Minnesota Extension Service
University of Minnesota

AG-FO-0611
Revised 1986

Avoiding Lambing Season Problems

By R.M. Jordan, extension animal scientist and professor, and H.E. Hanke, professor

Lambing season is the critical time when sheep producers' skill, effort, and concern determine the success of the operation. Dozens of problems can occur. All, however, stem from poor management, inadequate equipment, or an indifferent attitude. Of the three, attitude is by far the most important, followed by management. Poor equipment often gets the blame, but good management and proper attitude can make even poor equipment work.

ATTITUDE

The right attitude must be one of great concern for new life. In addition to humanitarian reasons, you should be motivated to save every lamb because that lamb is your profit. A successful lambing season is not merely bringing new lambs into the world; it is keeping them alive. It's an attitude of feeding and management that allows the lamb to grow to the best of its ability. That means every lamb must suckle and every lamb must be protected from chilling. Failure is certain if you don't have these concerns and if you do not look upon every lamb born as a lamb to be sold.

EQUIPMENT

Here are some of the necessary equipment for lambing:

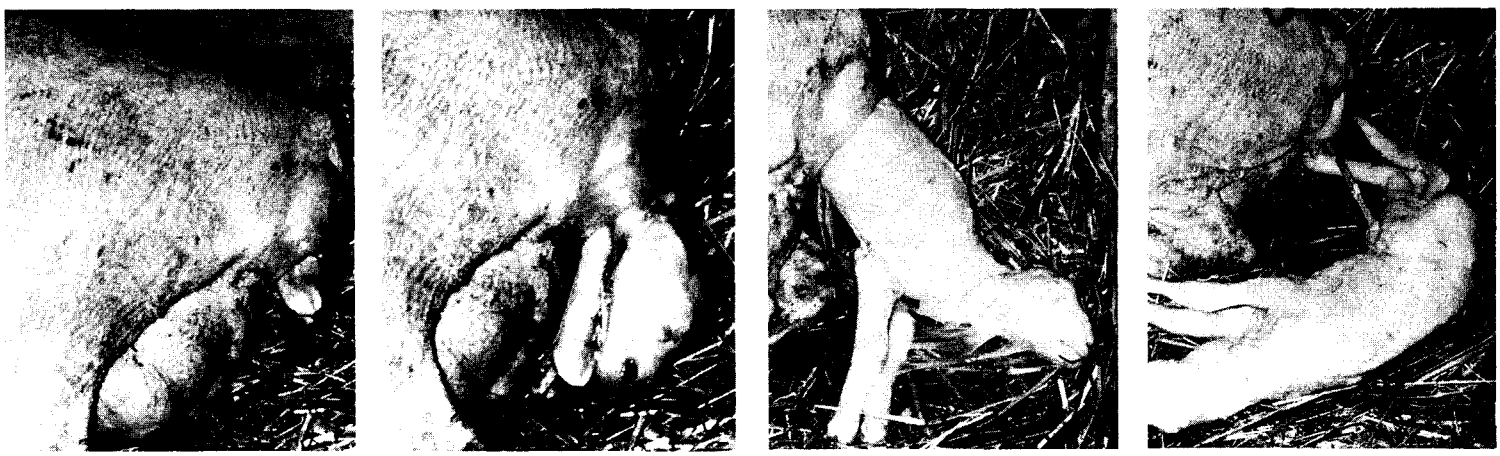
1) Lambing jugs—These are pens for individual newborn lambs. You need one jug for every 10 ewes. A jug can be constructed from two panels, each 4 feet long and 3 feet high. The two panels are hinged together and placed along a wall.
2) Gates—These are needed to form pens separating the drop band from ewes that have lambed and to separate various aged groups of ewes and their lambs.
3) Water—A handy, ice-free source of water will save much effort for the sheep producer. A lactating ewe may drink 2 to 3 gallons of water each day.
4) Feeding facilities—A place must be available to feed sheared ewes and their day-old lambs. Neither the ewes nor the lambs must become chilled during feeding (see drawing of lambing barn and feeding scheme).
5) Paint-branding irons—Some type of identification is required to match lambs with their mothers. Irons may be purchased from most livestock supply stores, together with paint that can be scoured out of the wool. Put a 1 on the first ewe that lambs and a 1 on each of her lambs. This also helps to sort lambs according to age. Another means of identification is a simple ear-notching system, such as cutting the end of an ear off all wether lambs and putting a notch at the end of an ear of twin ewe lambs. This will save much work when sorting market lambs from replacement ewe lambs; it eliminates the chance of selling all your twin lambs, which of course are the ones that should be kept for replacement ewes.
6) Medicine kit—It should contain at least: 1) iodine for treatment of the navel; 2) antibiotics—penicillin, streptomycin, etc., for infection of the ewe or lamb; 3) a hypodermic syringe; 4) supply of soft 1/4-inch cotton cord; and 5) a baby nipple, bottle, and a bag of good ewe milk replacer. Often, one or two feedings of milk replacer will keep a lamb going until you can graft it onto another ewe. A stomach tube and a funnel can be used to administer colostrum into the lamb's stomach. This procedure is especially important for a newborn lamb that is chilled and refuses to suckle. Figure 1 shows some of the tools used in docking, castrating, ear-notching, etc.

