|  |
| --- |
| ***I. Recorded Information*** |
| Calving event /Colostrum Feeding – Circle what is recorded: |
| Cow ID Time & Date of Birth Personnel in attendance |
| Calving Ease Gender Calf ID |
| Time Fed Amount Fed Mode of Administration |
| Type of colostrum (fresh/frozen/replacer/synthetic/other) |
| Quality Measurement Number of feedings |
| ***II. Farm Goals* Goal None identified** |
| DOA’s(deaths from birth to 24 hours) |
| Mortality |
| Morbidity |
| Growth rate |
| % of live hfr calves that make it to milking |

|  |  |  |  |
| --- | --- | --- | --- |
| **Mortality Rate\*** | **Days 1- 10** | **Total pre-weaned** | **Post-weaned to 4 mos** |
| Last month |  |  |  |
| Past 6 months |  |  |  |
| Past year |  |  |  |

\*Mortality Rate = Calves died after 24 hours/Total Calves born and surviving beyond 24 hours (DOA’s are exluded from this calculation)

|  |  |  |  |
| --- | --- | --- | --- |
| **Morbidity Rate** | **Days 1 - 10** | **# pre-weaned** | **Post-weaned to 4 mos** |
| Last month |  |  |  |
| Past 6 months |  |  |  |
| Past year |  |  |  |

**See Appendix A for Benchmarks**

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| ***III. Personnel Management*** |
| Are there biosecurity protocols? |
| Are there job descriptions? |
| Are there written protocols – treatments, calving pen mgmt, equipment cleaning, dehorning, tail docking, etc.? |
| Is there a training/retraining program for employees working with calves? |
| Are calf personnel evaluated over time? If yes, how? |
| Are relief/night crew personnel trained? |
| Have personnel been trained in identification of sick/injured calves and their treatments (vaccines, bolus admin., esophageal feeding tube, IV, etc.)? |
| How often are animals observed for signs of illness and injury? |
| Who is responsible for management of facilities (curtains, doors, shade ventilation, bedding, etc.)? |
| ***IV. Far off dry and pre-fresh cow management*** |
| What is accuracy of conception dates/due dates? |
| What is average dry period length?  What is the target dry period length?  What is the range of dry periods? |
| Are there times of overcrowding in far-off, close up and maternity areas? |
| What is the pre-harvest selection of colostrum donors? Consider early calving, Johne’s, mastitis, first calf heifers, BLV. |
| Describe the vaccination program for dry cows – include products & time of administration: |
| Are there significant issues with transition cow health?(Milk fevers, Ketosis, etc.) |
| ***V. Maternity Environment*** |
| Is calving area used exclusively for calvings (lame, sick cows, etc.)? |
| Types of maternity areas used (group pack, pasture, individual pen, tiestall, etc.? |
| If group pack-what is the maximum number of cows at any one time(recommend >80sqft/cow)? |
| What percent of calves are born outside of calving area? |
| What type of bedding is used for maternity area?  What type of surface is below the bedding?  How often is clean bedding added?  How often is the area completely cleaned & rebedded? |
| How long does the cow stay in the maternity area? |
| What type of ventilation is in maternity area?  Is it different for different seasons? |
| ***VI. Calving Event*** |
| Who is in charge of calvings?  Does this change at night, vacations, holidays, etc.? |
| Are the following addressed in the calving protocol:  Sanitation of the cow  Timeframe for assisting the cow/heifer  Equipment used for assisting and its proper use  Criteria for calling for assistance  Contact information for call for assistance |
| Is there a calf distress protocol?  What efforts are used for resuscitating a calf? |
| How is the calf cleaned and dried? |
| Is a weak calf given colostrum by tube?  If yes, what position is the calf in when tubed? |
| What percentage of calves nurse from the dam?  Does this vary by time of day?  Does this vary by time of year?  If there is evidence the calf has nursed is she offered more? |
| Is the navel dipped?  If yes, what is used and when. |
| **See Appendix B for Calving Assistance guidelines, calf resuscitation** |
| ***VII. Newborn holding area*** |
| What is used for newborn holding area (hotbox, pen, pack, etc.)?  Does this change with seasons?  If hotbox used –how often cleaned & disinfected? |
| How long do calves stay in the newborn holding area? |
| How often are calves observed in the holding area? |
| How close is the holding area to adult cow manure? |
