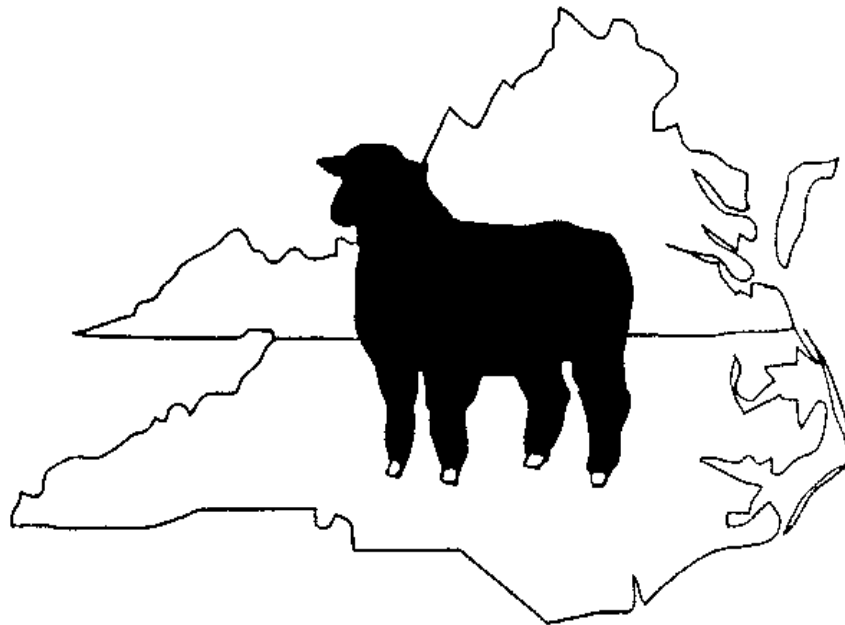


Proceedings

2013

VIRGINIA-NORTH CAROLINA SHEPHERDS' SYMPOSIUM



January 11 - 12, 2013

***ALPHIN-STUART LIVESTOCK ARENA
PLANTATION ROAD
BLACKSBURG, VIRGINIA***

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2013 VA-NC Shepherds' Symposium

Presented By

Virginia Sheep Producers Association

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Friday, January 11

- AM** *Alphin-Stuart Livestock Arena*
- 9:00-5:00** **Sheep Management 101 Workshop**
All day hands-on clinic for beginning shepherds covering topics related to basic sheep production and lambing management (Limited to first 20 participants registered, additional registration fee)
- PM** *Alphin-Stuart Livestock Arena*
- 4:00** **Virginia Sheep Industry Board Meeting (Open to the public)**
- 6:00** **Virginia Sheep Producers Association Board Meeting (Open to the public)**

Saturday, January 12

- AM** *Alphin-Stuart Livestock Arena*
- 8:15** **Registration and Commercial Exhibits**
- 9:00** **“Sheep Health – Common Problems, Mistakes, and Remedies”**
Dr. Andy Meadows, DVM, Springwood Livestock Management Services, Wytheville, VA
- 10:00** **“A New Approach: Forage –Based Ram Test for Evaluation of Performance and Parasites”**
Dr. Scott Greiner, Dept of Animal & Poultry Sciences, Virginia Tech
Mr. Lee Wright, Southwest AREC, Virginia Tech
- break*
- 10:45** **“Utilizing Fecal Egg Counts as Parasite Management Tool”**
Dr. Anne Zajac, DVM, VA/MD Regional College of Veterinary Medicine

- 11:45** **Roy Meek Outstanding Sheep Producer Award Presentation**
Virginia Sheep Producers Association Annual Meeting
- 12:15** **Lunch – will be provided**
“The Sheep Business – National Perspective from ASI”
Dr. Will Getz, ASI Executive Board – Region II Director, Georgia
- “What’s new with the American Lamb Board”**
Mr. Leo Tammi, Director – American Lamb Board, Mt. Sidney, VA
- PM**
- 1:30** **“Flock Nutritional Strategies”**
Dr. Mark McCann, Dept of Animal & Poultry Sciences, Virginia Tech
- 2:00** **Sheep Management Workshops (hands-on sessions)**
Ram Selection – Dr. Scott Greiner
Flock Health Tips – Dr. Kevin Pelzer, DVM,
VA/MD Regional College of Veterinary Medicine
Fecal Egg Count Lab – Dr. Anne Zajac
Evaluating Feed Options – Dr. Mark McCann
- 3:15** **“Successful Marketing – What You Need to Know”**
Mr. Jeff Lawson, Green Hill Farms, Churchville, VA
Mr. Gary Hornbaker, Mutton Bustin’ Farm Berryville, VA
Mr. Mike Carpenter, VA Dept. of Agriculture and Consumer Services

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If you are a person with a disability and require any auxiliary aids, services, or other accommodations for this symposium, please discuss your accommodation needs with Scott Greiner at (540) 231-9159 at your earliest convenience.

PRE-REGISTRATION INFORMATION

Received by January 5, 2013

FRIDAY ONLY

_____ **\$25.00 SHEEP MGMT 101 REGISTRATION**

SATURDAY SYMPOSIUM

_____ **\$25.00 FULL REGISTRATION (includes lunch, breaks, and materials)**

_____ **\$10.00 YOUTH FULL REGISTRATION (includes lunch, breaks, and materials)**

===== **TOTAL**

◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆

ON-SITE REGISTRATION

After January 5, 2013

FRIDAY ONLY

No On-Site Registration for Sheep Mgmt

SATURDAY SYMPOSIUM

_____ **\$30.00 FULL REGISTRATION (includes lunch, breaks, and materials)**

_____ **\$15.00 YOUTH FULL REGISTRATION (includes lunch, breaks, and materials)**

===== **TOTAL**

VIRGINIA-NORTH CAROLINA
SHEPHERDS' SYMPOSIUM
PRE-REGISTRATION

DEADLINE – JANUARY 5, 2013

LOCATION:

*Alphin-Stuart Livestock Arena
Plantation Road
Blacksburg, VA*

The Virginia-North Carolina Shepherds' Symposium is open to all sheep producers from the Mid-Atlantic Region. It provides in-service training opportunities for extension personnel, educators and other professionals in sheep and related agribusiness industries. Youth are an important segment of the sheep industry and are invited to attend.

MOTEL RESERVATIONS:

Holiday Inn – (540) 552-7001
900 Prices Fork Rd, Blacksburg (~1 mile) (next to University Mall area) (\$85+tax)

The Inn At Virginia Tech – (877) 200-3360 (*toll free*) or (540) 231-8000
901 Prices Fork Rd, Blacksburg (~1 mile) (next to University Mall area) (\$89+tax)

Blocks of rooms have been reserved at the hotels listed above. These rooms will be held until January 3, 2013.

Please state you are with the Virginia Sheep Producers when making reservations.

MOTEL RESERVATIONS ON YOUR OWN

VIRGINIA-NORTH
CAROLINA SHEPHERDS'
SYMPOSIUM



January 11 - 12, 2013

*Alphin-Stuart Livestock Arena
Plantation Road
Blacksburg, Virginia*

*Pre-Registration Deadline
January 5, 2013*

Sponsored by:

**Virginia
Cooperative Extension**
A partnership of Virginia Tech and Virginia State University www.ext.vt.edu

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VIRGINIA STATE

Complete separate form for each participant only if different addresses.