MANAGEMENT

Get ready

Lambs may be born about 145 days after the rams are turned in with the ewes. A new lamb is a 10-to-14-pound sopping wet baby that has left a warm, well-nourishing environment for a harsher life outside. Now it must initiate breathing, maintain its body temperature, and conserve its body fluids. However, it can't do any of these things if parturition is unduly delayed, if the lamb was undernourished in

BIRTH OF A LAMB—(FAR LEFT) After 20 minutes of uterine contractions, the water bag has broken and a foot and the nose and tongue appear. (SECOND PHOTO) Everything is normal—both front legs and the head have been delivered. The shoulders can cause trouble, and the ewe may require assistance. The direction of pull on the front legs should be mostly down. (THIRD PHOTO) The lamb has been delivered past the shoulders, but it must vigorously shake its head to rupture the membrane that is covering its nose. (FAR RIGHT) The lamb is born. Here is 12 pounds of breathing, sopping wet, moneymaking sheep. The umbilical cord is still connecting the lamb to the ewe. It will contract at the white spot on the cord and break when the ewe arises to mother her baby.



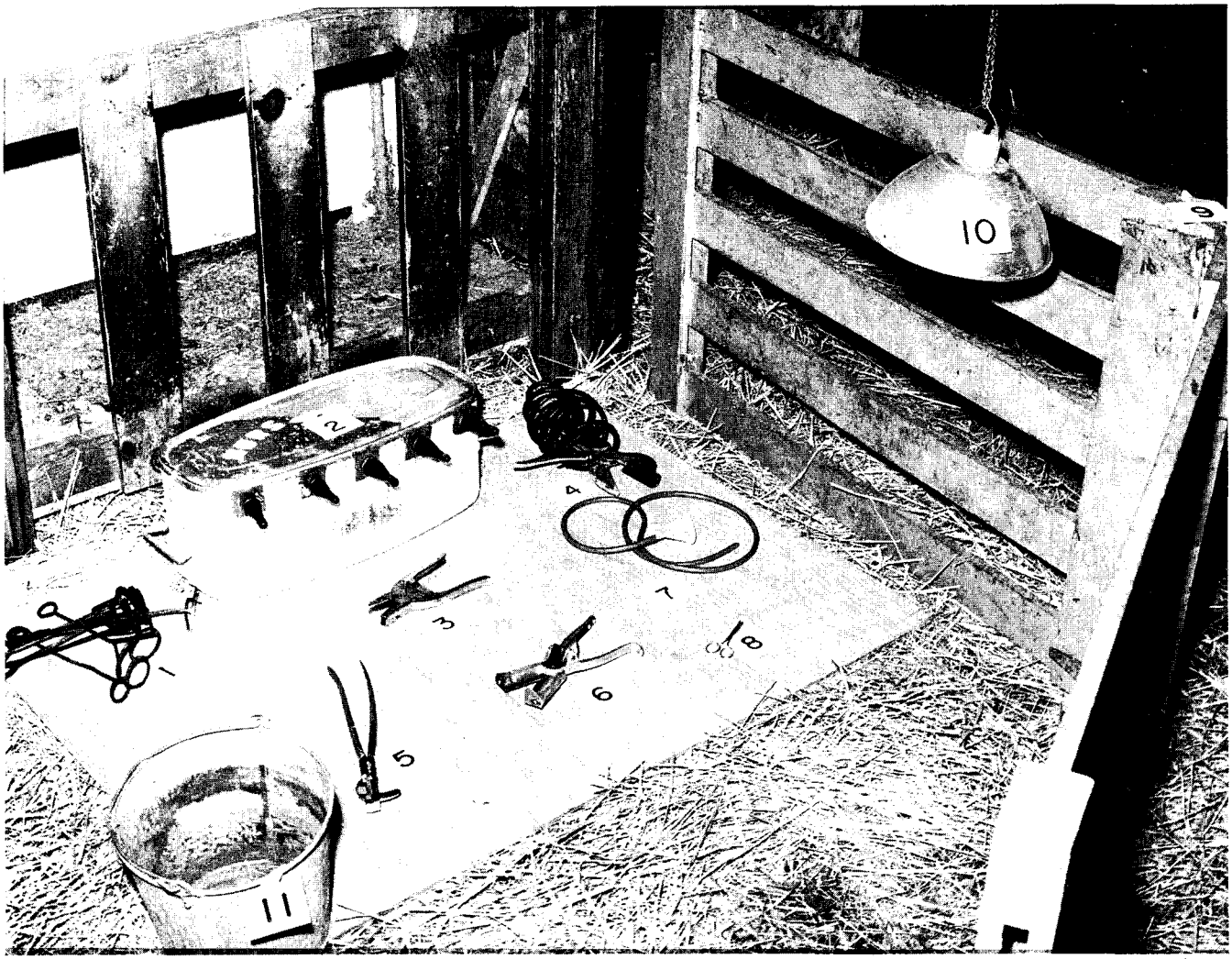


Figure 1. Here are some frequently used equipment during lambing season: 1) paint branding irons; 2) milk container and nipple for feeding ewe milk replacer (Five nipples are enough to feed 20-25 lambs); 3) ear tagger for identification; 4) an electric docker (it eliminates bleeding, is quick, but item 5, an emasculator, will