Feeding Sheep 101

An Intro to Feeding Sheep

- Who I am:
  - Ruminant livestock specialist with Perennia Food and Ag.
  - Finished my MSc last year at the U of Guelph where I studied market lamb nutrition

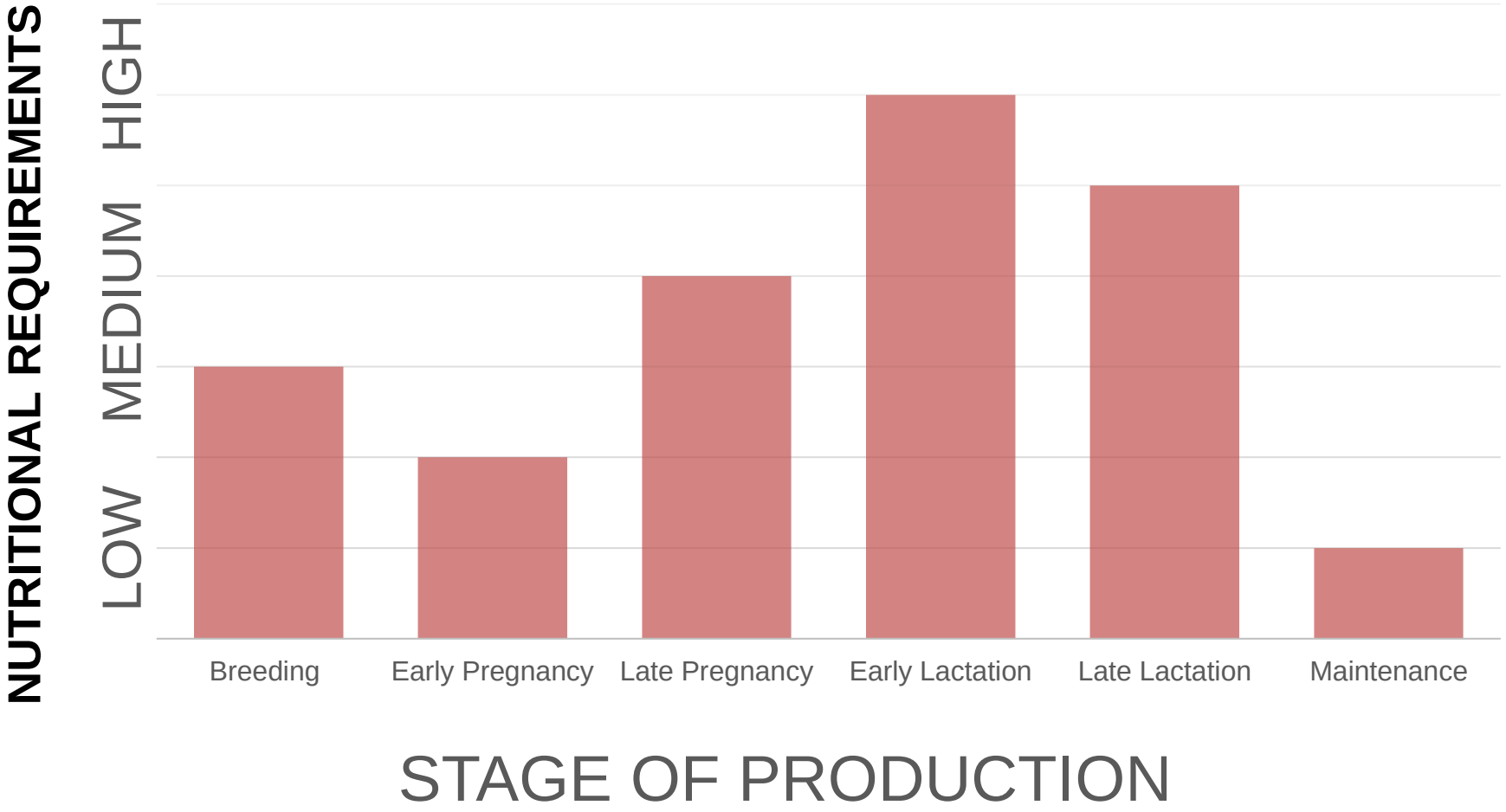
- Today I will talk about:
  - What proper nutrition looks like
  - Feeding lambs to finish
  - Balancing rations for different production stages

An Intro to Feeding Sheep

- It goes without saying that cost has to be a dominant factor
- Forages are the basis of a profitable ruminant-based operation
  - Optimizing forages are a key management goal
- Grain and other purchased feeds are to supplement shortcomings in the forage
  - The fewer shortcomings you have, the less you have to purchase

Feeding Ewes

EWE REQUIREMENTS



Intro to Feeding Sheep- Annual Lambing System

- Ewes lamb once a year
  - 34 days breeding
  - 145 days pregnant
  - 90 days lactating
  - 96 days in maintenance “doing nothing”

  - Pasture use should be maximized. It’s always cheaper for livestock to harvest their own feed.

