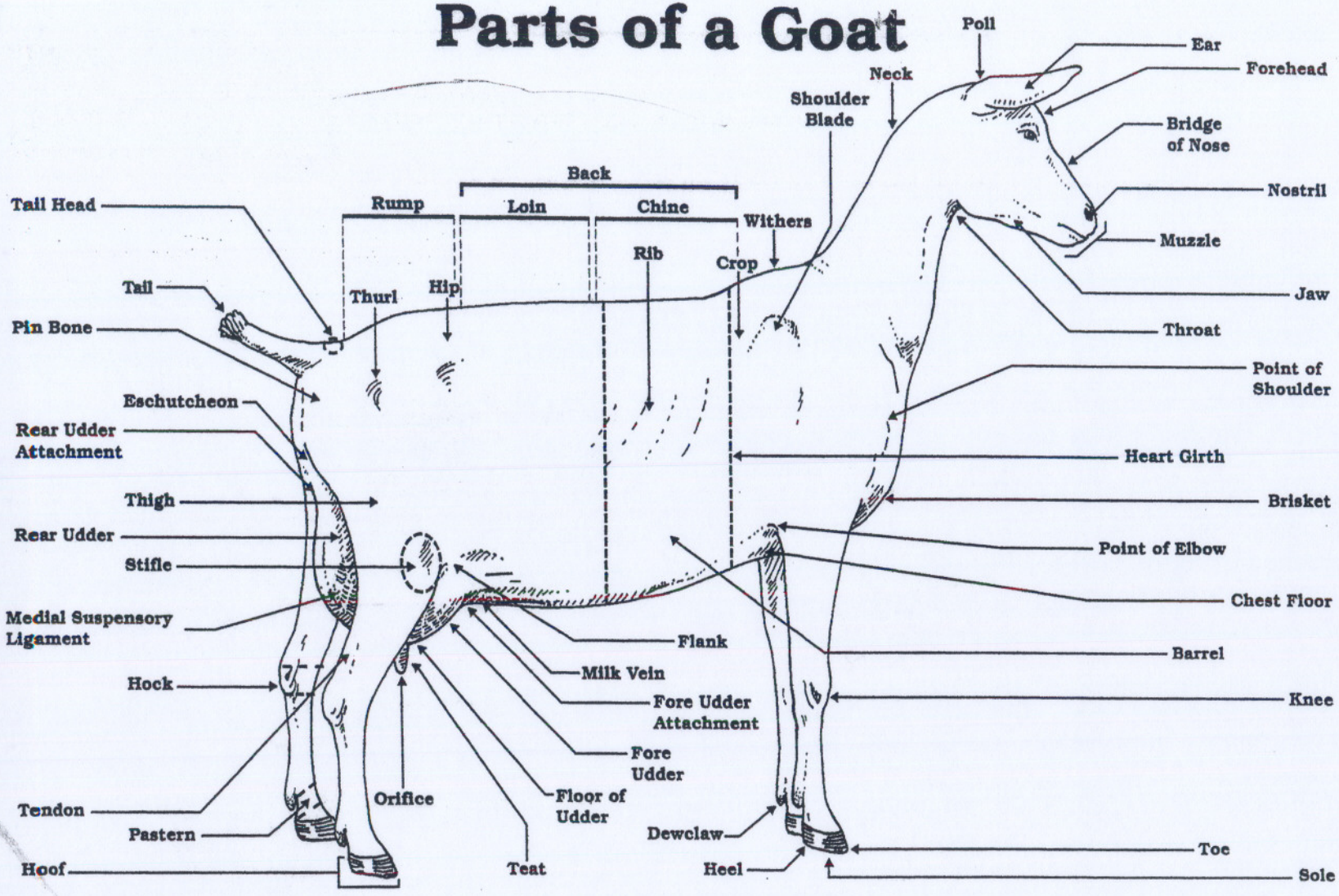
Parts of a Goat



GOAT LEARNING LABORATORY KIT

Exploratory Learning: Educational Program

This component adapted from materials of the American Dairy Goat Association

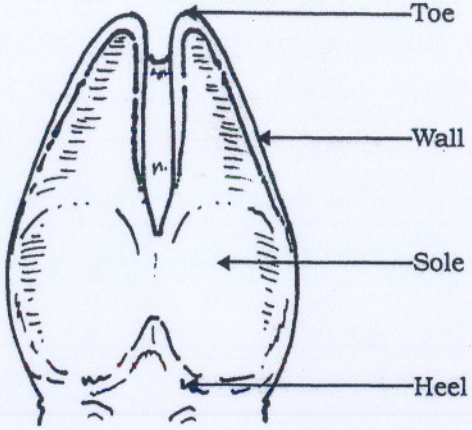
Product distribution through the Curriculum Materials Service

Use this poster in conjunction with Parts of a Goat (Dairy) – Match Correct Part Names with Their Locations on the Diagram situation/task statement and identification tags.

