

RUMINANTS

Care and Feeding

Experimental Conditions

Space dimensions vary with each experiment according to animal size. Refer to ILAR guidelines.*

Feeding Recommendations

Daily Feed Usage
2-3% of body weight

Water Requirement

Clean water continuously

Environmental Data

Room Temp.
Ambient

Humidity
45-55%

Light
8-14 hrs./day

Litter Material
Straw, hay, shavings, cobs

Biological Values

Blood Chemical Composition

	Water	Calcium	Sodium	Chloride	Phosphorus	Potassium
Sheep	82.3 gm/100ml	11.4 mg/100ml	156 mEq/L	116 mEq/L	6.5 mEq/L	5.3 mEq/L
Goats	80.4	10.3	138.8±2	97±3.2	7.5	3.9±0.9
Cattle	81.5	10.6	132-152	114	5.6-6.5	4.8
	Magnesium	Cholesterol	Glucose	Serum Protein	Albumin	Globulin
Sheep	2.8 mg/100ml	240 mg/100ml	40 mg/100ml	7.0 gm/100ml	3.8 gm/100ml	3.2 gm/100ml
Goats	3.0	170	64.6±8.5	6.7±0.5	3.6±0.15	3.0±0.35
Cattle	2.0	125	85	8.3	3.4	2.8

Values are for plasma, except where noted

Vital Data

	Temperature	Breathing Rate	Heart Rate
Sheep	39.1 °C	16.22 /minute	70-80 /minute
Goats	38.0 °C	18.23 /minute	75-90 /minute
Cattle	38.3 °C	18.28 /minute	60-70 /minute

Hematological Values

	Whole Blood Volume (T-1824 dye)	Clotting Time	RBC Diameter	Blood pH	RBC	Hematocrit	Platelets	Hb
Sheep	58 ml/kg	92±16 sec.	4.8 microns	7.4	10.3 10 ⁶ /mm ³	36 ml/100ml	437±91 10 ³ /mm ³	11.5-15.5 gm/100ml
Goats	70 ml/kg	—	4.0 microns	7.43	10.66±0.56	26±1	—	10.1±0.56
Cattle	57 ml/kg	—	5.9 microns	7.35-7.50	8.1	38.6	684	10.8

Total and Differential White Blood Cell Counts

	Leucocytes	Neutros	Eosinos	Basos	Lymphos	Monos
Sheep	7.8 10 ³ /mm ³	35.7 %	2.5 %	0.4 %	56.9 %	6.0 %
Goats	12.04	40.4±1.6 %	0.6±0.4%	0.4 %	55.8±2 %	2.8±1.2 %
Cattle	7.84	32.5 %	5.2 %	0.6 %	54.3 %	5.7 %

Life Cycle Information

	Weight Adult Male	Weight Adult Female	Weight at Birth	Breeding Age Male	Breeding Age Female	Estrus Cycle
Sheep	175-200 lb.	150 lb.	10 lb.	8-12 mos.	8-12 mos.	14 days
Goats	100 lb.	85-90 lb.	5.7 lb.	8-10 mos.	8-10 mos.	21 days
	Gestation	Weaning Age	Offspring	Rebreed After Parturition	Breeding Life Male	Breeding Life Female
Sheep	148 days	60-90 days	1-2	Seasonal	6-8 years	6-8 years
Goats	150 days	60-75 days	1-2	Seasonal	6-8 years	6-8 years

Mating Data: Sheep or Goats: 1 male per 50 females

* Refer to the "Guide for the Care and Use of Laboratory Animals" — NIH Publication No. 85-23, Revised 1985.

Prepared by the Institute of Laboratory ANimal Resources, National Research Council, 2101 Constitution Avenue, N.W., Washington, DC 20418