NAME _____

ADDRESS _____

CITY _____

STATE _____ ZIP _____

DAYTIME PHONE _____

E-MAIL _____

FAX _____

✦ Credit cards are not accepted this year ✦

Please return with payment for registration (make check payable to VSPA) no later than January 5 to:

Virginia Sheep Producers Association
Dept of Animal & Poultry Sciences
Virginia Tech
Blacksburg, VA 24061
Phone: (540) 231-9159
Fax: (540) 231-3010

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Virginia Sheep Industry Board
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261 Mt. Clinton Pike
Harrisonburg, VA 22802
540-209-9143

Virginia Sheep Producers Association
Dept of Animal & Poultry Sciences
Virginia Tech
Blacksburg, VA 24061
540-231-9163

Sheep Health: Common Problems, Mistakes, and Remedies

Andrew W. Meadows, MS, DVM
Springwood Livestock Mgt. Services
Wytheville, VA 24382
540-520-2609

Flock Health

- Interrelationships between many factors
 - Nutrition
 - Genetics
 - Parasites
 - Environment
 - Health program
- Foundation for productivity and profit potential

Nutrition

- Grazing/forage management #1 !!
 - Rotational grazing
 - Stockpiled forages
- Harvested forages
 - Dry
 - High moisture
- Grain/co-product supplements
 - Energy (TDN)
 - Protein (CP)
 - Ca:P ratio
- Vitamin/mineral supplements
- Water

Grazing/Forage Management

- Most cost effective feed source
- Healthiest feed for ruminants
- Common management **opportunities:**
 - Overstocking/overgrazing
 - Short grazing season
 - Single species grazing
 - High parasite loads

Overstocking/Overgrazing

- Dramatically increases parasite load and exposure
- Decreases pasture vigor and productivity
- Increases susceptibility to drought
- Decreases animal performance
- **Remedy: Pasture rotation/rest**

Pasture Rotation/Rest

- Rest period of 30-45 days allows for pasture recovery and regrowth
- Improves pasture health and productivity
- Aids in parasite management
- Improves livestock performance
- Take half, leave half

Short Grazing Season

- Increases cost of production!
- Requires greater amounts of stored/purchased feeds
- May decrease animal performance
 - Quality of feedstuffs
- May impact animal health
 - Increasing animal density
- **Remedy: *Extend the grazing season***

Extending the Grazing Season

- Stockpiled fescue
 - Excellent feed for ewe flock
 - Holds quality well into winter
 - Requires less labor than feeding hay
 - Gets sheep out of the barn!
- Fall/winter annuals
 - Excellent feed source
 - More input cost
 - Requires more labor/equipment

Single Species Grazing

- Favors parasite development and survival
- Most economically important livestock parasites are host-specific
- Less effective forage utilization
- **Remedy: *Multiple species grazing***

Multiple Species Grazing

- Complementary grazing behaviors
- Decreased parasite survival
- Add 2-3 ewes per cow
- Not available to all shepherds
- Agreements with neighbors??

Harvested Forages

- Hay
 - High moisture (Baleage)
 - Dry- Round, small square, large square
- Silage
- Haylage
- Potential contaminants
 - Listeria, Toxoplasma, mycotoxins, nitrates
- **Remedies: Proper storage, forage testing, observation**

Harvested Forages

- Storage
 - *Fermented feeds*- maintain anaerobic conditions until feeding
 - *Dry hays*- indoors or under cover, well-drained site with southern exposure if outdoors

Harvested Forages

- Forage testing
 - Nutrient composition- routine or *should be*
 - Mycotoxins- difficult to test for quantitatively
 - Nitrates- corn, sorghum, sudangrass, hybrids, johnsongrass, small grains.

Harvested Forages

- Pathogens
 - Listeria- circling disease
 - No prevention
 - Can be sporadic or outbreak
 - Treatment with penicillin or oxytetracycline is usually effective if done early in the disease course
 - Toxoplasma- feline G.I. parasite, abortions in ewes
 - No treatment
 - Prevention is avoiding feline fecal contamination of feeds, especially young cats
 - Feeding monensin to pregnant ewes is effective to control
- Animal observation is critical

Grain/co-product supplements

- Energy (TDN)
 - Usually the limiting nutrient for ewe flock
 - Corn and barley are standards for supplementation
- Protein (CP)
 - Cool-season grasses usually meet requirements
 - Often over-supplemented
- Ca:P ratio
 - Should be $\geq 2:1$
 - Biggest concern is for urinary calculi in males
 - Ringwomb in ewes
- Sulfur
 - Micromineral absorption
 - Polio

Vitamin/mineral supplements

- Use a product formulated for sheep/goats
- Copper
 - Toxic in excess
 - Risk ????
- Selenium
 - Also toxic in excess
 - White muscle disease
 - Retained placenta
 - Feed vs. injection
- Salt
 - Encourage water consumption
 - Limit intake

Water

- The most important nutrient, often overlooked
- If you wouldn't drink it, the sheep won't either!
- Especially in hot, humid weather
- Lactation
- Rams and wethers

Genetics

- Influence many aspects of flock health!
 - Parasites
 - Footrot
 - Respiratory disease
- Heritabilities are likely low
- Progress is slow but observable and worthwhile
- Tools to measure are currently lacking

Parasites

- There is NO silver bullet
- The good old days are likely gone forever
- Management is CRITICAL
- A few fundamental principles:
 - Minimize exposure to drugs
 - Monitor results
 - Keep records
 - Use all the tools available

Environment

- Keep sheep out of the barn as much as possible
- Maximize grazing opportunities
- Minimize animal concentration
- Ventilation is critical for housing systems

Health Program

- Abortions
- Foot health
- Parasites
- Reproductive management
- Pregnancy toxemia
- Respiratory disease

Abortions

- Syndrome includes abortion, stillborn, weak lambs
- Up to 5% of flock may be normal
- Infectious, toxic, physical causes
- Prevention/treatment (*if possible*) depend on cause
- Diagnostic testing is necessary to determine cause

Infectious Abortions

- Chlamydia (Enzootic abortion)
- Campylobacter (Vibrio)
- Toxoplasma
- Listeria
- Salmonella
- Leptospira, Q-fever, Brucella ovis

Abortion Prevention/Treatment

- Hygiene
 - Isolate ewes that abort
 - Remove soiled bedding and aborted tissues
 - Feed in bunks
- Bio-security
 - Do not buy replacements from flocks with problems
 - Isolate new purchases from the pregnant ewes
 - Consider antibiotic treatment for new purchases

Abortion Prevention/Treatment

- Vaccinations
 - Campylobacter, Chlamydia, Lepto
 - Immunity is short-lived
 - Primary and secondary immunizations first year, annual boosters thereafter
 - Inconsistent availability

Abortion Prevention/Treatment

- Antibiotics
 - Consult with your veterinarian
 - Use should be limited to cases where cause of abortion is diagnosed
 - Culture and sensitivity to guide therapy
 - Resistance is increasing
 - Necessary for ewe health in the case of Salmonella and Listeria

Abortion Prevention/Treatment

- Ionophores
 - Lasalocid, monensin
 - May be useful for Toxoplasma control
 - Also control coccidia
 - Improve feed efficiency
 - Not related to human therapeutic agents
 - Not absorbed from the G.I. tract
 - Consult your veterinarian

Foot Health

- Footrot vs. foot scald
 - Dichelobacter nodosus, B. melaninogenicus, F. necrophorum
 - Anaerobic
 - Sensitive to penicillin, tetracycline
 - Highly contagious in sheep/goats
 - Control rests on bio-security, hygiene, and animal treatment

Foot Health

- Hygiene
 - Reduce crowding
 - Encourage grazing, movement
 - Clean bedding
 - Minimize muddy areas
 - Foot trimming and bathing

Foot Health

- Bio-security
 - DO NOT buy from flocks with footrot
 - Isolate new additions
- Treatment
 - Trimming
 - Footbathing
 - Antibiotics
 - Topicals

Foot Health

- Eradication is possible
- Principles:
 - Resistance varies between individuals and appears to be heritable
 - Bacteria does not survive outside the host indefinitely- < 2 weeks
 - Sunlight and drying greatly decrease organism survival

Foot Health

- Strategy:
 - Create clean and infected pastures
 - Trim and examine each foot
 - Segregate sheep
 - Clean feet to clean pasture
 - Infected feet remain on infected pasture
 - Inspect, treat, and segregate weekly
 - Cull repeat offenders

Reproductive Mgt.

