same form that we use for recording births.

Farm files and wt at weaning and will provide spreadsheet of these data