So you’re thinking of getting sheep or goats...

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The Animal Health Centre
Biosecurity

- Procedures intended to protect humans or animals against disease or harmful biological agents
Be Careful What You Buy…
What can you do to minimize risk of new arrivals?

• Buy from trusted sources

• Quarantine – how long?
  – Minimum of 4 weeks suggested

• Test?
  – Gastrointestinal parasites
  – Johne’s disease
  – CAE (goats)
  – Caseous Lymphadenitis (CL)
Johne’s Disease
Johne’s Disease

- *Mycobacterium avium paratuberculosis*
- Serologic (blood) test available - $10/sample
- Fecal PCR available - $35/sample, but can pool
  - False negatives common with both tests
Caseous Lymphadenitis
Caseous Lymphadenitis (CL)

- Caused by the bacterium *Corynebacterium pseudotuberculosis*
  - Long incubation period (usually 2-6 months, sometimes years)
  - Can survive in the environment for more than 1 year, resistant to many disinfectants
  - Highly contagious, shearing is the main mode of transfer
  - Lambs/kids infected through drinking contaminated milk
  - COMMON in BC
  - >23% of total carcass condemnations at slaughter
What are some things you can do to minimize disease spread on your farm?
Traceability?

• The ability to track the path and history of an animal from its source to the consumer

- Individual Animal Identification
- Unique Premise Identification
- Tracking Animal Movement
RFID tag **MANDATORY**
$1.95 + $0.25 CSF check-off
Canadian Cooperative Wool Growers
www.wool.ca

Canadian Cattle Identification Agency
http://www.canadaid.com/

Goat regulations expected soon!
How to Tag

Tagging Video Series
Click on any video to view it. Each video is between 1 and 2 minutes in length. We recommend that you view all videos in the right order the first time you view them.

www.cansheep.ca

www.cangoats.ca
Good News: The top 3 causes of death are preventable!
Enterotoxemia
(pulpy kidney disease/overeating disease)
Vaccination

- Needs to protect from *Clostridium perfringens* C and D, ideally also tetanus
- May use a multivalent vaccine (includes several *Clostridium* spp.)
- Follow label directions – 1st vaccine around 8-12 weeks, booster 4 weeks later
- Vaccinate dams yearly, usually 3-4 weeks before giving birth

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Manufacturer</th>
</tr>
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<tbody>
<tr>
<td>Clostri Shield® 7 *(Elanco (Novartis))</td>
<td></td>
</tr>
<tr>
<td>UltraChoice® 7 <em>(Zoetis)</em></td>
<td></td>
</tr>
<tr>
<td>Vision® 7 with Spur® <em>(Merck Animal Health)</em></td>
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<tr>
<td>UltraChoice® 8 <em>(Zoetis)</em></td>
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<tr>
<td>Vision® 8 with Spur® <em>(Merck Animal Health)</em></td>
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<tr>
<td>Tasvax® 8 <em>(Merck Animal Health)</em></td>
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<tr>
<td>Clostridium Perfringens Types C &amp; D Antitoxin, Equine Origin <em>(Colorado Serum)</em></td>
<td></td>
</tr>
<tr>
<td>Caseous D-T <em>(Colorado Serum)</em></td>
<td>+ Glanvac6 <em>(Zoetis)</em></td>
</tr>
</tbody>
</table>
Haemonchosis
Diagnosing Gastrointestinal Parasitism

• Fecal Egg counts
• Diarrhea (Dag score)
• Anemia (FAMCHA scoring)
• Decreased weight gain
• Necropsy
Fecal Egg counts

• Sheep grazing pasture that are representative of the group – ideally 10 lambs and 10 ewes (8-10 pellets each)
  – Pool or run individually

• Refrigerate
  – Analyse within 7 days

• Quantitative method (eg. McMaster)
Diarrhea

• Dag Score
• Influenced by diet (lush grass = loose feces)
• Other causes of diarrhea
# Anemia

