

What is your maternity gameplan?

By Dr. Noah Litherland, Vita Plus dairy youngstock technical specialist

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Maternity has a direct impact on both the present and future state of the herd. A properly executed maternity game plan promotes successful transition into lactation for the dam and establishes the start of the nursery phase for the daughter. Progressive dairy farmers realize the economic impact of maternity and commit staff and resources to consistently achieve success.

Success in maternity starts with a team approach to do what's right for both cow and calf. Successful maternity management is perhaps more art than science, but establishing clearly written protocols is a hallmark of sound maternity programs. Consistently successful maternity programs have key attributes of well-trained and dedicated maternity staff, effective communication among workers and management, and adherence to time-tested methods.

I observed and surveyed dairies with progressive approaches to maternity management and noted key highlights of their protocols. Dairies surveyed used both just-in-time calving and group-housed calving protocols. I split the protocols into precalving and post-calving (cow and calf) to sharpen focus on the tasks for each animal. Example protocols, based on my survey, are listed below.

Clearly, numerous steps are required to care for maternity animals, plus a substantial amount of equipment, prep work, organization, cleaning and employee training. Most farms, however, find that, once a maternity protocol is up and running and workers get into a routine, the labor aspect becomes efficient and workers find satisfaction in getting the job done right.

Recording and evaluating maternity data completes the final phase of the maternity protocol. Analyzing and reviewing maternity data aids in troubleshooting, evaluating worker proficiency, and discovering areas of opportunity for improvement. An example maternity data recording sheet can be customized to fit your farm's needs (see below). Focus on the key variables you want to analyze. Key outcome variables could include:

- Cows: Calving ease score and time spent in calving pen
- Calves: Serum total protein concentration and calf mortality rate

In summary, take time to critically evaluate your maternity game plan. Are your expectations being met? Do maternity workers have a clear concept of goals and methods to achieve those goals? Perhaps it is time to invite your veterinarian and consultant to collaborate to help you achieve greater success in maternity.

Example precalving protocol: Just-in-time calving

- **Have an up-to-date checklist of projected calvings**, noting cows carrying twins and first-calf heifers. Cow stress (heat, multiple pen moves, small dam, twins) will decrease gestation length.
- **Feed close-up cows in the afternoon** to increase chances of daytime calvings.
- **Walk the close-up pen hourly** and note cows with bloody mucus and tail lifting.
- **Move cows to calving pen when hooves and nose are showing**. Note the time the cow is moved. The goal should be less than 10% of calves born outside of the maternity pen.
- **The calving pen should have deep bedding** with clean straw and good footing, such as lime.
- **Observe the calving pen every 30 minutes**.
- **Evaluate progress after one hour**. Check discharge color, contraction progress and feet/head orientation.
- **Assist, if necessary**, using perianal scrub, OB sleeves, clean equipment and lube. Call for assistance of an attending veterinarian when needed.
- **Once delivered, move the calf to the front of the cow** and allow for 15 to 20 minutes of maternal nurturing.



Example precalving protocol: Group-housed calving

- **Have an up-to-date checklist of projected calvings**, noting cows carrying twins and first-calf heifers. Cow stress (heat, multiple pen moves, small dam, twins) will decrease gestation length.
- **Feed close-up cows in the afternoon** to increase chances of daytime calvings.
- **Target a minimum of 150 square feet per cow in the close-up/calving pen.** The pen should be bedded with straw.
- **Walk the close-up pen hourly** and note cows with bloody mucus and tail lifting.
- **Note the time when calving was first observed.** Dry erase boards work well for these notes.
- **Observe the calving pen every 30 minutes.**
- **Evaluate progress after one hour.** Check discharge color, contraction progress and feet/head orientation.
- **Assist, if necessary**, using perianal scrub, OB sleeves, clean equipment and lube. Call for assistance of an attending veterinarian when needed.
- **Once delivered, move the calf to the front of the cow** and allow for 15 to 20 minutes of maternal nurturing.

Example post-calving protocol: Cow

- Offer 10 to 15 gallons of warm (110 degrees F) water to the cow upon removal of the calf.
- Move the cow to the hospital parlor.
- Prep the udder and strip out the teat end barrier.
- Harvest colostrum using clean equipment.
- Post-dip the teats.
- Add a fresh cow band or fresh group ID.
- Evaluate whether calcium supplementation is needed.
- Move to fresh pen.
- Clean/refresh the maternity pen with straw.
- Test colostrum quality with a Brix refractometer. Record the score and label the colostrum container.
- Heat-treat colostrum (if system is available).
- Clean and sanitize OB equipment.
- Notify parlor staff of the fresh cow.
- Walk the close-up pen.

Example post-calving protocol: Calf

- Thaw colostrum (if using frozen colostrum) and begin the warming process. Colostrum should be fed at 105 degrees F.
- Use a cart to gently move the calf to the processing area.
- Towel dry the calf with a clean towel, especially the ears.
- Apply ear tag(s).
- Dip the navel with 7-percent tincture of iodine.
- Administer intranasal vaccine.
- Provide oral vaccine or oral antibodies in accordance with the protocols established with your herd veterinarian.
- Use a clean tube feeder or a bottle with a good nipple. Feed 3 to 4 quarts of colostrum scoring about 24% with a Brix refractometer, or feed a colostrum replacer that provides a minimum of 150 g of globulin protein.
- Use some sort of marker (such as chalk line on a calf's head) to indicate the calf has received colostrum.
- Place the calf in a clean, warm pen bedded with straw for 12 hours, or until it is completely dry.
- Record calving information, such as time, calf ID, gender, navel check, colostrum Brix score, singleton/twin, and initials of employee processing the calf.
- Clean and sanitize calf processing equipment (such as the cart, tube feeder, bottle, nipple, etc.) and put the towel(s) in the washing machine. Replace plastic feeding equipment after every 12 calves.
- Move calf to its nursery pen after 12 hours, or when it is completely dry.