| What personnel work or walk through the newborn holding area? |
| What is used for bedding in this area? How often is bedding added?  How often is it totally cleaned out? |
| What is the average number of calves in holding area? Maximum #? |
| What is the quality of the ventilation in the holding area? |
| Are calf coats used in cold weather?  If yes, what temperature are they used? For how long?  See Appendix B |
| Where are bull calves housed before transport to market? |
| ***VIII. Conveyance to pre-weaned calf area*** |
| What is used to move the calf to the pre-weaned calf area? |
| Are they moved wet or dry? |
| Is the calf protected from adverse weather conditions? |
| How often is the conveyance cleaned and disinfected and what is used? |
| Are multiple calves moved at the same time? |
| Are there multiple calf raising areas used? If yes, is it recorded which area is used? |
| ***IX. Colostrum Collection*** |
| How soon is colostrum collected from dam? Recommended no later than 2 hours after calving. |
| If oxytocin is used, why and when is it administered? |
| Equipment:  Do you milk fresh cows with the same equipment as milking herd?  If yes, Describe how equipment is cleaned prior to milking the fresh cow. (Consider claw, milk hose, pail, covers, etc. to minimize pathogens)  If no, Describe how equipment is maintained and cleaned prior to milking fresh cows. (Consider claw, milk hose, inflations, pails, etc.)  Are fresh cows milked with sick cows?  Are clean gloves used for the first milking of fresh cows? |
| Cow prep (Prep on fresh cow should be similar or better than SOP for herd):  Do you do anything different preparing fresh cows for milking?  If yes, what?  Do you predip? What is used to wipe?  What is the stimulation time? What is the prep lag time? |
| **See Appendix C for Colostrum Collection & Use of Oxytocin** |
| ***X. Handling and Storing Colostrum*** |
| How long does colostrum sit before it is processed for feeding or storage? |
| Do you pasteurize colostrum? If yes, what type of unit, time and temperature? |
| How do you judge colostrum quality (lactation #, volume, color, thickness, colostrometer, Midland test, refractometer)? |
| Do you pre-chill colostrum before storing? It is recommended that colostrum is chilled to 60 F within 30 minutes of collection. |
| Do you add a preservative prior to storage? If yes, what? |
| Do you store colostrum in refrigerator or freezer? |
| What type/size of container do you use for storage? |
| Describe how you place/store colostrum units in refrigerator/freezer. |
| What volume of colostrum is added to refrigerator/freezer at any one time? |
| Do you monitor the temperature of the refrigerator? <40 F |
| Is colostrum identified by dam? By date? By quality? |
| Is colostrum pooled from multiple cows?  Pooling increases the possible spread of pathogens. |
| How long is colostrum stored before use? <7 days |
| What is the system for rotating stored colostrum? |
| Are colostrum containers re-used? If yes, how are they cleaned and disinfected between uses? |
| Do you use a self defrosting freezer (no recommended due to freeze-thaw cycle)? |
| Do you feed colostrum at body temperature (100-105 F)? |
| What is the hottest water used for warming colostrum (140 F)? |
| Do you change or replenish the water bath as it cools? |
| On average, how long is colostrum at the feeding temperature before actually fed (Less than 2 hours)? |
| How much volume is warmed at one time? |
| **See Appendix C for Colostrum Handling, Refractometer info.** |
| ***XI. Management of colostrum feeding utensils*** |
| How is colostrum fed? Bottles/esophageal feeder |
| If using bottles, what type of nipple is used? |
| What is the replacement interval for nipples (Inspect ends for size of opening and cracks, etc.)? |
| If using esophageal feeder, what is the condition of the tube/ball (Inspect for cracks, build up, etc.)? |
| What is the replacement interval for the tube? |
| Describe your method of cleaning utensils including products used: |
| **See Appendix D for Cleaning protocol** |
| ***XII. Feeding Colostrum to the calf*** |
| How much colostrum is fed to heifers for first feeding?  What is the total colostrum fed in first 12 hours? Recommend 10% body weight.  How is it fed –single feeding or multiple feedings? |
