

Integrated Sheep Production

(Genetics, Reproduction, Nutrition, Health)

Integrated Sheep Management

(Genetics, Reproduction, Nutrition, Health, Marketing)

Integrated Management Parts



Objective

- Milk-Fed Slaughter Lamb
 - 100 to 120 lb.
 - 3 to 7 mo.
 - 0.1 to 0.2 in. backfat
 - 2.5+ sq. in. LEA/50 lb. carcass
 - 2.5 to 3.0 yield grade
- Sell for high price/lb.

Annual Production Stages for Ewes

- Flushing
- Breeding
- Gestation
 - Early
 - Late
- Lambing
- Lactation
- Maintenance

Breeding Stock (Ewes)

- Seasonal vs. out-of-season breeders
- Crossbred vs. purebred
- Wool vs. hair
- Prolificacy
- Lambing ease
- Mothering
- Milking
- 150 lb. mature weight

Lambing Statistics of Crossbred Ewes (A Producer Example)

<u>Ewe Breed</u>	<u>S</u>	<u>TW</u>	<u>Tr</u>	<u>Q</u>	<u>Lambing Percent</u>
¼ Finn ½ Suff ¼ Col	7	16	2	1	188
Dorset	8	10	3	--	176
Ramb x Dorset	6	13	5	--	195
Dorset x ¼ Finn	2	5	4	--	218
Hamp x ¼ Finn	5	4	--	--	140
Suff x Hamp	4	3	--	--	157
Hamp	4	4	--	--	150
Total	36	55	14	1	

Av. Lambing Percent = 181
Need 200%
How?

**Fewer Hamp, more Finn
and Dorset**

**Select multiple birth
replacements**

Breeding Stock (Rams)

- Growth rate
- Muscling
- Structure
- Multiple birth
- Terminal sire?

Facilities (Barn)

- Lambing/lamb finishing
 - 35 ewes : 1200 sq. ft. (32 x 40 ft.)
 - 100 ewes : 3200 sq. ft. (40 x 80 ft.)
- Feeder space
 - 16 to 20 in./ewe
 - 3 to 4 in./lamb over 60 lb. (self-fed)
 - 9 to 12 in./lamb over 60 lb. (hand-fed)
- Creep area: 2 sq. ft./head

Facilities (Barn)

- Individual space
 - Dry ewe : 10 to 14 sq. ft./ewe
 - Ewe/lambs : 16 to 20 sq. ft./unit
 - Lambing pen : 16 to 20 sq. ft./pen
 - Weaned lambs : 8 to 10 sq. ft./lamb
- Scales
- Lambing panels

Facilities (Fences)

Boundary: Woven wire
 7-strand electric
 9-strand electric

Interior: 2 or 3 strand electric

Guard Dogs

Herding Dog(s)

Water and Minerals

- **Water**
 - 40 to 50° F
 - Fresh, clean
- **Mineral**
 - For sheep
 - Loose, ad libitum
 - Heavy plastic, portable feeders, move with wind

Nutrition

- **Feedstuffs**
 - Alfalfa hay – Roughage
 - Shelled corn
 - Soybean meal } concentrates
 - Forages (cool season grass, legumes) - Roughages
- **Balanced rations**
 - Ewes
 - Rams
 - Lambs
 - Replacements

Correctly fed sheep are prone to be healthy sheep that naturally have the defenses against infections and diseases.

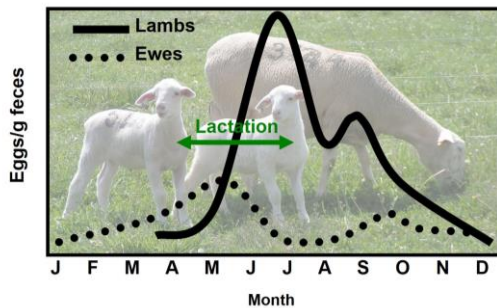
Health

- **90% of sheep ailments**
 - Preventable OR
 - Controllable
- **An ounce of prevention is worth a pound of treatment**
- **Sheep's body on "fritz"**
 - Treatment = Time, Expense, Inconvenience
 - Recovery = Behind in production
 - Lack of recovery
 - Deep hole

Health

- **Correct nutrition prevents**
 - Ketosis
 - Milk fever
- **Correct mineral supplementation prevents**
 - White muscle
- **Vaccinations prevent**
 - Enterotoxemia
 - Vibrio, EAE, Caseous Lymphdenitis
- **Vaccination controls**
 - Sore mouth

Stomach Worm Epidemiology



Health

- FAMACHA
- Strategic deworming
 - Before flushing
 - After lambing
- Dewormer resistance
 - Breed to avoid worm season
 - Confinement
 - Rotate pastures
 - Cull
 - CuSO_4

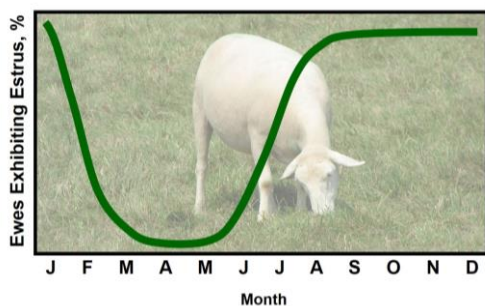
Pasture/Hay Management

- Pasture
 - 275 to 325d
 - Cool season grasses
 - ▲ Spring
 - ▲ Fall
 - ▲ Hay crop
 - ▲ Stockpile
 - Legumes
 - Alternative forages
- Rotate – electric fence/tape
- Minimum 30-d rest

