

## Sheep Health: Common Problems, Mistakes, and Remedies

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## Flock Health

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

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## 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

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## 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

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## Overstocking/Overgrazing

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

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## 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

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## 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***

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## 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

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## Single Species Grazing

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

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## Multiple Species Grazing

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

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## 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**

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## Harvested Forages

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

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## Harvested Forages

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

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## 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

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## 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

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## 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

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## 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

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## 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

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## 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

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## Environment

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

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## Health Program

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

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## 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

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## Infectious Abortions

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

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## 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

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## Abortion Prevention/Treatment

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

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## 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

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## 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

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## 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

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## Foot Health

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

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## Foot Health

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

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## 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

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## 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

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## Reproductive Mgt.

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

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## 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

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## 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

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## Pregnancy Diagnosis in Sheep

- Fetal aging
- Fetal counts
- Viability
- Congenital defects

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## 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.

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## Pregnancy Toxemia

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

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## 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<sup>++</sup> SubQ
  - Oral live culture yogurt
  - Vit. B complex

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## 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

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## 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”

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