



Small Ruminant Nutrition

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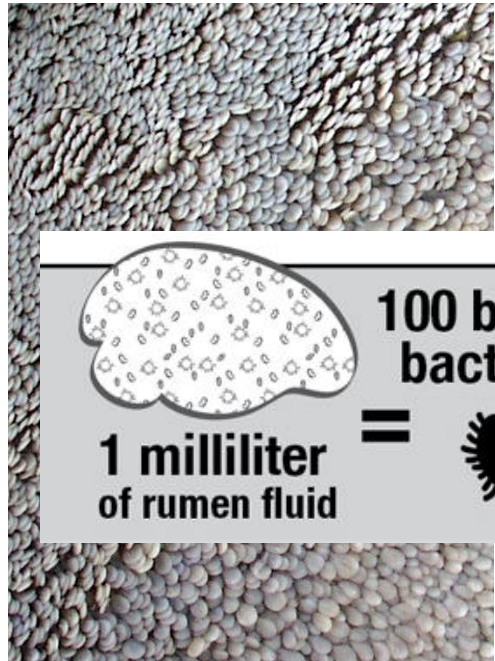
University of Florida

OUTLINE

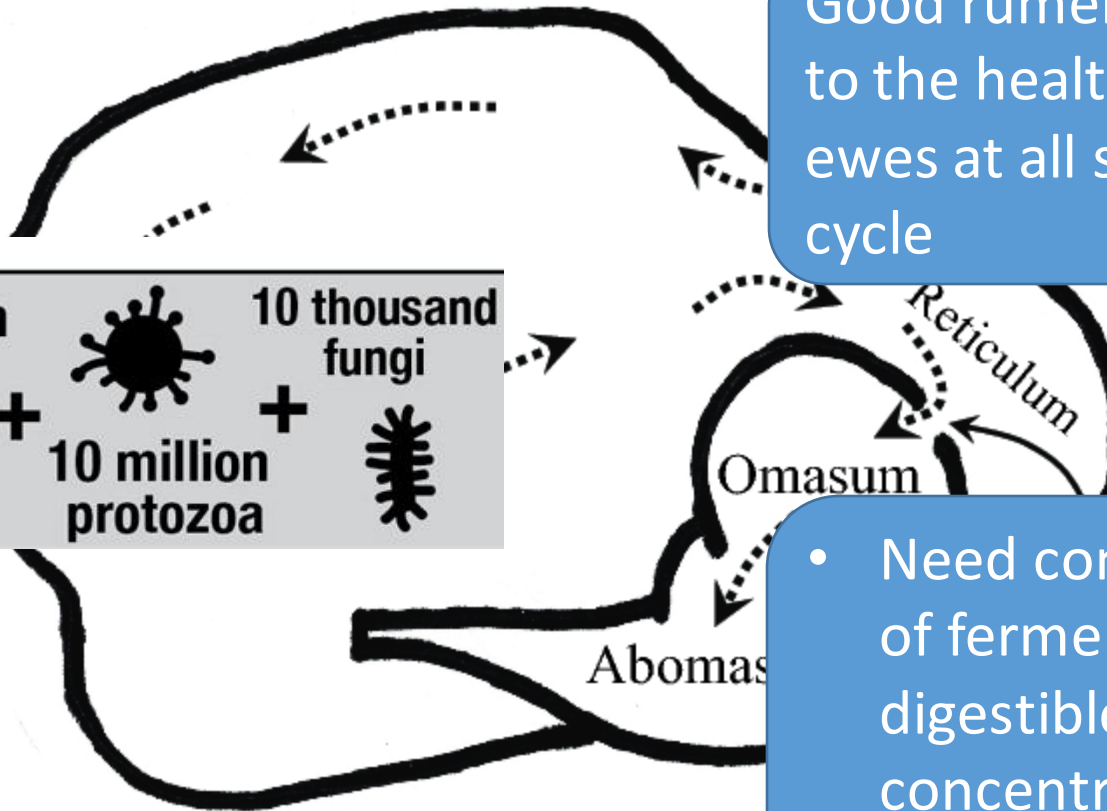
- **Rumen function**
- **Nutrient density**
- **Body condition scoring**



RUMEN FUNCTION



Rumen papillae



Good rumen function is fundamental to the health and productivity of ewes at all stages of the production cycle

- Need constant and balanced supply of fermentable energy (forage, digestible fiber and if necessary, concentrates)
- Supply of **rumen degradable protein**

