

The North Dakota Sheep Industry

No. 49

Newsletter

www.ndlwpa.com

August/September

A joint publication brought to you by the North Dakota Lamb and Wool Producers Association and the NDSU Extension Service

President's Message

I hope all of you are catching up on your fall work. I was very happy with the outcome of the Fargo RR Ram and Ewe Lamb Sale in August. We had good quality sheep, a good crowd, interesting educational topics, great facilities and the sheep sold quite well.

The Hettinger ram sale is coming up on September 19th, at 1:00 MDT at the Adams County Fair Barn. I hope as many of you as possible will take the opportunity to attend, there are over 200 rams consigned. The NDLWPA is sponsoring a free meal from 11:00 am until 12:30 pm for everyone in attendance. The association and consignors are very appreciative of your past support and would like to use this event to show our appreciation.



Lyle Warner

Two upcoming events to keep an eye out for are: 1) The Bowman Ewe Sale on Thursday, September, 27th, and 2) The Annual NDLWPA Convention at the Seven Seas in Mandan on Friday, November 30th and Saturday, December 1st, 2007. I hope we have a great turnout for both of these events.

Lamb prices are strong and steady and it is very encouraging to see new individuals entering the industry. I hope each of us takes the time to encourage and invite these new individuals into our organization.

Dr. Justin Luther and Dr. Chris Schauer are working very hard to develop educational opportunities for all of us who raise sheep. May your fall breeding season go well, and I look forward to seeing many of you in the very near future at our sheep activities.

Lyle Warner
NDLWPA President

Editor's Note

I would like to take this opportunity to recognize all of the hard-working individuals that have helped to serve our sheep industry during this past summer. Some of these ND sheep industry advocates do not even own sheep. They include: county agricultural agents, members of the NDLWPA, staff and professors of the NDSU Department of Animal & Range Sciences, local 4-H club leaders, and organizers of our county and state fairs. These individuals make some outstanding contributions to the success of our industry. Their efforts can be seen even further into the year by the vigorous calendar of sheep events coming up.

32nd Hettinger Ram Sale

September 19th, 2007 @ 1:00 p.m.

International Katahdin Expo in Fargo

September 20th to 22nd, 2007

Meat Goat Conference, Aberdeen, SD

October 5th & 6th, 2007

NDLWPA Annual Convention, Mandan

November 30th & December 1st

2nd Annual Shepherd's Clinic, Tappen

January 9th, 2008 @ 10:00 a.m.

Carrington Sheep Seminar

February 6th, 2008

Fall Ram Test Field Day, Hettinger

March 10th, 2008

When you attend one of these events, I urge you to give these individuals a pat-on-the-back. Their dedication contributes greatly to the vitality of our industry.

Justin Luther, Ph.D.

NDSU Extension Sheep Specialist

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**Secretary Minutes from the
North Dakota Lamb and Wool
Producers Association Meeting**

**Seven Seas, Mandan
August 22nd 2007**

Brent Kuss, NDLWPA Secretary

President Warner called the meeting to order.

Brent Kuss read the minutes from the June 25th meeting. Minutes were approved as read.

Mark Sheppard presented the treasurers report. Mark said there are a few bills to come for the Fargo Ram Sale yet. Mark also updated the board on what has been done with the CD's and some options to do with future CD's. Mark shows a balance of \$32,022.41 of all accounts. Matt Benz moved to accept the treasurer's report. Curt Stanely seconds the motion. Motion carries.

Old Business:

Fargo Ram Sale: The Board would like to thank Mark and Wanda Sheppard for clerking and Dr. Justin Luther for managing the sale. They spent many hours of preparation work and the sale went very smoothly. The board would also like to thank all the members that helped with set up and take down, loading sheep and pitching in where needed, it all added up to a very successful sale and an enjoyable day for all.

The board then discussed possible changes and concerns for future sales and the possibility of forming a standing sale committee to address concerns for all the sales that the association holds.

Hettinger Ram Sale: The board discussed advertising and which publications to place ads in and which radio stations to use.

Bowman Ewe Sale: Brent Stroh addressed the board on the Ewe sale. He will do the advertising posters and newspaper ads. He discussed having a noon meal sponsored and served by the NDLWPA. Brent Stroh, Lyle Warner, Brent Kuss, Curt Stanely, and Chris Schauer volunteered to serve the meal.