Charts and Diagrams

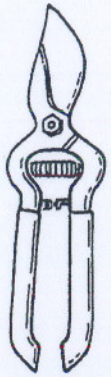
Goat Hoof Trimming

Anatomy



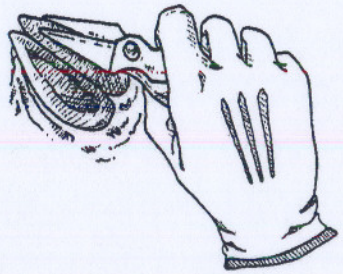
Tools

Foot Rot Shears

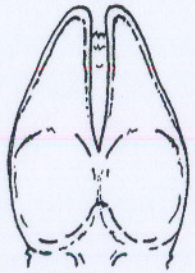


Pruning Shears

Overgrown Hoof



Cut from Heel to Toe



Properly Trimmed Hoof
Bottom View

Properly Trimmed Hoof

GOAT
LEARNING LABORATORY KIT

Exploratory Learning: Educational Program

This component adapted from materials published in the *Dairy Goat Journal*, Helenville, WI

Product distribution through the Curriculum Materials Service

Use this poster in conjunction with Goat Hoof Trimming – Match the Part of the Hoof, Tool Name, or Description to the Correct Diagram situation/task statement and identification tags.

Goat Diseases and Conditions

Disease:	Conditions:
• White muscle Disease	- Back legs& Muscles stiff.
• Chlamydia	-Blind
• Polioencephalomalcia (Goat Polio)	-Blind-Fever
• Foot & Mouth Disease	-Blisters
• Sore Mouth	-Blisters on mouth
• Bloat	-Bloated (stomach) Mouth Foam
• Colic	-Body stretched with feet behind.
• Respiratory Problem	-Breathing-Congested-Fever
• Tetanus	-Convulsions-Depressed-eye close
• Lung Worms	-Cough (chronic)
• Acidosis	-Depressed-drunken behavior
• Trace Mineral Disease	-Diarrhea
• Coccidiosis	-Diarrhea-Fever
• Pink Eye	-Eye closed and watery
• Floppy Kid Syndrome	-Drunken Behavior
• Ringworms	-Hair Loss

• Psoroptic Mange	-Head shaking
• Lice	-Itching-Irritation
• Mites	-Itching-Irritation
• Hypocalcaemia (dead/retained kid)	-kidding over due
• Enterotoxaemia	-Lying on side, paddling feet
• Listeriosis	-Moving in only one direction
• Bottle Jaw	-Swelling of face or lower jaw.
• Mastits	-Udder hard, hot or tender
• Scrapie Disease	-change in behavior-aggressive

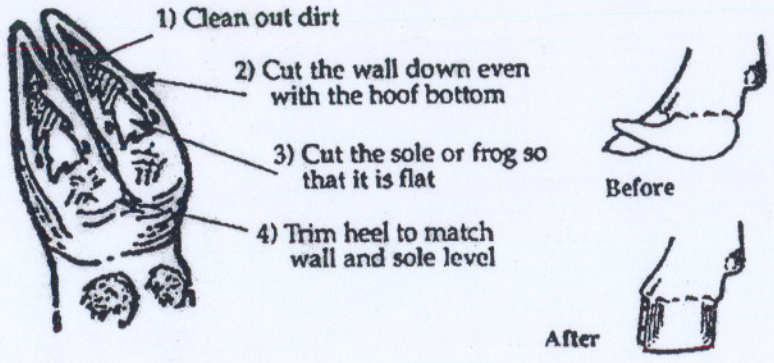
A Step-by-Step Guide to Hoof Trimming

1) Begin by cleaning any accumulated dirt out from the front area of the hoof bottom using the point of your trimmer.

2) Next, you may find that the walls are long. They should be cut to the same level as the bottom or the sole of the hoof.

