



TRANSITION COW MANAGEMENT CHECKLIST

NOTES

Grouping and Pen Movement

Goal: Reduce social, environmental and metabolic stressors by minimizing change

- Keep it simple. Avoid unnecessary pen changes. Each pen change may result in a drop in DMI and elevated cortisol levels due to social hierarchy issues.
- Decrease the impact of pen changes by moving animals once weekly and move in groups of 10 or more animals if possible
- The majority of cows should spend 21 – 28 days in the close-up pen.
 - Normal variation is ± 9 days. Need to have an average of 23 days in the close-up pen to have 95% of the animals in the pen for more than 14 days.
 - If possible, target slightly longer days in the close-up pen for those cows carrying twins or ones that are dry during the summer heat stress, as they may experience shorter gestation periods.
- Separate heifers and multilactation animals if at all possible
 - Heifers do not appear to need anionic salt diets, although there appears to be no harm in offering it to them.
 - Heifers have been shown to have longer resting times and higher DMI when separated from mature cows.
 - Heifers need higher levels of metabolizable protein during the close-up period (>15% more than mature cows).
- Maintain the stocking density at less than 100% (85% is the goal and is based on feed bunk space)
 - Set realistic lockup expectations (typically will not see 100% use of 5 in 10 stanchions with dry, mature cows)
- Maintain a clean, dry environment
 - Mud and heat stress increase metabolic needs, but decrease DMI
 - Wet, mucky conditions increase the risk of mastitis
 - Cows calving in wet conditions may experience higher risks for metritis
- If maternity pens are used:
 - Strive to move only at impending parturition (cows should spend fewer than 12 hours in a calving pen due to possible feed, water or social stressors associated with the use of maternity pens)
 - Maternity pens should be bedded with clean, dry material and changed frequently
- Cows should be housed in a colostrum pen for approximately 48 hours (depending upon withdrawal requirements of the dry period intramammary treatment used) immediately following calving. The hospital pen is not the best place to house fresh cows.
- Minimize distance walked by these tired and sore fresh cows by placing the pre- and postfresh pens close to the parlor if possible



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- Design move lanes and coordinate cattle movement to minimize lock-out time away from feed
 - Maintain stocking density <100%, with a goal of 85 – 90% for fresh cows

Nutrition and Feed Delivery

Goal: Minimize drop in DMI prepartum and maximize DMI postpartum

- Close-up cows (values for mature cows in the last two weeks of gestation carrying a 90 lb. calf):
 - Energy requirement last week of gestation: ~ 22 Mcals Metabolizable Energy (ME)/day
 - Protein requirement last week of gestation: ~ 1100 – 1200 grams/day of Metabolizable Protein (MP)
 - Monitor feed intake
 - Weigh daily feed delivered and leftover (goal of 5 – 8% refusals in close-up cows)
 - DMI of >28 lbs. for multilactation animals in close-up pen (2% BW). This value will decline in the last week of gestation.
 - DMI of >24 lbs. for heifers in close-up pen (2% BW)
 - DCAD for close-up cows:
 - Select forages, grains and grain by-products with low K to minimize amount of anionic salts needed
 - Conduct wet chemistry analyses for all forages for minerals
 - Formulate diet for a DCAD of -8 to -12 meq/kg DM
 - Monitor urine pH after any ration or forage change—goal is to have all cows at 6.0 – 7.0 after 48 hours on diet
 - Cows tested should have been on the diet for at least two days and should be more than a week away from calving
 - Feed 1500 – 1800 IU/d Vitamin E
- Fresh cows:
 - Monitor feed intake
 - Weigh daily feed delivered and leftover (goal of 5 – 8% refusals in fresh cows and 3% refusals in lactating cows)
 - DMI of >38 lbs. (3% BW) for fresh cow pen (2 – 21 DIM)
 - Feed 1500 – 1800 IU/d Vitamin E
 - Fat cows (≥ 4.0 BCS) are at increased risk of ketosis and should receive 8 – 10 oz. propylene glycol drench/cow at calving and again in 24 hours
 - Evaluate for potential inclusion of niacin and/or choline for these cows in the close-up pen
 - After the prescribed withdrawal time, move cows from colostrum pen to a fresh cow pen for ~ 14 – 28 days. Duration of time in fresh pen dependent on:



