



**Glossary of Terms**  
**for Project Participants**  
(Compiled May 2015)

## A

**ABOMASUM:** The fourth or true stomach of a ruminant where enzymatic digestion occurs.

**ABSCESS:** Boil; a localized collection of pus.

**ACIDOSIS (Grain Overload):** A condition in which the pH of the rumen is abnormally low (<5.5).

**ACUTE:** Any process occurring over a short period of time.

**ADJUSTED WEIGHT:** Weight of the animal that has been adjusted using a correction formula to a standard age, sex, type of birth/rearing, and/or age of dam. These weights increase the accuracy of comparisons between animals for selection as it accounts for known differences in environment. Adjusted weights are often used when doing performance testing.

**AFTERBIRTH:** The placenta and associated membranes expelled from the uterus after parturition.

**ANEMIA:** An inadequate number of red blood cells in the body.

**ANESTROUS PERIOD:** The time when the female does not exhibit estrus (heat); the non-breeding season.

**ANTHELMINTIC:** A drug that expels or kills internal parasites.

**ANTIBODY:** A protein produced by the body's immune system that recognizes and helps fight infections and other foreign substances in the body.

**ANTIBIOTIC:** A pharmaceutical product injected or fed to the animal that helps it fight off a bacterial infection.

**ARTIFICIAL INSEMINATION:** The injection of semen into the female reproductive tract through the use of an instrument (example: French gun) in order for the animal to become pregnant.

**AVERAGE DAILY GAIN (ADG):** The amount of weight gained each day during a period of time.

## B

**BACK CROSS:** Breeding a first cross offspring back to one of the parental breeds. This is often the first step in establishing a grading up program or composite breed.

**BALANCED RATION:** A ration containing nutrients in the correct proportion to meet the nutritional needs of the animal.

**BALANCE/SYMMETRY:** Describes how the parts of the body blend together and result in good eye appeal and proper confirmation.

**BLIND TEAT:** A nonfunctional teat on the udder of the goat. It can be an additional teat that is not connected to a milk duct or one that is nonfunctional due to mastitis.

**BLOAT:** An excessive accumulation of gas in the rumen and reticulum, resulting in distension of the abdomen.

**BODY CONDITION SCORE:** A numeric value assigned to an animal that estimates the degree of fatness or condition that covers the animal's body. This score is assessed by palpating the spine, (spinal and transverse processes) and ribs. See body condition scores for goats under goat nutrition Community of Practice.

**BOER:** One of the breeds of meat goats used in the U.S. This breed originated in South Africa and was imported into this country during the early 90s. For more information please see the breeds section in the goat Community of Practice area.

**BOLUS:** A rounded mass of medicine used in cattle, goats and sheep.

**BOTTLE JAW:** Bottle jaw is the vernacular term given to pendulous lower jaw swelling in sheep, cattle and goats. The swelling is a soft tissue edema cause by anemia that is characteristic in animals that are carrying a heavy load of blood sucking internal parasites – better known as worms.

**BREED:** A group of animals with similar characteristics (color, markings, size, etc.) that distinguishes it from other animals. The characteristics are passed from the parents to the offspring.

**BREEDING SEASON:** The period when goats will breed naturally. This season usually begins in the fall.

**BRUSH GOAT:** This was the term used to describe any goat that was of unknown breeding for many years in the U.S. These goats were generally provided very little maintenance and kept to clear brush on property. Many showed traits associated with dairy, Spanish, and Angora breeds depending on the location they were found.

**BUCK (Billy):** A sexually mature intact male goat used for breeding.

**BUCKLING:** A sexually immature young male.

**BUCK RAG:** A cloth rubbed on a buck and imbued with his odor. The rag is kept in a closed container and can be used to assist in stimulating estrus (heat) in does.

**BULL DOG or UNDERSHOT or MONKEY MOUTH:** The lower jaw is longer than the upper jaw, and the teeth extend forward past the dental pad on the upper jaw. This is disqualifying feature for confirmation.

BROWSE: Bushy or woody plants that goats consume.

BURDIZZO: A tool used to castrate goats, sheep or cattle that crush the spermatic cords to render the male sterile. This leaves the scrotum intact; however, the testicles will shrink away.