3) The sole or frog should be flat, not rounded, so you may need to level it. Do this by cutting a little bit at a time. Do not try just one cut to reshape the sole. Stop when the hoof bottom looks a little pink.

4) If necessary, trim the heel so that it is level with the sole and wall.



Tattooing: How To Do It

The tattooing process is easy, here is how you do it.

Clean the ear or the tail web with alcohol. Let it dry.

Using your tattoo tongs, puncture the ear firmly. Then remove the tongs from the ear, you may have to pry the ear off the tattoo needles if the ear is especially fleshy.

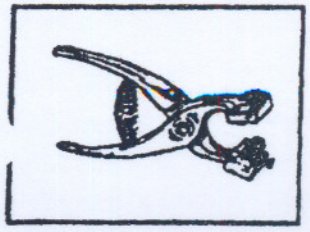
Put ink on the tattoo and rub ink into the punctures with a pencil eraser, the back of a toothbrush or your finger. If the ear or tail web bleeds, be sure to stop the bleeding before you apply the ink, as the blood welling up will tend to wash out the ink, causing a poor quality tattoo.

Some breeders put paste ink on the ear first before they puncture the ear. They then tattoo the er or tail and finally rub in the ink with their finger, etc. Breeders who tattoo this way say the mess on the tattoo tongs is worth it, given the excellent quality tattoo they get. However, you may find that if your tongs use metal digits, the digits may rust more quickly using this method.

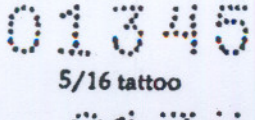
We use green ink because it shows up on darker skin. We get good results with both the liquid roll-on as well as the paste tattoo ink. We do not recommend using the black ink that comes with the tattoo outfits. Black tattoos don't show up as well as those made with green ink.

Some breeders use white ink for animals with especially dark ears. They say that the tattoos show up well and do not fade.

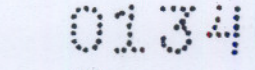
To check a tattoo, hold a light up behind the ear you are trying to read. If you can not read the tattoo someone else will probably have even more difficulty. Be sure you check the tattoos on all the goats before entering shows or enrolling your goats in official programs.



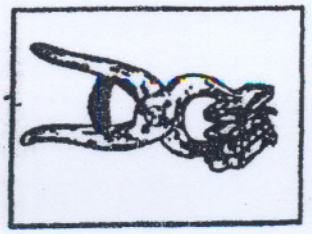
Stone .300 tattoo tong



5/16 tattoo



.300 tattoo



Stone 5/16 Tattoo tong

To goat lovers... A sad but important letter...

I would like to share a story with you and some important information you may or may not know. My niece and her husband have a small farm within the city limits of Philadelphia, PA. First a little background, my niece and her husband are the most loving people I know. They have treated their animals better than I have witnessed many humans being treated. I am a professional nurse in this state and could tell you many heartbreaking stories. They have loved and cared for many different kinds of animals over the past several years. This past summer though, we will never forget the tragedy they incurred nor the pain they experienced within their goat family. Why am I writing this you may ask? In hopes that no other may experience the pain that they have felt, for the loss of three of the most wonderful animals I have ever had the pleasure of meeting! Their goats Steve, Snow, and Fawn were not just farm animals, they were family members! Loved and appreciated by many extended family, friends and visitors to their home. During the course of "normal" farm work, my nieces' husband had been trimming and cutting down some trees on their property. Before putting his animals to bed that night he had as usual offered the animals a small "treat" or gesture of love as he and many others have frequently done, by ripping off leaves from the trees and admiring their enjoyment as well as excitement to be hand fed by a human and getting the "extra attention". They KNEW they were special! Sadly, and unbeknownst to anyone, that was the last feeding they would ever receive.

During the night, they experienced the most painful and horrifying suffering they had known, my niece and her husband, although as difficult as it may sound, would have done everything in their power to stop their suffering and pain. This particular man may have just laid down his own life for that of one he loved. They woke the next morning to find the horrifying result, all three of their beloved, lying down and the evidence of their suffering surrounding them. This couple had no idea at the time, what had happened. While dealing with their heavy grief, they additionally learned that it had been the leaves from the cherry trees cut off earlier that day that had become toxic and killed them. I know first hand, not a day goes by that don't miss or regret not knowing.