- Feeding strategy:
 - If cows start on low energy diet first, more emphasis on quick move
 - Goal should be to have cows prepared adequately at calving to go from close-up ration directly to high-cow ration
- Milking strategy:
 - If incorporating 4x/6x fresh cow milking, leave in fresh pen for 21 – 28 days
- Pen pressure: slugs of freshenings may force earlier moving out of fresh pen
- General principles:
 - Ensure uniform feed intake by all animals
 - Monitor particle size using a particle separator—ensure that at least 8 – 12% of particles remain on the top screen and that there is no more than a 20% difference between fresh and refusals when evaluated by the particle separator
 - Moisture content of ration of 45 – 50% reduces sorting and increases palatability
 - Monitor manure for fiber length, grain particles and gas bubbles. Prebatch mix/chop hays to control length at 2 – 3 inches < width of cow’s muzzle
 - Use high-quality, highly palatable hays free of mold and mycotoxins
 - Use high-quality, highly palatable silages free of clostridials or butyric acid. Do not feed silage from top and sides of silo to transition animals. Limit CS to no more than ~ 50% of forage needs.
 - Alfalfa haylage and corn silage chopped <.5” theoretical length may not be good sources of effective fiber
 - Avoid overcrowding—all animals should be able to get to the bunk at any given time; optimal stocking density of ~ 85% (85 cows for 100 stanchions)

Facilities and Cow Comfort

Goal: Maximize cow comfort, and minimize additional metabolic needs and risk of periparturient disease

- Clean, dry and comfortable beds or corrals. (Space requirements ~ 600 ft²/cow of loafing area and 50 – 70 ft² shade area/cow in open corrals. In freestall housing, a minimum of 1 properly bedded and maintained freestall/cow is needed.)
- Soaker lines on lockups during heat stress cycled once every 15 min. from 70 – 79°; once every 10 min. from 80 – 88° and once every 5 min. above 88° F with 0.33 gal of water/cow/cycle. (See Heat Stress Checklist)
- Minimize stress by minimizing movements, maintaining low pen densities, separating heifers and cows, and by providing adequate water, bedding, nutrition, etc.
- Acclimate heifers to lockups/stanchions prior to entering the close-up pen



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General Items

- All cows lose weight postcalving—normal weight loss during first 30 – 60 DIM should be <0.75 BCS or ~90 lbs. (1 BCS ~ 120 lbs. fat)
- First service conception rates may be reduced by 50% when BCS swings >1.0 during the first 60 DIM
- Anestrus (30 – 40%) increases in animals whose BCS falls below 2.75
- Use some form of a 10-day fresh cow monitoring and treatment program custom designed with your veterinarian to fit your farm’s needs
- Record fresh cow events such as DAs, RPs, mastitis, metritis, lame, died, sold and freshenings
- When animals fail to peak check total dry matter intake and ration protein and energy levels
 - Fresh cows need to rapidly increase feed intake and need adequate levels of quality protein and energy to achieve high peaks
- When animals fail to persist check body condition changes, dry matter intake and total ration energy levels; persistency is usually related to total energy intake
- Minimize lockup times in stanchions—ideally, cows will be locked for no more than 30 – 45 minutes/day for monitoring, breeding, vaccinations, pH checks, etc.
- Cows should increase in milk flow by ~ 10%/day for first 14 days
- Heifers should increase in milk flow by ~ 8%/day for first 14 days
- Following calving, goal of <6% sold and <2% dead during first 60 DIM (risk expressed as total sold or died/total calved)
- Heat stress conditions narrow the margin for error:
 - Total feed intake decreases, but maintenance requirements for energy are increased
 - Cows spend more time standing (higher risk for lameness)
 - Shorter gestation lengths
 - Higher risk for RPs and much higher risk for more severe metritis
 - See Heat Stress Checklist for more details
- Fat cow problems should be addressed by strategic management of ketosis risk (propylene glycol drenching), reducing weight swings in transition period, and improving breeding management to reduce long days open; not by a “reducing diet” in late lactation or far-off dry period.

This checklist is not meant to be an exhaustive list of all possible transition issues, but to serve as an aid in the investigation of problems and in improving day-to-day management.