

SMALL RUMINANT START UP 101

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Some slides and photos used with permission by Susan Schoenian, University of Maryland Extension (retired) and Baalands Farm



Starting

- Type of operation?
 - Hobby (for fun?)
 - Food production for yourself/family
 - Business (sustainable operation)
 - Pay for itself?
 - Pay for the farm?
 - Pay salary?
- Type of operation
 - Registered breeding stock? Show? Commercial meat?
 - Direct marketing? Sales?



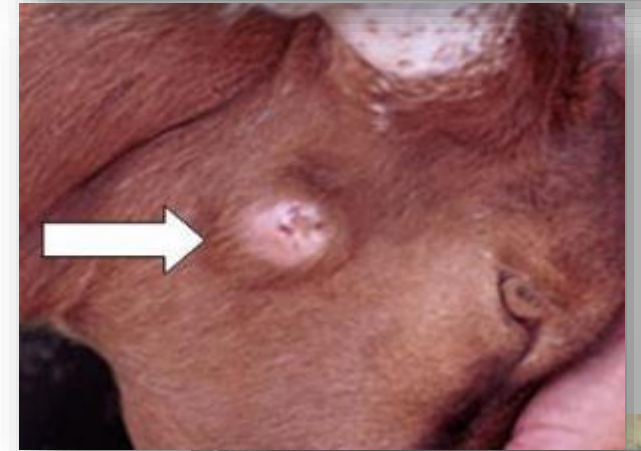
Selecting animals to buy

- Select breed/breed type and species based on:
 - Your markets
 - Your resources
 - Land/amount/type of grazing
 - Housing/facilities/equipment available (fencing)
 - Feed sources and funds available for them
 - Labor
- Profit = outputs – inputs; what you get out of them minus what you put in them (oversimplified)



Selecting animals to buy

- Buy healthy animals from someone raising them like you are going to and from a similar area
- Choose breed or breed type based on your market and resources
- BEWARE of sale barns
- Look at animals and ask owners questions:
Abscesses/knots (CL)? Lameness/foot issues?
Soremouth? Pinkeye? Abortions/reproductive problems?
How often deworm/treat? Vaccines?
Breathing hard?



Selecting animals to buy - performance

- For buying OR deciding which to keep on your farm:
- Born/raised a twin or better
- Dewormed once (?) when young
- Weaning weight ratio above 100% (females) and post-weaning weight above 100% (males)
 - Get average for group similar age/raised the same
 - Divide individual value by the average, multiple by 100



Selecting animals to buy

- Select breed/animals that meet your minimum performance standards
 - Look at records of performance too; choose born/raised a twin or better, grew well, few dewormings
- Check teeth – palate and teeth (only on bottom) should line up
- Male testicles should be a good size for age/weight
- Choose those with good records AND good conformation (how put together) if selling breeding stock
- Quarantine all new animals (no nose-nose contact) for at least 30 days



Know What 'Healthy' Looks Like

- Runs to feed
- Bouncy, springy step
- Bright eyes
- Carries head upright
- Flashy tail
- Healthy coat
- Playful
- Round solid pellet poop



Signs of Problems

- Depressed, not getting up and moving around
- Standing hunched with head and tail down
- Coughing, wheezing, and/or breathing hard
- Not interested in others and playing
- Off feed/not eating
- Grinding teeth



Signs of Problems

- Dull eyes
- Ears hanging
- Diarrhea
- Runny nose
- Lameness
- Poor body condition
- Last ones come up (dragging)