<table>
<thead>
<tr>
<th>Clinical Category</th>
<th>Eye Lid Color</th>
<th>Packed Cell Volume/PCV</th>
<th>Treatment recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Red</td>
<td>≥ 28</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>Red-Pink</td>
<td>23-27</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>Pink</td>
<td>18-22</td>
<td>?</td>
</tr>
<tr>
<td>4</td>
<td>Pink-White</td>
<td>13-17</td>
<td>Yes</td>
</tr>
<tr>
<td>5</td>
<td>White</td>
<td>≤ 12</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Times to Monitor
(and possibly treat)

- Ewes 1 month prior to lambing/kidding
  - Reduce periparturient egg rise (=most important source of pasture contamination for lambs)
- Lambs at mid-summer
  - Repeat monitoring at least every 4 weeks
- 2 weeks after treatment
- Breeding animals in fall (if affected)
- New introductions
- Thin sheep, poor growth rates, scours
Deworming products
Dewormer resistance

• COMMON
  – In Ontario resistance to ivermectin and fenbendazole was demonstrated on 97% (28/29), and 95% (19/20) of the farms tested, respectively

• Recheck a fecal egg count 2 weeks after deworming

• Management to control parasites is key.

*Considered resistant if dewormer does not reduce fecal egg count by more than 95%
Diagnosis: Starvation
Causes of Starvation

- Inadequate Feed Quantity
- Poor Feed Quality
- Restricted access to feed
  - Inadequate bunk space
  - Dominant animals
- Disease (malabsorption, tooth problems)
- Cold weather
- Disease
- Parasites
How much to feed?

www.sheepbytes.ca

www.sheepandgoat.com
Body condition scoring

- **IMPORTANT**
  - Prevents starvation
  - Best management tool for improving production
  - Evaluate at least three times a year

*Body Condition Score Goals:*

<table>
<thead>
<tr>
<th>FEMALE</th>
<th>Late Gestation</th>
<th>Score 2.5 - 3.5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Weaning / Drying off</td>
<td>Score 2+</td>
</tr>
<tr>
<td></td>
<td>Breeding</td>
<td>Score 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MALE</th>
<th>Pre-Breeding</th>
<th>Score 3 - 3.5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Summer</td>
<td>Score 2+</td>
</tr>
</tbody>
</table>
Body Condition Scoring

1. Spinous process – run fingers down backbone

2. Transverse process – push fingers down alongside backbone

3. Assess amount of muscular and fatty tissue below transverse process - pass fingers under the ends of these bones

4. Fullness of eye muscle in the angle above and between spinous and transverse process

5. Score
Abortions

The top three infectious causes of abortion in sheep and goats can cause life-threatening disease in pregnant women and result in fetal death or malformation.
• To avoid the risk of infection, pregnant women:
  – Should not help to lamb or milk ewes/does
  – Should avoid contact with aborted or newborn lambs/kids or with the afterbirth
  – Should not handle clothing, boots etc. which have come into contact with lambing/kidding ewes/does or newborn lambs/kids

• Potentially contaminated clothing will be safe to handle after being washed on a hot cycle.
Available Resources

– Resources available in BC, programs, regional/local contacts
  • Animal Health Centre
  • Regional Agrologists
  • AgriServiceBC@gov.bc.ca

– Code of practice for the care and handling of sheep and goats
BC Sheep Federation

– Voice of the industry
– Represented on Canadian Sheep Federation, National on Farm Food Safety program, National Animal Welfare program, Provincial Farm Animal Care Committee....
– Free advertising for your farm on the Buyers Guide
– N’Ewes 3x year

$35/ year http://www.bcsheepfed.com
BC Goat Association

- Increase public awareness of the value of goats and goat producers, circulate information, encourage young people with goats and 4H
- Breeders Directory
- GoatKeeper Magazine 6x year

$45/year for an individual
$60/year for a family

http://www.bcgoat.ca
Questions?
When to supplement vitamins and minerals?

**Pasture**
- Green pastures and sunlight great source of vitamins minerals
  - Vitamins stored in fat for 3-4 months

**Hay**
- Fat soluble vitamins (ADEK) need to be supplemented as rumen can’t make them
- Can vary in mineral content = supplementation usually needed

Salt?
• How and why do you buy your supplements?
  – Pelleted, textured, loose, blocks
• Common minerals:
  – 1:1
  – 2:1
• With or without salt
• Watch shelf life
  – Vitamins expire without antioxidants!