SHEEP AND GOAT PROJECT

Nutrition of the Ram, the Ewe and the Lamb

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Outline

- Nutrition and Nutrients
- Pasture Management
- Grazing Management and Pasture Rotation
- Feeding Management
- Ram Nutrition
- Ewe Nutrition: Pregnancy and Lactation
- Lamb Nutrition: Weaner and Grower
- Ration Formulation (basics)

NUTRITION

- Balanced Nutrition is Key for the success of your sheep farm operation

- Can be achieved with Pasture/Legume mix of 3:1 ratio. This will provide a cheap source of nutrients to feed every sheep

- Recommended Supplements:

❖ Chopped fresh forages from a Protein Bank,

❖ Grain Concentrated Feeds, Citrus pulp, etc

❖ Forage Silage or Corn forage-based Silage

❖ Hay

NUTRITION

IMPORTANT NUTRIENTS:

1. Water- Sheep need 3 to 8 liters of water/day
2. Carbohydrates- Provides Energy for Body Function and Normal temperature regulation
3. Protein- Promotes growth rate (meat) of sheep and helps important body functions
4. Vitamins- Good for healthy growth of sheep
5. Minerals- Improves appetite and fertility of ewes and rams

PASTURE MANAGEMENT

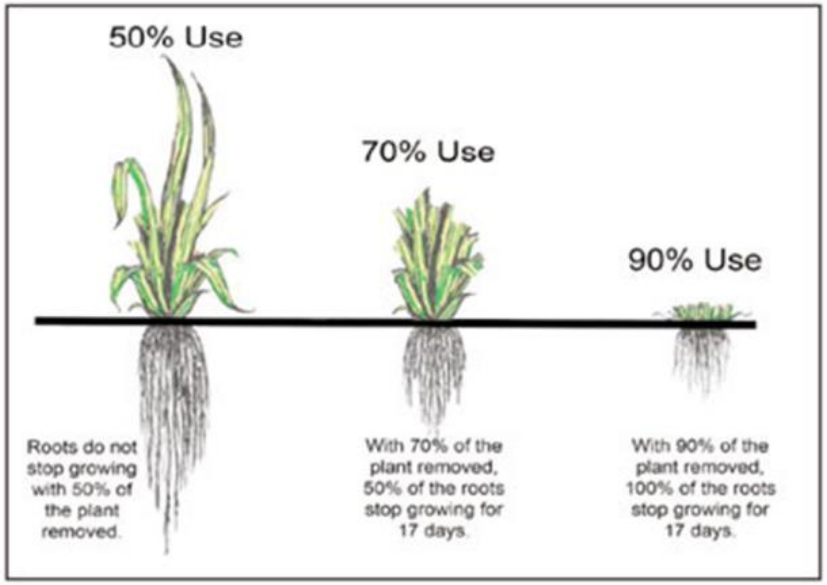
1. A Quality Pasture provides a balanced diet for sheep of all ages
2. The quality pasture for sheep has a mixture of improved well managed grasses and legumes
3. Pasture rotation is good practice to avoid over and under grazing
4. Stocking rate: 10–12 sheep/acre

Pasture Management

Grazing Management Tips

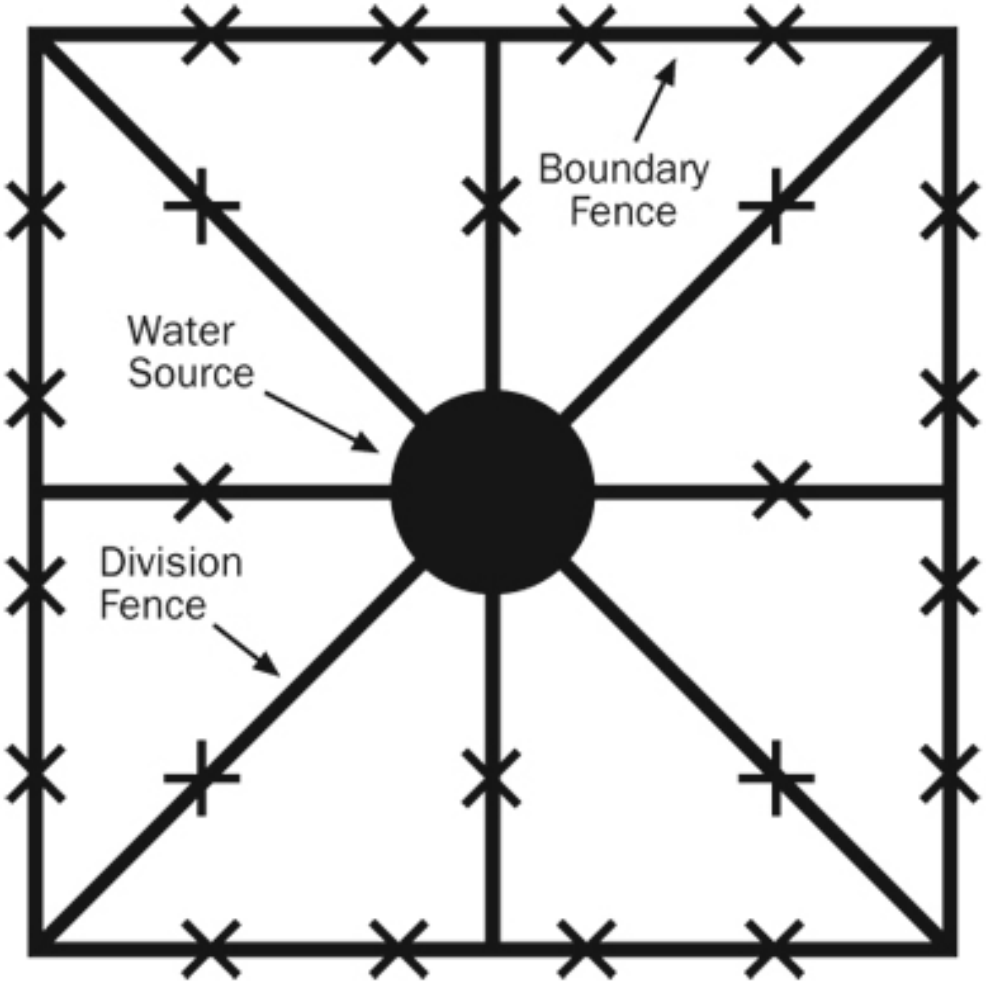
1. Root system of grass is protected by maintaining the grass in a vegetative state result in good pasture
2. Overgrazing damages the root system and affects grass root recovery taking longer to recover
3. Under grazing reduces quality and yield of grass