Intro to Feeding Sheep- Accelerated System

- There are a few different systems but the main point is that ewes lambs more than once a year
  - 21 days breeding
  - 145 days pregnant
  - 60 days lactating
  - 17 days “doing nothing” (much needed rest and relaxation!)

- What accelerated lambing is NOT: leaving the ram in 24/7
  - You can’t manage this

Intro to Feeding Sheep- Accelerated System

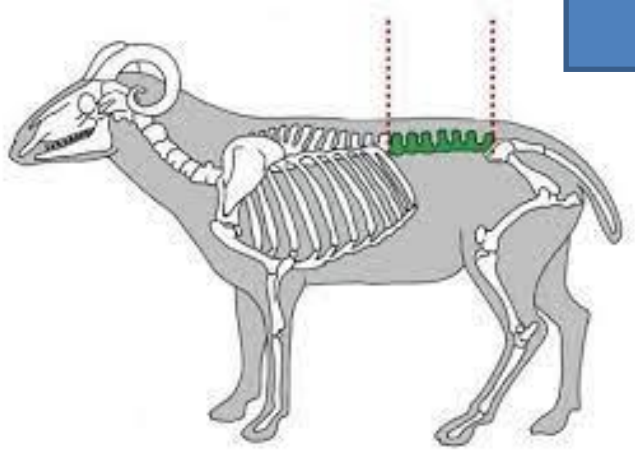
- With an accelerated program, you don't have as much time to get her body condition back if she loses weight. The easiest, most economical thing to do is make sure she doesn't lose weight in the first place.

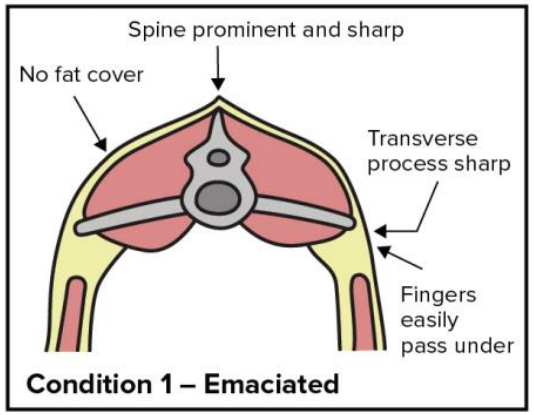
Body Condition Scoring: What is it and why should you care?

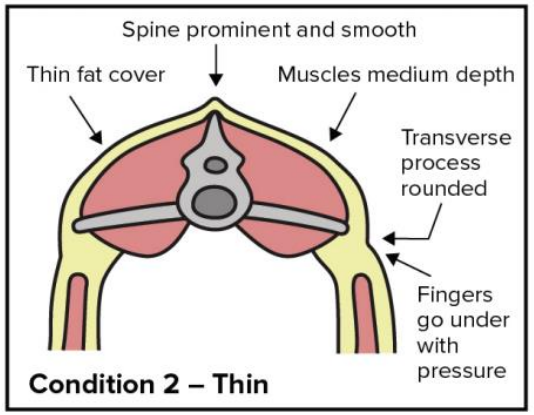
- Body condition scoring is a system that measures the amount of fat cover on a sheep's frame, on a scale of 1-5
  - 1= emaciated
  - 5= obese

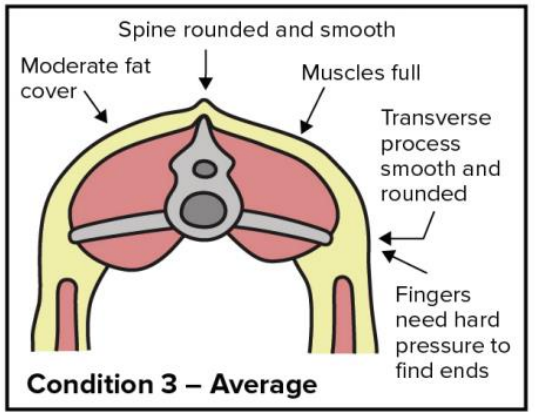
Body Condition Scoring: What is it and why should you care?