BUTT HEAD: Goats born without horns.

BUTTING: A method of fighting by which one animal strikes the head and horns of its opponent.

## C

CAPRINE: The scientific name for the goat species.

CAPRINE ARTHRITIS ENCEPHALITIS (CAE): An infectious disease that causes arthritis and progressive inflammation in one or more organs or tissue systems such as the joints, bursa, brain, spinal cord, lungs and udder. This disease affects goats and is currently incurable.

CALIFORNIA MASTITIS TEST (CMT): A kit that can be used to test mastitis in cows and does.

CHEVON: Chevon is the French word for goat. These are animals that are slaughtered near or shortly after weaning.

CARCASS: The dressed body of a slaughtered animal.

CASTRATION: Removal of the testicles.

CUBIC CENTIMETER (cc): A volume measurement identical to milliliter (ml).

**CISTERN:** The final temporary storage area of milk in the udder.

**CLEATS (Clays, Claws, Clees):** The two halves of the goat's hoof.

**CLOSED HERD or FLOCK:** No new animals are introduced into the herd or flock.

**CLOSTRIDIAL INFECTION:** A bacterial infection that can occur in sheep and goats. Some goat diseases that are caused by this infection are: Blackleg, Enterotoxaemia (Overeating disease) and Tetanus.

**COCCIDIOSIS:** A disease that is commonly exhibited in younger animals caused by a protozoa parasite infection. It is characterized by diarrhea, dehydration, weight loss, lack of thriftiness, and weakness.

**COLOSTRUM:** The first milk the doe or ewe produces after given birth to their offspring. The milk is thick and golden yellow in color and contains rich antibodies. If the newborn does not consume the milk within the first 24 hours of life, there is very little chance the animal will survive.

**CONCENTRATE:** The non-forage part of an animal's diet, principally grain and including oil seed meal and other feed supplements that are high in energy and/or protein, but low in crude fiber.

**CONFORMATION:** The combination of structural correctness and muscling of the animal including the frame and shape of the animal.

**CREEP FEEDER:** An enclosed feeder meant to keep larger (older) animals out for supplementing the ration of young animals.

**CROSS BREED:** An animal whose parents are of two different breeds.

CROWN ROAST: Made by adjoining two Frenched eight-rib racks with twine and bending them to form a circle. The ends are secured by twine.

CRYPTORCHID: A condition where one or both testicles fail to descend into the scrotum sac.

CULL: To remove a substandard animal from the herd or flock.

## D

DAIRY GOATS: Goats that are used primarily for milk production. For more information please see the breeds section in the goat Community of Practice area.

DOE (Nanny): A sexually-mature female goat.

DOELING: A young female that is not yet sexually mature.

DRENCHING: To administer an oral dose of liquid.

DRESSING PERCENTAGE: The dressing percentage is calculated by dividing the carcass weight by the live weight.

DRY PERIOD: The time when the female is not producing milk.

DRYLOT: An area with no vegetation generally an outside pen area.

DYSTOCIA: Difficulty in delivering the fetuses.

## E

**EAR TAG:** A method of identifying animals by using a plastic or metal tag placed in the ear of the animal. The ID information is printed or written on the tag and then it is applied to the ear. This is not considered a permanent method of ID.

**EMBRYO:** Unborn offspring that does not yet have developed organ systems and is in the very early stages of development in the uterus.

**ENVIRONMENT:** The sum of all the conditions the animal is exposed to including: climate, housing, feed sources, disease, etc.

**ESTROGEN:** The hormone that primarily causes behavioral estrus.

**ESTROUS (adjective):** An adjective describing anything having to do with the female reproductive cycle, including estrus.

**ESTROUS CYCLE:** The beginning of one estrus (heat) to the beginning of the next estrus (heat).

**ESTRUS ((noun, a.k.a "Heat")):** The period in which the female is receptive to breeding.

**EXTERNAL PARASITE.** These parasites feed on body tissue such as blood, skin, and hair. The wounds and skin irritation produced by these parasites result in discomfort and irritation to the animal. Some examples of external parasites are: fleas, lice, mites, nose-blot flies, and ticks.