- Ram management
 - Shearing
 - Shade
 - Nutrition
 - Se/Vit E
 - Body condition
 - Ca:P
 - Water
 - Vaccinations- CD/T annually

Ram Management

- Breeding soundness exam
 - Prior to every breeding season, esp. spring
 - Physical
 - Soundness
 - Body condition
 - General health
 - Scrotal circumference
 - Under 14 mos.- 30 cm
 - Over 14 mos.- 32 cm
 - Semen evaluation
 - Motility > 30%
 - Morphology >50%
 - Brucella ovis serology

Reproductive Mgt.

- Ewe management
 - Vaccinations
 - Campylobacter/Chlamydia- pre-breeding, mid-gestation
 - CD/T, E. coli- 30 days pre-lambing
 - Breeding season
 - “Ram effect”
 - Flushing
 - Pregnancy diagnosis

Pregnancy Diagnosis in Sheep

- Fetal aging
- Fetal counts
- Viability
- Congenital defects

Pregnancy Diagnosis in Sheep

- Benefits to the shepherd
 - Grouping ewes for feeding.
 - Eliminating open/barren ewes.
 - More timely marketing of ewe lambs for higher prices.
 - More efficient utilization of labor at lambing time.
 - Facilitate grafting of triplets/quads.

Pregnancy Toxemia

- Affects ewes carrying multiple fetuses
- Late gestation
- Over-conditioned
- Inadequate energy intake

Pregnancy Toxemia

- Prevention
 - Prevent excessive conditioning in dry ewes
 - Feed pregnant ewes according to fetal counts
- Treatment
 - 1-2 oz. propylene glycol orally per day
 - Dextrose, Ca⁺⁺ SubQ
 - Oral live culture yogurt
 - Vit. B complex

Respiratory Disease

- Adequate ventilation in housing systems
 - Ammonia is a potent airway irritant
 - Control dust
 - Avoid overheating
- Vaccinations
 - Pasteurella multocida
 - Parainfluenza 3
- Treatment
 - Antibiotics, consult your veterinarian

Summary

- Flock health is the foundation to productivity and profit potential
- There are no “silver bullets”
- Let sheep be sheep, forage management is key
- Vaccines, anthelmintics, antibiotics, ionophores are useful tools, neither “demons” nor “saviors”

Forage-Based Hair Sheep Ram Lamb Evaluation
Summary of Virginia Tech Southwest AREC Ram Test 2012

S.P. Greiner, D.L. Wright, D.R. Notter, M.A. McCann, B. Allen, and A. Zajac
Virginia Tech

Program Objectives

1. To provide a standardized post-weaning performance evaluation of growth and parasite resistance that will furnish records which will be useful to the consignor's breeding program.
2. To serve as an educational tool for the sheep industry.

Program Overview

Eighty nine Katahdin rams born December 15, 2011 through March 15, 2012 were delivered to the Southwest Virginia Agricultural Research and Extension Center at Glade Spring, VA on June 5. Rams originated from 13 flocks located in VA, OH, GA and KY. At delivery, rams were weighed, vaccinated for clostridial diseases and soremouth, and scrotal measurements taken. Additionally, rams were dewormed with three anthelmintics (ivermectin, albendazole, levamisole), and fecal samples collected to determine presence of nematode parasites (FEC). A 21 day adjustment period was used to acclimate rams. A subsequent FEC was taken 12 days following delivery to confirm acceptable reduction in parasite load. The primary goal of the pre-test period was to ensure all rams had very low parasite loads at the initiation of the test.

Following the three week adjustment period, rams were allocated to 4 forage paddocks based on age and weight, and the structured performance test initiated on June 29. At the start of the test period all rams will receive an oral dose of 5,000 3rd stage *H. contortus* larvae. Body weights, FEC, PCV and FAMACHA scores were taken at the beginning of the test period, at 14 day intervals during the test (14, 28, 42, and 56 days), and at the conclusion of the test (74 days, September 11). During the test, rams had continuous access to fescue paddocks, and received supplemental concentrate feed at rate of 3% body weight daily (75% TDN, 16% CP).

FEC and FAMACHA was utilized to determine rams requiring deworming treatment. Rams were scanned via ultrasound on August 28 to estimate carcass merit/body composition. All rams were dewormed with multiple anthelmintics at the conclusion of the test (September 11). All rams were subjected to a breeding soundness examination conducted by veterinarians from the VA-MD Regional College of Veterinary Medicine.

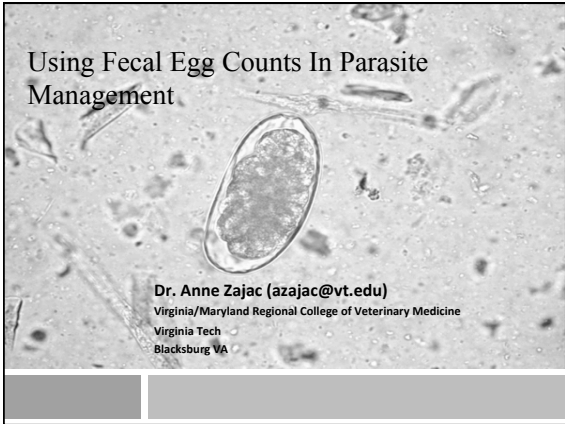
Results

A summary of the performance data results for the rams over the 74-day test period is summarized below. A total of 7 rams required deworming treatment during the test period.

Trait	Average	Minimum	Maximum
Test Start Weight, lb	78	48	131
Test Final Weight, lb	96	64	154
ADG, lb/d	0.25	0.05	0.46
WDA, lb	0.47	0.35	0.61
Scrotal Cir., cm	30.0	22.0	35.5
100-lb Adj. Fat Th., mm	2.4	0.7	4.4
100-lb Adj. Loin Depth, mm	18.3	14.3	21.9
Mean Adj. FEC, egg/g	541	11	4003

An educational field day and sale was held on September 22. Thirty-two of the rams which completed the test were offered through the sale. An rams which required deworming were eliminated from the sale, as were rams with poor performance and those which failed the breeding soundness exam. Consingors were allowed to sell a portion of their rams and retain a portion for home use. All available information on the rams was presented in the catalog, including: birth type, codon 171 genotype, final weight, test ADG/ratio, WDA/ratio, scrotal circumference, adjusted fat thickness, adjusted loin muscle depth, mean adjusted FEC (average of four adjusted fecal egg counts taken post-infection), and FEC Category (presented adj FEC into three categories: +++ = rams one standard deviation better than the average, + = one standard deviation poorer than average, and ++ = near average of test group). Rams categorized as +++ for FEC sold at the top of the sale order, followed by ++ rams and finally + category rams. Within FEC category, sale order was established based on an index weighted 2/3 on WDA and 1/3 on ADG. EBVs were also provided for rams participating in the National Sheep Improvement Program.

