Feeding the Doe Herd

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Goals for the Doe Herd

- **Maximize conception rate**
- **Minimize embryo and fetal mortality**
- **Birth of viable kids capable of rapid growth**
- **Heavy milk production**
- **Minimize feeding costs**

2001 FEED TEST RESULTS

Alfalfa-Grass (Hay or Silage) 1st Cut

# of samples	RFV	Protein	TDN	Phosphorus	Manganese	Zinc	Copper	Molybdenum
Average 65	95.56	12.75	57.62	0.18	28.04	17.38	5.72	3.07
High	162.00	19.70	65.40	0.39	113.00	32.60	13.00	13.00
Low	62.10	7.10	49.60	0.09	14.50	9.60	1.90	1.00

Native Hay

# of samples	RFV	Protein	TDN	Phosphorus	Manganese	Zinc	Copper	Molybdenum
Average 4	86.08	9.70	57.30	0.10	95.63	19.23	3.50	1.90
High	92.80	10.70	59.60	0.15	166.00	28.00	4.30	3.00
Low	79.30	9.30	55.10	0.05	25.40	15.10	2.00	1.00

Oats Green Feed

# of samples	RFV	Protein	TDN	Phosphorus	Manganese	Zinc	Copper	Molybdenum
Average 6	94.53	9.25	59.93	0.26	17.60	17.50	4.80	0.98
High	108.00	11.90	63.40	0.33	30.60	21.80	5.40	1.50
Low	88.40	7.40	57.00	0.19	8.90	9.10	4.00	0.50

Tame Hay Grass

# of samples	RFV	Protein	TDN	Phosphorus	Manganese	Zinc	Copper	Molybdenum
Average 11	87.59	10.21	58.43	0.15	35.10	20.37	4.79	2.01
High	96.90	14.00	61.00	0.31	52.10	43.90	8.40	3.80
Low	77.20	6.70	56.00	0.07	23.60	14.70	2.00	1.00

Alfalfa 2nd Cut

# of samples	RFV	Protein	TDN	Phosphorus	Manganese	Zinc	Copper	Molybdenum
Average 15	134.67	19.13	63.93	0.27	28.69	21.72	8.28	6.21
High	155.00	24.80	66.40	0.40	50.90	28.30	10.60	18.70
Low	117.00	15.90	61.20	0.17	15.30	17.40	6.60	1.40

Maintenance (weaning to flushing)

Goal - To achieve a minimum BCS of 3, 3 weeks prior to breeding

- **Feeding level depends upon body condition at weaning**
- **70 kg doe in good condition**
  - **1.0 - 1.5 kg of average quality forage (10% protein, 55% TDN)**

Flushing (3 weeks before breeding)

Goal - To achieve a BCS of 3.5 at breeding

- **Increase energy intake (60% TDN)**
  - **good quality forage**
  - **grain supplementation of poorer forages**
- **Consider -**
  - **Current condition score**
  - **Breed**
  - **Time of Breeding**
  - **Lactating Does**

Early Pregnancy (first month)

Goal - To maintain or slightly increase body weight

- **Nutritional management is critical in minimizing embryo loss**
  - **avoid under and over feeding**
- **Maintain flushing rations for 3 - 4 weeks after breeding**

IMPACT OF GROWTH RATES AND PREGNANCY ON FEED REQUIREMENTS OF GOATS

Additional Requirements for Late Pregnancy - (for all goat sizes)						
TDN (g)	Crude Protein	Ca (gm)	P (gm)	Vitamin A (1000 IU)	Vitamin D IU	DM
397	82	2	1.4	1.1	213	0.71

Additional Requirements for Growth - weigh gain at 50 g per day (for all goat sizes)						
TDN (g)	Crude Protein	Ca (gm)	P (gm)	Vitamin A (1000 IU)	Vitamin D IU	DM
100	14	1	0.7	0.3	54	0.18

Additional Requirements for Growth - weight gain at 100 g per day (for all goat sizes)						
TDN (g)	Crude Protein	Ca (gm)	P (gm)	Vitamin A (1000 IU)	Vitamin D IU	DM
200	28	1	0.7	0.5	108	0.36

Additional Requirements for Growth - weight gain at 150 g per day (for all goat sizes)						
TDN (g)	Crude Protein	Ca (gm)	P (gm)	Vitamin A (1000 IU)	Vitamin D IU	DM
300	42	2	1.4	0.8	162	0.54

