

# Using stored feeds on annual rangeland and alternatives/improvements

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## The annual forage left

- Not talking about “grass banking” as in irrigated pasture

- RDM

- One year’s feed left for the next year

- What’s that dry feed worth?



## What's the value of this dry feed? Protein

- We will need some protein supplement if grass is the sole source
- We may not need as much protein if clover is present
- Normally filaree can fix this problem with 27% CP
  - 5-9 lbs of filaree is all that is needed

Stage of maturity	Crude protein (%)		
	Annual grass	Filaree	Bur clover
Early vegetative	18	27	28
Late vegetative	15	25	27
Early flowering	15	22	26
Late flowering	10	16	22
Mature	6	10	19
Dry	5	7	18
Dry, leached	3	5	17

Source: Hart et al. 1932; Gordon and Sampson 1939

Source: Annual rangeland quality ANR pub #8022

Rose clover and vetch are similar quality to bur clover

# Protein - CP

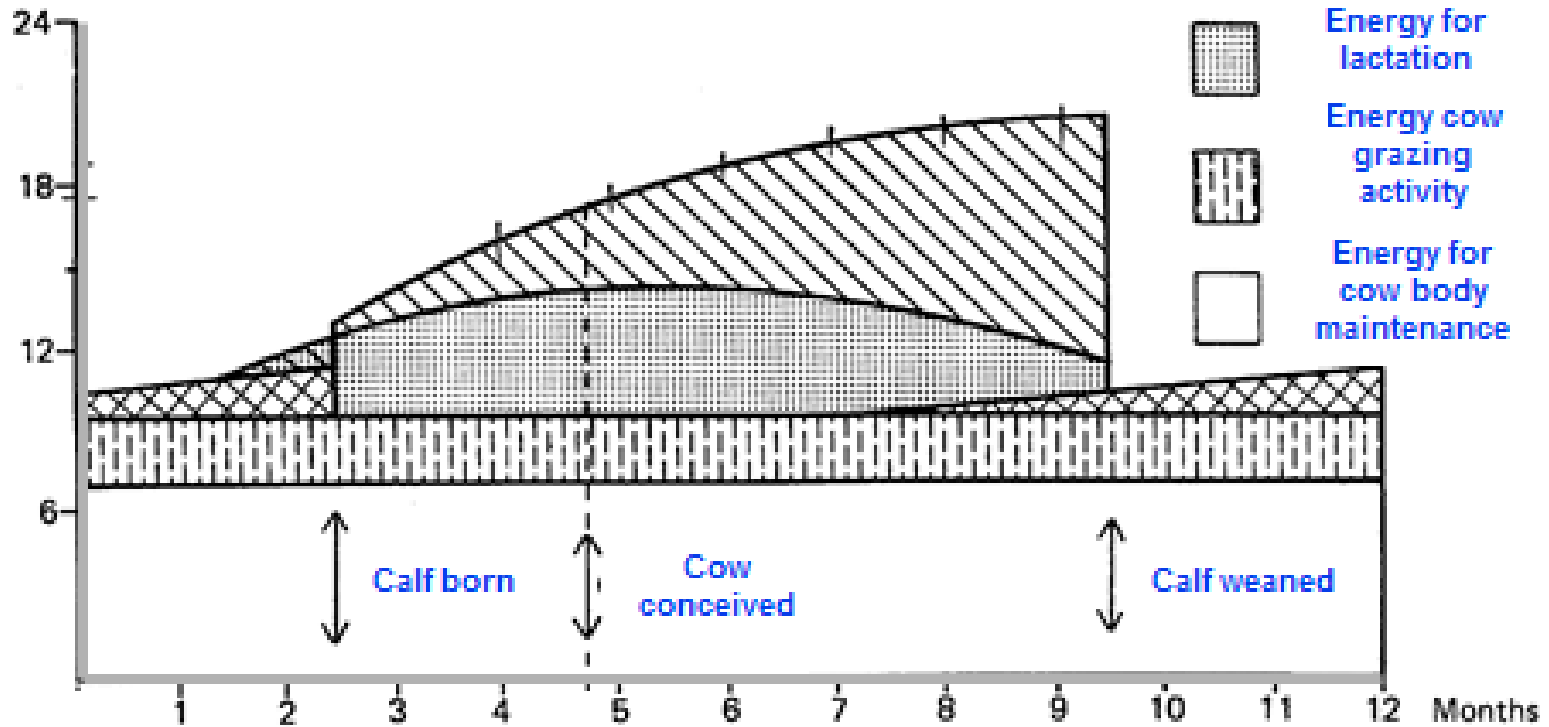
- Cow protein requirements – 1,000 lb SMALL COW
  - Dry (mid gest) - 1.33 lbs/day
  - Calving - 2.5 lbs/day
- Lbs of clover needed
  - Dry cow 7.6 lb DM per day
  - Calving 14.7 lbs DM per day
- Lbs of grass needed
  - Dry cow 44 lbs DM per day
  - Calving 83 lbs DM per day
  - **More than double INTAKE even for the dry cow**

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# Total daily requirements

Total Digestible nutrients (TDN) lb.



Last third of pregnancy - First 84 days after calving are the most critical production phases

Estimated requirements for 1000 lb. mature cow for 12 month reproductive cycle, based on 90 day calving season and 500 lb calf at 7 months of age (Ensminger).

## Energy - TDN

### Cow TDN requirements

- Dry (mid gest) – 8.8 lbs/day
- Calving– 13.8 lbs/day

Stage of maturity	Metabolizable energy (Mcal/kg)			TDN (%)		
	Annual grass	Filaree	Bur clover	Annual grass	Filaree	Bur clover
Early vegetative	2.8	3.5	3.3	77	97	91
Late vegetative	2.7	3.4	3.2	74	94	89
Early flowering	2.6	3.3	3.1	72	91	86
Late flowering	2.4	3.0	2.9	67	84	80
Mature	2.2	2.6	2.6	61	72	72
Dry	2.1	2.5	2.5	58	69	69
Dry, leached	2.1	2.4	2.4	58	67	67



## Energy

### Lbs of clover needed

- Dry cow 13 lb DM per day
- Calving 21 lbs DM per day

### Lbs of grass needed

- Dry cow 15 lbs DM per day
- Calving 24 lbs DM per day



Sounds doable right?

Here's the curve ball!  
Medusahead, goatgrass, etc.  
This makes intake impossible!

# Consider calcium/Phosphorus

- Calcium is present in legumes and clover such as hay
- Phosphorus is likely depleted in all dry/leached residual feed, but is easily supplemented by nearly any forage or concentrate
- Wheat hay is low in calcium, ryegrass is ok, clover and alfalfa are high



## Consider adding rose clover

- Cattle don't find it palatable when green which preserves it for dry feed
- Quality preserves very well in dry feed
- Highly sought after when dry
- One of few clovers that does well without large additions of phosphorus
- Only need one or two lbs/acre
- Seed is inexpensive and available
- Inoculate for nitrogen fixation! Size of plant = amount of N produced





# Vetch – Lana variety – deep ground



# Seeding clover

Get the inoculate in the ground!

Other than that I don't care

Keep it cheap



# Increase the digestible grass? Will it stick around?





# Perennials? Moderate drought This year...minimal



# Other ideas?

- Remember RDM guidelines still matter once it rains
- Don't sacrifice next year as well