I hope that somehow, by sharing their story, another family or person, who genuinely loves their goats, will never experience the heartache they have endured. Their pen will never be the same. But if some good can come of this, they would appreciate the knowing that through their pains, another may have been saved. Please share this story with any one raising or loving goats, and ask your veterinarians to share with the many people they reach, caring for goats. We ask this through love and prayers for my niece and her husband, and of course, In Loving Memory of..... **Steve, Snow and Fawn**.

Research Closes in on Goat Scrapie

Posted: Monday, April 6, 2009 8:01 pm

Goats are tough, spirited animals, but they're no match for scrapie, a form of transmissible spongiform encephalopathy. Now, with a "helping hand" from science, the animals' plight could take a turn for the better.

Toward that end, Agricultural Research Service (ARS) scientists and their collaborators have developed a live-animal test to detect scrapie in goats. Called the rectal mucosa biopsy test (RMBT) or rectal biopsy, the new method involves snipping a tiny piece of lymphoid tissue from the lining of an afflicted animal's rectum. A dab of local anesthetic eases the animal's discomfort, notes microbiologist Katherine O'Rourke with the ARS Animal Diseases Research Unit in Pullman, Wash.

Lymphoid tissue is used because it collects malformed proteins called prions, which are thought to cause scrapie, adds O'Rourke. She's a member of a scrapie research team that includes Washington State University, Colorado State University, the Animal and Plant Health Inspection Service (APHIS), the National Park Service and the Canadian Food Inspection Agency.

Advantages of using the rectal biopsy test method include speed, easier methodology and its generation of a high number of repeat samples from individual animals.

On a related front, ARS Pullman geneticist Stephen White is leading studies to characterize the prion protein gene of goats and identify differences between individual animals and breeds harboring the gene. His team has so far examined the sequences and distribution of alleles--alternative forms of genes--from 446 goats representing 10 breeds, including Alpine, Angora, Boer and Nubian.

The ARS Pullman lab also is collaborating with APHIS to formulate a strategy aimed at helping the U.S. goat industry eliminate scrapie from its herd, which numbers four million head. Hardships imposed by scrapie on America's goat and sheep producers include the physical loss of animals, costs of disposal of carcasses and offal, trade restrictions and diminished domestic and international markets for breeding stock, semen and embryos.

"Caprine Vital Signs - Physiological Data"	
Temperature	101.5° to 104° F
Respirations	Adults: 12 - 20 per minute Kids: 20 - 40 per minute
Pulse	70 - 80 beats per minute
Rumination	1 - 1.5 per minute
Estrus Cycle	18 - 23 days
Gestation	146 - 156 days

FETAL DEVELOPMENT

Heart Beat Apparent	20 days
Limb Buds Visible	28 - 35 days
Differentation Of Digits	35 - 42 days
Nostrils & Eyes Differentiated	42 - 49 days
Eyelids Close	49 - 56 days
Horn Pits Appear	77 - 84 days
Hair Around Eyes & Muzzle	98 - 105 days
Tooth Eruption	98 - 105 days
Hair Covering Body	119 - 126 days
Length Of Fetus At 30 Days	1.4 cm
Length Of Fetus At 145 Days	43 cm