also remove the tail with no bleeding.); 6) an all-in-one docker and castrator (it has a sharp pair of blades for cutting off the tail—bleeding will occur—or end of scrotum, a blunt pliers for removing the testicles, and ear notcher. Item 4 costs well over $100, while items 5 and 6 cost about $20 apiece.); 7) funnel and stomach tube used to feed a weak lamb colostrum; 8) a pair of surgical scissors used to remove a small bit of skin below the eyelid of a lamb with entropion or turned-in eyelid (It's easy to correct, but if not may cause blindness.); 9) hinged panels used to build a jug; 10) heat lamp and aluminum reflector (Note that it's hung from a chain, not the cord, and a porcelain socket is used for additional fire protection.); and 11) a pail to water ewes in the jug.

uteri, or if the new environment is too cold (below 45° F). Newborn lambs primarily dry themselves by burning body fat that generates sufficient heat to evaporate the moisture from their skin and fleece. If you can't provide the lamb with a suitable environment (above 45°F), don't "lamb" until the weather is warmer. One Minnesota sheep producer lambed out 200 ewes in January and February in an open machine shed where he had constructed a plywood lambing room. This provided a relatively tight area, and the heat given off by the ewes, plus heat from lamps, kept the area relatively warm. The extremely critical time is from birth until the lamb is completely dry. Thereafter, a dry, draft-free area will suffice if supplemental heat from lamps is provided.