DEFINITIONS

**CRUDE
PROTEIN%**



Total N x 6.25

**TOTAL DIGESTIBLE
NUTRIENTS, %**



Digestible Energy

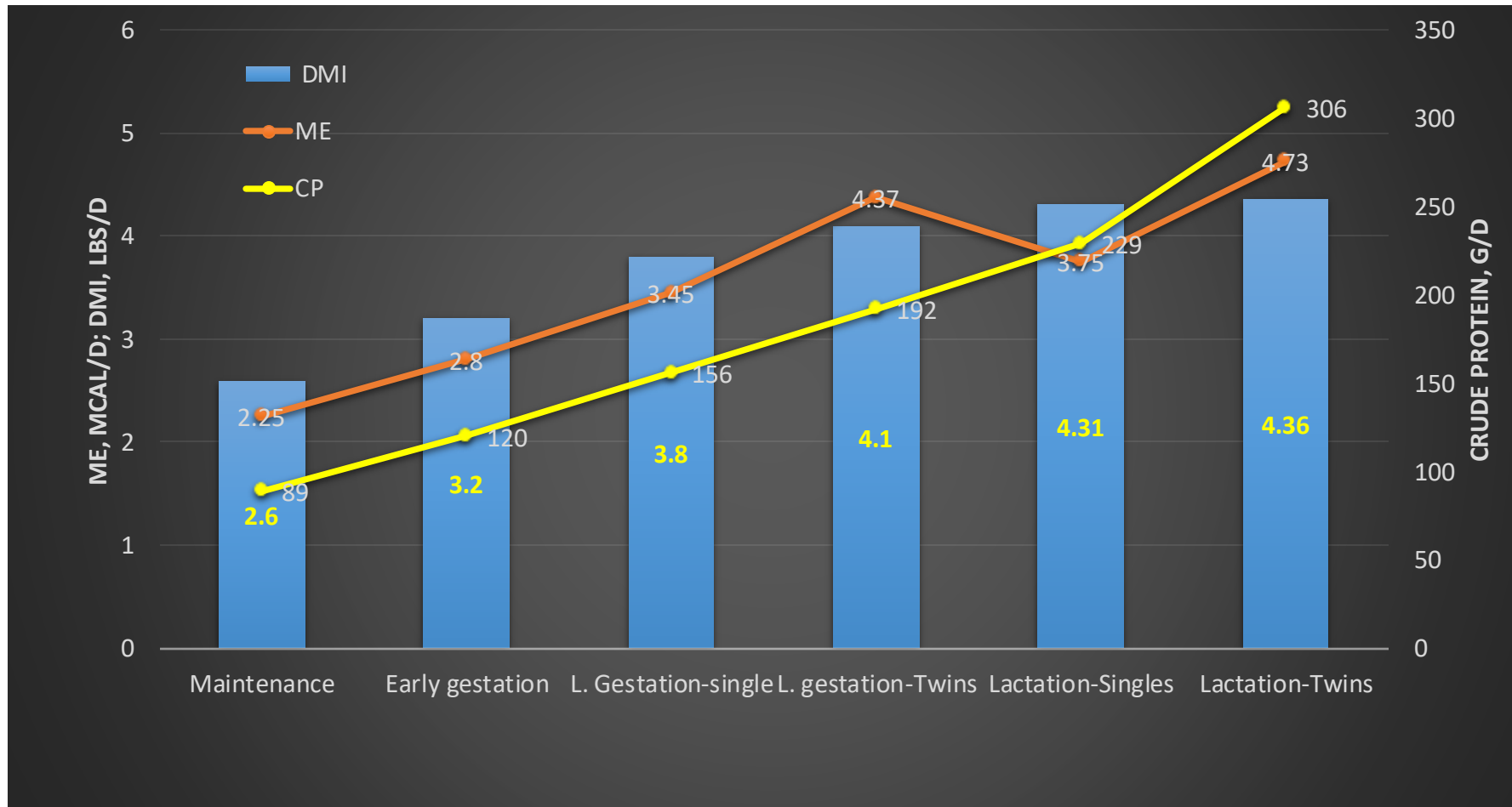
**Metabolizable
Energy**



**Megacalories/Mega
joules**

Ewe requirements (154 lbs mature BW)