UNITS OF MEASURE

1/8 Cup = 1 fluid ounce = 6 teaspoons = 30 ml

MEDICATIONS USED IN GOATS

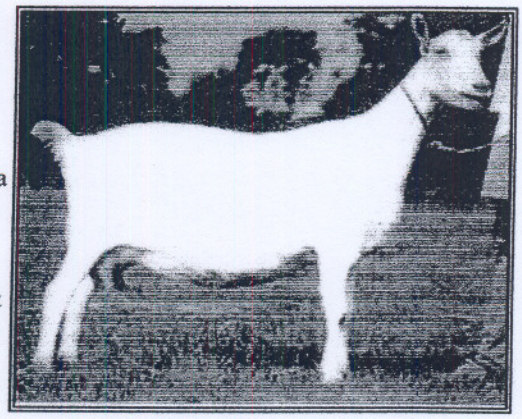
ANTIBIOTICS	Brand Name	Approval	Dosage	Route	Frequency	Withdrawal T Meat	M
Procain Pen G	Crysticillin	extra label	10,000-20,000 IU/lb	SQ	QD	14-20 days	5 d
Benzathine Pen G	Pen BP-48	extra label	20,000 IU/lb	SQ	q 48 hours	30 days	·
Amoxicillin	Amoxi-inject	extra label	5 mg/lb	SQ	QD	25 days	96 h
Ampicillin	Polyflex	extra label	5 mg/lb	SQ	QD	10 days	72 h
Oxytetracycline	LA-200	extra label	9 mg/lb	SQ	q 48 hours	28 days	6 d
Sulfadimethoxine	Albon	extra label	25 mg/lb	PO	QD	7 days	·
Ceftiofur	Naxcel/Excenel	extra label	0.5-1 mg/lb	IM	QD	4 days	3 d
Erythromycen	Erythro-200	extra label	1 mg/lb	SQ	QD	3 days	72 h
Tylosin	Tylan-200	extra label	10 mg/lb	IM	QD	30 days	95 h
Neomycin	Biosol	approved	5 mg/lb	PO	BID	30 days	·
Florfenicol	Nuflor	extra label	9 mg/lb	IM	q 48 hours	28 days	·
Gentamicin	Gentocin	do not use					
Tilmicosin	Micotil	do not use	toxic to goats				
Enrofloxacin	Baytril 100	do not use	no extra label use				
ANTI-INFLAMATORY DRUGS							
Flunixin meglumine	Banamine	extra label	1.1-2.2 mg/kg	IV/IM	QD	14 days	4 d
Phenylbutazone	Bute	extra label	10-20 mg/kg	PO	QD	14 days	5 d
Aspirin	Aspirin	extra label	100 mg/kg	PO	QD	1 day	24 h
ANESTHETICS AND TRANQUILIZERS							
Xylazin	Rompun	extra label	0.5-0.1 mg/kg	IM/IV		5 days	72 h
Ketamin	Ketaset	extra label	5-10 mg/kg	IM/IV		3 days	72 h
Thiamylal Na	Biotal	extra label	1-20 mg/kg	IV		1 day	1 c
Yohimbine	Yobin	extra label	0.25 mg/kg	IV		7 days	72 h
Lidocaine	Lidocaine	extra label	variable for locale	anesthesia use 1%			
COCDIOSTATS							
Monensin	Rumensin	approved	15-20 gms/ton	anesthesia use 1%		0	·
Lasalocid	Bovatec	extra label	20-30 gms/ton	anesthesia use 1%		?	·
Decoquinate	Deccox	approved	0.5 lb/ton feed	anesthesia use 1%		0	·
Amprolium	Corid	extra label	25-30 mg/feed or water	anesthesia use 1%		?	·
ANTHELMINTICS							
1. Avermectins:							
Ivermectin	Ivomec Drench	extra label	0.3 mg/kg	PO		11 days	6 d
Ivermectin	Ivomec 1%	extra label	0.3 mg/kg	SC		56 days	36-4(
Doramectin	Dectomax	extra label	0.3 mg/kg	SC		56 days	36-4(
Eprinomectin	Eprinex	extra label	0.5 mg/kg	PO		0 days	0 d
Moxidectin	Quest, Cydectin	extra label	0.5 mg/kg	PO		0 days	·
2. Benzimidazoles:							
Albendazole	Valbazen	extra label	10 mg/kg	PO		27 days	5 d
Fendendazole	Panacur/Safeguard	approved	10 mg/kg	PO		14 days	4 d
Oxfendazole	Synanthic	extra label	0.5 mg/kg	PO		14 days	5 d
3. Cholinergic: Agonists							
Levamisole	Levasole	extra label	8 mg/kg	PO		10 days	4 d
Morantel Tartrate	Rumatel	approved	10 mg/kg	PO		30 days	0 d

About the author: This information was derived from various charts, tables and resources. If you should find something thatyou think should be added, deleted, a warning posted regarding the use of or any other specific issue, please contact me with that information.

Plants Poisonous to Livestock

Toxic Plants and the Common Caprine

This web page was created by Kevin Kirchofer, an undergraduate student at Cornell University for the AS625 class. All comments and suggestions are welcome.



Unlike the public's vision of a goat, the cast iron-stomached beast that can eat everything from a tin can to plastic wrapping, there are many things that can kill a goat. Some poison plants are ingested by accident, while browsing, but a major reason for the toxic poisoning of goats comes as a result of starvation.

As with all nutritional toxicology, it is the size of the dose, and the poison present in the plant that will determine whether the animal lives or dies. This web page is devoted to the caprine species, and to many of the plants out there that can kill them. It gives a fairly comprehensive list of plants commonly found in areas with goats, but it is not complete.