How large must a lambing area be? Twenty square feet per ewe provides space for closeup ewes (the drop band) and for the ewes and lambs confined in individual pens (jugs) as well as for walking space for shepherds.

Pregnancy disease

Prevention of pregnancy disease (lambing paralysis) is one aspect of prelambing management that can't be overlooked. This deadly disease occurs only among ewes having multiple fetuses. It is caused by interference with the normal metabolism of carbohydrates. Toxic ketone bodies—particularly acetic acid—build up within the ewe. If the disease progresses very far, it is irreversible. It is prevented by feeding the ewes enough so that they continue to gain weight during the last month of gestation. Regardless of how fat they are, they must gain weight during this last month. Fat ewes are actually more prone to pregnancy disease than are thin ones. A deficiency in protein also contributes to the problem. Remember, a ewe carrying two or three fetuses has limited feed capacity. Therefore during the last month, some grain must be fed in addition to forage or silage.

Before the causes and prevention of pregnancy disease were known, this was one of the most serious sheep diseases. However, it need never occur on your farm. Within a month before the first lamb is due, notice if any ewes refuse to eat. These are the ones most likely to have pregnancy disease. You may be able to save these ewes if you drench each one with a cup of corn syrup, molasses, or propylene glycol two or three times when you first notice the symptoms. If you wait a few days before treatment, nothing will cure these ewes.

Lambing barn management

The need to lamb 100 ewes in a barn big enough for only 50 ewes is a common problem. However, of 100 ewes, no more than about 35 will probably lamb per week. Also, after a new-born lamb has dried off, been fed, and had an opportunity to adjust to a harsher environment, it can be moved to cooler and presumably less costly quarters. Figure 2 presents a workable lambing barn arrangement and the movement of ewes through it during the course of the lambing season.

Prelamb shearing

Shear the ewes before they lamb. This not only enables you to house more ewes in an area, but also makes the barn much warmer and dryer, so ventilation is less of a problem. In addition, prelamb shearing is a tremendous aid to the shepherd. He can easily see which ewes are most apt to lamb first. It's also easier for the lambs to start suckling, and it encourages the ewes to seek shelter from cold and take their newborn lambs with them.

Daily operation

Here's what going to happen and what you need to do during lambing.

About 4 days before the first lamb is expected (145 days after the rams were turned in with the ewes), sort out the 25-30 percent of the ewes that you think will lamb first. Place them into a warm area at night. Ewes closest to lambing normally have considerable udder development, their vulvas are enlarged and dilated, and they appear heavy through the middle. They have some difficulty moving. However, no sign is a perfect indicator. Obviously, a ewe carrying one lamb could be closer to lambing than one expecting triplets and yet appear less heavy and have less difficulty moving around than the ewe carrying three fetuses. If you do not have feeding space inside the barn, these "closeup" ewes could be turned out during the day. This would minimize the moisture problem that usually develops in a barn. Freshly sheared ewes can't stay out all day in cold weather, so feed a ration that enables them to obtain their nutritional requirements during a short period of time.

After 5 or 6 days, recheck ewes not in the closeup drop band. Possibly in 1 week, some ewes that you didn't think were going to lamb soon may have progressed markedly. Do everything you can to avoid having lambs born out in the snow. Remember, by the time a ewe lambs, you have spent about 62 percent of the total yearly cost of producing her lambs.