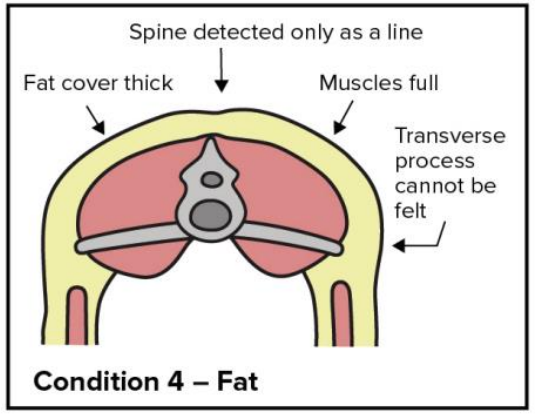
- Making sure ewes are a proper condition optimizes their productivity
  - Improves health
  - Improves efficiency (not wasting money overfeeding them)
  - Gives you a chance to react to thin or obese ewes before they have problems

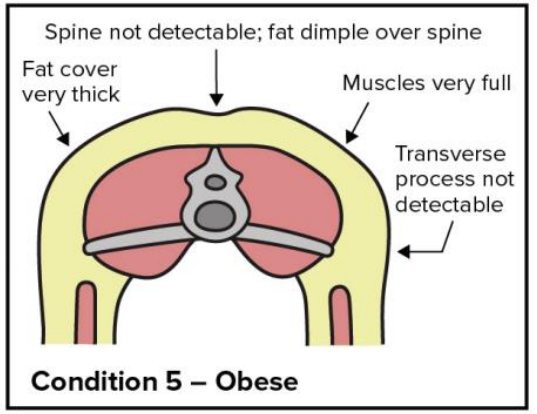



Spine prominent and sharp
No fat cover
Transverse process sharp
Fingers easily pass under
Condition 1 – Emaciated


Spine prominent and smooth
Thin fat cover
Muscles medium depth
Transverse process rounded
Fingers go under with pressure
Condition 2 – Thin


Spine rounded and smooth
Moderate fat cover
Muscles full
Transverse process smooth and rounded
Fingers need hard pressure to find ends
Condition 3 – Average


Spine detected only as a line
Fat cover thick
Muscles full
Transverse process cannot be felt
Condition 4 – Fat


Spine not detectable; fat dimple over spine
Fat cover very thick
Muscles very full
Transverse process not detectable
Condition 5 – Obese

Nutrition across production stages

Maintenance

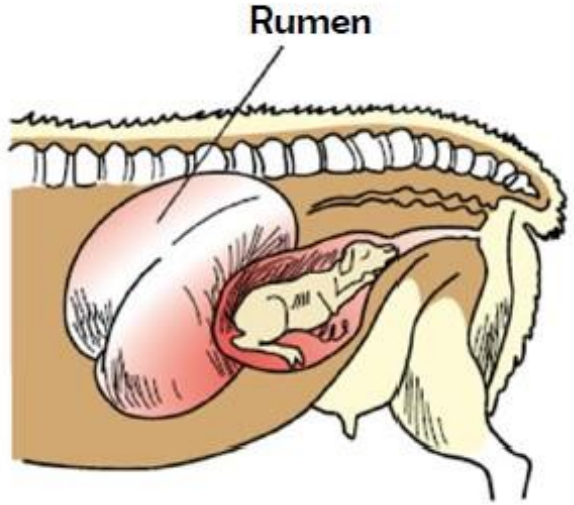
- Depending on our production system, the duration of this phase can last from a few days to a few months
- Goals depend on our system
  - Lose condition?
  - Maintain condition?
- Forage-based; requirements for protein and energy are low

Flushing

- A rising plane of nutrition immediately prior to, and during, breeding
  - 2 weeks before
  - 2 weeks after
- Why: Increased rate of ovulation (and improved lambing rate)
- Most beneficial:
  - Older ewes vs. ewe lambs
  - Thin ewes
  - Less prolific breeds

Early Gestation

- Very little difference in nutritional demands between early gestation and maintenance diets
- Wastes money and creates problems down the road if she is overfed
- Forage-based; very little grain (if any)



Late Gestation

- 70% of lamb growth happens in the last 6 weeks of pregnancy
- Mammary glands develop
- Rumen capacity decreases; can't physically eat as much
  - Pregnancy toxemia occurs if ewes aren't getting enough energy
- Overfed ewes can mean huge lambs

Early Lactation

- Largest nutritional demand in her entire cycle
  - Best quality feeds
  - Extra grain may be needed
  - Vitamins/minerals should be balanced as well
- Lots of clean water is of particular importance at this stage