Mid Pregnancy (up to 100 days)

Goal - To increase body weight slightly

- **Placenta is fully developed**
- **Underfeeding**
  - **underdeveloped placenta**
  - **small kids**
- **Overfeeding**
  - **reduces feed intake in late pregnancy and increases incidence of pregnancy toxemia**
  - **wasteful**

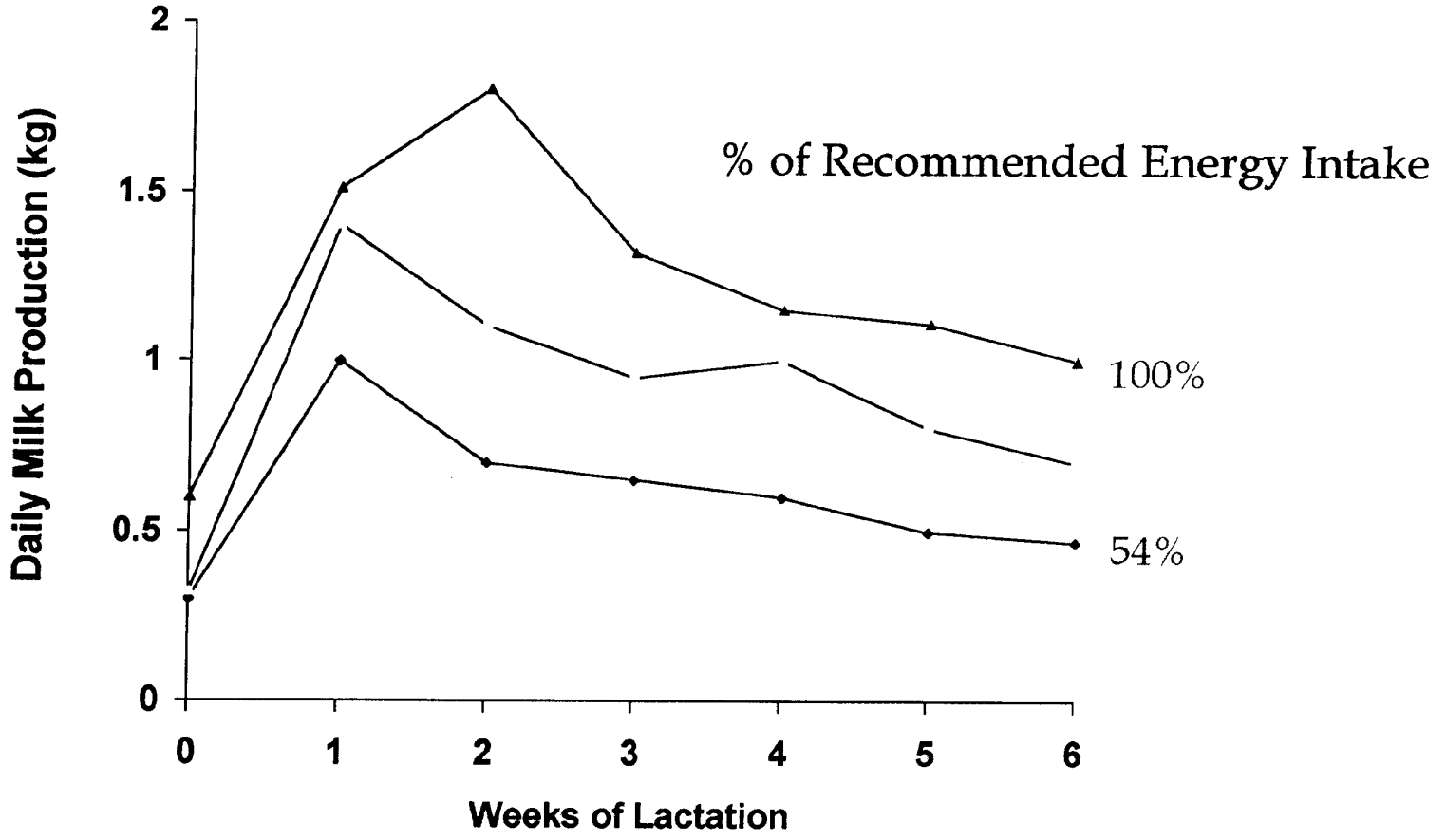
Mid Pregnancy (up to 100 days)

