West Virginia University

News Ewe Can Use

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Welcome!!

We are pleased to publish the first issue of "News Ewe Can Use". This newsletter is an information and communication forum published by the West Virginia Sheep Management Project, an outreach program of West Virginia University. Our goal is to provide timely and useful information to sheep farmers covering a wide range of topics and issues. We hope that you will enjoy these articles, and maybe even pick up a bit of "News Ewe Can Use."

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WV Sheep Management Project

Who are we? What do we do? The West Virginia Sheep Management Project is an outreach of West Virginia University. The long-term goal of the project is to help farmers realize a greater return to sheep production and to help revitalize the sheep industry in West Virginia. Statistics show that the number of sheep in West Virginia has declined drastically from about 1 million in the 1940's to about 40,000 today. The project will introduce a broad scope of new programs in reproductive management, selection and breeding, nutrition and forage management, flock health, marketing, financial management, and predator control.

The initial focus of the project has been to shift the breeding and lambing seasons and therefore, the subsequent marketing dates for farm flocks by using out-of-season breeding techniques. This shift in breeding and lambing periods gives producers the opportunity to capitalize on an historically higher spring lamb market. In addition, fall lambing may help reduce production losses due to internal parasites and lamb losses due to predators. To date, farmers in eight counties of West Virginia have participated in the out-of-season breeding portion of the project (see "How Well Is Out-of-Season Breeding Working?", page 4).

The project staff includes a resident panel of professors and researchers at WVU, county extension agents, and a professional field staff. Headquarters for the project is located in Pendleton County, at the Community Building in Franklin. With the help and support of House Finance Chairman Harold Michael, D-Hardy, and others, the project is being funded by a grant approved by the state legislature.

We believe that the project will serve as a catalyst for expanding and improving opportunities for small, independent sheep producers in the Appalachian region, and throughout West Virginia.

If you would like more information about the project or would like to participate, please give us a call at (304) 358-3660.

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Did You Know?

Did you know that the sheep industry formed the first national livestock organization in the United States? The National Wool Growers Association was founded in 1865 to help stem the tide of cheap imports of New Zealand wool. Currently, the U.S. sheep industry is engaged in a struggle to curb the recent flood of cheap imports of lamb primarily from New Zealand and Australia. History repeats itself ? (See page 2).

President's Decision on the Section 201 Lamb Imports Case

On July 7, 1999, President Clinton announced a combination of trade relief and domestic assistance for the U.S. lamb industry. His decision followed a unanimous ruling by the U.S. International Trade Commission (ITC) that the domestic lamb industry is threatened with serious injury due to the recent surge of cheap lamb imports. The effects of this surge have been felt by all segments of the U.S. lamb industry, including the lamb industry here in West Virginia.

A Section 201 trade case was filed before the ITC on September 30, 1998, by a nine-member coalition, led by the American Sheep Industry Association (ASI). The petitioners represented all segments of the domestic lamb industry, including growers, feeders, lamb packing and lamb processing companies. The trade commission's investigation found that lamb imports had increased nearly 50 percent between 1993 and 1997. U.S. Department of Agriculture statistics showed that these record-setting increases continued during 1998 and into 1999. The commission also concluded that imported lamb cuts from Australia and New Zealand consistently undercut the wholesale price of identical domestic cuts by margins as high as 20 to 40 percent.

These findings supported petitioner's claims that the price disparity between domestic and imported product has led to a chain reaction crash of the U.S. lamb market. Processors were the first to feel the effects of the flood of cheap imports and were forced to lower prices in an effort to compete with lower priced imports and to move a perishable product. This meant that processors demanded lower prices from their suppliers, the packers, who in turn reduced price offerings to their suppliers, the feeders, and the feeders to the growers. Each segment has had little choice but to accept the prices offered or incur substantially greater losses due to mounting costs and to the perishable nature of their product. In many instances, this has meant that prices have been driven below break-even levels, threatening the viability of the entire domestic industry.

The President's relief package imposes a three-year tariff-rate quota program and provides monetary assistance for the industry. The three-year program of tariff-rate quota is outlined in the table below. The $100 million in assistance has been earmarked for scrapie eradication, marketing, government purchases of excess lamb and direct payments.

The recovery package offers the U.S. lamb industry a tremendous opportunity to boost its competitiveness. ASI, on behalf of the petitioners and on behalf of the estimated 69,000 U.S. sheep producers it represents, has expressed its gratitude to the 37 U.S. Senators, including Senator Byrd of West Virginia, and to the 40 U.S. House of Representative members for their efforts and support of the U.S. lamb industry's case.

The industry has submitted a very aggressive and ambitious proposal to effect industry-wide recovery. The battle may be over, but the work has just begun for the U.S. lamb industry.