Late Lactation

- 6-8 weeks after lambing
- Still a demanding production phase

Feeding Lambs

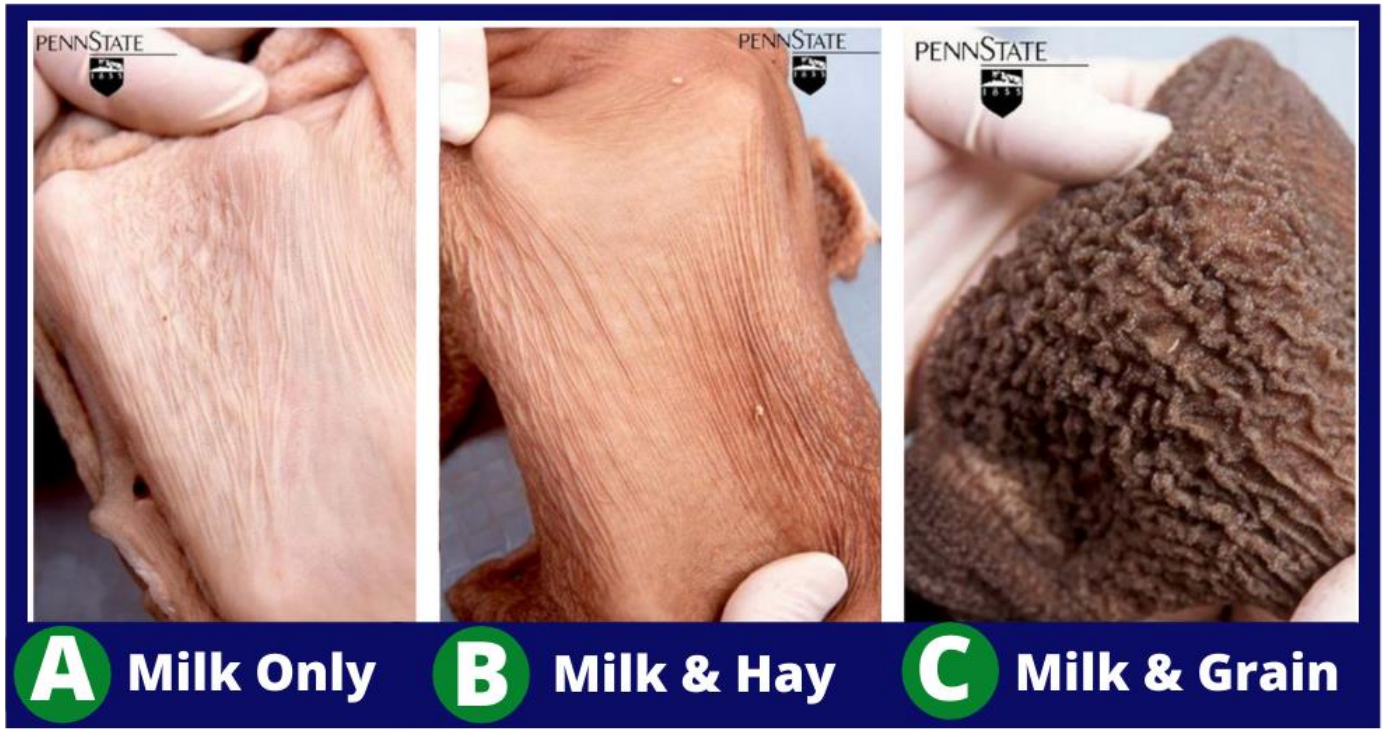
Efficient Lamb Nutrition

- What is efficient?
  - Feed:gain ratio
  - Average daily gain

- Our challenge as Maritimers: grain is EXPENSIVE
  - Our costs of production are different than elsewhere in the country

Feeding Young Lambs

- Creep feed is expensive
  - Promotes rumen development



Feeding Young Lambs

- High protein but not necessarily high energy
- Too much energy in early stages results in fat, not muscle or frame
  - Expensive gains for market lambs
  - Detrimental to ewe lambs

Feeding Replacement Ewe Lambs

- Sort your replacement ewe lambs and market lambs
- Replacement ewe lambs should grow about half the rate of market lambs
- Market lambs “live fast, die young”; replacements we want to ‘program’ differently
  - During weeks 4 to 20 of age, the mammary tissues are growing at a faster rate than the rest of the body
  - Overfeeding will cause fat to be deposited in these mammary tissues
  - Will create a lifelong effect on her milk-producing potential

Feeding Market Lambs

- Based on my Master's research, the sweet spot of forage:grain is around 40-60%
  - Too much forage may limit growth; not energy dense
  - Too much grain can cause acidosis

Feeding Market Lambs

- Because our grain prices are so high in the Maritimes, try to maximize forage use in market lamb rations
  - Test your feed!!!
  - Come up with a plan for forage use BEFORE you start to feed it out
  - Balance your ration (option to have me help)

Ration Balancing: What does this mean?