Effects of Grazing on Grass



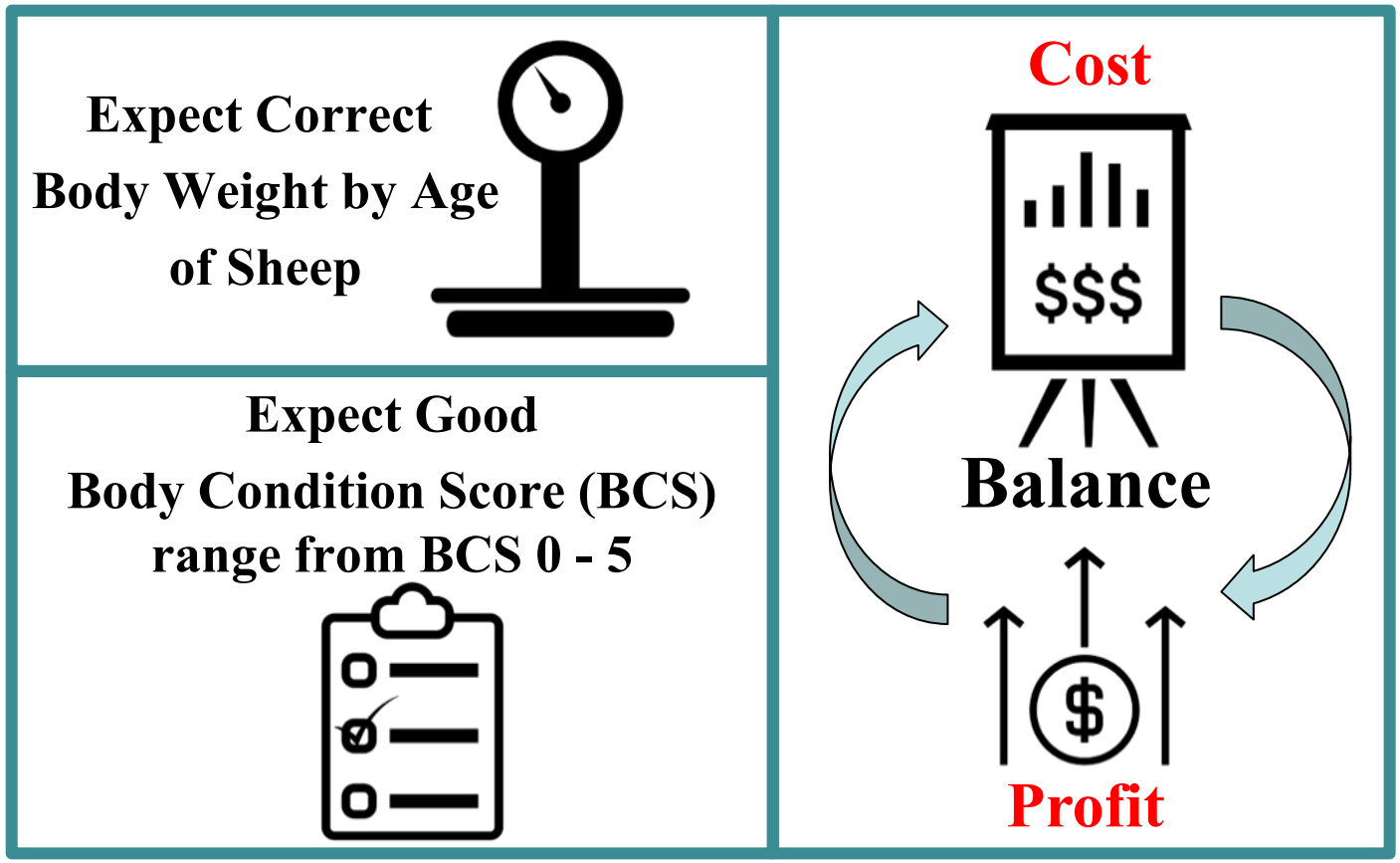
Example of a Pasture and Legume Mix

Pasture Rotation Diagram



Feeding Management

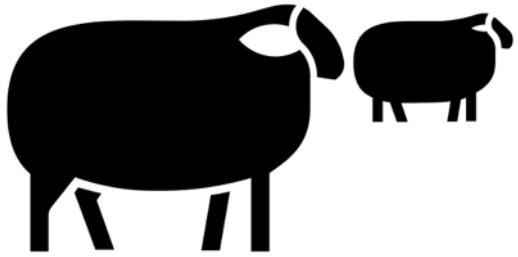
GOALS



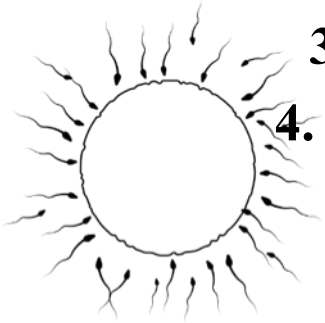