What are the signs that a ewe is about to lamb? She may not eat; her udder and teats will be distended; the vulva will be very dilated; she will appear a bit hollow just in front of her hips; and she'll be not as wide and full over the rump, because the musculature there will have relaxed. The obvious sign is when the ewe lays down and starts to labor. She is apt to get up and lie down a dozen times before she's able to pass the water bag which normally precedes the birth of the lamb. Although it may take as long as an hour, a ewe usually takes about 15 minutes to pass the water bag. Shortly thereafter in a normal birth, the two front feet and the nose will appear. Although it may not seem like it to the sheep producer, about 80 of 100 ewes that lamb will require absolutely no assistance. Give the ewe ample time to deliver the lambs on her own. This may be an hour or so. Don't "jug" the ewe until after she has lambed. Ewes carrying triplets often have a higher percent of malpresented lambs, so flocks with high lambing rates require closer supervision during lambing.

Helping the ewe

If, within an hour, you see nothing and yet the ewe has labored long and hard and is beginning to tire, investigate. Wash your hands, and gently insert your fingers into her vagina. What do you feel? Just two little cartilage-padded feet and no nose tells you that possibly the head is turned back or down, or possibly you are feeling the two hind feet. To correct the presentation, you must know for sure. If they're the hind feet, the bottom of the feet will be up. If they're the front feet, the bottom of the heels will be down. If the head is down, you must enter the uterus of the ewe. Again, make sure your hands are clean. Put a lubricant on your hands so that you do not injure the ewe. Tie a soft cotton cord to each leg and then push them back in so you can insert your hand and find the head. Place the head on top of the two front legs and pull gently on the cord that is fastened on the two front legs. Normally if the head stays on top of the two front legs, birth will be normal and prompt.

What if only one front leg is presented together with the head? To get the second leg, you must go into the uterus. Any time you go into the uterus, you are increasing the possibility of infection. Eighty to 90 percent of the time you can deliver a lamb with only one leg and the head presented. You may have to help the ewe a bit. Pull down on the front leg toward her hock at the same time that she labors.

What if only the head is presented, and the ewe has ceased to labor? Then, the unborn lamb's tongue will be swollen and enlarged, and it will be impossilble to push the head back into the ewe. Usually, you can slip one hand in on one side and get hold of one leg to deliver the lamb.

With sheep, you have time to call a veterinarian; very often, however, experienced sheep producers are equally good at delivering lambs. If the lamb is born normally while you are present, clean the mucous from its nose, give it a slap on its ribs, and possibly blow into its lungs. This will help it start breathing. The procedures are not necessary every time. But they are signs of a good sheep producer. Then open the ewe's teats by extracting a bit of milk from each nipple so that the lamb has less difficulty nursing. Let the pair rest for half an hour; normally within half an hour, the lamb will be up and nursing. If, after 2 hours, the lamb still looks gaunt and is bleating, help it suckle. During the first 1 or 2 hours, it is cooperative and will suckle very energetically. The ewe may not be cooperative, but if you can get milk into the lamb's stomach within those first few hours, the battle is half won. Within 1/2 to 1 hour, the ewe will pass the placenta or afterbirth.

What about the chilled or weak lamb that simply won't nurse? A 10- to 12-inch rubber tube affixed to a 60 to 100 cc. syringe will deliver colostrum milk directly into the lamb's stomach. This method of saving lambs is one every good sheep producer has adopted. Insert the rubber tube (human catheter tube works well) into the lamb's throat and then into the stomach. If the lamb is severely chilled, immerse the entire lamb (to its nostrils) in warm water (100-110 degrees F.). It's amazing how a lamb that's apparently at death's door can be revived this way.

To keep a source of colostrum on hand, "steal" some from other ewes. A lamb only needs 6 to 8 ounces of colostrum to receive adequate antibody protection. Most good-milking ewes produce four times that amount. Freeze this spare colostrum in ice cube trays or in small plastic bags and thaw out as needed. Colostrum is an absolute necessity for lamb survival. About 75 percent of the lambs that don't receive colostrum die within the first six weeks.