Photo bottom: Susan Schoenian, Baalands Farm

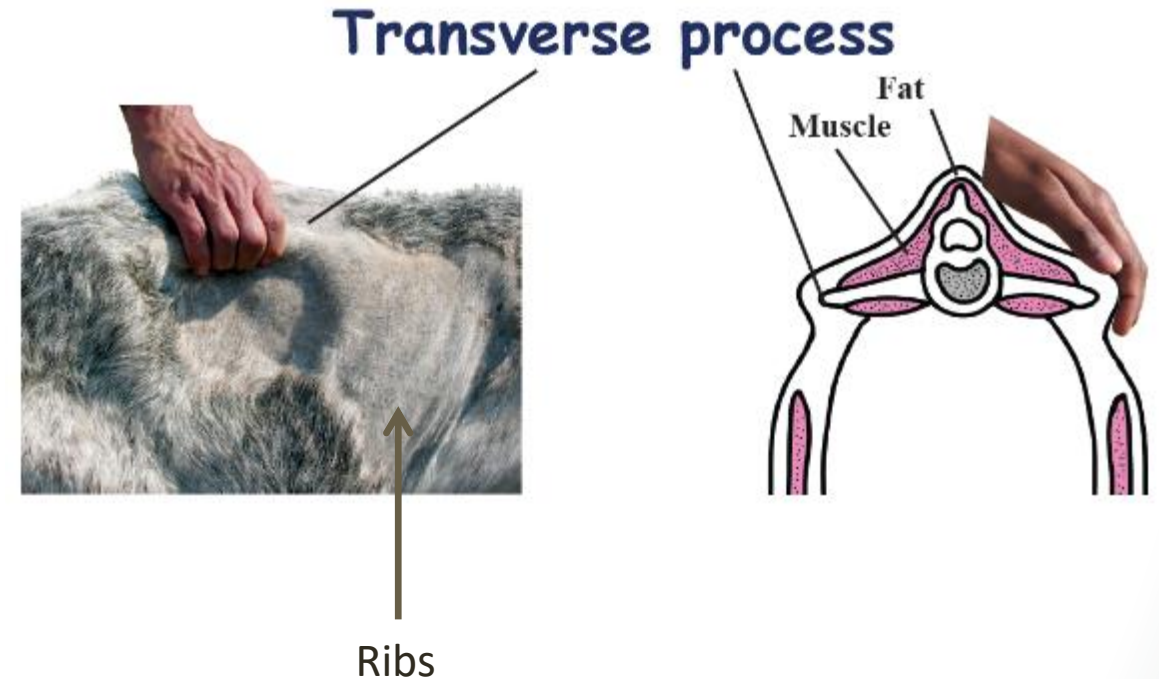
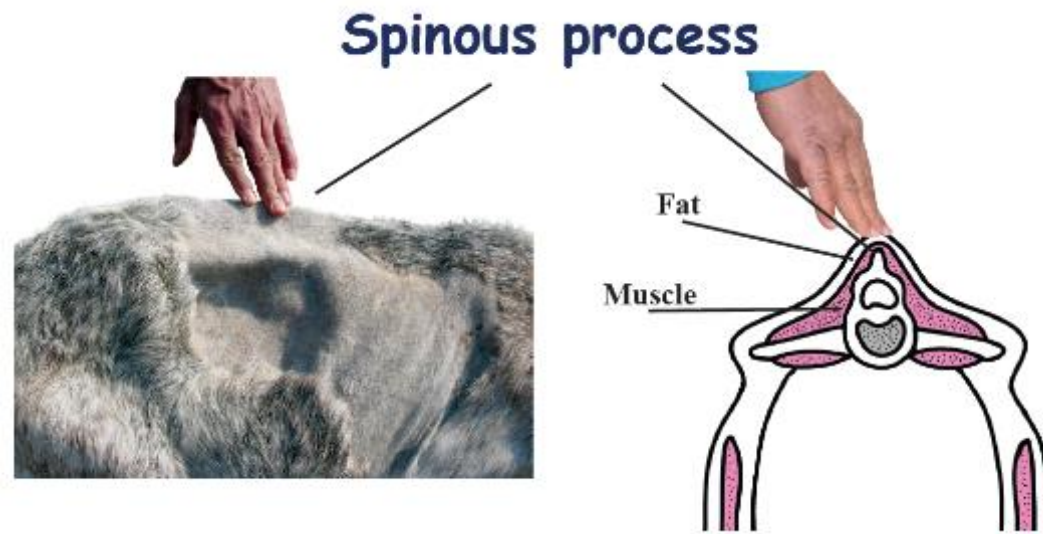
Good Management = Good Health

- Adequate Facilities
 - Quarantine / Isolate
 - Prevent introduction of disease and parasites to animals on farm
- **KEEP RECORDS!**
- Adequate forage & water (1-4 gallons head/day; warm in winter, cool summer)
- Good NUTRITION supports the immune system; BCS



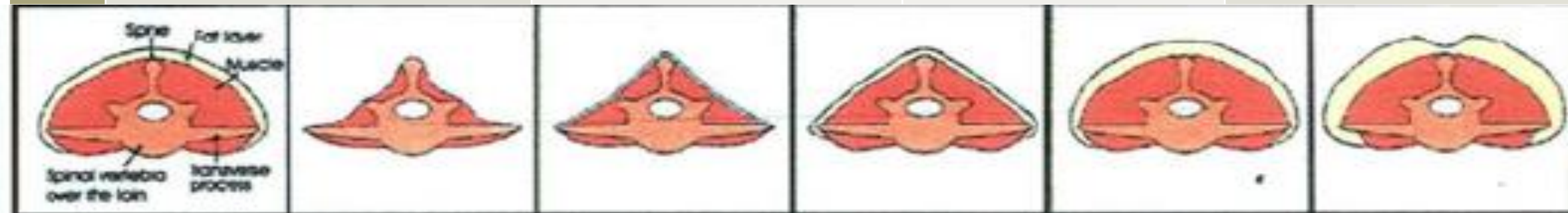
Body Condition Scoring (BCS)

