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 FOR IMMEDIATE RELEASE
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3 Hour Fertilizer Certification Opportunity

It has been a few years ago now that we the new requirement to have a license to spread fertilizer in Ohio. OSU Extension held several programs to offer the required training to obtain this license for producers who would need it by September 30 of 2017 when it kicked into effect. I was doing Adams, Brown and Highland Counties at that time and held multiple training opportunities in each county. However, I know there were several who did not get trained.

For those who did not get a license, but now realize they need one, passing an exam is one of the options. This option is available on the second Monday of each month at the Old Y Restaurant at noon along with the pesticide exams. The fertilizer exam and training are the same for private or commercial, unlike the pesticide certification. For applicators this shows up as category 15 on private and commercial applicator licenses, but it may also show up as, yes or no, for fertilizer.

If you do not like taking exams and need to be certified for spreading fertilizer you have an opportunity to attend a 3-hour training on Friday, March 6, 2020 in Washington Court House at 9:00 a.m. Fertilizer certification is required if you apply fertilizer, other than manure, to more than 50 acres of agricultural production grown primarily for sale. If you hire someone to make the application of fertilizer you do not need the certification. This training is for both private and commercial.

The cost is \$30 and you need to contact the Fayette County Extension office in advance of the training by calling 740-335-1150. The payment needs to be sent to 1415 US Hwy 22 SW, Washington C.H., OH 43160 which is also the location for the training. These trainings are hard to find, don't miss it.

Emergency Management with Difficult Births

It is that time of the year for many cow/calf producers. Some have already dealt with some of the issues of difficult births. This information is part of a post in the Ohio Beef Cattle Letter from Dr. Michelle Arnold with the UK Veterinary Diagnostic Lab. You can read the entire post in the Feb. 12 edition of the Ohio Beef Cattle Letter.

The key event in the transition from life inside the uterus to an independent existence is the initiation of breathing. As the lungs inflate, blood is enriched with life-sustaining oxygen. The first breath is the hardest to take and is comparable to the first hard push of air necessary when inflating a balloon. In order to help breathing begin after a difficult delivery, immediately place the calf upright on its sternum (breastbone) to maximize ventilation (Figure 1). Calves should have their nose and mouth cleared of any fluid or other physical obstruction, either by hand or suction bulb. Calves should not be hung upside-down or swung around by their rear legs to remove fluids by gravity. These procedures cause the abdominal organs to push against the diaphragm, making it even more difficult to expand the lungs. Calves should make active respiratory movements within 30 seconds of being delivered.



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If spontaneous breathing does not begin, it is important to stimulate respiration. Many methods have been tried but very little published information is available as to their usefulness. Once the calf is placed on its sternum, vigorous stimulation of the calf by rubbing the head and body and placing a finger or piece of straw in the nose should initiate a gasping reflex that helps bring air into the lungs. Mouth-to-mouth or mouth-to-nose resuscitation is very difficult to do effectively. Establishing a tight seal to prevent air leakage is difficult but, even more importantly, the air blown in usually goes down the esophagus and fills the stomach, making the situation worse for the struggling calf. Calves that do not respond to respiratory stimulation techniques and cannot sit up on their own after 10 minutes are unlikely to survive.

In moving from the uterus to the outside environment during birth, newborn calves often experience a dramatic shift in temperature. Calves delivered normally maintain their body temperature (thermoregulation) by shivering and by mobilizing energy from brown adipose (fat) tissue. Simple, natural physical activities such as standing, walking, and consuming colostrum will also generate body heat. Following a difficult birth, calves have an impaired response to cold temperatures. Inadequate oxygen can reduce muscle tone and prevent shivering as well as decrease the calf's ability to utilize its brown fat. Calves with thermal stress and low energy are slow to stand and nurse, limiting their ability to warm themselves through this natural physical behavior. These calves should be exposed to an infrared heater or placed in a warm bath to improve rectal temperature, blood oxygen level, and respiratory rate.

The single most important factor in calf survival after a calf establishes its breathing, is receiving and absorbing an adequate amount of good-quality colostrum. It is essential that all calves receive 3-4 quarts of colostrum within the first 6 hours of life, preferably 2 of those quarts within an hour of birth. Since a calf is unlikely to voluntarily suckle after dystocia, it is recommended to feed colostrum via stomach tube ("esophageal feeder") within one hour of birth if there is any doubt as to the calf's vitality. Calves that are wedged in the pelvic canal for prolonged periods may be born with a swollen head and/or tongue. This condition will usually resolve itself within one to two days but feeding the calf with an esophageal feeder is required until the calf is able to suckle. Colostrum contains immunoglobulins that form the calf's immune system as well as nutrients vital to the newborn such as fat-soluble vitamins and sugars. A weak newborn calf left to suckle the cow without assistance is a major cause of "failure of passive transfer" (FPT) of antibodies from dam to calf because of delayed consumption of colostrum. FPT increases susceptibility to infectious diseases, increases neonatal sickness and death and has long-term effects on growth and performance if the calf survives.

In summary, success in saving a calf after a difficult delivery will depend largely on the condition of the calf at birth. Some will suffer major trauma during delivery resulting in severe bruising, fractured ribs, bleeding in the central nervous system, and other maladies resulting in death irrespective of treatment. Other calves will be born with a heartbeat but not breathing; these calves are good candidates for resuscitation. Establishing a straight airway by placing the calf on its sternum, initiating breathing through vigorous rubbing of the head and body and tickling the nasal passages with a piece of straw, and establishing a warm body temperature are the cornerstones to immediate calf survival. Once the calf is stable, early delivery of high-quality colostrum is essential for passive transfer of immunoglobulins, energy, and long-term survival.