| Are colostrum replacers or supplements used?  If yes, what products:  Is it mixed separately?  How many grams of IgG are administered (Recommend 125 grams)? |
| On average, how soon is colostrum fed to heifers? Recommend 1-2 hours, no longer than 6 hours. |
| Are personnel wearing gloves when feeding colostrum? |
| Is the calf offered to nurse from the bottle? |
| How much time is allowed the calf to feed from the bottle before using the esophageal feeder? |
| When using the esophageal feeder, are employees trained in its proper use?  Consider gentle handling/restraint, fluid flow prior to and after full insertion of the tube and placement of the tube. |
| Are calves fed standing or sitting upright? |
| Do calves stay standing or sitting upright after being fed? |
| ***XIII. Additional newborn calf management*** |
| Other oral products given on first day? (First defense, Calf guard, etc.)If yes, what is used and when? |
| Other products given to the newborn? (Selenium, vitamins, etc.)  If yes, what is used? |
| Are you monitoring TP levels? If yes, how often # of calves  What are the most current values?  What method?  Refer to Appendix C1 for standard values and methods. |
| **See Appendix C for Total Protein and Refractometer info.** |
| ***XIV. Pre-weaned calf housing*** |
| Describe calf housing system: |
| Does housing protect from environmental extremes (heat, cold, snow)? |
| Can calves lie down without being in a draft for all seasons? |
| Is there enough bedding that calves can nest in the winter? |
| Is there nose-to-nose contact between calves? |
| What type of bedding is used? How often is bedding added? |
| Is air quality dusty when bedding is added? |
| Does calf hygiene suggest housing is clean and bedded regularly? |
| How is housing cleaned between calves (calf pens, bedding, base materials): |
| If adults and calves are in same facility, is there potential for adult respiratory pathogens to reach calves? |
| Is ventilation adequate? |
| Can ventilation be adjusted based on temperature, humidity, etc.? |
| Do solid sides of individual pens limit ventilation? |
| Is there group feeding (mob, self, robotic feeders)?  If yes, what age are calves placed in group feeding situation?  Where are they housed until then?  Can you monitor individual feed intakes?  What is the square footage allocated per calf?  What is the age range in group housing? |
| Do personnel working with calves, work with adults or sick animals?  If yes, are separate boots and coveralls used? |
| Is there any way adult manure gets into calf area (people, equipment, etc.)?  If yes, describe: |
| Is calf housing situated where drainage from adult animals, feed storage, manure containment, etc. can enter? |
| How is extra water disposed of? |
| How clean is the area under the water and grain buckets? |
| What type of fly control is used? |
| **See Appendix E for Housing, Bedding and Fly Control information** |
| ***XV. Liquid feeding management*** |
| What is fed after colostrum (milk, milk replacer, transition milk, etc.)?  How long after feeding colostrum is this offered? |
| How much liquid feed is offered per feeding or per day? |
| What is the feeding interval? |
| Is liquid feed fed at a relatively consistent temperature each time? |
| What is the protein and fat content of the liquid feed? |
| What is the protein source? |
| Are there growth rate goals? |
| Are calves fed more in winter? |
| Do you adjust liquid feed densities or amounts by age &/or size? |
| Do you monitor weight or height of calves?  If yes, how? |
| What type of liquid feed is used? This can be whole milk, milk replacer, waste milk, pasteurized waste milk, pasteurized whole milk, acidified milk, acidified milk replacer, or combinations of any of these. |
| Is anything added prior to feeding?  If yes, what products? Consider Bio Mos, decoquinate, amprolium, etc. |
| If using supplements, are they blended into the liquid feed and periodically resuspended (some will separate out)? |
| When do you begin to offer water to calves? |
| Is water fed free choice? If no, what is the frequency & amount offered? |
| Is the frequency and amount adjusted seasonally? See Addendum for expected water intakes. |
| How soon after offering liquid feed is water available to calf? |
| How is water handled during periods of freezing? |
| How hard is the water (palatability)? |
| Has the water been analyzed for mineral content (sulfates)? |