New Business:

Annual Convention: The date is Nov. 30th-Dec. 1st 2007 at the Seven Seas in Mandan ND. The board discussed possible speakers, presentations and also meals. President Warner asked Wyman Sheetz, Brent Stroh, Dr. Justin Luther, and Dr. Chris Schauer to help set up a convention schedule.

Mark Sheppard updated the board on our non-profit status in regards to the postmasters for our mailings.

It looks like everybody is satisfied and things will be the same as the past.

Brent Kuss asked the board for a donation to the ND Fur Takers Auction. Brent Stroh made a motion to donate up to \$50 for coyote traps for their benefit auction. Curt Stanely seconds the motion. Motion passed.

Dr. Justin Luther discussed with the board about having an all day sheep school in the central part of the state, possibly at Brent Stroh's farm. More details will be available in the future as this event progresses.

President Warner adjourned the meeting.

Members present: Wyman Sheetz, Brent Stroh, Brent Kuss, Matt Benz, Dr. Chris Schauer, Lyle Warner, Curt Stanely, Dr. Justin Luther, and Mark Sheppard.

**Ram Management for Better
Fertility and Longevity**

Justin Luther, Ph.D.

Extension Sheep Specialist
North Dakota State University
Department of Animal & Range Sciences

Rams are dangerous, require extra space, consume large quantities of feed, and are difficult to handle. But until a practical method of artificial insemination is developed for the modern sheep producer, they will remain a necessary part of the sheep operation. Rams must be managed properly to ensure that a large proportion of ewes become pregnant and generate profit each year. Although it requires time and effort, adoption of proper ram management techniques is necessary for successful sheep production.

The needs or management requirements of the ram will vary according to ram age and time of year. For the purposes of this article, the management needs of the ram will be divided into: 1) pre-breeding season, 2) breeding season, and 3) the breeding season to pre-breeding season interval. Of these, the longest, and most often neglected, time period is the breeding to pre-breeding interval. This period lasts approximately 300 days. Mismanagement during this time may lead to problems that cannot be corrected during the pre-breeding and breeding periods.

1) Pre-Breeding Season

The pre-breeding season is the 3 to 4 weeks before rams are turned in with the ewes. Ram lambs should be at least 6 months of age and 50 to 60% of their mature weight by this stage. Ram lambs should consume approximately 3% of their body weight on a dry matter basis (ration with 63% TDN and 12% CP, plus mineral). For example, a 150 pound ram lamb should consume 4.5 pounds of dry matter. For most

ram lambs, this can be offered through 4 pounds of good quality forage and 2 pounds of grain. Meeting, and not exceeding, these ration requirements will allow replacement ram lambs to achieve the suggested 60 to 80% of their maximum growth rate (approximately 0.6 pounds per day).

Mature rams need to consume approximately 2.5% of their body weight on a dry matter basis (ration with 63% TDN and 9.6% CP, plus mineral). For most mature rams, this can be offered through 6 pounds of medium quality forage and 1 to 2 pounds of grain. Mature rams will lose 10 to 20% of their live weight during the breeding period and thus, body condition score (level of fatness on a scale of 1 = emaciated to 5 = obese) of the mature ram should be increased to 3.5 or 4.0 by the start of the breeding season.

Common nutritional problems with rams exist across many sheep operations as the pre-breeding period begins. Namely, rams are too fat or too thin. Fat rams tend to be less fertile because the physiological mechanism that is necessary for regulating testicular temperature is impaired by excessive fat cover. On the other end of the spectrum, thin rams do not have the necessary energy reserves to keep them fit throughout the breeding season. Many producers will also attempt to save on space and feed mature rams and ram lambs together, which only puts ram lambs at risk of injury and not getting enough feed. Shepherds will also forget to offer a complete mineral mix. A balance of minerals is important for many physiological functions including sustained fertility throughout the breeding season. During the short (3 to 4 week) pre-breeding period producers may attempt to put weight on thin rams by offering large quantities of grain in place of forage. This can result in decreased fiber digestion in the rumen, increased risks of "pizzle rot". Pizzle rot is an ulcerated bacterial infection found on the sheath of the ram and can occur when the ram consumes a diet high in crude protein. Ram lambs consuming high grain diets are also at greater risk of urinary calculi or "water belly" due to an imbalance in the calcium to phosphorus ratio. Clearly, proper nutrition before and during the pre-breeding period is critical if rams are to achieve optimal reproductive performance.