Pasture/Hay Management

- Grass hay
 - Orchardgrass
 - Vegetative to mature
 - EG, maintenance
- Legume hay
 - Alfalfa
 - Early bloom
 - LG, lactation
 - May be cheaper to buy
 - Weigh bales before buying by the bale

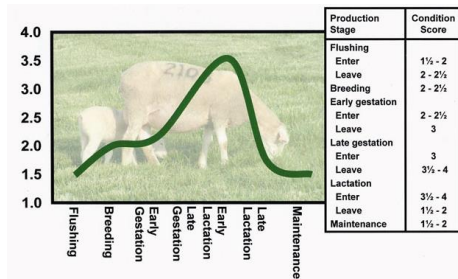
Monthly Estrous Activity of Ewes



Reproduction

- Estrous cycle: 16 to 17 d
- Estrous period: 20 to 42 h
- Gestation: 147 d
- Normal breeding season: Fall
- Anestrus: March, April, May

Body Condition Scoring



Flushing

- 2 wk before breeding
- Enter 1.5 to 2.0 BCS
- Teaser
- Supplement OR
- Fresh pasture (grass)
- Shade, fresh water, mineral
- Leave 2.0 to 2.5 BCS

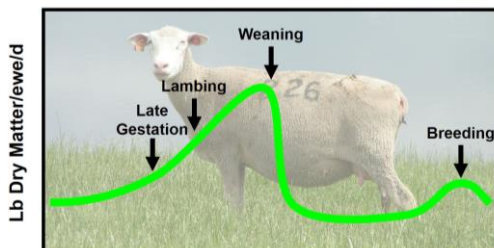
Breeding

- 3 to 6 wk
- Enter 2.0 to 2.5 BCS
- Continue flushing regime
- Leave 2.0 to 2.5 BCS
- Fertile ram w/markings harness
 - Ram BCS 2.5 go 3.0
 - Manage like ewes
- Shade, fresh water, mineral

Early Gestation

- 110 to 120d
- Enter 2.0 to 2.5 BCS
- 7 to 10 lb gain/ewe
- Scavengers
- Leave 3.0 BCS

Annual Nutritional Requirements



Late Gestation

- 28 to 35 d
- Enter 3.0 BCS
- ADG = 0.5 lb/ewe
- Daily ration
 - 3.0 lb hay (2d highest quality)
 - 1.0 lb grain
- Fresh water, mineral
- Leave 3.5 to 4.0 BCS

Lambing Management

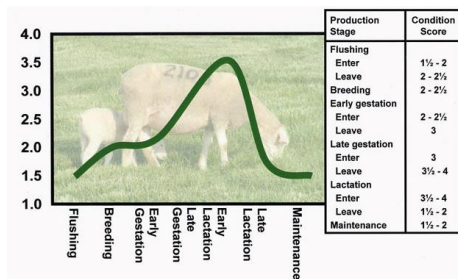
- Be prepared
 - Supplies
 - Energy
- Greatest shepherding skills needed in 1st week after birth
- Go to Lambing School
- Hone skills

Lambing Management

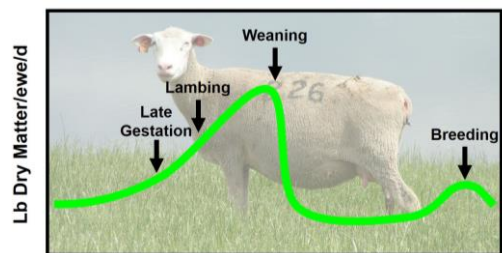
Percent Lamb Crop – The Key to Profit

<u>% Lamb Crop Sold</u>	<u>Hr/Ewe</u>	<u>Lb Lamb/Hr</u>
100	3.50	28.6
125	3.85	32.5
150	4.00	37.5
175	4.20	41.7
200	4.40	45.5

Body Condition Scoring



Annual Nutritional Requirements



Lactation

- 60 d
- Enter 3.5 to 4.0 BCS
- Leave 1.5 to 2.0 BCS

Fed for milk production, not BCS

Lactation

- Daily ration (barn)
 - 5.0 lb alfalfa hay
 - 2.0 lb grain
- Daily ration (cool season pasture)
 - 5.0 lb pasture DM
 - 1.0 lb grain
- Shade (on pasture)
- Fresh water, mineral

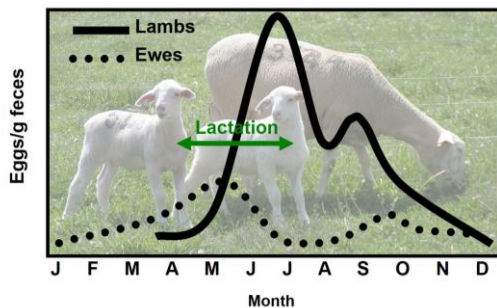
Maintenance

- 150 d
- Enter 1.5 to 2.0 BCS
- Fresh air and sunshine
- Leave 1.5 to 2.0 BCS
- Shade, fresh water, mineral

Lamb Management

- Creep feed (90% grain, 10% SBM)
- Wean at ~60 d
- Confinement
 - Self-feed 90:10 concentrate: roughage
 - ADG: 0.6 to 1.0 lb/hd
- Pasture (grass/legume, alfalfa)
 - Hand fed 2.0% BW daily (grain)
 - ADG: 0.5 to 0.6 lb/hd
 - Shade, fresh water, mineral
 - Manage stomach worms (rotate)

Stomach Worm Epidemiology



Marketing

- Know what, when, and where you will market before you turn rams in!
- Market in uniform lots
- May have to haul more than 10 miles

Integrated Management Parts



Integrated Sheep Management (Pyramid Sheep Farming)