| Do you use a water softener? (Increase in sodium may lead to increase in osmotic imbalance in intestine) |
| Are there written protocols for feeding calves? |
| Are personnel trained in the protocols? |
| Do you monitor the temperature of the liquid feed with a thermometer? (Recommend noting temperature on every batch) |
| **See Appendix F Liquid Feed management and Water information** |
| ***XVI. Milk Replacer Management*** |
| What additives are included in the Milk Replacer? |
| Is milk replacer being mixed to the concentration (weight per volume) per label directions? |
| Is the powder added to the water by volume or weight? (weight is recommended) |
| How do you know your measurement is correct? |
| Is the water used for preparing milk replacer the temperature recommended? |
| How hard is the water (compatability w/ milk replacer)? |
| Has the water been analyzed for mineral content? (compatability w/ milk replacer) |
| Do you use a water softener? (compatability w/ milk replacer) |
| Is the milk replacer mixed to an even consistency? |
| Is the last calf getting the exact same product as the first calf (example: consider fat separation due to temperature)? |
| Is powder added to water rather than water added to powder? |
| Is replacer stored according to label directions & protected from flies, birds, etc.? |
| **See Appendix G Milk Replacer Management** |
| ***XVII. Management of whole milk, waste milk, pasteurized waste or whole milk, acidified milk and combinations*** |
| Are you measuring the solids?  If yes, how do you measure and how frequently? |
| If using pasteurized waste or whole milk: What type of pasteurizer? |
| Are employees trained on it’s use? |
| How is the performance of the pasteurizer monitored? Consider maintenance, culturing, performance logging. |
| If using acidified milk: Are you agitating the final product? |
| What is the pH of the final mixture? |
| How long is the milk acidified before feeding? |
| Is milk cold when mixed with the acid? |
| Is residual milk discarded prior to adding more to the feed system? |
| **See Appendix H – H3 Management and Solids Calculator** |
| ***XVIII. Management of liquid feed utensils*** |
| For bottles, what type of nipples are used? |
| What is the replacement interval for nipples? |
| Esophageal feeder – what is the condition of the ball? |
| What is the replacement interval of the tube? |
| Describe your method of cleaning utensils: |
| If group feeding/mob feeding/automatic feeders:  How often are nipples and tubing cleaned? |
| How often are nipples and tubing changed? |
| How often is this vessel washed? |
| Describe how nipples, tubing and vessels are cleaned: |
| **See Appendix D Cleaning Equipment** |
| ***XIX. Dry feeding management*** |
| What is the growth goal for heifers through transition period until they are fed full TMR (or equivalent)? |
| How do you monitor growth goals (heights, weights, bcs)? |
| *Starter grain management – birth through weaning:* |
| Is your starter grain specifically formulated for baby calves? |
| What is the physical form of the feed? Textured Pellet |
| If textured, how is the corn processed? |
| What is the reason for using textured or pellet? |
| What is the source of grain? Commercial Custom mix Farm mix |
| Are there any significant fines when opening feed? |
| Is there dust or fines when feeding? |
| Is there variability amongst loads? |
| How is grain stored? |
| Is there sweating and/or moisture where feed is stored? |
| Do rodents or birds have access to stored feed? |
| How is feed delivered/fed to calves? |
| At what age do you begin to feeding starter grain? |
| How much and how often is it offered? |
| Does amount change by age or weight of calf? |
| How is intake recorded: By calf By group By day |
| How often are refusals discarded? |
| What do refusals look like? Consider fines, wet, mold, clumps. |
| What is done with refusals? |
| Where do calves eat grain from: Pail Floor Mob-fed |
| What are the nutritional specifications of the grain:  % or grams of protein Energy content in mCal  Starch content Vitamin/mineral content |
| Are there coccidial control products in the grain (Rumensin, Bovatec, Deccox, etc.)? |
| **See Appendix A for Growth Rates** |
| ***XX. Weaning and transition: Feeding considerations*** |
| Describe how you transition your calves from liquid feeding to dry feed only: |
| Would you consider the weaning as abrupt? |