- **Maintenance nutrient levels**
  - **55% TDN**
  - **10% protein**
- **4 lbs of average quality alfalfa-grass hay**

Late Pregnancy (last 6 weeks)

Goal - To maintain BCS or limit drop to less than 0.5 points (body weight gain of 180 - 225 g/day)

- **70% of fetal growth**
- **Underfeeding does**
  - **fetal growth**
  - **pregnancy toxemia**
  - **milk production**
    - **onset and overall quantity**


Daily Milk Production (kg)
2
1.5
1
0.5
0
0
1
2
3
4
5
6
Weeks of Lactation
% of Recommended Energy Intake
100%
54%

Late Pregnancy (last 6 weeks)

- **Feeding levels of 65% TDN, 12% protein**
- **Good quality hay (60% TDN) plus 0.5 kg barley**
- **Average quality hay (55% TDN) plus 1.5 lbs barley**

Rations for Pregnant Does (175 lbs)

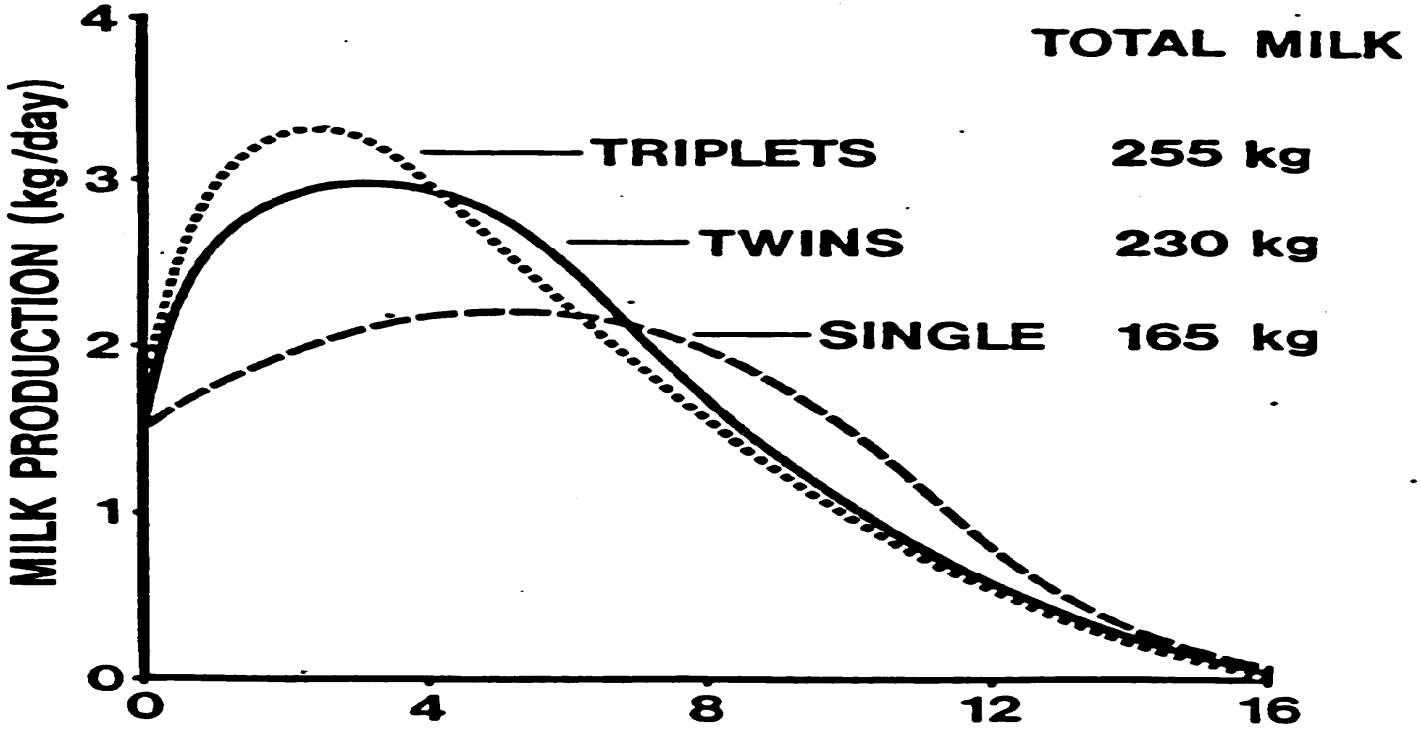
	1st 15 weeks	Last 4 weeks
Hay	4	3
Barley	-	2
1:1 mineral	10 grams	10 grams
Co- salt	10 grams	10 grams
Vitamin A pm.	5 grams	5 grams
Lbs DM	3.3	4.4
%TDN	55	65
%CP	10	12