THE TARIFF-RATE QUOTA PROGRAM

YEAR	BELOW-QUOTA TARIFF	QUOTA	ABOVE -QUOTA TARIFF
1	9%	70.2 Million Pounds	40%
2	6%	72.1 Million Pounds	32%
3	3%	74 Million Pounds	24%

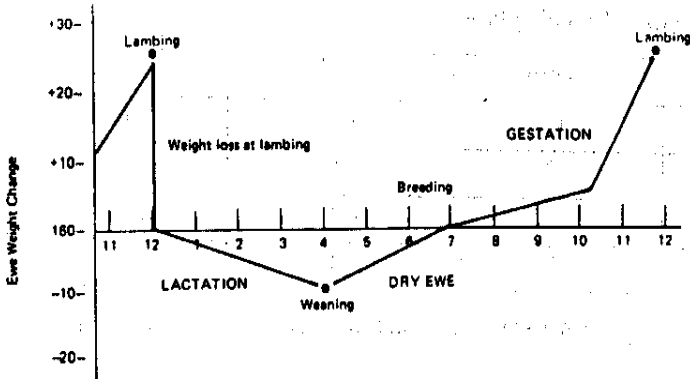
In This Issue...

Body Condition and Nutrition of the Ewe

Drought conditions throughout West Virginia are forcing producers to sharpen their management skills. Limited feed resources demand closer attention to the nutritional management of the ewe flock. The nutritional needs of a ewe vary with her stage of production. These needs are also affected by number of lambs that a pregnant ewe is carrying and by the number of lambs that a lactating ewe is nursing. The diagram below illustrates the weight changes normally expected during the production year for a 160-pound ewe giving birth to and rearing twins (SID Sheep Production Handbook. American Sheep Industry, 1988). Ideally, a ewe should lose five to seven percent of her body weight during lactation. This weight is then recovered during the dry period, with the ewe gaining 1/8 to 1/4 pound per day just prior to breeding. The ewe should then gain during gestation in proportion to the weight of the fetal tissues and fluids, with the most significant gains occurring during the last six weeks of pregnancy.

Body Condition Scoring. One of the best ways to determine if the energy needs of your ewes are being met, is to monitor body condition. Body condition scoring is based on an estimation of the degree of muscling and fat cover. Using the standard system, sheep are scored on a scale from zero to five, with zero being extremely thin, and five being extremely fat. However, a simplified method of condition scoring is generally sufficient. Rank your ewes on a scale of one to three, one for ewes that are "too thin", two for ewes in moderate condition, and three for ewes that are "too fat." The "hands-on" approach to body condition scoring is best. Wool length can make visual estimation of fat cover difficult. Even a short growth of wool can be deceptive. Feel the fat covering over the spine, ribs, and rump. Sort off the thin ewes and over-fat ewes and feed accordingly!

Flushing. Flushing is the practice of increasing the ewe's level of nutrition two to three weeks prior to the start of the breeding period. Flushing has been shown to increase the ovulation rate, and in turn, the number of lambs born. Flushing may also increase the percentage of ewes exhibiting estrus early in the breeding season. Flushing fall-breeding ewes that have been "roughed" on poor pastures during the summer drought may provide an additional boost, as ewes in poor-to-moderate condition tend to respond more favorably to flushing than do fatter ewes. Flushing is more likely to have a positive effect if the level and length of the flushing period is sufficient for ewes to achieve an increase in weight and body condition. The ration can then be tapered off to maintenance level over a one-to-two week period.



Source: SID Sheep Production Handbook. American Sheep Industry, 1988.

Early Gestation (14-50 days). Maternal recognition of pregnancy occurs about 12-14 days following fertilization. It then takes approximately two more weeks for an embryo to attach to the wall of the uterus. Nutrition during this period influences the attachment and survival of the embryo. Feed to maintain moderate body condition.

Mid Gestation (50-100 days). This is the period of placental development. If nutritionally stressed during this period, a ewe may absorb multiple fetuses in order to maintain one viable fetus. Continue to feed to maintain moderate body condition.

Late Gestation (100-148 days). Approximately 70% of fetal growth occurs during the last six weeks of pregnancy. During this period, a ewe carrying twins will require almost twice as much energy as a ewe carrying a single. Remember that both thin ewes and over-fat ewes entering the last part of pregnancy are good candidates for pregnancy toxemia. These ewes also produce poor quality colostrum, do not milk well, and have poor mothering instincts. Significant changes in body condition are difficult to achieve during this period. Rapid fetal growth reduces rumen capacity and it becomes difficult for a thin ewe to consume enough feed to improve her condition. Conversely, severely restricting the diet of an overly fat ewe during this period can increase her risk of metabolic problems.