## F

**FAMACHA ©:** It is an acronym for Faffa Malan Chart; he is the person who developed a method of using the color of the inner eye lid to determine the level of parasite infection in sheep and goats in South Africa. The method is used to implement selective treatment programs for parasites in goats. To use the system properly producers need to attend training course and obtain an official chart. This system is only good for control of *H. Contortus* (also known as the barber pole worm).



**FECAL EGG COUNT (FEC):** Using a fecal flotation method to determine the level of parasite load in goats based on the number and type of parasite eggs found in the feces.

**FECAL FLOTATION:** A microscopic procedure used to identify various parasite eggs in a fecal sample. There are two basic methods used: Modified McMaster and Wisconsin methods.

**FECES:** The manure or excrement produced by an animal.

**FEED ADDITIVE:** Anything added to a feed, including preservatives, growth promoters and medications.

**FETUS:** Unborn offspring that has developed organ systems. This term applies to the baby after embryonic development and until birth.

**FIBER (in diet):** The portion of a feed that is indigestible or slowly digested by ruminants. It may be expressed as crude fiber, neutral detergent fiber, acid fiber or effective fiber.

**FIBER GOAT:** type of goat used for fiber production. The hair is harvested and used for textile production. Angora and Cashmere are two common fiber breeds of goats in the U.S. For more information please see the breeds section in the goat Community of Practice area.

**FINISH/CONDITION:** Refers to the amount of external fat that covers the body.

**FLUSHING:** The process of increasing the quality of the diet of the doe before breeding season starts. The practice is used to increase the number of ovulations to try to increase the number of offspring. It is generally achieved by increasing the energy in the diet by either using high quality forage or increasing or starting feeding a concentrate.

**FORAGE:** The hay and/or grassy portion of the diet of goats, sheep and cattle.

**FOREQUARTERS:** The area on the animal's body that includes the withers, front legs, feet, shoulder, chest and brisket area.

**FREE CHOICE (Ad Libitum):** Feed made available to an animal at all times so that the animal can eat whenever and as much as it chooses.

**FRENCHING:** Frenching is the process of removing one and a half inches of meat from the end opposite the loin eye of the roast or rib chops.

**FRESHEN:** When a doe gives birth (kid) and starts to produce milk.

## G

**GAMBREL RESTRAINER:** A restraining device that is made of plastic placed over the top of the animal's neck, with slots on either side to hold both front legs of the animal.

**GENOTYPE:** The specific genes that the animal has on its chromosomes. The genotype of an animal is set at conception and controls the potential performance, color, size, and fertility of the animal. The genotype and environment combine to produce the phenotype of the animal.

**GESTATION:** The period in which the doe is pregnant (average 150 days).

## H

**HAND MATING:** A breeding scheme in which a female and male are isolated by the producer in a confined area for individual breeding.

**HEAT (Estrus):** The period in which the doe is receptive to mating.

**HERMAPHRODITE:** A sterile animal with reproductive organs of both sexes.

**HORMONE:** A chemical secreted into the bloodstream by an endocrine gland, bringing about a physiological response in another part of the body.

**HOT CARCASS WEIGHT:** The weight of a dressed carcass immediately after slaughter prior to the shrinkage that occurs in the cooler.

**HOTWEIGHT BASIS:** generally used in marketing where price is based on the hot carcass weight of the animal rather than the live weight taken just prior to processing.

**HYPOTHERMIA:** When body temperature drops below that required for normal metabolism and body functions. Inability to keep warm often caused by cold or wet weather.



I

**IMMUNITY:** Protection from disease that comes as a result of the body's normal immune system response.

**INBREEDING:** The mating of closely related individuals.

**INTERNAL PARASITES:** Parasites located in the gastrointestinal system in animals.

**INTRADERMAL:** Within the dermis, this is the layer of skin below the epidermis (outermost layer).

**INTRAMUSCULAR (IM):** The route of administering medications by inserting the needle straight into the skin and deep into the muscle. The recommended site for this injection is usually given in the neck of the animal.

**INTRANASAL (IN):** The spraying or administering of a solution into the nostrils.

INTRAVENOUS (IV): Medication injected into the vein, usually the jugular vein.

## J

JOHNE'S DISEASE (*Mycobacterium paratuberculosis*): A bacterial disease causing severe weight loss and some diarrhea. Not currently curable.