Sample Requirement - 50 kg Doeling Late Pregnancy in Winter - 100 gm /day gain							
BM	DM INTAKE	TDN (g)	CP	CU	P	Vit. A	Vit D.
50 kg	2.4	795	110	4	2.8	2.1	429
Late Preg.		397	82	2	1.4	1.1	213
100 gm gain		200	28	1	.7	.5	108
	2.4	1392	220	8	5.6	3.7	760

Energy & DN %	%	%	%	%	%
58.40	9.2	.29	.21	3,500	760

Lactation

- **Highest nutrient requirements**
- **Body weight loss can provide 25-30% of energy needed after kidding**
  - **does with BCS<2.5 in very poor position to meet milk potential**
  - **protein must be provided in the diet**
- **Age of doe, number of kids affects milk production**
- **Separate feeding for doe with multiples**



WEEKS AFTER KIDDING

Lactating - 50 kg Doeling in Winter 50 gm / day gain							
BM	DM INTAKE	TDN (g)	CP	CU	P	Vit. A	Vit D.
50 kg	2.4	795	110	4	2.8	2.1	429
50 gm gain		100	14	1	.7	.3	54
2 kg 4% fat		692	144	6	4.2	7.6	1520
	2.4	1587	268	11	7.7	10.0	2003

Energy & DN %	%	%	%	%	%
66	11.2	.46	.32	10000	2000

Lactation

- **Feeding levels of 65% TDN, 15% protein**
- **Good quality hay (60% TDN) plus 1 lb barley and 0.5 lb canola meal**
- **Excellent quality alfalfa hay or cereal greenfeed**

IMPACT OF MILK PRODUCTION ON FEED REQUIREMENT OF DAIRY GOATS

Additional Requirements for One Kg of Milk Production Per Day						
% Fat	TDN (gm)	CP (gm)	Ca (gm)	P (gm)	Vit A (IU)	Vit D (IU)
2.5	333	59	2	1.4	3,800	760
3.0	337	64	2	1.4	3,800	760
3.5	342	68	2	1.4	3,800	760
4.0	346	72	3	2.1	3,800	760
4.5	351	77	3	2.1	3,800	760
5.0	356	82	3	2.1	3,800	760
5.5	360	86	3	2.1	3,800	760
6.0	365	90	3	2.1	3,800	760

Rations for Lactating Does

	Singles	Twins	Triplets
Hay	5	4.5	4.5
Barley	1.5	2.5	3.0
Can. meal	-	0.5	1.0
1:1 min.	10 g	14 g	14 g
Co-salt	10 g	14 g	14 g
Vit.A pm	6 g	10 g	10 g
Lbs DM	5.7	6.6	7.1
%TDN	65	65	66
%CP	15	16	17

KIDS: Orphaned

- Colostrum on the 1st day, 0.25 to 1.0 kg milk 2 to 3 times a day according to size for 6 to 9 weeks, plus 16% protein supplement consisting of coarse grain, steamed rolled corn, oats, barley, pelleted alfalfa leaf meal, molasses (not more than 10%), and grass hays *ad libitum*

A Comparison of Goat, Cow and Sheep Milk with a Commercial Milk Replacer												
	Dry Matter %		Protein %		Fat %		Lactose %		Ash %		Energy Density Kcal/gm	
	90	As Fed	90	As Fed	90	As Fed	90	As Fed	90	As Fed	90	As Fed
Goat	90	13	26	3.3	29	4	29	4	5	0.8	5.1	0.74
Cow	90	13	23	3.2	26	3.6	34	5	5	0.8	4.9	0.7
Ewe	90	18	26	5.5	35	7	32	4.5	5	0.8	5.3	0.77
Lamb Milk Replacer	90		20		25		41		4	0.9	4.8	