Lactation. The nutritional demands of the ewe are the greatest during early lactation. Ewes nursing twins have greater protein and energy requirements than do ewes nursing a single lamb. Separate ewes nursing twins from ewes nursing singles, and supplement accordingly. Milk production peaks three to four weeks following lambing, and supplementation can be tapered off after that time. About 75% of the total milk yield is produced during the first eight weeks of lactation. After that period, milk production drops off drastically and the ewe's contribution to the nutritional needs of her lamb(s) is minimal. Consider early weaning lambs from fall-lambing ewes to reduce the total amount of feed that will be needed to carry these ewes through the winter feeding period.

REMEMBER!!! Regular monitoring of body condition combined with the appropriate ration for both the stage of production and the condition of the ewe, will help ensure not only healthy ewes and lambs, but will help ensure the most efficient utilization of your feed resources!

How Well Is Out-of-Season Breeding Working?

How well is out-of-season breeding working? Given the drought, maybe too well! This year, ewes lambing in early fall will be in danger of giving less than optimum milk, and based on the ovulation rate, many of these ewes will be having twins. On the brighter side, selling last year's fall born lambs early this year was a blessing as the lambs weren't around to eat that non-existent grass.

Marlon Knights, Ph.D student at WVU, has summarized the data on 5 farms where we have completed both checks on ovulation rate and pregnancy to first and second services. Many of you will remember last year's data, which are summarized in Table 1. There was a lot of variation among flocks last year, but it was clear that 5 days treatment with intravaginal progesterone inserts (CIDRs - controlled intravaginal drug release) was as good as 12 days. We also found that a number of pregnant ewes lost their fetuses during the hot summer weather, accounting for why the lambing rates were lower than the pregnancy rates. Last year, treatment with FSH (follicle stimulating hormone) increased litter size by about 0.25 lamb, but this was not a significant effect.

Treatment for 5 days made it easier to keep ewes confined in smaller areas during the treatment and breeding periods, than did treatment for 12 days. Given these findings, this year we have compared a 5 day progesterone treatment without FSH (40% of flock), to a 5 day progesterone treatment combined with FSH (40% of flock), to untreated control ewes (20% of flock).

As we have collected the data this summer, the ovulation rate in control ewes has seemed surprisingly high. Those data are still being summarized, but even with the drought, the FSH may not have been necessary to achieve ovulation rates comparable to the normal breeding season. We won't know for a few weeks whether the lambing rate and the number of lambs born per ewe will show any differences. The first lambs are due to arrive on one cooperating farm the second week in September.

Table 1. Results from 1998 Out-of-Season Synchronized Breeding Program

Treatment Group[1]	Control	P12	P12-FSH	P5-FSH
Number of Ewes per Treatment Group	73	73	71	77
Ewes in Estrus (% 1st estrus)	12	77	66	79
Ovulation Rate[2] (1st estrus average)	—	1.88	2.16	2.24
Pregnancy Rate (% overall)	51	81	75	79
Lambing Rate (% overall)	41	66	64	63
Lambs Born per Ewe (overall average)	1.5	1.5	1.6	1.8

[1] **Control** = no treatment **P12** = progesterone treatment only for 12 days **P12-FSH** = progesterone treatment for 12 days + FSH injection 24 hours prior to CIDR removal **P5-FSH** = progesterone treatment for 5 days + FSH injection 24 hours prior to CIDR removal .
[2]Number of ovulations observed following first estrus.

Table 2. Preliminary Results From 1999 Out-of-Season Synchronized Breeding Program

Treatment Group[1]	Control	P5	P5-FSH
Number of Ewes per Treatment Group (total of 5 farms)	92	181	201
Ewes Marked by Rams (%)	32	76	73
Ovulation Rate[2] (1st estrus average)	—	1.96	2.00
Pregnancy Rate (% overall)	57	71	68

[1] **Control** = no treatment **P5** = progesterone treatment only for 5 days **P5-FSH** = progesterone treatment for 5 days + FSH injection 24 hours prior to CIDR removal.
[2]Number of ovulations observed following first estrus.

Breeding Soundness Clinics

Do you know if your rams are ready for breeding? Can they get the job done?

A Ram Breeding Soundness Evaluation (RBSE) will help you answer these questions. The RBSE is a simple and effective means of evaluating the breeding potential of a ram. An RBSE takes only a few minutes. It includes a general physical exam, an exam of the reproductive tract, and an assessment of semen quality.

Stress, including heat stress, can affect the semen quality of a ram. Did you know that it takes approximately 60 days for sperm to develop and mature? This means that the heat and drought conditions two months ago can affect the semen quality of your rams today. Highly fertile rams can increase the pounds of lamb produced per ewe exposed by settling more ewes, settling more ewes earlier in the breeding season, and by producing more multiple births. Rams with poor fertility not only sire fewer lambs, but in multiple-sire breeding systems, they can also interfere with breeding by your better rams. Why wait until lambing season to find out what kind of condition your rams are in today?

