

Meat Goat Management and Nutrition

Animal Science Fall Agent Training

Emporia, KS

October 10, 2006

- Meat
- Milk
- Mohair



Photograph courtesy OSU



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Meat



Boer



Kiko

provided by Dr. An Peischel

provided by Dr. An Peischel



Spanish

Pictures courtesy of Oklahoma State University

Dairy

Alpine

Oberhaslis

Nubian

Toggenburgs

LaMancha

Saanens

Pictures courtesy of University of California, Irvine

Hair

Angora



Cashmere



Pictures courtesy of Oklahoma State University

Extension Focus

- Youth Livestock
 - Cheap (Inexpensive)
 - Easy

- Commercial
 - Ethnic demands
 - Noxious weed control

Terminology

- Kid- young goat
- Doe/Nanny- sexually mature female
- Billy/Buck- male Goat
- Wether- castrated male



Photograph courtesy OSU

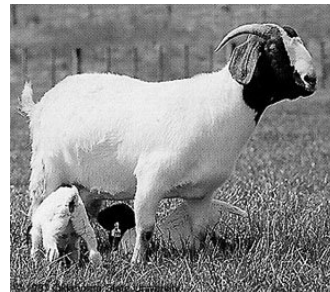
Reproductive Summary

- Puberty 6-8 months of age
- Estrus 21 d
- Gestation 150 d



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Facilities and Equipment

- Sheep and Goat netting
- Barbed wire 10+ strains
- Electric fence
- Many options no perfect solution

"if you can see through it or blow smoke thru it, a goat can get thru it"

-Unknown

Water Consumption

- 110 lb ~ 1 gallon/d
- Diet dependent
- Hot weather- increase
- Cold weather- decrease
- Lactation increase requirement
~ quart per pint produced

Nutrient Requirements for meat and fiber producing goats¹

Nutrient	Young Goats		Does (Dry & pregnant)	
	Weanling	Yearling	Early	Late
Daily Intake, lb	2.0	3.0	4.5	4.5
TDN, %	68	65	55	60
CP, %	14	12	10	11
Calcium, %	0.6	0.4	0.4	0.4
Phosphorous, %	0.3	0.2	0.2	0.2

Adapted from J. P. Mueller, M. H. Poore, J. Luginbuhl, and J. T. Green. Matching forages to the nutrient needs of meat goats. Derived from NRC for goats. 1981.

Nutrient Requirements for meat and fiber producing goats¹

Nutrient	Lactating does (80 lbs)		
	Avg. Milk	High Milk	Buck (80-120 lbs)
Daily Intake, lb	4.5	5.0	5.0
TDN, %	60	65	60
CP, %	11	14	11
Calcium, %	0.4	0.6	0.4
Phosphorous, %	0.2	0.3	0.2

Adapted from J. P. Mueller, M. H. Poore, J. Luginbuhl, and J. T. Green. Matching forages to the nutrient needs of meat goats. Derived from NRC for goats. 1981.

Nutrition

Nutrient Requirement Calculator-

<http://www2.luresext.edu/goats/research/nutritionmodule1.htm>

The screenshot shows a Mozilla Firefox browser window displaying the website <http://www2.luresext.edu/goats/research/nutritionmodule1.htm>. The page features the Langston University logo and navigation links for Dairy, Fiber, Meat, and Current Research. The main content area is titled "Nutrient Requirement Calculators" and lists three calculator options:

- Technical Version Calculator**
 - This Calculator is probably most suitable to individuals with some knowledge of ruminant nutrition and have reasonably accurate values for inputs, such as body weight, body weight change, milk yield and composition, clean motair fiber growth, diet composition, etc. It is probably most appropriate for nutritionists, graduate students in ruminant nutrition, and extension personnel specializing in nutrition. This calculator reports energy requirements in MegaJoules, protein requirements in grams, and predicted dry matter intake in kilograms. This Calculator is based upon equations derived from research conducted at the Institute to develop expressions of nutrient requirements of goats published in a special issue of *Small Ruminant Research* (2004, Volume 53, Number 3) published by Elsevier Science. Several ancillary calculators are also available.
- Producer Version Calculator**
 - This Calculator is oriented toward extension agents and many goat producers in the United States. This Calculator uses English measures (i.e., pounds), and reports energy requirements in MegaCalories, protein requirements in pounds, and predicted dry matter intake in pounds. Perhaps more importantly, this calculator has default values and optional means of deriving inputs that may not be known. One example is use of heartgirth and genotype to estimate body weight. This Calculator uses the same equations as found in the Technical Version Calculator.
- Foreign Language Versions**
 - Technical Version Calculator translated into Arabic, Chinese, French, and Spanish.

At the bottom of the page, there is a footer with contact information: Copyright © 2000 Langston University • Agricultural Research and Extension Programs, P.O. Box 730 • Langston, OK 73050 • Phone 405 466 3336.