- Balancing a ration takes many factors of the diet into account:
  - Dry matter content
  - Energy content
  - Protein content
  - Vitamin and mineral content
  - Fibre content
  - Calcium/phosphorus ratio and more
- Ideally, this will match up with the animal's requirements. You can mix and match different inputs and add different amounts until you achieve 'balance'.

Ration Balancing: What does this mean?

- My favourite way to balance a ration is to start with your most appropriate forage for the group you are feeding.
- You have to test your forage to know what you have. You can't balance a ration any other way. Forages are highly variable.
  - Energy?
  - Protein?
  - Selenium, Vit A, manganese? Etc
  - Calcium? Etc
  - Cobalt or iodine? Etc

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SheepBytes Ration Balancer

Welcome back, Jonathan Wort | Help | Change Password | Logout

File | Title: | • Finishing Lambs | Medium Size Breeds | Wt 38 kgs | ADG 0.227 kgs | Age >= 6 months

Ration | Animal | Feeds | Feeding Information | Yardage Calculator | Water | Notes | Client | Calculator | Reports

Add Feeds | Edit | Remove Feeds | Create Mix | Un-create Mix | Show Mix | Ratios

NOTE: All nutrients must be entered on a dry matter basis.

Feed Name	As Fed (kgs)	DM Fed (kgs)	As Fed (%)	DM Fed (%)	DM (%)	NEm (Mcal/kg)	NEg (Mcal/kg)	Protein (%)	Calcium (%)	Phosphorus (%)	Cost As Fed ($/unit)	Unit Weight (kg/unit)	Magnesium (%)	Potassium (%)	Sulphur (%)	Sodium (%)	Chloride (%)	Salt (%)
GRASS HAYLAGE	1.7778	0.8000	72.0	56.6	45.0	1.17	0.61	14.00	0.50	0.22	35.00	907	0.15	2.27	0.18	0.03	0.00	0.08
BARLEY GRAIN	0.6780	0.6000	27.5	42.5	88.5	2.03	1.37	12.50	0.07	0.38	3.90	22	0.14	0.54	0.14	0.02	0.00	0.05
Sur Gain Premium …	0.0071	0.0070	0.3	0.5	99.0	0.00	0.00	0.00	16.00	5.00	36.00	25	4.00	0.00	0.00	0.00	0.00	0.00
COBALT IODIZED …	0.0063	0.0060	0.3	0.4	96.0	0.00	0.00	0.00	0.00	0.00	7.95	25	0.00	0.00	0.00	37.00	0.00	92.50
AMMONIUM CHLO…	0.0000	0.0000	0.0	0.0	100.0	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00

Dry Matter Intake

Maximum(kgs):	Recommended(kgs):	Supplied(kgs):	As Fed(kgs):	Pred. ADG(kgs):	Cost($/HD/Day):
1.50	1.43	1.41	2.47	0.203	0.2219

Results	Dry Matter	NEm (Mcal)	NEg (Mcal)	Protein (g)	Calcium (g)	Phosphorus (g)	Cost ($/HD/Day)	Copper (mg)	Magnesium (g)	Potassium (g)	Sulphur (g)	Sodium (g)	Chloride (g)	Salt (g)
Recommended Nutrients Per Day	1.43	0.80	0.96	132	4.2	3.5		7	1.2	6.1	2.6	1.1		2.7
Supplied In Feed	1.41	0.80	0.82	187	5.5	4.4	0.2219	7	2.3	21.4	2.3	2.6	0.0	6.5
	DM(%)	(Mcal/kg)	(Mcal/kg)	(%)	(%)	(%)		(mg/kg)	(%)	(%)	(%)	(%)	(%)	(%)
Diet Concentration(DM)	57.2	1.53	0.93	13.2	0.39	0.31		5	0.16	1.51	0.16	0.18	0.00	0.46

Main Takeaways

- Test your forages
- Have a plan in place
- Feed for production stages

- Please reach out if you have any questions, now or in the future!
  - ktrottier@perennia.ca

Thank you!