Each ram should undergo a breeding soundness exam 3 to 4 weeks prior to breeding. This includes assessment of both structural and reproductive soundness. In the structural examination, soundness of feet, legs, and mouth should be evaluated. Hooves should be trimmed and allowed time to heal over before breeding, and if necessary, rams should be shorn to prevent heat stress and decreased fertility. A mature ram should also have the large majority of his teeth in place to ensure that the above nutritional requirements can be met. In addition, only rams with a BCS of 3 or greater should be used in large breeding

pastures (i.e. greater than 10 acres). Similar to the ewes, rams should also be treated for internal and external parasites.

The reproductive soundness evaluation should include examination of the testicles, penis/sheath, and semen. The scrotum should be at least 30 to 32 cm in circumference for ram lambs and mature rams. Testicles should also be palpated to detect any inflammation or hardness. Inflammation of the epididymis (known as epididymitis) is usually caused by physical damage or infection from *Brucella ovis*. In addition, close examination of the sheath should be performed to determine the presence or absence of pizzle rot that could lead to infertility. Finally, a semen sample should be collected by a veterinarian. A ram could easily pass the physical exam and still be sterile. Semen standards for acceptable fertility include: sperm motility of 30 to 70%; normal sperm morphology of 50 to 90%; ejaculate volume of 0.5 to 1.5 ml; less than 5% white blood cells; and sperm cell concentration of 2 to 3 million per ml. A semen sample that meets the latter standards will be associated with a thick, creamy appearance. It becomes obvious that a breeding soundness examination will identify many causes of infertility, but it will not determine if a ram has a low libido. A ram's libido can only be tested by exposing him to ewes in estrus or heat.

2) Breeding Season

Table 1 indicates acceptable ram:ewe ratios during the breeding season. The large range in these values is caused by numerous environmental and management factors. Briefly, the number of ewes a ram can breed is reduced with a shorter breeding season, decrease in ram age (less than 15 months), increase in pasture size and roughness of terrain, and use of estrous synchronization protocols.

Table 1. Suggested Ram:Ewe Ratio

Ram	No. of ewes
Mature	50 - 150 5 - 15*
Lamb	25 - 75 2 - 8*
*If ewes are in a synchronized estrus	

If possible the shepherd should use a breeding harness or marking paint to monitor a ram's breeding activity. When using this management tool, the paint or marker color should be changed every sixteen days and become progressively darker (i.e. yellow, red, green, and black). If no marks are observed during the first sixteen days of the breeding season there may be several explanations. The ewes may not be cycling, the ram may have a low libido, or there may be a problem with the harness. If re-marks are present after sixteen days, poor ram fertility may be a problem. It is not necessary to check for marks every day when using this tool to determine expected lambing date, only Saturdays or Sundays will suffice

because of the 2-3 day variation that exists in ewe gestation length.

Hot temperatures (>90°F) during the breeding season (and pre-breeding) can impair the natural physiological mechanisms used to maintain proper testicular temperature (approximately 95°F) in the ram. Maintenance of proper testicular temperature is important for sperm production, which takes approximately 49 days. Therefore, it is important to avoid heat stress in rams because they may become sterile for the entire breeding season. To avoid heat stress the flock manager must always provide access to shaded areas and fresh water. Furthermore, since most ewes are in estrus or heat for at least 24 hours, the ram(s) can be turned out with the ewes during the night when ambient temperatures are lower and penned by themselves during the day. This management technique will also be useful if rams are getting too thin (BCS <2.5) and need to be fed separately.

Group mating (i.e. using more than one ram to breed a group of ewes) offers some very distinct advantages and disadvantages. Under range conditions it is almost always necessary if the producer is attempting to maintain a shorter lambing season. Furthermore, single-sire mating runs the risks of low conception rates. On the other hand; multiple rams may fight at the expense of breeding ewes, it is difficult to detect infertile or male-oriented rams, and offspring performance of a particular sire cannot be determined.

3) Breeding to Pre-Breeding Interval

As mentioned above, the breeding to pre-breeding interval represents the longest ram management period (270 to 330 days) and is when rams are most often overlooked. Although the ram is on vacation during this time, the shepherd is not. Rams are often housed in less than ideal conditions and do not receive the attention they need leading to improper nutrition and greater risks of disease. It often requires extra time and money to fix these problems but not fixing the problems will lead to a decrease in performance during the breeding season.

Although smaller pens to start with will prevent fighting injuries, rams should be penned together and receive 100 square feet of space per ram. This allows rams to be mobile and receive exercise when sparring with one another. It is also important for the shepherd to make sure that rams are able to restore lost body condition.