The 30 rams sold averaged \$883 per head, with a range of \$425 to \$1900. Rams sold to Virginia, North Carolina, Ohio, and Georgia.

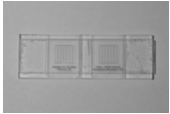


Sheep Fecal Egg Counts

- What is a fecal egg count?
- What are they good for?
- What are they not good for?
- Should you do your own fecal egg counts?
- What's needed to do them?

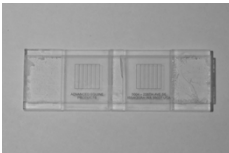
Fecal Egg Counts

- Most common way and the best way to get fecal egg counts for sheep, goats and horses is McMaster test
- Uses special slide with a grid to make counting easier
 - Measure manure and flotation fluid so know exactly the quantity of manure in the test
 - Count eggs, then can calculate back to yield eggs/gram manure



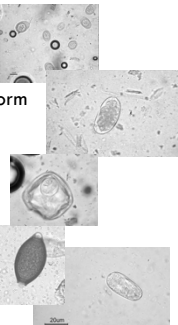
Why Count Egg Numbers in Fecal Exams?

- In pets (or people) we don't want any parasites at all so positive/negative test is desirable
- In grazing animals we accept the presence of some level of parasites so positive/negative test less helpful



Which Parasites Do You See in Fecal Test?

- Coccidia
- Strongylids (GI worms including *Haemonchus contortus*—barberpole worm
 - May also be called trichostrongyles or strongyles
 - Several species produce identical eggs
- Tapeworm (*Moniezia*)
- Whipworm (*Trichuris*)
- Threadworm (*Strongyloides*)



Other parasites?

- Lungworms
 - A different test is better for lungworms
- Deer (meningeal) worm
 - Not in manure because worms never become adult

Parasites in a Fecal Egg Count

- Example: results from 4 month old lambs
- Whipworms, threadworms not considered important except under unusual circumstances
- Number of tapeworm eggs meaningless because eggs passed in segments
- ns=none seen

Sheep	Strongylids	Coccidia	Tapeworm	Whipworm	Threadworm
1	3000	500	ns	150	400
2	600	10,000	150	ns	ns
5	150	2000	8000	50	200
6	1500	200	ns	ns	100
7	500	900	15,000	ns	ns
8	400	ns	ns	100	750



Parasites in a Fecal Egg Count

- As an example, results from 4 month old lambs
- Recognize that if one sheep infected with parasites below, they are all exposed
 - ns doesn't mean they are not infected

Sheep	Strongylids	Coccidia	Tapeworm	Whipworm	Threadworm
1	3000	500	ns	150	400
2	600	10,000	150	ns	ns
5	150	2000	8000	50	200
6	1500	200	ns	ns	100
7	500	900	15,000	ns	ns
8	400	ns	ns	100	750

Why Do Fecal Egg Counts (FEC)?

- To see if drugs still work
- Indicate relative susceptibility of individual animals to parasite
- Use in conjunction with other information to design and evaluate parasite control programs
- However
 - Fecal exams are not a reliable way to diagnose parasitic disease in **individual** animals

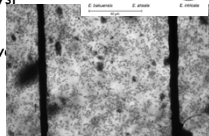
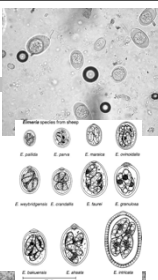
What To Do With FEC Results?

- Most natural reaction is –this will tell me who to treat
- FEC provide an estimate only, eggs not uniformly distributed
 - Not a highly accurate test, especially at low numbers
- Numbers not absolute, have meaning in context
 - Time of year (winter, summer, early/late grazing season, etc)
 - Treatment history (dewormed last week, last month, last year, etc)
 - Animal condition: age, clinical signs, etc.
- FEC never intended to be sole determinant of disease status of an animal

Sheep	Strongylids	Coccidia
1	3000	500
2	600	10,000
5	150	2000
6	1500	200
7	500	900
8	400	ns

FEC and Disease

- Many assume that over a certain number of coccidia in a fecal sample means it's coccidiosis
- Not as straightforward as it seems
 - Diarrhea may precede high oocyst shedding
 - Clinically normal animals can have high oocyst counts
 - What species is it?



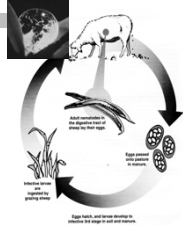
Diagnosing Disease with Fecal Egg Counts

- What's the disease cutoff for coccidiosis?
 - All over the place, see 5,000 up to 50,000 opg
- Same with worms, egg count may not tell you if they have disease
- What to do with these lamb results?
- Nothing without further information
 - Are there signs of disease?
 - Anemia, diarrhea
 - Treatment history, time of year

Sheep	Strongylids	Coccidia
1	3000	500
2	600	10,000
5	150	2000
6	1500	200
7	500	900
8	400	ns

Strongylid worms

- Number of eggs in manure will vary seasonally
- Population of adult worms in gut lower in winter months
 - Many larvae in the host in a dormant state (arrested or hypobiotic)
 - No disease, no eggs in feces



What are Fecal Egg Counts Good For: Testing Drug Efficacy

- Modern available dewormers fall into 3 groups

Benzimidazoles	Macrolides A-avermectin M-milbemycin	Nicotinics
fenbendazole (Safeguard)	ivermectin-A (Ivomec etc.)	levamisole (Prohibit)
albendazole (Valbazen)	eprinomectin-A (Eprinex)	Pyrantel(Strongid)
Oxfendazole (Synanthic)	doramectin-A (Dectomax_)	morantel (Rumatel, Goat Care, Positive Pellet)
Oxibendazole (Anthelcide)	moxidectin-M (Cydectin)	

What are FEC Good For: Testing Drug Efficacy

- Fecal Egg Count Reduction Test (FECRT) for sheep and goats
 - Usually done by comparing pre and post treatment samples from a group of animals (should have 10-15)
 - Need 2 fecal samples from each animal—at the time of treatment and 10-14 days later (not after that)
 - Most scientific is to have a treated group and an untreated group because egg counts might change for other reasons, but this isn't always practical
 - Calculate the % reduction in fecal egg counts (FECR)

What are FEC Good For: Testing Drug Efficacy

- Fecal egg count reduction test—sheep and goats
 - Animals must have minimum of 150-200 epg before treatment, even higher is preferred
 - Lower counts inaccurate
 - If testing fewer than 10 animals the you will get a rough idea only
 - Give the right amount of drug—weigh animals preferably
 - If not weighing, dose for heaviest animal
 - Use oral form of drug
 - Collect follow-up sample 10-14 days
 - Easiest to calculate egg count reduction for each animal and then average

FECRT example 1

Animal #	Pretreatment	After Treatment	Reduction
1	1000	100	90%
2	600	50	92%
3	200	0	100%
4	3000	250	92%
5	150	50	67%
6	1500	0	100%
7	500	100	80%
8	400	0	100%
Average	919	69	90%

CALCULATE FECR $100(1 - \{\text{Post/After}\})$ for each animal, calculate mean

One sheep is not enough; what if you picked #5?