TDN, %	51.6	52.5	52.2	64.8	52.2	64.8
CP, %	7.5	8.3	8.7	10.5	11.7	15.5



NUTRIENT DENSITY



10 lbs TDN

25 lb Straw



18 lb Alfalfa



11 lb Corn

NUTRIENT DENSITY

1 lb Protein



25 lb Straw



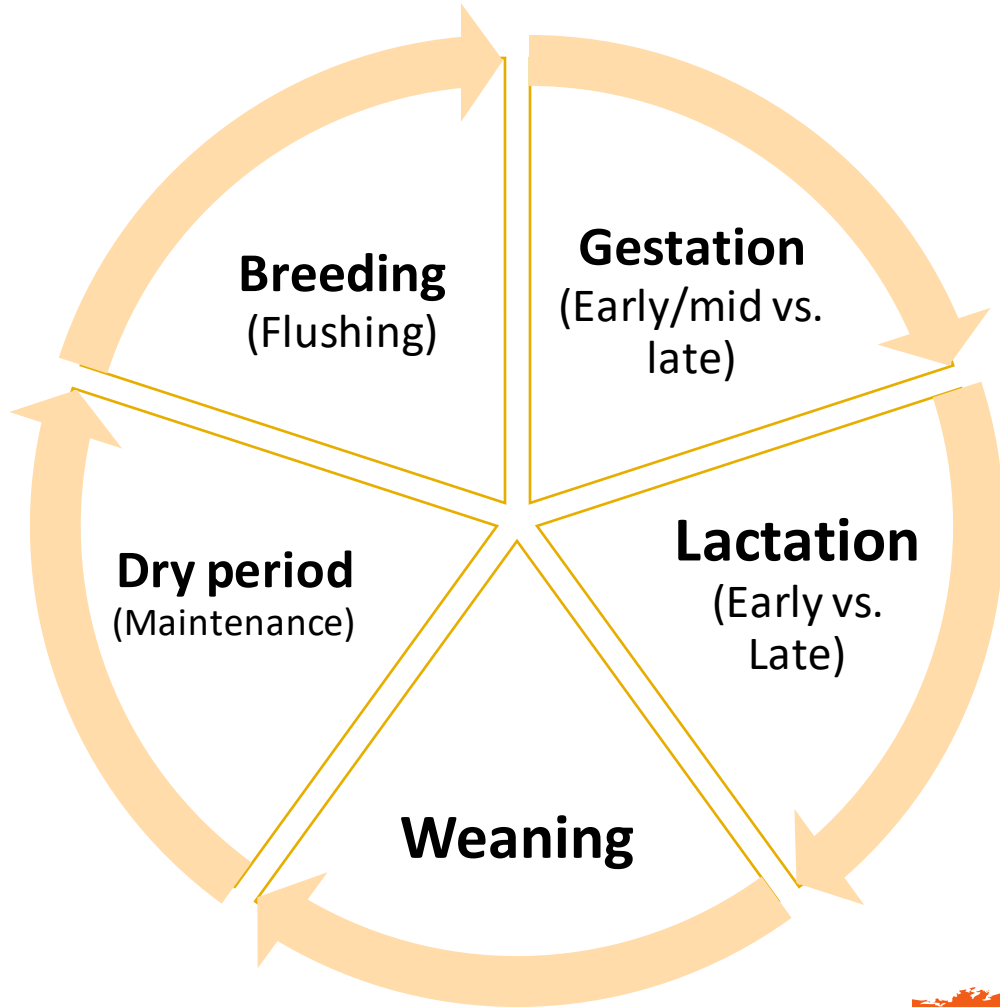
5.5 lb Alfalfa



2 lb Soybean meal

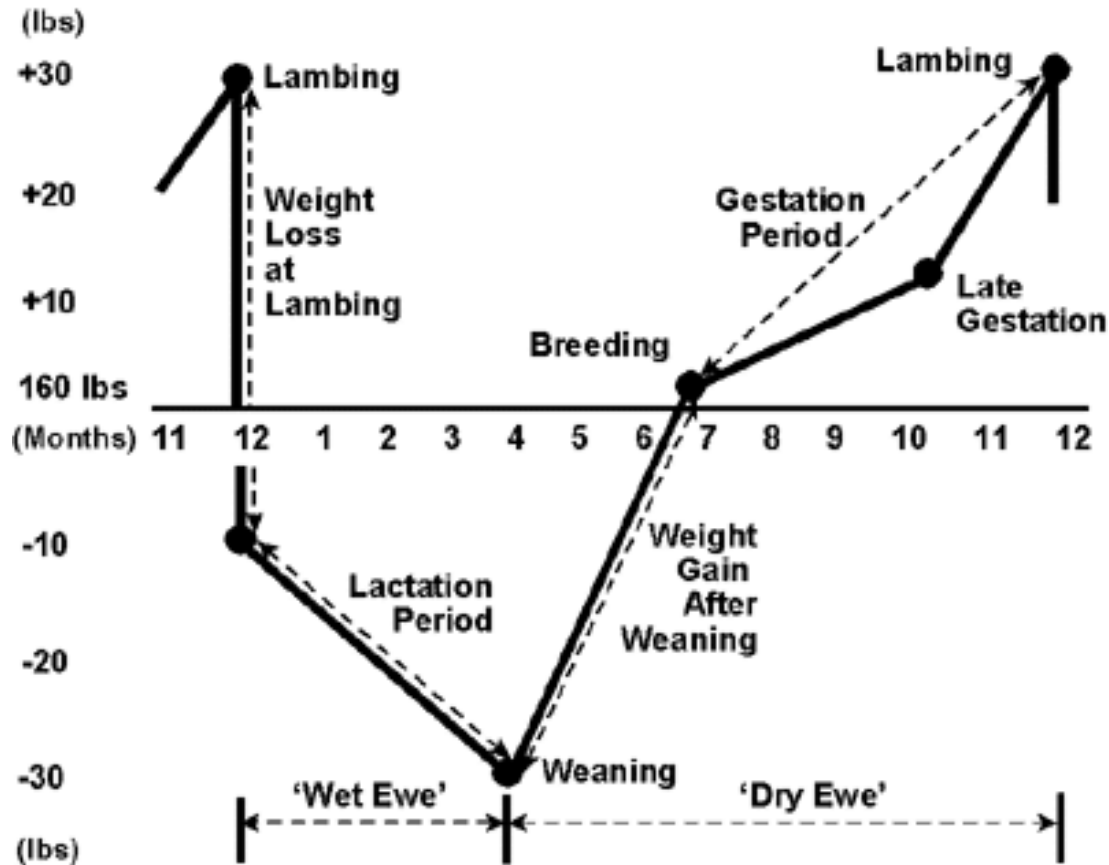
Ewes and Does

Rams and Bucks



- **Maintenance (2.5-3.0 BCS)**
- **Breeding (3.0-3.5 BCS)**

EXPECTED WEIGHT CHANGES



The average 160 lb. ewe rearing twins will experience in a 12-month period

BODY CONDITION SCORE

Ewes and does: Never 1 or 5 (Always 2 to 4)

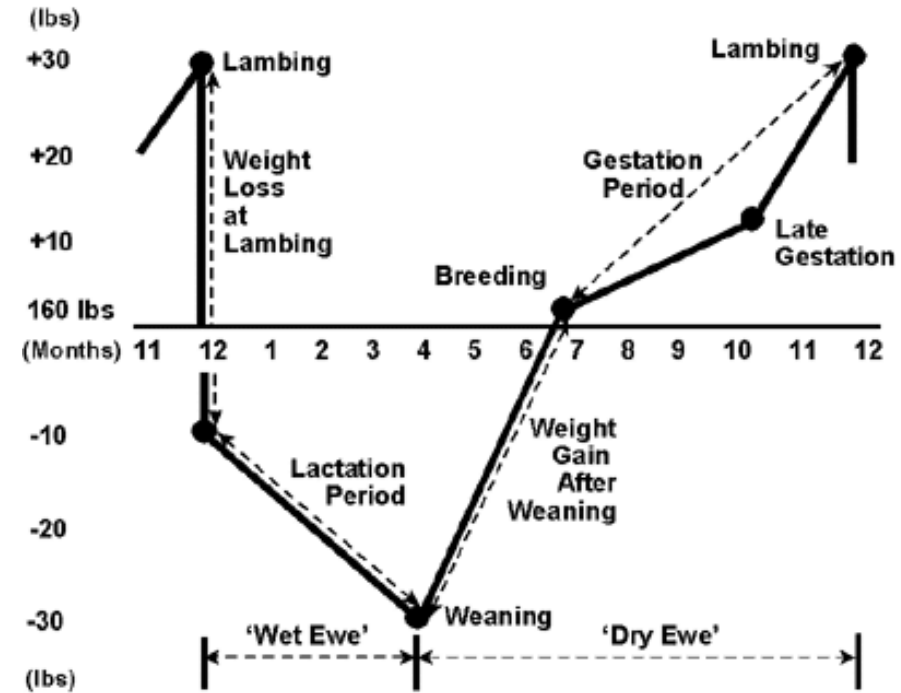
- **Breeding-** BCS= 3.0-3.5
- **Lambing-** BCS = 2.5-3.0
- **Weaning-** BCS = 2 (at minimum)
- **Dry period-** BCS = 3.0-3.5

Rams and Bucks:

- Pre-breeding: 3-4

Low BCS (2 or less) during late gestation and lambing:

- Pregnancy toxemia (2+ lambs/kids)



SUMMARY

- Rumen health should not be compromised at all stages of production cycle
- Nutrient density should be taken into consideration while formulating rations
- Body condition score is essential management practice for assessing adequacy of feeding program
- Essential to optimize nutrition for maximizing profitability of small ruminant production systems



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