



Prevent Respiratory Acidosis in Calves

Plan ahead to ventilate a newborn calf's lungs and keep it healthy during birth.

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As soon as a newborn calf is delivered, focus on establishing respiration. Cattle producers expecting a calf crop should take time now to review procedures to combat respiratory acidosis in newborn calves. Calves with respiratory acidosis are unable to rid their lungs of excess carbon dioxide its body produces and are less able to obtain nutrients from colostrum.

"Every baby calf born is in a situation where there is a build-up of carbon dioxide and its byproduct, lactic acid, during the delivery process," says Glenn Selk, Oklahoma State University Cooperative Extension cattle reproduction specialist.

Delayed passage through the birth canal in the face of uterine contractions that pinch off the umbilical cord compromises oxygenation of the calf. Although the calf is able to breathe as soon as its nose passes the lips of the vulva, expansion of the calf's chest is restricted in the narrow birth canal.

Continuous forced traction can seriously aggravate the situation, Selk says. "As soon as the calf's head has passed the lips of the vulva, traction should be interrupted, the nostrils cleared of mucus and cold water applied to the head."

When the calf is completely delivered, primary attention is directed toward establishing respiration. Mucus and fetal fluids should be expressed from the nose and mouth by exerting pressure using the thumbs along the bridge of the nose and flat fingers underneath the jaws, and sliding from the level of the eyes down toward the muzzle.

Selk says the practice of suspending the calf by its hind legs to clear the lungs must be questioned.

"Most of the fluids that drain from the mouth of these calves probably come from the stomach, and the weight of the intestines on the diaphragm makes expansion of the lungs difficult," he says. "The most effective way to clear the airway is by suction."

Respiration is stimulated by many factors, but only ventilation of the lungs allows the cattle producer to render help immediately.

"Brisk rubbing of the skin and tickling inside the nostril with a piece of straw also has a favorable effect," Selk says. "The phrenic nerve can be stimulated with a sharp tap on the chest slightly above and behind where the heartbeat can be felt."

Find additional recommendations on cattle management by contacting your local cooperative extension.