- Must get your hands on them
- At least backbone and ribs
- Goats – sternal fat



Body condition score – deworming and nutrition

	Backbone/top of spine	Side of backbone	Muscle	Fat
1	Individually clearly felt, sharp, obvious	Fingers easily pass underneath	Very little	No
2	Form a smooth line with deep undulations	Smooth round edges	Concave	Very thin
3	Only slightly detectable undulations	Well covered have to push firmly to get fingers underneath	Not concave Not convex	Moderate
4	Only detectable with firm pressure	Cannot be felt at all	Maximally developed Convex	Thick
5	Not detectable			Very thick



Score:

1

2

3

4

5



BCS 2



BCS 3



BCS 4

Watch for Signs of Parasites (Worms)*

- Pale gums and eyelids
- Poor weight gain
- Weight loss
- Bottle Jaw
- Diarrhea
- Decreased milk production
- Poor hair coat
- Parasites are worse when it is hot and humid



*Training available for detailed parasite control and FAMACHA certification (www.wormx.info).

Bottle jaw

Sub-mandibular edema



Barberpole worm and nutritional/disease issues can also cause bottle jaw.

How do we decide who to deworm?

Can use the FAMACHA® eyelid color scoring system to estimate anemia/blood loss in sheep and goats; also look at body condition, hair coat, if sick, if have diarrhea, etc. to decide which animals to deworm; only deworm those that need it

	Eye lid color	Packed cell volume,%	Treatment recommendation	
1	Red	≥ 28	Optimal	No
2	Red-Pink	23-27	Acceptable	No
3	Pink	18-22	Borderline	?
4	Pink-White	13-17	Dangerous	Yes
5	White	≤ 12	Fatal	Yes



Can get FAMACHA card/ certification by going to a workshop (www.wormx.info – also a link to online training; talk to your county Extension agent) or through your veterinarian

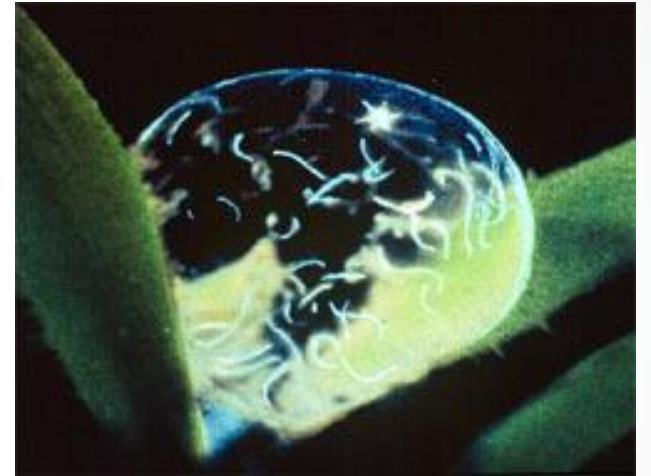
Deworm with???

- Know what dewormer works on your farm
 - DrenchRite (LSU?), FECRT (on-farm testing)
- Only three classes
 - Drug name ends in –dazole (widespread immunity in U.S.)
 - Safeguard, Panacur, Synanthic, Valbazen
 - Drug name ends in –ectin (widespread immunity in U.S. except moxidectin/Cydectin –but growing)
 - Cydectin, Ivermectin, Eprinex, Dectomax,
 - Nicotinics (levamisole)
 - Prohibit, Strongid, Goat Care 2X, Rumatel
- If one doesn't work, others will not (or will not work as long)
- Once worms are immune, does not reverse
- If deworm and don't get better or have to deworm again in 3-4 weeks, worms likely have/getting immunity
- Currently: one from all three classes when deworm



What else can we do? “Whole farm” approach:

- Understand parasites
 - They mate in the animal and poop out eggs, takes a long time for Baberpole to die in animal and on pasture
 - Worms like warm, moist weather
 - Most larvae/worms in first 2-4” of grass/forage
- Manage animals
 - Young, growing animals have the most problems, especially just weaned (intact male kids worst)
 - Just before/after birthing and during lactation, females have problems (and spread worms to offspring)
 - Under-fed, thin, stressed and sick animals have more problems



What else can we do? “Whole farm” approach:

- Create clean or safe pastures – new, tilled, burned (while dormant), rested/rotated (4-6 months best, at least until at least 6” tall or taller)
- Consider multi-species grazing – horses/cows can help clean up goat/sheep worms
- Consider alternative forages – browse, sericea lespedeza, chicory?, sanfoin?, birdsfoot or big trefoil?
- Understand the role of nutrition – if not in good body condition, will get worms easier and be more likely to die from worms; extra protein may help fight worms
- Could use zero grazing – cut/carry forage to them, drylots, barns, feedlots
- Don’t deworm all animals at the same time; manage to keep worms around that have not been dewormed
- Use multiple measures of worm infection (like the 5-point check) to decide which to deworm
- Don’t feed on ground, keep feeders clean