Feeding the ewe—postlambing

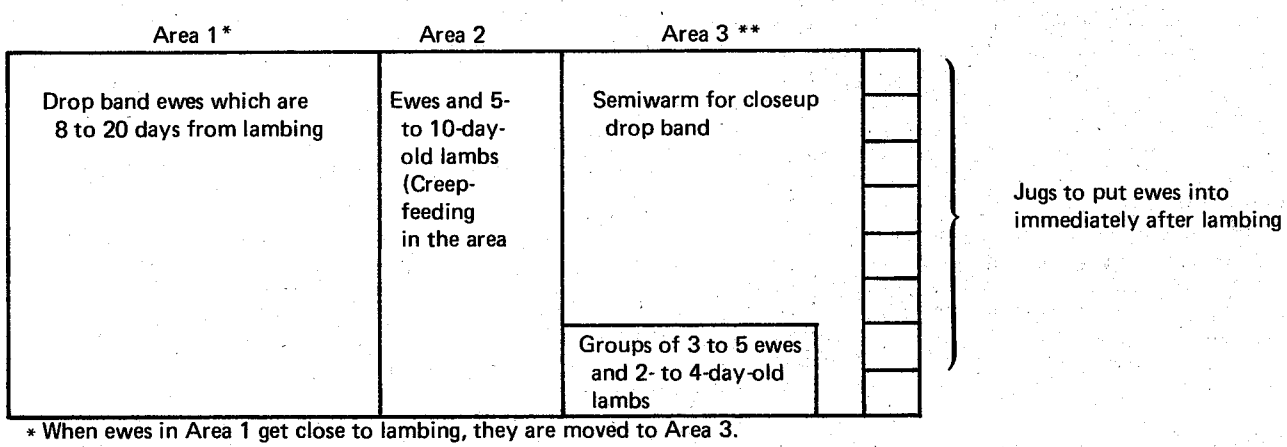
Warmed water, a hot bran mash, and carrots won't produce any more milk, won't prevent "bad" milk, and won't prevent constipation any more effectively than will a flake of alfalfa hay and a bucket of water from a labor-saving, frost-free hydrant. Do the things that save lambs and save labor.

Normally, offer the ewe, while in the jug, a flake of hay after lambing. Don't leave the ewe and her lambs in the jug more than 36 hours. This practice reduces feeding and watering labor and eliminates the need for a grain trough in the jug. Confinement is not normal, and ewes don't milk well when confined. Lambs are more apt to be laid on in the jug.

After leaving the jug, the ewes should be grouped (three to five ewes per group, initially) and should be fed grain from then on. Groups of 30-40 ewes and their lambs do better than groups of 100 or more.

Feed them a full feed of forage (4-5 pounds per ewe daily) and 1 pound of grain (corn or corn and oats). Within 2 or 3 days, increase the level of grain to 1.5 to 2 pounds. A ewe cannot produce milk effi-

Figure 2. Lambing barn arrangement and movement of ewes.



* When ewes in Area 1 get close to lambing, they are moved to Area 3.

** Following lambing and movement from the individual jugs, the ewes and their lambs are grouped together (three to five ewes and their lambs) into the pens in the warm lambing area for 2 to 7 days (Area 3). They are then moved to Area 2 to make room for younger lambs from the jugs to move into the grouping pens. The size of Area 3 is fixed. However as the number of ewes in the drop band (Area 1) decreases, the size of Area 2 should be expanded to accommodate the increased numbers of ewes and lambs.

ciently or in sufficient quantities on a hay ration; some grain must be fed. Also, you lose all chance of profit on a January or February lamb if you don't feed the lambs for maximum gain. Abundant milk makes lambs grow.

A 150-pound ewe nursing a single lamb need 3.5 pounds of total digestible nutrients (TDN) and an ewe nursing twin needs 4 pounds of TDN daily. That's equivalent to the energy in 7 to 8 pounds of hay or in 25 to 28 pounds of corn silage. An ewe can't eat those amounts, so she will reduce milk production down to the level that her nutrient intake will support. Therefore, feed your ewes 2 pounds of grain plus a full feed of forage. That will provide 3.5-3.7 pounds of TDN.