During the month of September, the West Virginia Sheep Management Project is conducting RBSE clinics free of charge in several counties that are currently participating in the project, with appointments scheduled through the local County Extension Agent. Participating counties include Pocahontas, Pendleton, Grant, Greenbrier, Randolph, and Preston. If you missed this opportunity in your area, and would like more information, please contact the WV Sheep Management Project.

Scrapie Update:

Live Animal Test Now Available

For the first time, a live animal test for diagnosing scrapie is commercially available to sheep producers. The new test was developed by researchers with the USDA's Agricultural Research Service (ARS), and involves sampling the lymphoid tissue in a sheep's third eyelid. The tissue sample can be collected using a local anesthetic, making the new ARS test safer, easier and less expensive than more invasive procedures.

Scrapie is a fatal degenerative disease affecting the central nervous system of sheep. It is one of a group of diseases known as transmissible spongiform encephalopathies. Although scientists still don't fully understand how scrapie is transmitted, the disease is thought to be spread most commonly from a ewe to her offspring and to other lambs in the contemporary lambing group through contact with the placenta and placental fluids. The disease has a long incubation period. Signs of the disease may not be evident until 2 to 5 years after an animal has become infected. Once an animal becomes infected, death is inevitable. Until recently, the only way to confirm diagnosis of the disease was to microscopically examine brain tissue from the dead animal. In the U.S., scrapie has primarily been diagnosed in the Suffolk breed. The disease has had a significant impact on marketing opportunities for seed stock.

A Voluntary Scrapie Flock Certification Program is also available to sheep producers. The voluntary program focuses on risk reduction practices. Enrolled flocks are monitored using four levels of standards as a means of identifying flocks that are free of scrapie. Those interested in the Voluntary Scrapie Certification Program should contact the State Veterinarian's office. The live animal test is available through Gene Check, Inc., Fort Collins, CO.

"Opportunity Knocks"

Guard Dog Cost-Share

The West Virginia Department of Agriculture (WVDA) and the USDA have provided funding for a cost-share program with farmers that want to buy guard dogs. The cost-share program is for working dogs purchased for the purpose of guarding sheep and/or goats only. It does not include dogs purchased for breeding purposes or as pets. Farmers who purchase guard dogs may be eligible to receive a maximum of $100.00 for the calendar year as partial reimbursement. For more information about the cost-share program and about using guard dogs to reduce predator losses, contact the state Animal Damage Control office at (304) 636-1785.

NIH Proposals

There is a potential alternative marketing opportunity for the right farmer or farmer(s). The National Institute of Health (NIH) has announced that it will again be accepting bid proposals to purchase sheep for research purposes. NIH currently purchases 100-120 lambs per year, weighing 50-70 pounds. These lambs need to be supplied on a year-round basis, 6-12 head at a time, and delivered to the NIH quarantine facility in Poolesville, MD. There is no breed bias, but polled whiteface or crossbred lambs are preferred. A verifiable health program must be in place and must meet several specific criteria. For more information, contact the WV Sheep Management Project.

Mark Your Calendars!!!

Mark your calendars for Saturday, November 13, 1999. Woody Lane, a nationally known livestock nutritionist, will be here in West Virginia to conduct a day-long workshop that will cover everything from basic sheep nutrition to forage and pasture management, early weaning of lambs, and new marketing opportunities. Lane, who lives in Roseburg, Oregon, owns and operates an independent consulting firm "Lane Livestock Services." He also teaches courses in forages and livestock nutrition to area ranchers, facilitates a forage study group for ranchers, and writes a popular monthly column called "From the Feed Trough..." for The Shepherd magazine.

Woody earned his advanced degrees in livestock nutrition from Cornell University and spent two years as an assistant animal scientist with the Allegheny Highlands Project in Elkins, WV. In the 1980's, he was the State Extension Sheep and Beef Cattle Specialist for the University of Wisconsin. Woody is in great demand as a speaker and has given numerous nutrition and forage workshops across the United States and Canada. In the past few years, he helped develop the well-known "SID Sheep Production Handbook" and together with the popular veterinarian Don Bailey, developed an instructional set of three videotapes called "Lambing Time Management."

We are fortunate to have a speaker of Woody's caliber in West Virginia. The day-long workshop will be a great opportunity for sheep farmers to ask questions and increase their knowledge of sheep management.

Special Sheep Workshop

Featured Speaker: Dr. Woody Lane

Saturday November 13, 1999

Clinton Hedrick Community Bldg, Riverton, WV

9:00 am - 4:00 pm