Balanced Feeding Management

ADVANTAGES

1. Rapid Growth

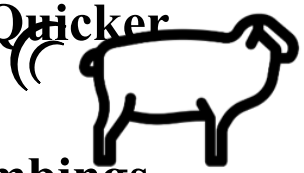


2. Better Health Condition



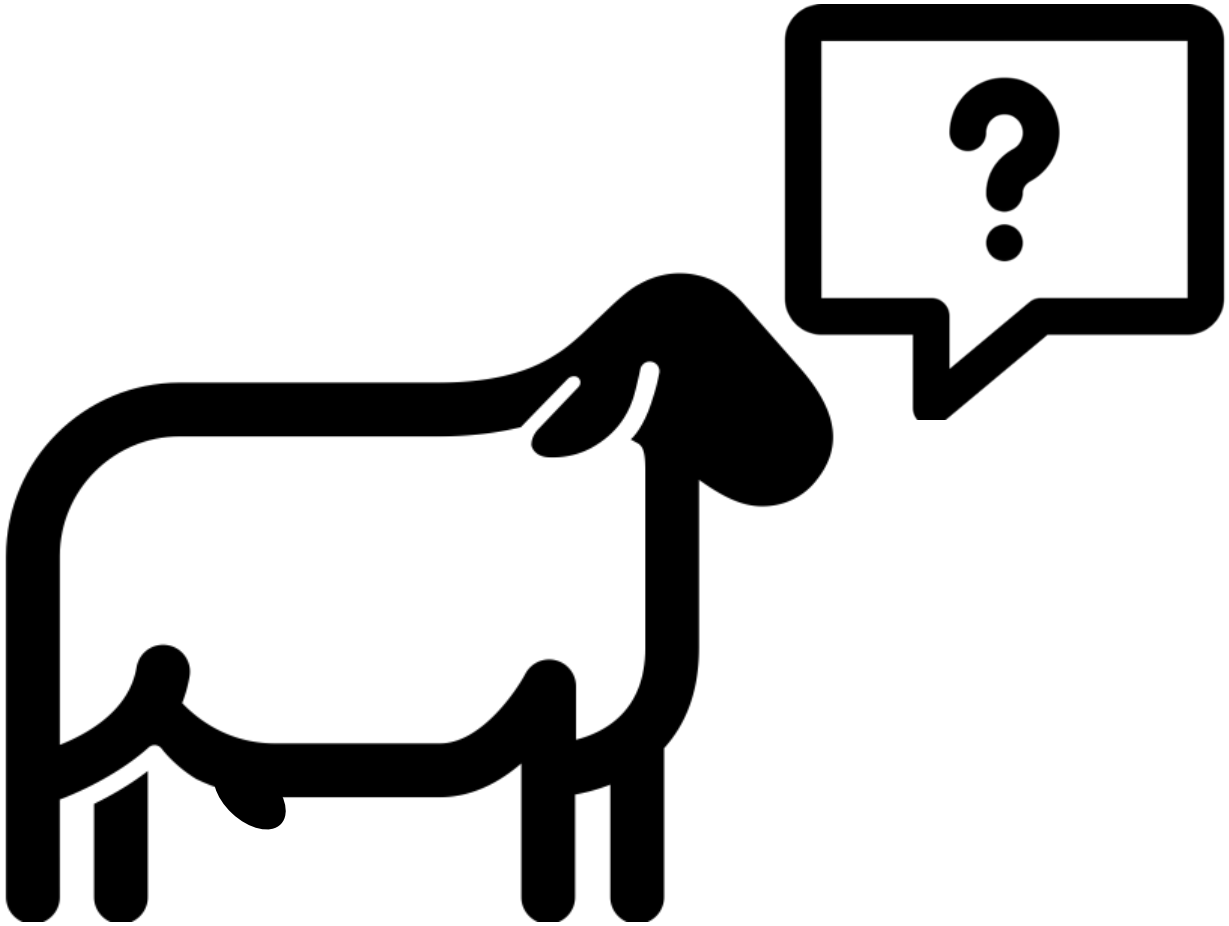
3. Highly Fertile,
4. High Conception,
5. Very Prolific