Creep Feeding

- **Encourages early consumption of solid food**
  - **provides supplemental nutrients for rapid gain**
  - **promotes early weaning**

Creep Rations

- **Begin with soybean meal at 2 weeks of age.**
- **Introduce a 2:1 mix of whole barley and 32% protein pellets when SBM intake is 60g/head/day.**
- **At 30-35 lbs, feed a 3:1 mix of barley and pellets.**
- **Kids eating> 0.5 lb of creep can be safely weaned.**

2001 Feed Test Summary

Feed-Type : Alfalfa-Grass (Hay or Silage) 1st Cut

	RFV	PROTEIN	TDN	PHOSPHORUS	MANGANESE	ZINC	COPPER	MOLYBDENUM
	%	%	%	2001	PPM or mg/KG	PPM or mg/KG	PPM or mg/KG	PPM or mg/KG
Average Feed Test Values of 65 Tests	**95.56**	**12.75**	**57.62**	**0.18**	**28.04**	**17.38**	**5.72**	**3.07**
High Range	**162.00**	**19.70**	**65.40**	**0.39**	**113.00**	**32.60**	**13.00**	**13.00**
Low Range	**62.10**	**7.10**	**49.60**	**0.09**	**14.50**	**9.60**	**1.90**	**1.00**

2000 Feed Test Summary

Feed-Type : Native Hay

	RFV %	PROTEIN %	TDN %	PHOSPHORUS %	MANGANESE PPM or mg/KG	ZINC PPM or mg/KG	COPPER PPM or mg/KG	MOLYBDENUM PPM or mg/KG
Average Feed Test Values of 4 Tests	86.08	9.70	57.30	0.10	95.63	19.23	3.50	1.90
High Range	92.80	10.70	59.60	0.15	166.00	28.00	4.30	3.00
Low Range	79.30	9.30	55.10	0.05	25.40	15.10	2.00	1.00

2000 Feed Test Summary

Feed-Type : Oats Greenfeed

	RFV %	PROTEIN %	TDN %	PHOSPHORUS %	MANGANESE PPM or mg/KG	ZINC PPM or mg/KG	COPPER PPM or mg/KG	MOLYBDENUM PPM or mg/KG
Average Feed Test Values of 6 Tests	94.53	9.25	59.93	0.26	17.60	17.50	4.80	0.98
High Range	108.00	11.90	63.40	0.33	30.60	21.80	5.40	1.50
Low Range	88.40	7.40	57.00	0.19	8.90	9.10	4.00	0.50

2000 Feed Test Summary

Feed-Type : Alfalfa-Grass (Hay or Silage) 2nd Cut

	RFV %	PROTEIN %	TDN %	PHOSPHORUS %	MANGANESE PPM or mg/KG	ZINC PPM or mg/KG	COPPER PPM or mg/KG	MOLYBDENUM PPM or mg/KG
Average Feed Test Values of 15 Tests	134.67	19.13	63.93	0.27	28.69	21.72	8.28	6.21
High Range	155.00	24.80	66.40	0.40	50.90	28.30	10.60	18.70
Low Range	117.00	15.90	61.20	0.17	15.30	17.40	6.60	1.40

2000 Feed Test Summary

Feed-Type : Tame Grass Hay

	RFV %	PROTEIN %	TDN %	PHOSPHORUS %	MANGANESE PPM or mg/KG	ZINC PPM or mg/KG	COPPER PPM or mg/KG	MOLYBDENUM PPM or mg/KG
Average Feed Test Values of 11 Tests	87.59	10.21	58.43	0.15	35.10	20.37	4.79	2.01
High Range	96.90	14.00	61.00	0.31	52.10	43.90	8.40	3.80
Low Range	77.20	6.70	56.00	0.07	23.60	14.70	2.00	1.00

KIDS: Weaned and Yearlings

- Good mixed hay *ad libitum*, plus 0.25 to 0.75 kg of 16% protein supplement consisting of coarse grain mixtures and pasture

BUCKS: breeding

Bucks: breeding (out of season)

Good hays *ad libitum* and pasture (in season)

0.5 to 1.0 kg of a 14% protein supplement, plus mineral supplementation and salt, plus good hays and pasture.