Jody Holthaus, Agent
Meadowlark Extension District
Livestock and Natural Resources

Baby Calves and Snow!

Recently a producer called to tell of the success he had noticed in using a warm water bath to revive newborn calves, which had been severely cold stressed. A quick check of the scientific data on that subject bears out his observation. Canadian animal scientists compared methods of reviving hypothermic or cold stressed baby calves. Heat production and rectal temperatures were measured in 19 newborn calves during hypothermia (cold stress) and recovery when four different means of assistance were provided. Hypothermia of 86 degrees F rectal temperature was induced by emersion in cold water. Calves were rewarmed in a 68 to 77 degree F air environment where thermal assistance was provided by added thermal insulation or by supplemental heat from infrared lamps. Other calves were rewarmed by immersion in warm water (100 degrees F), with or without a 40 cc drench of 20% ethanol in water. Normal rectal temperatures before cold stress were 103 degrees F. The time required to regain normal body temperature from a rectal temperature of 86 degrees F was longer for calves with added insulation and those exposed to heat lamps, than for the calves in the warm water and warm water plus the ethanol treatments. During recovery, the calves rewarmed with the added insulation and heat lamps produced more heat metabolically than the calves rewarmed in the warm water. Total heat production during recovery was nearly twice as great for the calves with added insulation, exposed to heat lamps than for the calves in warm water and in warm water plus an oral drench of ethanol, respectively. By immersion of cold stressed calves in warm water, normal body temperature was regained most rapidly and with minimal metabolic effort; no advantage was evident from oral administration of ethanol. When immersing baby calves, do not forget to support the head above the water, to avoid drowning.
If this means taking the newborn into the house, into your bathtub. Be sure to get prior approval, from the person in charge!

Source: Robinson and Young. University of Alberta. J. Anim. Sci., 1988.