6. Return to Estrus Quicker



7. Every 2 yrs 3 lambings

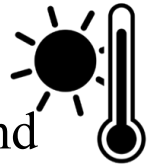
RAM NUTRITION



Pre-breeding rams

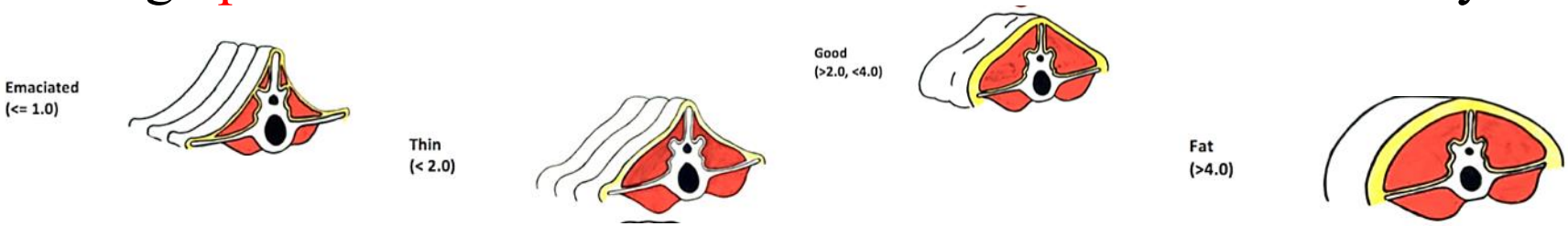
Ram management

- Ram fertility is affected by extremely hot weather
- Breeding indoors is safe and improve Ram Fertility

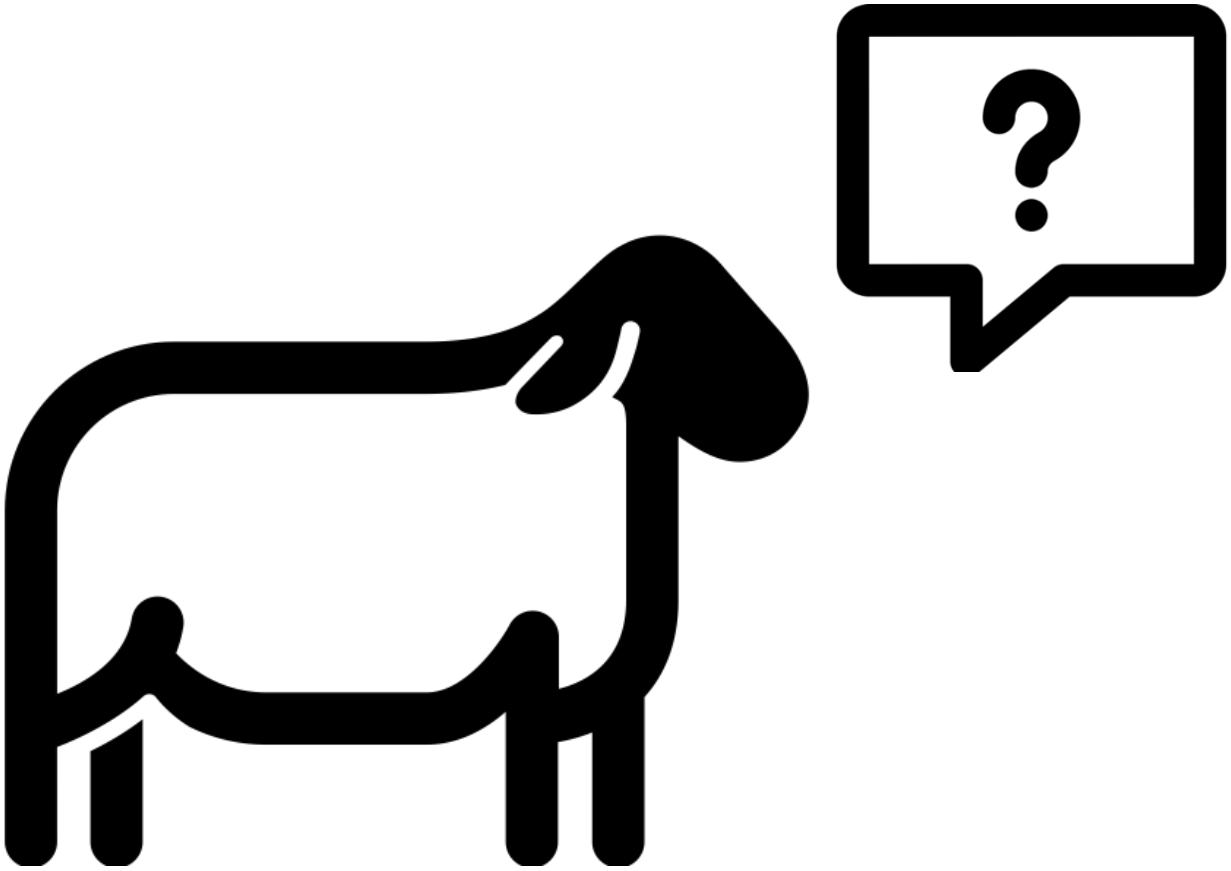


- A healthy mature ram can breed 25-30 Ewes

- Provide a Nutritional Flush 2 weeks before breeding to bring up BCS to 3.5-4.0 & feed 1 lb. Grain Concentrate daily



