

Feed Nutrient Requirements
Presented by Dr. Robert Van Saun
NMAB Alpaca Nutrition Seminar, July 23, 2011

Van Saun Requirements							As Tested
Maintenance	Units	Males > 1 year	Breeding Females	Obese Females	Pregnant Females (1-8 mos)	Notes	
Feeding Group							
TDN	% DM	55 - 60%	50 - 55%	40 - 50%	50 - 55%		61.0
CP	% DM	9 - 11%	9 - 11%	9 - 11%	9 - 11%		10.8
Ca	% DM	0.3 - 0.48%	0.2 - 0.24%	0.2 - 0.24%	0.2 - 0.24%		0.77
P	% DM	0.21 - 0.28%	0.12 - 0.20%	0.12 - 0.20%	0.12 - 0.20%		0.26
Notes		Higher mineral needs					

Higher Requirements

Feeding Group	Units	Pregnant Females 9-11 mos	Nursing dams with crias	Weanlings up to 1.5 years	Notes		
TDN	% DM	55 - 70%	60 - 70%	55 - 65%		61.0	
CP	% DM	10 - 14%	12 - 14%	14 - 16%		10.8	
Ca	% DM	0.45 - 0.56%	0.45 - 0.62%	0.53 - 0.73%		0.77	
P	% DM	0.28 - 0.33%	0.32 - 0.45%	0.27 - 0.38%		0.26	
Notes		Higher amounts of trace minerals and vitamins preferably from supplements					

Minerals

Cobalt	PPM	0.12-0.15ppm DM				
Ash	% DM					8.9
Calcium	% DM	0.17 - 0.75				0.77
Phosphorus	% DM	0.14 - 0.43				0.26
Magnesium	% DM	0.13 - 0.22				0.31
Potassium	% DM	0.6 - 0.96				2.28
Sulfur	% DM	0.15 - 0.20				0.32
Sodium	% DM	~0.225%; 0.17 - 0.14			0.01% typical forage. †Personal note Dr. Van Saun	0.111
Iodine	PPM	0.6 - 0.76			M, G; 0.55-0.65ppm DM	
	PPM	1.1-1.3			P, L; 0.65-0.75ppm DM lactation	
Iron	PPM	47 - 76			Maint	103.0
	PPM	60 - 72			G, P, L	
Manganese	PPM	24 - 29			M, G	139.0
	PPM	53 - 64			P, L; 28-30ppm DM pregnancy	
Zinc	PPM	35 - 45			M, G; 40-45 ppm	19.0
	PPM	45 - 54			P, L; 55ppm DM pregnancy; 60ppm DM lactation	
Copper	PPM	9-12 ppm			>26ppm high risk	8.0
Selenium	PPM	0.35 - 0.42			M, G; 6.5-6.8ppm BW; 0.75mg/day	
	PPM	0.4 - 0.48			P, L	
Molybdenum	PPM	<1				
Nitrate Ion	% DM	0.0 - 0.44				0.04
Chloride Ion	% DM					0.28
Cu/Mo ratio		<12:1				
Zinc/Cu ratio		4-6:1				2.38

Other

Moisture	%	<15%				9.1
Soluble Protein	% CP	25<SP<<60				24.7
Fat	% DM	2 - 3%; <5%				4.2
Sugar	% DM					9.0
Starch	% DM					3.1
NFC (grasses; legumes)	% DM	20-25; 38-40				19.6
RFV		>100 ?				91.0
ADF	% DM					38.2
NDF	% DM	50%				60.8
ADF/NDF		0.6 - grass; 0.8 - alfalfa				0.63
Lignin	%DM					4.84
Lignin / NDF	% NDF					8.00

Calculated Value
Color codes are entered manually
Always clear the color before entering new test results
Higher than requirement
Lower than requirement