What about protein? An ewe needs .5 (single) to .8 pound (ewe with twins) daily. If you're feeding alfalfa-brome (13-14 percent protein) as suggested earlier, the ewe will receive adequate protein. If you're feeding grass hay, feed, in addition to the grain, .25-.35 pound of a 40 percent protein supplement daily.

After 8 weeks of lactation, the ewe has given about 50 percent of all the milk she will produce. Therefore, reduce nutrient intake 10-15 percent and reduce costs.

Lambs that are not pastured should be weaned not later than 10-11 weeks of age. Thereafter, reduce ewe feed to maintenance levels (2.5-3.0 pounds of hay equivalent daily) to reduce feed costs.

The extension folder "Young Lamb Nutrition and Management" (AG-FO-0610) discusses in detail how to feed and manage a young lamb. Therefore, the following points are merely reemphasized:

1) Save every lamb. About $20 worth of ewe milk replacer and creep feed and not over 1 hour's worth of time will produce a 35-pound, 6-week-old lamb that is ready to eat grain and hay and to grow into money.
2) Lambs gain best when they eat a lot of a nutritious ration. Corn, soybean meal, and leafy alfalfa are palatable and will make lambs grow.
3) If you intend to raise April lambs on pasture, stop creep-feeding the lambs and grain-feeding the ewes 2 weeks before they go to pasture.

Diseases

The extension folder "Sheep Diseases" (AG-FO-1877) discusses diseases in more detail, but the following points bear emphasizing.

After lambing, ewes may develop pneumonia, mastitis, or uterus metritis. Your veterinarian can either treat the cases or advise you. Usually, these diseases are caused by bacterial infections. Thus, an antibiotic administered early and at sufficient levels usually is the prescribed treatment.

With a severe uterine infection, the ewe may expel her uterus. This requires reinserting it and preventing it from being expelled again. Suture the vulva partially closed or keep it in with a rope harness.

For mastitis, use penicillin and streptomycin. In severe cases, inject it through the teat canal into the infected quarter. Pneumonia also responds to antibiotics and, occasionally, to sulfa treatments.

Lamb health problems usually include death or retarded growth from pneumonia. In addition, enterotoxemia may be a big killer among creep-fed lambs suckling heavy-milking ewes. If it occurs during the first 3 weeks, the best protection is vaccinating the ewes within the last 3 weeks of gestation. If it occurs when the lambs are 5-8 weeks old and are eating considerable grain, reduce death loss by vaccinating each lamb with 2 cc. of clostridium perfringens D toxoid at 3 weeks of age and again at 5 weeks.

Creep rations high in grain provide excess phosphorus. Add at least 1 percent limestone or .25 percent ammonium chloride to the creep ration to prevent urinary calculi.

Arthritis and swollen joints that cause arthritis can also reduce a lamb crop. Lamb in clean quarters and dip each lamb's navel in tincture of iodine as soon after birth as is possible.

Tetanus is associated with horses and the use of rubber rings for docking and castrating. If you have had a problem, vaccinate your lambs and stop using rubber rings.

Muscular dystrophy, or stiff lamb disease, has become serious the past decade. It is associated with rapid-gaining lambs eating rations that are low in selenium and vitamin E. Injecting inflicted lambs with selenium and vitamin E usually cures the condition. Feedstuffs are low in selenium in eastern Minnesota. Provide ewes and lambs salt fortified with 30 ppm of selenium. Vitamin E deficiency is often the cause of muscular dystrophy. The addition of 10 mg of α-tocopherol acetate (vitamin E) per pound of creep diet will provide adequate vitamin E.

Issued in furtherance of cooperative extension work in agriculture and home economics, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Patrick J. Borich, Dean and Director of Minnesota Extension Service, University of Minnesota, St. Paul, Minnesota 55108. The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, or veteran status.