EWE NUTRITION



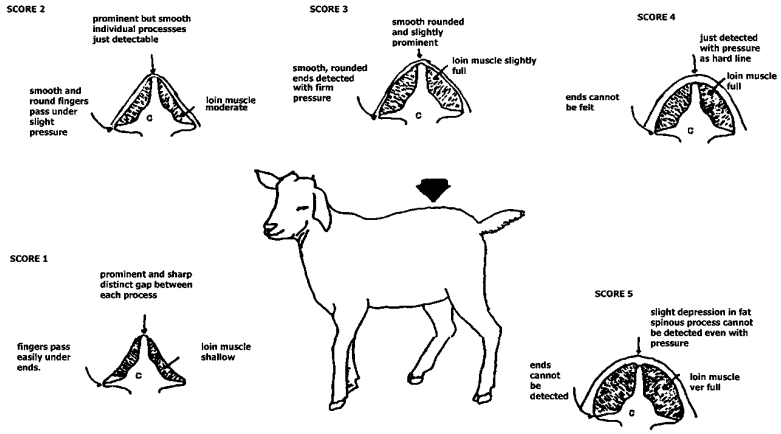
Pre-breeding ewes

Ewe Nutrition

- Deworm Ewes and give Vitamin before the Breeding Season

- Graze them on high quality pasture plus is recommended

- A Nutritional flush 2 weeks before breeding is recommended to bring up BCS to 3.0 - 3.5 if the ewes are underconditioned

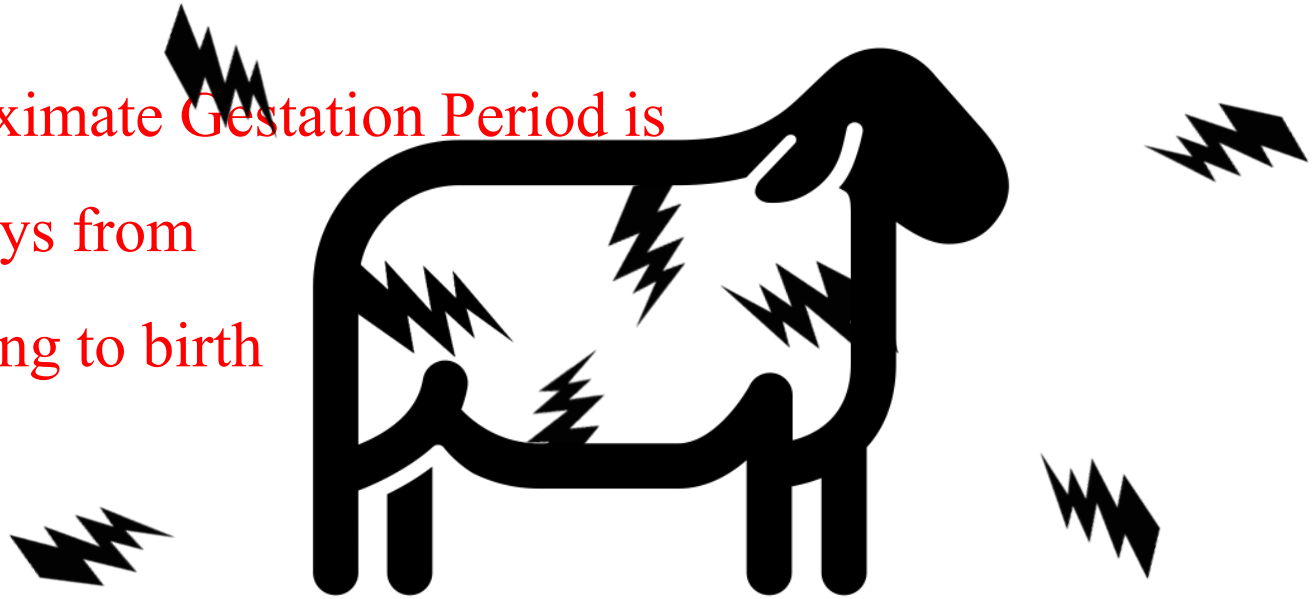


Pre-breeding ewes

Ewe management

- Avoid sudden changes in the feeding and housing of ewes during the first several weeks after breeding to minimize stress on ewes

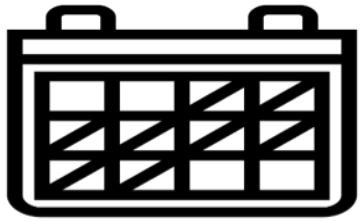
- Approximate Gestation Period is
- 150 days from
- Breeding to birth



