



MINIMIZE STRESS

- Stress can impact oocyte quality for 60-90 days
- Stresses can be associated with nutrition, calving and lactation, weather and temperature (heat/cold), illness, transport and socialization with other cattle
- Consider fans and misters in cases of extreme heat

NUTRITION

- Diet can significantly impact oocyte quality and donor performance in an IVF program
- Donors should be fed a balanced ration not exceeding 15% crude protein. Excess protein causes urea buildup in follicles which compromises oocyte quality
- Ideal body condition score for dairy donors on collection = 2.75-3.25
- Avoid feedstuffs and feed additives with additional fats to increase milk production that are high in palmitic acid
- Put a transition plan in place for new/young donors to allow them to acclimate to the donor diet
- A well-balanced vitamin and mineral program can improve donor performance
- Consult a nutritionist or veterinarian when questions arise

DONOR SET UP

- If moving cattle to a satellite center for boarding, allow for an adaption period of 2-4 weeks; changes in nutrition, management and social hierarchy can all impact oocyte quality
- Donors should be at least 70 days post-partum and have had one natural heat since the most recent conventional embryo flush

- Ill or Injured donors and those in peak lactation/negative energy balance are not good candidates for OPU and should be examined by a veterinarian prior to collection
- Dominant follicle removal (DFR) prior to collection is the best set up to ensure a new healthy follicular wave and consistent results
- Progesterone is necessary for development of good quality oocytes and to avoid irreversible in vivo maturation; CIDRs should be inserted following DFR and replaced immediately if lost prior to OPU
- Shots should be given at precise 12-hour intervals as deviation from this schedule can cause follicles and the oocytes inside to decrease in quality and even die prior to collection

RECIPIENTS

- Recipients should be 70 days post-partum
- The same nutrition and body condition score considerations for donors apply to recipients
- Heat detection, whether visual or with a temperature/pedometer device, is critical for identifying the best recipients; Age of a CL cannot be determined by ultrasound or palpation
- Embryos should be transferred 6.5-8 days following estrus
- Induce recipients that haven't calved by their due date

There's no one key to success, rather an entire protocol that nets the best results