In summary, taking care of the management, nutrition, and health needs of the ram(s) during these three stages will increase years of service and help to ensure optimal pregnancy rates in your ewe flock. Ram facilities should be designed to house rams to

reduce injury (to both the shepherd and the ram) and increase the number of opportunities for observation.

Culling Ewes

Shelby Filley, Ph.D.

Regional Livestock & Forage Specialist
Oregon State University Extension Service

Culling is the practice of selling off animals that you no longer want to or no longer can keep. There are many reasons to cull ewes; economics drives most of them. If you have sheep as a hobby, culling for aesthetic reasons may be more important to you. Many times both reasons impact your decision to sell sheep that are not your usual product to market. This article discusses reasons to cull, as well as strategic marketing of cull ewes. Consider how the following points impact your sheep flock and adjust your management plan appropriately.



Reasons to Cull

First, let's start with aesthetic reasons for culling sheep. Keeping too many ewes on a given acreage for too long a time could make your farm appear unhealthy or untidy by leading to overgrazing, thin animals, and/or muddy pasture conditions. Even with small numbers of sheep, disease can crop up and, if left untreated, can make things look bad. Treat sick animals early in the disease process, and know when to release interest in them before they deteriorate too far. Animals and land in poor condition could impact public perception of the sheep industry. Since we care about our animals, our land, and our industry, we should do all we can to promote a healthy, positive image of animal husbandry.

Now, let's move on to economic reasons for culling sheep. Obviously, keeping unproductive or underproductive ewes is economically inefficient. So, what are the factors that lead to these maladies of production? Sometimes it is our fault that the sheep need to be culled. Initially, we should make sure that the sheep we select for production fit the ranching environment and our desired production goals. Throughout the production cycle, we need to follow good, sound management practices. That way, we don't have to cull unnecessarily. Other times the reasons for having to cull ewes are out of our control. Either way, we can adjust and improve our production efficiency. Reasons to not keep ewes in your flock can vary. Some problems are genetically controlled (linked to genes, breeding decisions or choice of ram or ewe flock), while others are a product of the environment

(weather related, disease challenges, nutritional problems, etc.). In most cases, good record keeping can help you determine whether or not you have problems, as well as help you find where those problems lie.

Culling Criteria

Here is a list of some reasons for culling your ewes. Decide which reasons impact your ranch. Then make a list of culling criteria for your flock and make a point of following it.

- Open or barren ewes: possibly depending on why not pregnant
- Genetic improvement desired: sort out ewes that don't fit your goals
- Production/Reproduction level (use your record keeping): Lambing rate (singles/twins/triples), poor lamb weaning weights, poor milk production, growth rates, etc.
- Genetic defects or predisposition to disease: scrapie, foot rot, face covering, entropion, etc.
- Physical problems: Lambing difficulty, prolapses, poor conformation (udder, feet, legs)
- Disease: decrease amount of subclinical disease & chronically ill animals
- Retire old, thin ewes that can no longer eat properly

Marketing Culls

Marketing of cull animals is mostly done through public markets, with the majority of ewes being culled after spring lambing time. With the high number of cull ewes available at that time, the price is at a seasonal low. So, if after lambing you decide you need to cull some ewes, there are two options sell now or sell later when the market prices may be improved. You will need to factor in the cost to keep the ewes, including feeding costs, health care costs, and any death losses.

Depending on the reasons why, ewes that are open or barren may need to be culled. Many times it is advantageous to know which ewes are not pregnant before lambing season so you don't have to feed them all fall and winter. If you have your ewes pregnancy checked after the breeding season is over, you can market the open ewes in the fall of the year when market prices for cull ewes are typically better. This may improve your options for barren ewes as well as provide important management information for your pregnant ewes. For more information on these topics review the American Sheep Industry's "Sheep

Production Handbook". Call the ASI at 303-771-3500 or visit www.sheepusa.org.

Abortions in Sheep – Causes, Control and Prevention

Justin Luther, Ph.D.

Extension Sheep Specialist
North Dakota State University
Department of Animal & Range Sciences

THE LAMBING SEASON can be the most exciting time of the year for a sheep producer. The long awaited opportunity to evaluate that new ram or great set of replacement ewes finally arises. So, when the first two ewes abort, the next ewe has a still born lamb and the fourth ewe has a set of twins that are weak at birth and soon die, it can be a very depressing and frustrating experience. These are all signs of an infectious abortion outbreak that should motivate you to: 1) identify the *cause(s)* of abortion in your flock and 2) develop a plan to control or prevent abortions from occurring in the future.