This list comes from an old Dairy Goat Management book that I had kicking around at home, and may be incomplete. For a more comprehensive, and more scientific list, consult Mary Smith, and David Sherman's *Goat Medicine.*

[Alkaloids] [Cyanogenic] [Photosensitizing] [Saponins] [Tannins] [All Others]
Click on the following link for further information on the plants listed below

Alkaloid Containing Plants:

Aconite
Allspice
Black Snake Root
Bloodroot
Blue Cohosh
Boxwood
Celandine
Common Poppy
Crotalaria
Crow Poison
Death Camas
Dicentra
False Hellebore
False Jessamine
Fume Wort
Hellebore
Hemp
Horse Nettle
Indian Hemp
Indian Poke
Jimson Weed
Larkspur
Lobelia
Lupines
Marjiuana
Monkshood
Moonseed
Nightshade
Pink Death Camas
Posion Darnel
Poison Hemlock
Poison Rye Grass
Rattleweed
Rock Poppy
Senecio
Spider Lily
Spotted Cowbane
Spotted Water Hemlock
Stagger Grass
Staggerweed
Sweet Shrub
Thorn Apple
Varebells
Wild Parsnip
Wolfs-Bane
Yellow Jessamine

Cyanogenics (plus a few that aren't...):

Cyanogens are glycosides that contain both a sugar, and a cyanide-containing aglycone. They can be hydrolyzed by enzymatic action releasing HCN(Hydrogen cyanide), which is a very potent toxin. This in turn inhibits the terminal respiratory enzyme, cytochrome oxidase.

Arrow Grass
Lily of the Valley

Photosensitizing:

Photosensitivity describes an abnormal sensitivity to light, and may result as an inability of cells to repair themselves when exposed to UV light. Complications may result in production of metabolites throughout the body.

Black Locust
Blue Cohosh
Broomcarn
Buckeye
Cherry
Choke Cherry
Corn Cockle
Dogbane
Elderberry
Hemp
Horse Nettle
Indian Hemp
Ivy
Johnson Grass
Kafir
Laurel
Leucothoe
Buckwheat
Goat Weed
Klamath Weed
Lantana
Rape
St. John's Wort
Maleberry
Marijuana
Milkweed
Milo
Nightshade
Oleander
Rhododendron
Sevenbark
Silver
Sneezewood
Sorghum
Stagger Brush
Sudan Grass
Velvet Grass
White Snakeroot
Wild Black Cherry
Wild Hydrangea

Saponins:

Saponins are naturally occurring glycosides whose active portions are soluble in water and produce foam (reducing the surface tension of water). The name comes from Saponaria, soapwort, the root of which has been used as a soap (Latin sapo, soap). The chemical composition of some saponins is very similar to that of hormones, their aglycones being choline steroids. Some saponins contain a triterpenoid aglycone. Their structure is very similar to that of cardiac glycosides. Bitter taste (triterpenoid aglycones contain glucuronic acid in place of sugar and are detectable by sweet taste: liquorice). Saponins cause growth depression in poultry and swine; bloat in ruminants. Aglycones increasing the permeability of membranes can cause haemolysis by destroying the membranes of red blood-cells, thus releasing hemoglobin. This hemolytic activity of saponins varies considerably from plant to plant. Protoplasts are also affected. Cholesterin inactivates saponosides in humans, only our mucus membranes are badly affected. Used in sneezing powder and as an emetic -> irritate the membranes of respiratory and digestive tracts, this local irritant effect is helpful in pectoral syrups and tisanes to facilitate expectoration. Many plants containing saponosides are diuretic. In humans, the effect disappears within a week following the neutralizing action of cholesterin. Some saponins (e.g. those in oats and spinach) increase and accelerate the body's ability to absorb some active compounds e.g. calcium and silicon assisting in digestion.

Bagpod
Coffee Weed
Purple Sesban
Rattlebox
Soapwort

Tannins:

- Oaks

All Other Toxic Plants:

These plants all have different properties that make them toxic in their own way. They may not even kill the goats, but they cause mechanical injury or problems with resins. So for all others, here is the list:

Clover
Cocklebur
Downy Broome Grass
Sand Bur
Squirrel Tail Grass
Inkberry
Poke Weed
Pine Trees
Ponderosa Pine Needles
Baneberry
Buttercups
Crowfoot
Ground Ivy
Lobelia
Snakeberry
Spurge
White Cohosh