What are FEC Good For: Testing Drug Efficacy

- In general, for sheep and goat dewormers look for efficacy greater than 90%
- If efficacy less may indicate presence of resistant worms
 - Numbers in mid range—70-90% harder to interpret—watch closely
 - <70% strong concern
- Always consider confounding factors:
 - Were animals given the right dose?
 - Was the drug expired?
 - Might egg counts change on their own?
 - Did you have enough animals
- The lower the fecal egg count reduction, the higher the proportion of resistant worms in the population—but not a direct relationship (so 60% FECR doesn't mean you killed 60% and 40% of the worms are resistant)

Why Do Fecal Egg Counts (FEC)?

- To see if drugs still work
- Indicate relative susceptibility of individual animals to parasite
- Use in conjunction with other information to design and evaluate parasite control programs
- However
 - Fecal exams are not a reliable way to diagnose parasitic disease in **individual** animals

Individuals Vary in Susceptibility to Worms



- Normal immunity controls parasites, doesn't eliminate them
 - Immune animals will have eggs in manure
 - Immunity in place at maturity
 - Variation in level of immunity in individuals
- Where do worm problems appear?
 - Sheep before immunity fully developed
 - Sheep with temporary reduction in immunity
 - Ewes at time of lambing especially susceptible
 - Poor health or nutrition
- Animals with **INHERITED** high susceptibility to parasite

Immunity of the Host

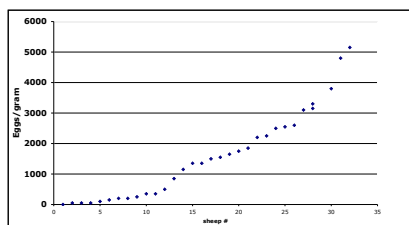


- Under normal conditions, most animals control their parasites
- A few are highly susceptible
- Much of an individual animal's susceptibility is inherited so that can be selected for in a breeding program
- Population rule: All other things equal, **~30% of the animals contribute ~80% of the parasite eggs to pasture**
- But if you have only 10 sheep, you may not see exactly that breakdown

Reduce Parasite Exposure on Pasture Immunity of the Host Drugs



My Sheep



Selection for Resistance to Parasites

- Easiest to identify the most susceptible sheep with FAMACHA (anemia) scores
 - Tells you who not to use for breeding,
- Since most animals should not develop disease, FAMACHA not so good for identifying the sheep with the best immunity
 - This is where fecal egg counts come in

Interpreting Fecal Egg Counts

Lamb #	Eggs/g	
101	ns	More resistant
110	6000	More susceptible
192	400	
64	1150	
105	750	
120	1650	
89	1050	
95	4050	More susceptible
116	850	
100	1900	
75	100	More resistant
88	1050	
108	900	

- Fecal egg counts 4-5 month old lambs in August
- McMaster not highly accurate especially when numbers low
 - Small differences not very meaningful
- When looking for resistant/susceptible animals do tests when egg counts highest
- May not tell you the BEST one, but can narrow it down

Interpreting Fecal Egg Counts

Lamb #	Eggs/g
64	1150
105	750
120	1650
89	1050
116	850
88	2000
108	900

- Fecal egg counts 4-5 month old lambs in August
- The larger the group of sheep, the more likely you are to see meaningful differences
- In this group there are no differences

Should You Do Your Own FEC?

- Commercial labs vary in charge
 - Try and find one that does bulk rate
- Worth doing your own if you will be doing lots
 - Active selection program, drug testing
 - Strong interest
- If only doing a small number every year may not be worth investment and may not be easy to do them well

Performing Fecal Egg Counts

- Whether or not you do your own, need good sample collection
 - Know who the sample came from
 - Allows identification of highly susceptible/resistant animals
 - Need **fresh** samples
 - Samples that sit on the ground invaded by free living nematodes
 - Eggs may hatch
 - Use samples that you have seen hit the ground or rectal fecal samples

Performing fecal exam

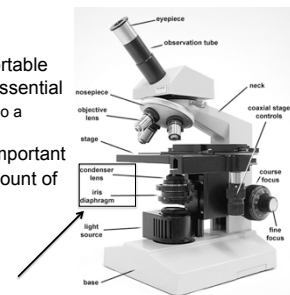
- Collection of fecal samples
 - Rectal fecal samples
 - Wear glove, use water, spit or KY jelly to lubricate finger
 - Insert 1 or 2 fingers into rectum, animal often stimulated to push feces out or you can cup fingers and pull out
 - Turn glove inside out and label
 - Don't try on babies!
 - Samples can be stored in the refrigerator for up to a week before examination
 - Put in plastic bag, press out excess air so eggs don't develop

Performing the fecal exam

- Greatest amount of information comes from sampling individual animals
 - Representative sample from each category: ewes, lambs, rams, etc.
- Composite sample (samples mixed together)
 - More convenient, quicker
 - Can be misleading depending on which animals are included
 - If doing composites
 - Separate by category (ewes, lambs, etc)
 - Use the same amount of feces from each animal

Equipment

- Compound Microscope
 - Binocular more comfortable than monocular, not essential
 - Can also use attached to a computer
 - Internal light source important
 - Means to regulate amount of light reaching slide
 - Moveable stage



Performing the Fecal Exam Equipment

- Way to measure feces
 - By weight or by volume
 - Recommend using weight
 - Can get inexpensive balances in 0.1 increments
- Way to measure flotation solution
 - Syringe, graduated cylinder, small measuring cup



Supplies

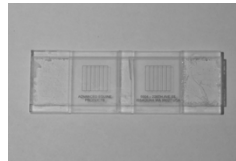
- Other supplies
 - Paper/plastic cups
 - Something for mixing--spoon, tongue blades, etc.)
 - Something for straining--tea strainer, cheesecloth squares, unfolded guaze pads
 - Something for transferring material to slide--pipette or 1 cc syringe
 - Nice to have some slides and coverslips on hand for unusual things

Methods of fecal analysis

- McMaster test based on flotation--parasite eggs float because they are less dense than the fluid they're in
- Flotation solutions
 - Saturated salt solutions
 - Table salt (NaCl) or Epsom Salts (MgSO4)
 - Add to warmish tap water until some stays undissolved, let sit overnight
 - Commerical solution--Fecasol (Sodium nitrate) can also be used
 - Sugar solution very viscous and sticky

McMaster Test Equipment

- McMaster's Slide



U.S. Supplier:
Chalex Corporation
 5004-228th Ave SE, Issaquah, WA.
 USA 98029
 Phone 425-391-1169
 Fax 541-886-3300
<http://www.vetslides.com>

Get slides with green lines

Doing Your Own Fecals

- Can also buy complete set-ups like this website sells, also claim to provide on-line help



American Sheep Industry Update

Will R. Getz, Ph. D.
ASI Region 2 Director
Fort Valley, GA

213 ASI Calendar

Received by Mail
Available for \$5 by contacting ASI

Let's Grow Efforts

- Focus on management efficiency.
 - Need to maximize efficiency of lambs born and lambs/wool shipped every year for profitability and for growth.
- August webinar focused on pregnant ewe nutrition.
- Two new webinar topics being scheduled.
- www.growourflock.org

Let's Grow Efforts

Next Phase
Mentor Program
New Producer Toolkit

eXtension - Sheep

Sheep Community of Practice
Vetted Science-based Information
Producer Support Available
Electronically

International Factors Impacting Wool Prices – Downward Pressure

Euro-zone Economy Uncertainty
Decline in Global Finance Market
Large Chinese Interests Waiting for
Cheaper
In USA the Military Remains Biggest
Buyer and User of Wool

Wool Superwash

- Huge success story for the sheep industry.
- Results in a shrink-resistant treatment that makes wool products machine washable and dryable without shrinking = Total Easy Care
- Used in commercial and military products.
- Production projections exceeded by 40% in 1st full year.