Nutrition during Pregnancy

Early pregnancy - Before 40 days

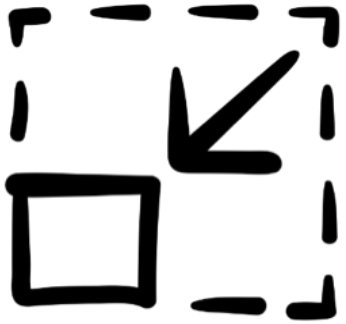
1. After breeding leave ewes completely alone (first 2 weeks)



2. Supply good pasture grazing, supplemented with chopped forage (mar-alfalfa, mulberry, etc.) if grazing is not enough.

3. Don't allow ewes to change more than 0.5 BCS

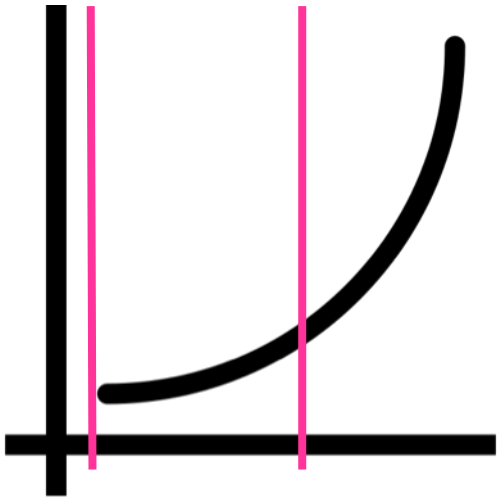
4. Loosing weight not good or overly fat not good



Nutrition during Pregnancy

Mid pregnancy - Between 40-90 days

- During this first half of pregnancy no supplemental feeding required since fetal growth is slow (about 30% growth)

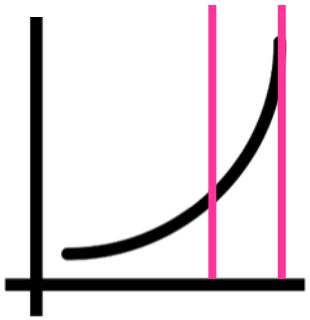


First-half of pregnancy
Fetus grows 30%

Nutrition during Pregnancy

Late pregnancy- after 90 days

1. 70% of fetus growth and udder development



2. So, supply extra forage of very high Protein quality

3. Give grain concentrate minimum 13% Crude Protein (CP)

Min. 13% CP

4. Mineral/Salt block prevents Calcium deficiency

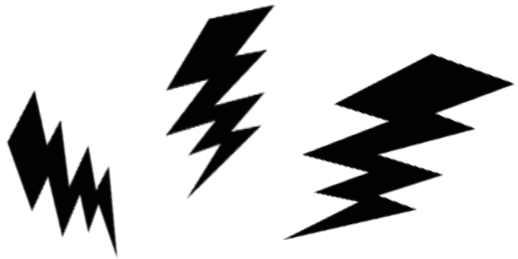
Nutrition during Pregnancy

Late pregnancy- after 90 days

5. For multiple births: give 2 lbs. concentrate per ewe per day recommended during the last 2 weeks before lambing.

6. Provide enough feeder space

7. Avoid unnecessary stress



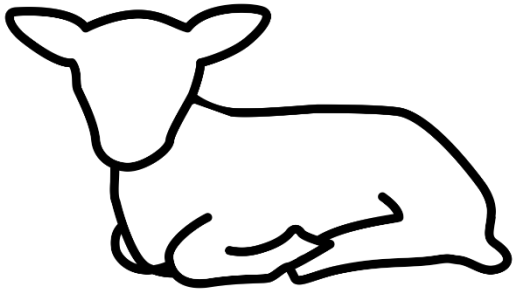
Nutrition during Pregnancy

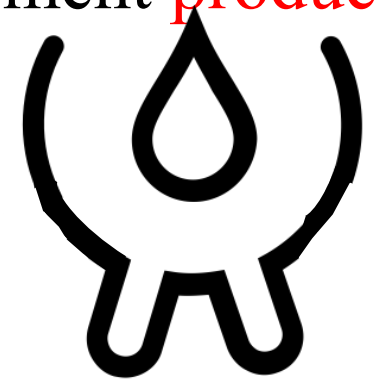
❖ Extra nutrition after 90 days is needed to:

a) Support growth of fetus and helps to develop udder

b) Give birth to strong and healthy lambs

c) Mammary development produces plenty Milk for lamb





Feeding during late Pregnancy

Forage and Grain combination Recommended

Chopped Forage	Grain Concentrate	Wks before lambing
5.0 to 6.0 lbs. Mar-alfalfa/ mulberry/ nacedero, etc.	0.5 (one time feeding)	8
3.0 to 4.0 lbs. Mar-alfalfa /mulberry/nacedero, etc.	1.0 to 1.5 lbs. (split feeding)	6
Limit the roughage intake Ewe lambs and mature Ewes carrying 2 or more fetuses	1.5 to 2.0 lbs. (split feeding)	4