Identifying the Causes of Abortion

Identifying the exact cause of abortion in your flock requires knowledge of the clinical signs, flock history and laboratory diagnostics. Delivery of the proper samples (fetus and placenta) to your local veterinarian or state diagnostic laboratory is recommended. Samples should always be placed on ice in a spill-proof insulated container. It is likely that your diagnostic laboratory will provide results for one of the four common types of infectious abortion. The clinical signs and mode of transmission for each of these four types will be described.

1) Enzootic Abortion is caused by *Chlamydia psittici*. This organism will spread through infected fetuses, placentas, vaginal discharges, feces and nasal secretions. The organism enters the blood stream but causes no signs of infection in the ewe unless she is, or becomes, pregnant. During pregnancy, the organism enters the uterus and causes inflammation of the placenta and death of the fetus. If infection occurs before conception the ewe will abort during mid-pregnancy. If infection occurs during early pregnancy, abortion will occur 60-90 days thereafter. If infection occurs during mid- or late-pregnancy, stillbirths and weak lambs at birth may be observed.

Ewes in their first pregnancy are most susceptible to infection. In the Western U.S., isolated range flocks are highly susceptible when the organism is introduced. Similarly, Western ewes introduced into

infected Midwestern flocks are very susceptible. Approximately 25-60% of ewes will abort, depending on the time of the outbreak relative to initiation pregnancy. Older ewes will become immune to *Chlamydia psittici*, thereby minimizing the annual flock abortion rate to 1.0-5.0%. *Chlamydia psittic* infection can also occur in young lambs and may lead to pneumonia.

2) Vibrio Abortion is caused by *Campylobacter sp.* The organism is discharged with the membranes, uterine fluids and fetus at the time of abortion. Transmission will occur when ewes ingest infected membranes or fluids, or through consumption of *Campylobacter sp.* contaminated feeds. If infection occurs during early pregnancy, the ewe will likely reabsorb the fetus. If infection occurs during mid-pregnancy, abortion will occur 10-20 days later. A late pregnancy infection will result in stillbirths and weak lambs at birth.

In general, 20% of ewes in a flock will abort following introduction of *Campylobacter sp.*, however some outbreaks have led to 80 or 90% of ewes aborting. As with enzootic abortion, older ewes may become immune, but 5-10% of the infected flock will continue to abort each year.

3) Toxoplasmosis Abortion is caused by *Toxoplasma gondii*, a protozoa which causes coccidiosis in cats. Infection will occur following ingestion of feed or water that has been contaminated with oocyst-laden cat feces. If infection occurs during early pregnancy the embryo or fetus will generally be reabsorbed and rebreeding may occur. If infection occurs during mid-pregnancy, abortion will occur and the ewe may be susceptible to a secondary infection. During late-pregnancy, infection will lead to abortion, still births, mummified fetuses or weak lambs at birth.

Abortion can occur in 5 to 50% of the ewe flock, with typical losses averaging 15-20% of the lamb crop. In healthy, non-pregnant ewes toxoplasmosis will not cause clinical symptoms or detrimental effects.

4) Salmonella Abortion is a rare occurrence that is caused by various *Salmonella* organisms. Stress and the number of ingested *Salmonella* bacteria will determine whether or not the pregnant ewe aborts. If abortion does occur it is usually during the final month of pregnancy. Most of the ewes will exhibit diarrhea and some will die from metritis, peritonitis, and/or septicemia. Healthy, young lambs may also contract the disease and die.

Controlling Abortion

When faced with an unexpected outbreak of abortions there are some general practices that can be utilized to minimize the risk of spreading the infectious

organism.

- Check feed and water supplies for sheep and cat feces contamination
- Sanitize feeding and watering equipment
- Separate ewes showing signs of abortion and house them separately from the remainder of the flock
- Properly dispose of (burn or bury) the infected placenta and fetus
- Do not feed ewes on the ground

The following treatments can also be used to minimize the number of ewes aborting in an infected flock.

- Immediately vaccinate the remaining pregnant ewes for enzootic and/or vibrio abortion.
- Begin feeding 500 mg of chlortetracycline per head per day for 5 days and then reduce to 250 mg per head per day for the remainder of pregnancy.
- If the outbreak is severe, inject all ewes with long acting tetracycline (LA 200) at the rate of 10 mg/lb s.c.
- If Salmonella is the causative agent, inject ampicillin at the rate of 5 mg/lb. Spectinomycin may also be used at the rate of 5 mg/lb per day for three days.