Lamb Prices Under Pressure in Traditional Production/Processing System

- Result of complex interaction of factors resulting from:
 - Happenings in feed grain market.
 - Happenings in Australia and New Zealand
 - Happenings in slaughter capacity
 - Happenings in consumer disposable income
 - Happenings in market price dynamics

Lamb Prices and Product Characteristics

- Record high purchase of product by USDA for use in military and school lunch programs.
- Lamb summit in September in response to complex issues.
- ALB and American Sheep and Goat Center supporting an assessment of lamb business.
- Results to be reported at ASI Convention.

Export Markets

- Interest shown by Japan, China, Taiwan, Russia and European Union.
- Free trade barriers have been reduced, e.g. BSE case in 2003.
- Must product to foreign specifications for sustainable opportunity.

Wildlife Services

- Animal rights groups still seeking to reduce or eliminate functions of livestock protection via USDA/Wildlife Services by reducing or eliminating funding.
- The issues remain and will be back on the table for legislative action in 2013.

LRP-Lamb Revisions

- Revised subsidy levels.
- Tuesday sales when Monday is federal holiday.
- Informational materials available
 - www.rma.usda.gov/livestock

Flock Nutritional Strategies

Mark A McCann
Extension Animal Scientist

Feeding the flock is the largest cash cost associated with sheep production. Beyond the cost side of the balance sheet, nutrition also plays a key role in factors affecting income such as number of lambs born, lamb vigor and survival, milk production and lamb growth. Balancing costs with production benefits is the key to formulating an economical nutritional strategy for your flock.

Managing factors which impact income

The ewe's annual production cycle can be divided into five periods: flushing, early gestation, late gestation, lactation, and maintenance. Of these, late gestation and lactation are the two most critical and costly periods of feeding the ewe. The last 30-45d of gestation and first 45d of lactation generally require supplementation (Table 1) to meet nutritional needs. This is especially true for ewes with twins. Inadequate nutrition during late gestation can cause numerous problems such as:

- A higher percentage of ewes with pregnancy disease
- A decrease in birth weights
- Weaker lambs at birth
- An increase in infant lamb mortality
- Slower gaining lambs
- Lower milk yields during lactation

Underfeeding during lactation will reduce ewe milk production and body condition. The decline in milk production will negatively impact lamb growth and vigor. The ewe's requirements for protein and energy are at their highest during this period and the requirements increase with the number of lambs..

Flushing is a short period of time prior to and the onset of breeding where energy is supplemented to increase ovulation rate. Most research would indicate that this only effective and economical when ewes are in a thin body condition.

The maintenance of ewes is their lowest nutritional requirement for both protein and energy. During maintenance and early gestation are the easiest times to increase the body condition of thin ewes with the use of good quality forages.

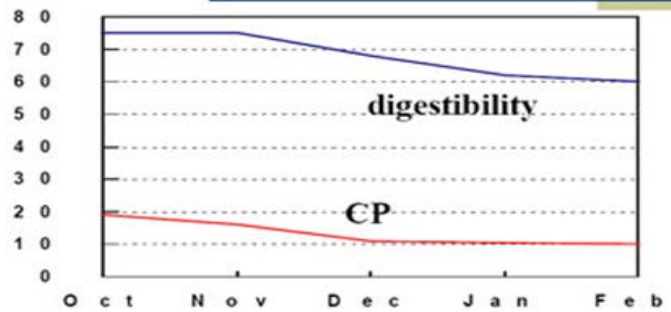
Managing factors which impact costs

One key to managing costs is minimizing use of stored forages and grain. This is not to eliminate their use but rather emphasize being efficient and economical in when and how much to feed. A few factors to keep in mind are:

1. Many times it is less expensive to purchase hay than to produce yourself. This is common in small farm flocks but should be considered for larger flocks as well.
2. Not all hay is created equal. Forage testing for nutritive analysis will identify the better quality hay that needs to be fed during the periods of highest nutritive need. The analysis will also allow supplementation decisions to balance specifically what the hay is deficient in (energy, protein or both).
3. Sheep are especially adept at being selective in their hay consumption. To minimize waste, store hay inside and use round bale feeders.

Quality of Stockpiled Tall Fescue

The best way to keep hay and feed costs to a minimum is a solid pasture and grazing management strategy. Matching flock nutritional needs to your forage program are critical. That would suggest that the period of greatest nutritional need (lactation) would be best set to coincide with spring grass in late March and April. Forage at this time is highest in digestibility and protein content. A lactating ewe with twins would only need supplemental energy to meet her nutritional requirements. As cool season grasses begin to mature in mid to late May, ewes would be well past their peak nutritional needs which occurs about at three weeks into lactation.



Ross and Reynolds, 1979

A crucial forage management related item which impacts flock nutrition and forage productivity is the frost seeding of clovers into pasture in February. The addition of clovers to pastures accomplishes two goals. The first being that clovers are generally more digestible and higher in protein than grasses and they are also effective in diluting infected tall fescue. Clovers are legumes which fix nitrogen in the soil. Nitrogen is “fixed” in clovers through a symbiotic relationship with rhizobium bacteria that infect roots. The plant provides energy for the bacteria and bacteria provide the “machinery” necessary to convert atmospheric nitrogen to a form available to plants. Most people picture a ‘conduit’ that transports nitrogen directly from clover to grass. Unfortunately, almost no nitrogen is contributed in this mode. Essentially, nitrogen is supplied to grasses indirectly via the decomposition of the clover root nodules. Nitrogen must then be converted into a form available to plants. This conversion or ‘mineralization’ releases nitrogen slowly- more similar to a time release fertilizer than an application of ammonium nitrate or urea. Given the high cost of fertilizer, clovers are an economical way to supply nitrogen to your grass pasture. After perennial clovers are well established, nitrogen will be released to grasses at a relatively constant rate as nodules decompose. White clover can fix 50-125 pounds of nitrogen per year and red clover can fix 75-150 pounds depending on stand, soil and growing conditions. At current urea prices this practice can translate to \$30-\$90 per acre in added nitrogen on an annual basis.

Stockpiling tall fescue pastures in the fall is an economical method to carry forage quantity and quality beyond the growing season into late fall and winter. A portion of pasture is set aside and fertilized with 40-60lb of N in mid to late August. Grass growth is allowed to accumulate for later grazing. The quality of stockpiled forage will persist through much of the winter.

Grazing management is a key component to getting the most from your stockpiling investment. Giving sheep access to large areas of stockpiled forage can result in trampling losses and reduced efficiency of harvesting available dry matter. By rationing or limiting access to stockpiled areas such as with strip grazing forage utilization will be improved and grazing days extended. More time and management expense is substituted for winter feed costs.