| How much reduction of liquid feed occurs over what period of time? |
| Does the reduction occur at one feeding or split among a day’s feedings? |
| What are the total feedings per day and how are they reduced over what time period? |
| When does the weaning process begin – age of calf and/or grain intake? |
| What grain intake is expected when weaning is complete? (2-3 lbs recommended per calf) |
| Is weaning accomplished by group or individually? |
| What do you use for coccidiosis control? Describe products used, preventative or therapeutic, how long given and mode of administration. |
| Does this meet the threshold for coccidia prevention? |
| Are antibiotics in the grain or added to the grain?  If yes, describe product, start and length of feeding: |
| At what stage do you transition from a starter grain? |
| What is the nutritional content – consider protein and energy? Avoid abrupt changes in protein. |
| ***XXI. Weaning and transition: Environment*** |
| How often are calves observed during the day, with exception of feeding? |
| How many days after termination of liquid feed is the calf moved to the first pen? |
| What is the age variation in the first pen? (2 weeks) |
| What is the maximum number of calves in the first group pen? (Recommend no more than 6 when previously individually raised) |
| What are the dimensions of the resting space?  See Appendix E |
| How long does a group stay in the first pen? |
| Do you measure feed intake in the first few days of transition? |
| Are there transition calves that have trouble eating and drinking the first few days? |
| Describe how calves adjust to new feeding and watering system, such as headlocks use, etc.: |
| Is there an issue with cross suckling? |
| Can all calves eat comfortably at the same time? |
| What is used for bedding? |
| How frequently is bedding added? |
| How is bedding applied? |
| Is it dusty when applying fresh bedding? |
| Does the hygiene of the calves suggest pen is clean and bedded regularly? |
| How is the pen cleaned between groups? |
| Is the water source different than the source during the liquid feed period? |
| Where is the location of the water in the pen? |
| How frequently are the waterers cleaned? |
| Is the water heated in cold weather? |
| Is water available 24/7? |
| Are all heifers able to use the water source? |
| Are adults housed in same barn/facility?  If yes, does ventilation allow adult respiratory pathogens to reach calves? |
| Are there means of bringing in adult cow manure into calf pens? Consider location, equipment and people traffic. |
| At what age does the next move occur? |
| How many calves are grouped in the next pen? |
| **See Appendix E Housing, Bedding & Fly Control** |
| ***XXII. Vaccination program*** |
| Describe the vaccination program from birth to 4 months – include ages and vaccines used: |
| How often is the vaccination program reviewed with the veterinarian? |
| Has the program changed in the last 6-12 months based on health issues or diagnostic tests? If yes, what changes were made and when? |
| Are vaccines administered at a time with other procedures? |
| Are vaccines handled and stored per label (refrigeration, expiration date, usage of MLV directly after mixing, etc.)? |
| Are employees trained in administering vaccines? |
| ***XXIII. Timeline of Calf Management: Procedure Record - Day of Life*** |
| Decrease amount of milk fed to calf – start weaning (No earlier than 30 days) |
| Offer dry feed/starter grain (No later than 2 weeks) |
| Stop feeding milk (No earlier than 40 days/ 7 days prior to weaning) |
| Begin feeding dry hay (No earlier than 3 weeks; needs to be highly digestible earlier cut hay) |
| Begin feeding grower ration (After 3 months of age) |
| Addition of fermented feed (After weaning, should be high quality) |
| Free choice water (From Day One) |
| Coccidia control (ASAP – in milk, milk replacer for prevention) |
| Preventive antibiotics(if any) (Refer to your veterinarian) |
| Intranasal vaccine (Refer to your veterinarian) |
| Vaccinations(SQ/IM) (Refer to your veterinarian) |
| Calf ID – ear tags (ASAP for recordkeeping) |
| Dehorning (If using caustic paste 3-7 days; otherwise dehorn between 2-4 weeks of age) |
| Tail docking (Within first 3 weeks) |
| BVD-PI test (ASAP) |
| Trim Extra Teats (ASAP) |
| Movement from individual pen (7 days after weaning) |
| Recommend spreading stressful procedures out. |