Preventing Abortion

After an outbreak of abortions the producer must develop a plan for preventing abortions from occurring in the future. The following guidelines should be considered.

- Vaccinate. Vaccines are currently available for Vibrio and Enzootic Abortion. *Campylobacter fetus* (cause of Vibrio Abortion) vaccine is given 30 days before breeding and repeated 60-90 days later. *Chlamydia psittaci* (cause of Enzootic Abortion) is given 60 days before breeding and repeated 30 days later. (*Note: Supply of both vaccines has been unreliable in the past so it is recommended to place your order early in the year*)
- Maintain sanitary feed and water supplies.
- Manage first lambing ewes in a separate flock.
- Do not purchase replacement ewes from an infected flock.

Summary

There are four major causes of infectious abortions. Accurate determination of the infectious agent requires a diagnostics laboratory. Antibiotics, vaccines and sanitary facilities can all be used to minimize the risk of abortions and ultimately improve reproductive efficiency of the ewe flock.

Livestock Risk Protection - Lamb

"A risk management tool designed to protect against unexpected price downswings for slaughter lambs."

On Sept. 28, 2006, the Federal Crop Insurance Corporation's (FCIC) board of directors approved the expansion of the LRP insurance to include a lamb pilot program as requested by ASI. On July 18, 2007, the program details were finalized by the U.S. Department of Agriculture's Risk Management Agency (RMA) with the first date of sale being September 17, 2007.

ASI and its development partners, Applied Analytics, the American Sheep and Goat Center, the Livestock Marketing Information Center and Virginia Tech, worked with the FCIC and RMA for nearly three years to bring this much-needed insurance product to producers.

LRP-Lamb is designed to insure against unexpected declines in market prices of slaughter lambs. Sheep producers may select 13-week, 26-week or 39-week insurance periods as well as coverage levels ranging from 80 percent to 95 percent of the expected ending value to correspond with their general feeding, production and marketing practices.

ASI has developed an online educational/training course detailing the features of LRP-Lamb. It is designed as a tool for producers and agents to utilize to learn more about the product and to offer scenarios to assist with the decision to purchase the insurance. Visit the ASI website for more information: http://www.sheepindustrynews.com/LRP_LAMB/ or contact the following NDSU Extension Specialists:

Mr. Tim Petry, Livestock Marketing Economist
Department of Agricultural Economics
Phone: 701-231-7469
E-mail: Tim.Petry@ndsu.edu

Dr. Justin Luther, Extension Sheep Specialist
Department of Animal Sciences
Phone: 701-231-7993
E-mail: Justin.Luther@ndsu.edu

27 states (including ND) are eligible.



NDLWPA Membership Form

This form is a membership application for the North Dakota Lamb and Wool Producers Association (NDLWPA) and American Sheep Industry (ASI) Association

Please Print Clearly

Name: _____

Street Address: _____

City: _____

State: _____

Zip: _____

Phone: _____

Fax: _____

Email: _____

No. of Sheep/Goats: _____

Please check all that apply: Commercial Purebred Club Lamb Dairy

Lamb Feeder Shearer Allied Industry Business

Please check membership type:

NDLWPA Annual Membership - \$20

NDLWPA Annual Junior Membership (under 18 years of age) - \$5

ASI Annual Membership - \$.04/head or \$25 minimum (whichever is greater)

Joint NDLWPA/ASI Annual Membership - \$40

Hardcopy of the ASI Weekly Newsletter - \$10

Note: ASI Annual Membership will automatically get you an email copy of the ASI Weekly Newsletter.

Total: _____

Please make checks payable to: NDLWPA

Send this application and your payment to: NDLWPA

9463 86th St SE
Fullerton, ND
58441

Form more information call: 701-375-6971 or visit: www.ndlwpa.com

State Replacement Ewe Sale Bowman Auction Market

North Dakota Lamb & Wool
Producers Association

Approximately
2,000 Ewes



4th Annual

September 27th, 2007 @ 1:00 p.m. MDT

Harry Kerr, Bowman Auction, (701) 523-5922

Chris Schauer, Director HREC, (701) 567-4323

Hettinger Ram Sale Adams County Fair Barn

North Dakota Lamb & Wool
Producers Association

200 Rams
QR & RR



32nd Annual

September 19th, 2007 @ 1:00 p.m. MDT

Justin S. Luther, Sale Manager, (701) 231-7993

A free lunch will be served!

The North Dakota Sheep Industry
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