Lactation Nutrition

Lambing to weaning (Feeding the Ewe)

weeks after lambing

3-6

- 1.5 - 2.0 lbs. Concentrate feeding level (split to twice a day)

8

- Reduce to 1 lb. of the concentrate
- Preparing to wean the lamb at a set time

weaned

- Reduce to 0.5 lb of the concentrate

Nutrition of the Lamb

STAGES OF THE LAMB	DIET
1. Neonatal – birth to 10 days	1. Strictly milk diet – Start with Colostrum as soon as possible (3 Q Rule)
2. 10 to 90 days: Pre-weaning (45 lbs. at weaning)	2. Creep feeding (18% Crude Protein) – helps to reduce stress at weaning, increase growth rate and helps rumen development
3. 90 days onwards to Market	3. Grower ration (14 – 16% Crude Protein minimum

CREEP FEEDING

Strategy to Creep Feed

1. Start creep feed between 1 - 2 weeks of age of lamb
2. 2nd week onwards provide quality forage (Mar-alfalfa) supplemented with grain concentrate 18% CP
3. The creep pen allows only the lamb inside

Simple Creep Feeders

CREEP FEEDING

Advantages

1. Enhance rumen development
2. Improve growth rate
3. Minimize stress at weaning

Development of the Rumen

Importance of diet to rumen development (6 weeks of age)

AFTER-WEANING FEEDING

FEED QUALITY

- Supply quality fresh pasture high in protein and energy
- Ensure pasture is young and succulent
- Avoid old and fibrous pastures as this is lower in energy levels.

FEED QUANTITY

- 4-5% live weight

Example:

- 50 lbs. lamb requires
  2 to 2.5 lbs. DM feed/day

- 3.0 lb. DM/day for a 65 lbs. lamb

AFTER-WEANING FEEDING

Concentrate CP% Levels

To accelerate lamb growth rate:

Weaner – 18% CP

Grower – 16% CP

Lamb growth affected by:

1. Feed: Quantity/Quality
   - 4 – 5% of body weight
   - Pastures good conditions
2. Genetics
3. Health status
4. Parasites
5. Clean water
6. Grazing systems

Crude Protein % (CP%) Required in Sheep Rations

Sheep Rations	Pre-Starter 1	Starter 2	Grower / Early Lactation 3	Late Lactation 4	Late Gestation 5	Finisher & Early Gestation 6
Feeding Regime	Birth to Weaning (creep feeding)	Weaning to 60 lbs.	60-85 lbs./ After birth to 1 month before weaning	From one month before lamb is weaned	From 100 days of gestation to giving birth	85 lbs. to market wt./ 0-100 days of gestation
CP %	20	18	16	14	13	12

Feeding Strategy

- To accelerate growth of Lamb (weaner to grower) give enough CP Minimum weaner (18%) and grower (16%)
- With a Balanced Ration, Lambs perform to their maximum Genetic Potential

Ration Formulation

1. Need to check **availability** and **management** of feed sources to calculate a **ration**
2. It is important as animals will consume **adequate foods**.

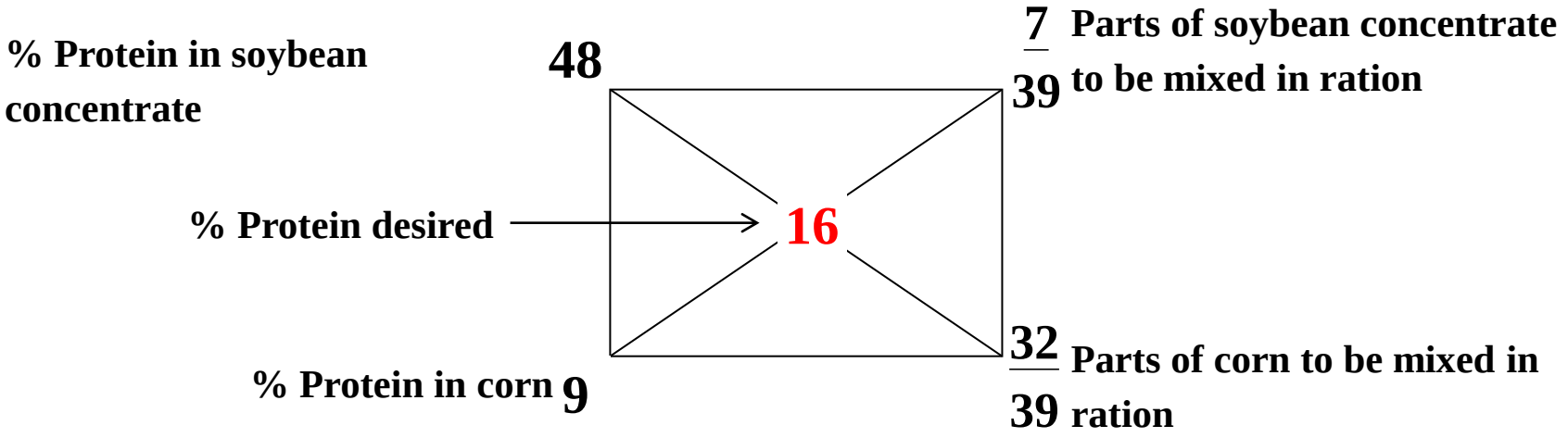
Pasture Management

Forage Supplement

Creep Feeding

Ration Formulation: Pearson Square Method

- Calculate a Sheep Grower (16%) when only corn (9%) and a 48% soybean concentrate are available.