What else can we do? “Whole farm” approach:

- Use genetic selection –
 - Only buy animals that do not have to be dewormed often when raised in the same system you want to use in the same environment
 - Only keep animals on your farm that do not have to be dewormed often and still perform well (give you nice twins every year for example)
 - Consider more resistant breeds and/or crossbreeding
 - Sheep: Katahdin, St Croix, Barbados Blackbelly, Gulf Coast/Florida Native, Texel (?)
 - Goats: Kiko, Spanish (some lines, real Spanish, not scrub goats), Myotonic



Most questions after parasites? – Nutrition/Feeding

- Pasture/forage management is vital and takes a lot of work
- Forage (grass, browse/woods, forbs) is often energy (calorie) deficient – most people need to supplement
 - **Not enough by itself for young, growing animals, late pregnant animals, lactating**
 - Could supplement before breeding to increase multiples (profit center)
- Sheep like grazing; forbs (weeds)
- Goats are browsers but also good grazers
 - Do not eat everything – most picky livestock species
- Loose mineral made for YOUR species (too much copper can kill a sheep; goats need more copper)
- Feeder space (even for hay) is very important, goats especially can be bullies



Energy (TDN) content of feeds



Oils (corn, vegetable, etc.) have a lot of energy; whole cottonseed good protein and energy (limit to adults, no more than 1 lb/day or 15% of the diet – gossypol)

Feedstuff	% TDN
Urea	0 percent
Oat straw	48 percent
Orchardgrass hay	59 percent
Grass silage	61 percent
Fescue pasture	64 percent
Dry beet pulp	75 percent
Barley	84 percent
Corn	88 percent
Bread by-product	91 percent
Whole Cottonseed	91 percent
Distiller's grains	92 percent
Fat	195 percent

Basic Vaccination Program

- Depends on farm/area issues
- CD&T vaccine, prevent “over-eating disease”/bloody scours/tetanus
- Lambs and kids: 5-6 weeks of age, booster at 8-9 weeks (follow label); adults at least annually (females 3-4 weeks before giving birth)
- 7 or 8-way (contains 7-8 Clostridium serovars - (Blackleg, Malignant edema, Red Water); if not a problem on farm may be added cost



Photo: Susan Schoenian,
Baalands Farm

First Aid Kit

- Rectal thermometer
- Sterile syringes and needles
- Sterile gloves; Exam gloves
- 7% tincture of iodine
- Probiotics, anti-stress drench
- Broad-spectrum antibiotic
- Hoof trimmers
- Hoof treatment product
- **Phone number of your veterinarian!**
Especially with VFD in effect.
- **Note pad and pen**



Reproduction

- When breeding season, come in heat every 21 days (goats)/17 days (sheep)
- Control breeding season (45-60 days?) by removing male so know when to increase feed, vaccinate and prepare for babies (and can plan for marketing)
- 1 adult buck or ram/30 females (less for young buck or synchronized?); BSE
- Can use AI/ET in goats; harder in sheep (surgical)



Reproduction

- Get prepared for birthing time; can watch some videos/webinars online
- If female is having problems giving birth, can use exam gloves or cleaned/scrubbed hands to reach in and see if you can help (again, videos and webinars available to help; consult with a vet; call a vet as needed)
- Can carry diseases people can get! If have several stillbirths/abortions, get help!



Reproduction/Breeding

- Buy best male you can – he contributes half of entire herd (your past 3 choices are 88% herd/flock)
 - Purchase or keep from your farm based on performance/records
- Younger, selected animals best genetics
- Keep records for best selection (top 5-10%)
- Don't keep problem animals (bad repro/performance, bad conformation, bad health; attitude?)

Reproduction

- Realize you will have need to sell some animals for meat, no matter what your production system is (even if breeding stock or show stock producer); don't pass on the problems



Marketing opportunities

- Goats mostly ethnic/specialty market; sheep high during some Holidays too
- Can take advantage of these times of high consumer demand through marketing:
 - Sales at livestock auction/sale barns
 - Sales to a harvest/processing facility or other middlemen (buyers)
 - Farm gate (on-farm) sales of live animals directly to consumers
 - Sales of meat or value added products (or you eat them)
- Scrapie program – mandatory but free tags/tagger



References and Additional Resources

Small Ruminant Webinars:

- www.sheepandgoat.com/#!webinars/cu81

Body Condition Scoring (works for goats and sheep), includes video:

- <http://www2.luresext.edu/goats/research/bcshowto.html>

Parasite (worm) control information:

- www.wormx.info
- <http://web.uri.edu/sheepngoat/famacha/> (online certification)

Ethnic market calendars:

- <http://sheepgoatmarketing.info/calendar.php>