Table 1 Forage Quality and Supplementation (176 lb ewe)¹

Forage Analysis		Early ² Gestation		Late ³ Gestation		Early ⁴ Lactation		Late ⁵ Lactation	
CP % of DM	TDN % of DM	Lbs SBM	Lbs Corn	Lbs SBM	Lbs Corn	Lbs SBM	Lbs Corn	Lbs SBM	Lbs Corn
11.2 & over	56 & over	-	-	-	.75	.5	2.5	.3	1.5
9.5 - 11.1	56 & over	-	-	.15	.75	.8	2.5	.45	1.5
	53 - 56	-	-	.15	.85	.8	2.7	.45	1.65
	50 - 53	-	-	.15	1.0	.8	2.9	.45	1.80
8.2 - 9.5	54 - 56	-	-	.25	.8	1.0	2.5	.55	1.5
	51 - 54	-	.2	.25	1.0	1.0	2.75	.55	1.75
	50 & under	-	.4	.25	1.2	1.0	3.0	.55	2.0
7.3 - 8.2	53 - 55	.1	-	.4	.8	1.1	2.5	.6	1.5
	51 - 53	.1	.2	.4	1.0	1.1	2.75	.6	1.75
	50 & under	.1	.4	.4	1.2	1.1	3.0	.6	2.0
Under 7.3	Under 48	.2 - .3	.5 - 1.0	.4 - .5	1 -1.5	1.2 -1.5	2.5 -3.5	.7 - .8	2.0 -3.0

¹ Recommendations are made on basis of 44 % soybean meal and ground shelled corn. Other supplements can be used to deliver the same amount of energy and protein.

² Dry ewes in the first 15 weeks

³ Last 4 weeks of pregnancy (200% lambing rate expected).

⁴ First 6-8 weeks of lactation suckling twins

⁵ Last 4- 6 weeks suckling twins.

Ram Selection

Scott P. Greiner

Extension Sheep Specialist, Virginia Tech

From a genetic standpoint, ram selection is the most important decision a sheep producer makes. The vast majority of genetic improvement in the flock is the direct result of ram selection. For flocks with small numbers of ewes, the importance of an individual ram is even further exaggerated- as one ram alone accounts for a large proportion of the genetics represented in each lamb crop. Relative to other production and management decisions, ram selection is an infrequent occurrence. However, these decisions have long-term impact relative to the productivity and profitability of the sheep enterprise.

Genetic progress in economically important traits is dependent on several factors, including:

Accuracy of Selection- The true breeding value of the animal must be estimated accurately. This is best accomplished through the use of Estimated Breeding Values since EBVs account for nongenetic factors and are expressed on an across-flock basis. With EBVs not widely available, it is important that performance traits be compared between animals only within contemporary group (group of animals provided the same opportunity to perform (same flock, age, diet, management, etc.)). Performance records also need to be properly adjusted for nongenetic factors such as age of ewe, type of birth and rearing, and sex of lamb for growth traits such as weaning weight.

Intensity of Selection and Variation- Since fewer rams are selected than replacement ewe lambs, rams can be more intensely selected for traits (more can be culled). It is also important that there be variation within the flock for the traits being selected, as more variation allows for more difference between genetically superior vs. inferior individuals to be made. Lack of variation makes genetic change very slow, as even superior animals are more similar to the average of the flock.

Heritability- Variation in traits between animals is due to combination of genetics and environment. The portion of the variation that is due to genetics is termed heritability. Traits with higher heritabilities respond faster to selection as a higher percentage of the differences between animals is due to genetics which will be passed to the next generation. In general, reproductive traits are lower in heritability and respond slower to selection (number of lambs born for example). Growth traits such as weaning weight and post-weaning weight are moderate in heritability, and carcass and fleece traits are generally high in heritability. Consequently, more rapid genetic progress is generally achieved in carcass and growth traits compared to reproduction.

The first step in ram selection includes thoughtful determination of the role of the ram in contributing to the existing flock genetics. The breeding system utilized, marketing system, management level, and feed/environmental resources are important considerations for determining this role along with flock records to benchmark the flock performance and establish strengths and weaknesses. What traits do I need to improve (or maintain) in my flock, and how will the new ram contribute to these goals? For

example, traits of importance in rams will vary greatly if the ram will be used to sire replacement females vs. a ram that will be used strictly as a terminal sire.

The following major criteria are considerations for ram selection:

1. Performance Record: Ideally ram selection would include evaluation of a complete performance record on potential rams. This performance record would include adjusted records (or EPDs generated through the National Sheep Improvement Program) for birth type, weights, fleece attributes, carcass merit, and dam lifetime production. Unfortunately, many times these records are not widely available. Although the heritability of condition of birth is low (single vs. twin vs. triplet), lambing percentage can be increased by selecting for multiple births over time. Of particular importance is the lifetime production of the dam, including number of lambs born per lambing and total weaning weight. Growth traits are typically expressed as weights measured at weaning (60-90 days), 120-days, and at a year of age. In the absence of formal weights being available, growth can be measured as a function of weight per day of age. Many purebred breeders commonly measure post-weaning performance on a structured gain test. Selection for growth needs to be in concert with selection for appropriate mature size.

2. Conformation/Soundness: Visual appraisal is generally a poor method of selection for the traits just discussed. However, conformation as it relates to soundness is critically important to the function of the ram. Rams that stand and travel squarely and freely on their feet and legs are most desirable. Mouth soundness is particularly imperative, and rams exhibiting parrot mouth or monkey jaw conditions should be avoided. In most cases, muscling is assessed by visual appraisal as is body capacity. A breeding soundness exam that includes semen evaluation should be performed.

3. Source: A variety of sources are available to purchase rams. Seedstock suppliers who are able to furnish extensive performance records offer the best opportunity to make informed selection decisions. Select breeding stock from flocks with compatible goals and selection strategies relative to the intended role of the ram to be purchased. Ram testing stations exist in the region, and allow for the comparison of rams from different flocks in addition to providing performance information and verification of a health and management program. Select rams from a reputable source, and from a breeder who stands behind their genetics. Remember that in addition to the new genetics you are purchasing in the form of the ram, you are also acquiring the health program of the source flock.

In summary, ram selection is critical to genetic improvement of the flock. Establishing the goals and priorities of your program and how the new ram will contribute to these objectives prior to the purchase of the new ram is key.

**“Successful Marketing -
What You Need to Know”**

Gary W. Hornbaker
Retired Animal Science Specialty Agent – VCE
Producer – Clarke County
Mutton Bustn’ Farm

Direct Marketing Opportunities

- freezer lambs
- feeder or club lambs
- breeding stock (rams/ewes, purebred/commercial)
- research animals
- wool
- pelts/skins
- manure
- specialty products (sausage, “rent a sheep”, grazing, rodeo, exhibitions)

How much time, effort, and money can
you afford to devote to direct marketing
for a increased return?