ANSWER

- 7/39 = 18% of soybean
- 32/39 =82% of corn

You will, therefore, require 18 lbs. soybean concentrate and 82 lbs. of corn to mix to make up a total of 100 lbs.

Ration Formulation: Pearson Square Method

NOTE

- The most important thing before calculating the ration is to make sure the percentages of nutrients are based on **dry matter (DM)**.
- We can standardize different feed sources by using dry matter data.

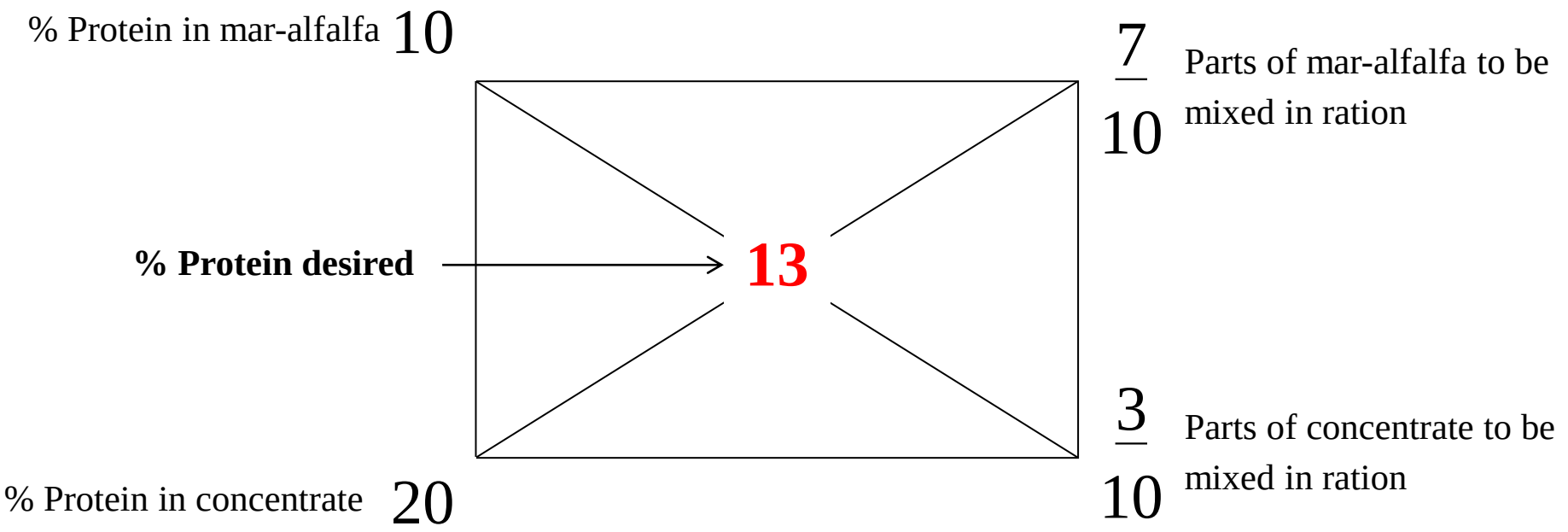
- Example, when a sheep eats 10 lbs of hay which contains 80% of DM, the DM intake of the sheep is 10 * 80% = 8 lbs. (in reality sheep ate 8 lbs. Feed)

Example of a Ration Formulation

- A farmer uses mar-alfalfa and a commercial grain concentrate to feed a late-gestation ewe. How many lbs. of these feeds should be given to a 132 lbs. ewe? (use table 2)

Table 2.

DM% of mar-alfalfa	20%, as fed
CP% of mar-alfalfa	10% of DM
DM% of commercial concentrate	90%, as fed
CP% of commercial concentrate	20% of DM
Req. of Dry matter of late-gestation ewe	2.75% of BW
Req. of Crude protein of late-gestation ewe	13% of DM



- 7 / 10 = 70%, 3 / 10 = 30% (% of mar-alfalfa and concentrate)
- 132 * 2.75% = 3.63 lbs. (req. of dry matter intake of a late-gestation ewe)
- 3.63 * 70% = 2.541 lbs. (weight of DM of mar-alfalfa)
- 2.541 / 20% = **12.705 lbs.** (weight of mar-alfalfa should be fed)
- 3.63 * 30% = 1.089 lbs. (weight of DM of concentrate)
- 1.089 / 90% = **1.21 lbs.** (weight of concentrate should be fed)
- ANSWER: The farmer should feed at least 12.705 lbs. of mar-alfalfa and 1.21 lbs. of commercial concentrate to a 132 lbs. late-gestation ewe.

Hope this info will assist your Management of Sheep; Any Questions or Clarifications feel free to call your Extension Officer

Thank You, God Bless You