Langston University Goat Research Extension - Mozilla Firefox

http://www2.lsu.edu/goats/research/nutritionmodule.htm

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Goat Research

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RATION BALANCER AND NUTRIENT REQUIREMENT CALCULATOR

This program calculates energy and protein, calcium and phosphorus requirements and predicts intake of goats. These inputs are passed to a ration balancing program for diet formulation. Inputs are in English units, lbs and TDN. The calculation of protein and energy requirements are based on the new set of equations published by the E (P&A) de la Garza American Institute for Goat Research in Small Ruminant Research volume 53, number 3, published in 2004. Calculation of calcium and phosphorus requirements are based on the 1982 NRC publication. Since this program is so large and complex, there is the possibility of undetected errors that may give unrealistic results and should not replace common sense. Please feel free to contact the developers of this program [Dr. Terry Copson, Dr. Art Gietzsch or Dr. Steve Hart] if calculations appear unrealistic or there are problems in using the program. Javascript and cookies must be enabled for this program to work.

JavaScript must be enabled to use this nutrient requirements calculator. Javascript and Cookies must be enabled to use the Total Mixed Ration calculator. This page will check to see if your browser has these two components enabled.

- JavaScript is: enabled!
- Cookies are: enabled!

- Select the biotype of goat (bio)
- Select the class of goat (class)
- Select gender of the goat (gender)
 - Pregnant goats that are over 95 days pregnant require additional nutrients to maintain pregnancy. [Click here if your goat is over 95 days pregnant](#)
- Input bodyweight of goat in lbs

If you do not know the weight of the goat, you can measure the heartgirth and estimate the weight by [clicking here](#).
- Select the pounds of weight that you expect the goat to gain in a month (0 lbs per month)

(Exclusive of gain due to pregnancy)
- Nutrient requirements must be adjusted for grazing, walking and browsing activity. [Click here if your goats have access to pasture](#)
- Enter estimated TDN level of the diet.
- Enter estimated crude protein level (%) of the diet.

http://www2.lsu.edu/goats/other/goat_other.htm

Example

- Boer cross
- Wether 30 lb
- Gain .20 lb day
- Slightly active
 - TDN ~60%
 - CP ~12%

Example results

- Requirements

- TDN 0.84 lb
- CP 0.20 lb
- C 2.04 g
- P 1.43 g

Sample Diet

Item	Amount fed, lb
Fescue Hay	1
DGGS w/s	.5
Mineral Supplement	Free Choice
Vitamin Supplement	Free Choice

Minerals and Vitamins

- Complete goat mineral
 - 50:50 trace mineralized salt and Dicalcium phosphate
 - Standard beef mineral
- Vitamin A & D depending on season

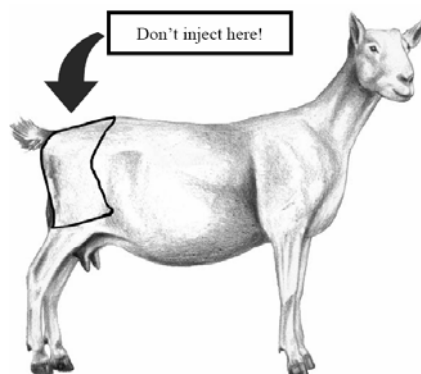
Youth Livestock Projects

- Nutrition
 - Commercial "Cabrito" feeds
 - Purina Goat Chow®
 - ACCO Cabrito ®
 - Local CO-OP



Drug Usage

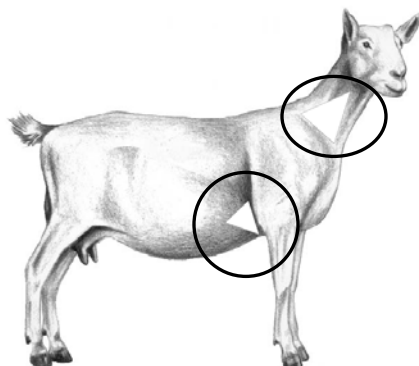
- Consult veterinarian
- Injection sites



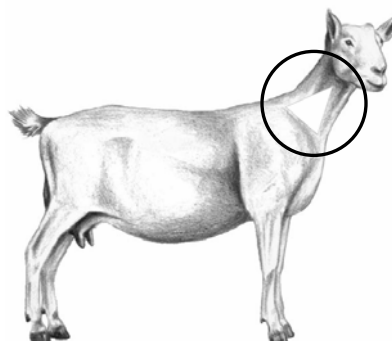
Diagrams from Lionel Dawson, D.V.M., M.S., Dip., ACT, Administration of Injectable Drugs and Vaccines in Goats. Proceedings of the Langston annual goat field day proceedings

Drug Usage

Intramuscular



Sub-cutaneous



Diagrams from Lionel Dawson, D.V.M., M.S., Dip., ACT, Administration of Injectable Drugs and Vaccines in Goats. Proceedings of the 2005 Langston annual goat field day proceedings

Drug Usage

- Approved drug use for goats

- See the handout

A Guide to Drug Usage in Goats

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Cited Literature

Texas 4-H Meat Goat Guide

<http://texas4-h.tamu.edu/publications/as34060.pdf>

Types of Fencing for Goats

<http://www.luresext.edu/goats/library/field/hart01.html>

Nutrition for Production

<http://www.luresext.edu/goats/library/field/hart06.pdf>

A Guide to Drug Usage in Goats

<http://www.luresext.edu/goats/library/field/DawsonA05.pdf>

Administration of Injectable Drugs and Vaccines in Goats

<http://www.luresext.edu/goats/library/field/DawsonB05.pdf>