Basic direct marketing concerns:

- Time
- Targeting your market
- Facilities and equipment
- Taxes and sales fees
- Product knowledge
- Promotion or advertising
- Regulations

Time



- Extensive personal contact
 - answer questions
 - show products
 - facilities preparation
 - travel to shows
 - letters
 - business cards
 - web site and email

Targeting A Market

- Freezer lamb market
- Ethnic/Religious market
- Retail food store market
- Restaurants
- Club lambs
- Breeding stock
- Specialty products

Facilities & Equipment

- Self assessment of operation -
 - slaughter facilities
 - disposal of offal
 - sorting and holding pens
 - loading facilities
 - SCALES !
 - storage areas

- truck and/or trailer
- display area (farm or shows)
- **computer**
- **fax machine**
- **iPhone**

Collection of Taxes and Fees

Virginia Sheep Industry Board Act-
Code of Virginia - Chap. 43, Sec 3.1
Lamb check off fee
\$.50 / head
Paid to Tax Commissioner each
quarter
Maintain records for 3 years

• **Virginia Retail Sales Tax Collection**

– **Code of Virginia Section 58.1 - 630**

– A farmer regularly engaged in selling tangible personal property at retail must register as a dealer and collect and pay the tax due on retail sales. The tax applies to regular or recurring sales of farm products by farmers or peddlers or at a public market, roadside stand, farm or any other place

Product Knowledge

- Do you know your true cost of production?
- Do you know your price?
- Do you know the grades or standards of your product?
- Do you have standard charges? Do they change?
- How do you handle money collections?
- Do you have guarantees or a satisfaction policy?
- Do you know what processing is available and what it cost?

Promotion

- farm signage
- mailings
- field days
- exhibitions or festivals
- web site
- associations and cooperatives
- ***Do not expect other people to sell your products for you!***

Promotion Assistance

- Virginia Cooperative Extension
- VA Dept. of Agr. & Consumer Services
- American Sheep Industry Association
- Local Government
- Breed or Product Association
- Organization or Business Publications
- **Word of Mouth !!!**

Regulations

- Specific Products
- Slaughter inspections under the *Wholesome Meat Act (Pub.L. No 90-201, 81 Stat. 585 (1967))*
 - federally inspected
 - state inspected
 - custom processing
 - products must be marked “Not for Sale”
 - home slaughter and usage

Words of Advise:

Sell animals by the head or products by the piece.

Get paid up front.

Do not assist with slaughtering, handling, or transporting meat.

Have a plan for marketing and disposal.

Try new ways of education, promotion, and communications.

Direct marketing is a challenging on-going process that isn't for everyone, **if it were easy everybody would be doing it.** Sometimes what might sound like a tremendous price or opportunity **really isn't !!!**

“Successful Marketing – What You Need To Know”
Mike Carpenter, VDACS

First, I would like to follow up on my comments made at the Field Day held at Steele’s Tavern in August. I was very cautious about my price prospects for the upcoming Eid-al-Adha Festival. What a surprise we all had when people came out with enthusiasm to purchase lambs for this festival. We saw the largest price increase we have ever seen! For only the week prior to the festival, prices jumped mostly \$40-60/cwt., and in a few isolated situations for a small number of lambs prices were over \$200/cwt. The high prices were only for male lambs – rams and wethers. Suffice it to say there was a lot of pent-up demand from the ethnic community as they were determined to participate in this religious ritual.

Conversely, prices dropped as fast as they went up. At the auction where prices were over \$200/cwt., the following week they were \$99.

My lesson learned for this year – identify and separate your male lambs for this festival and don’t be late. The target is 5-10 days prior. Since then, the only price increases have been for other less well-known holidays for people from other nationalities. These occurrences will look like blips on a radar as any increase in price will be only for 1-2 week time period/ If you want to take advantage of any of these opportunities, it will take some time to research to be successful at pinpoint marketing strategies.

FRIDAY, JANUARY 11

**9:00 am-
5:00 pm** **Sheep Management 101 Workshop**
*All day workshop for beginning shepherds covering topics related to basic sheep production and lambing management. Workshop will include hands-on activities with sheep.
(*additional registration fee, limited to first 20 participants registered)*

PM **Alphin Stuart Livestock Arena**

4:00 pm **Virginia Sheep Industry Board Meeting (open to public)**
Alphin-Stuart Livestock Arena

6:00 **Virginia Sheep Producers Association Board Meeting (open to public)**
Alphin-Stuart Livestock Arena

Saturday, January 12

AM **Alphin Stuart Livestock Arena**

8:15 **Registration & Commercial Exhibits**

9:00 **“Sheep Health- Common Problems, Mistakes, and Remedies”**
Dr. Andy Meadows, DVM, Springwood Livestock Mgt. Services, Wytheville, VA

10:00 **“A New Approach: Forage-Based Ram Test for Evaluation of Performance and Parasites”**
*Dr. Scott Greiner, Department of Animal & Poultry Sciences, Virginia Tech
Mr. Lee Wright, Southwest AREC, Virginia Tech*

BREAK

10:45 **“Utilizing Fecal Egg Counts as Parasite Management Tool”**
Dr. Anne Zajac, DVM, Virginia-Maryland Regional College of Veterinary Medicine

11:45 **Roy Meek Outstanding Sheep Producer Award Presentation**
Virginia Sheep Producers Association Annual Business Meeting

PM

12:15 **Lunch**
“The Sheep Business- National Perspective from ASI”
Dr. Will Getz, ASI Executive Board- Region II Director, Georgia

“What’s New with the American Lamb Board”
Mr. Leo Tammi, Director- American Lamb Board, Mt. Sidney, VA

1:30 **“Flock Nutrition Strategies”**
Dr. Mark McCann, Department of Animal & Poultry Sciences, Virginia Tech

2:00 **Sheep Management Workshops (hands-on sessions)**
*Ram Selection- Dr. Scott Greiner
Flock Health Tips- Dr. Kevin Pelzer, DVM, Virginia-Maryland Regional College of Veterinary Medicine
Fecal Egg Count Lab- Dr. Anne Zajac
Evaluating Feed Options- Dr. Mark McCann*

3:30 **“Successful Marketing- What You Need to Know”**
*Mr. Jeff Lawson, Green Hill Farms, Churchville, VA
Mr. Gary Hornbaker, Mutton Bustin’ Farm, Berryville, VA
Mr. Mike Carpenter, Virginia Dept. of Agriculture and Consumer Services*

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If you are a person with a disability and require any auxiliary aids, services, or other accommodations for this symposium, please discuss your accommodation needs with Scott Greiner at (540) 231-9159 at your earliest convenience.

Outstanding Sheep Producer Award Recipients

2011 – Leo Tammi, Augusta County
2010 – Bobbi Hefner, Highland County
2009 – Mac Swortzel, Augusta County
2008 – David Shiflett, Augusta County
2007 – Doug Riley, Augusta County
2006 – Mike Carpenter, VDACS
2005 – Jim Wolford, Wythe County
2004 – Martha Mewbourne, Scott County
2004 – David Redwine, Scott County
2003 – Martha Polkey, Loudoun County
2002 – Carlton Truxell, Augusta County
2001 – Corey Childs, Clarke County
2000 – John Sponaugle, Rockingham County
1999 – Bill Stephenson, Page County
1998 – Gary Hornbaker, Clarke County
1997 – Bruce Shiley, Clarke County
1996 - Weldon Dean, Rockingham County
1995 - Bill Wade, Augusta County
1994 - John Henry Smith, Russell County
1993 - Robin Freeman, Chesapeake
1992 - Courtland Spotts, Pulaski County
1991 - Ted Bennett, Halifax County
1990 - Clinton Bell, Tazewell County
1989 - Rex Wightman, Shenandoah County
1988 - Tim Sutphin, Pulaski County
1987 - Zan Stuart, Russell County
1986 - J. W. Riley, Augusta County
1985 - John Bauserman, Fauquier County
1984 - Roy Meek, Pulaski County
1983 - Jonathan May, Rockingham County