## K

KEDS: They are large, flattened, usually wingless parasitic flies.

KETONE: Compounds found in the blood of pregnant does suffering from pregnancy toxemia.

KETOSIS: The accumulation of ketones in the body, responsible for pregnancy diseases, acetonemia, twin lambing disease and others that occur at the end of pregnancy or within a month of kidding.

KID: A goat less than one year old.

KIKO: Breed of meat goats that originated in New Zealand and are known for hardiness. They have been imported in the U.S. For more information please see the breeds section in the goat Community of Practice area.

## L

LACTATION: The period in which a doe produces milk; the secretion or formation of milk.

LARVAE: The immature stage of an adult parasite. The term applies to insects, ticks and worms.

**LEGUMES:** A family of plants that has nodules on the roots to enable them to fix nitrogen from the atmosphere. Legumes are high in protein and bear their seeds in a pod (i.e., clover, alfalfa, cowpea).

**LETHARGY:** An animal that is slow to react lacks energy and is often sick.

**LIBIDO:** Sex drive.

**LINE BREEDING:** A form of inbreeding that attempts to concentrate the genetic makeup of some ancestor.

**LIVER FLUKES:** A small leaf-shaped organism that rolls up like a scroll in the bile ducts or liver tissue.

**LOIN:** A muscle that lies between the last rib and the hip bones of the back. Is commonly used to describe the part of the body between the last rib and the hip.

**LUNGWORMS:** Roundworms found in the respiratory tract and lung tissue.

**LUTALYSE (PGF<sub>2</sub> or Prostaglandin):** A hormone used for synchronizing estrus.

## M

**MARBELING:** The fat within the muscle.

**MASCULINITY:** Term used to describe the secondary male characteristics which are exhibited in the head, neck shoulders and chest.

**MASTITIS:** Inflammation of the udder usually caused by a bacterial infection.

**MATERNAL:** Pertaining to the mother or dam.

MEAT GOAT (type): A breed of goat that is primarily used for meat production.

METABOLIC DISEASE: Those diseases that involve the lack of or unusual breakdown of physical and chemical processes in the body. Often associated with nutrition and feeding.

METRITIS: Inflammation of the uterus.

MILLILITTER (ml): A metric volume measurement that is identical to cubic centimeter (cc).

MICROORGANISM: Any living creature of microscopic size, especially bacteria and protozoa.

MONKEY or BULL DOG or UNDERSHOT MOUTH: The lower jaw is longer than the upper jaw, and the teeth extend forward past the dental pad on the upper jaw. This is disqualifying feature for confirmation.

MUMMIFIED FETUS: a dead, shrunken fetus usually carried to term or later by the doe. The fetus usually died at an early stage of development, but after was too large to be reabsorbed by the doe.

## N

NECROPSY: To examine an animal after death to determine the cause of death.

NON-PROTEIN NITROGEN (NPN): Feed ingredient that is not a protein, but contains nitrogen (urea) that can be converted by the animal into protein (with enough energy).

## O

**OMASUM:** The omasum is the third compartment of a ruminant's stomach located between the reticulum and the abomasum. Known as manyplies.

**OPEN:** A female that is not pregnant.

**OPEN SHOULDERS (Loose shoulders):** The shoulder blades are structurally too far apart at the top which makes it difficult for the animal to stand for long periods or to move around freely.

**OVER-CONDITIONED:** An animal that is excessively fat often due to over feeding.

**OVERSHOT or PARROT MOUTH:** An animal that has the lower jaw shorter than the upper jaw and the lower teeth hit the back of the dental pad. This is disqualifying feature for confirmation.

## P

**PALATABLE or PALATABILITY:** The taste and texture of forage and feed. A forage that is highly palatable has a pleasant taste and texture to livestock.

**PARASITE:** An organism which lives on or in another living organism (host) at the expense of the latter.

**PARROT or OVERSHOT MOUTH:** An animal that has the lower jaw shorter than the upper jaw and the lower teeth hit the back of the dental pad. This is disqualifying feature for confirmation.

**PARTURITION:** The process of giving birth.

**PASSIVE IMMUNITY:** Acquiring the protection against infectious disease from another animal. This commonly occurs when a newborn consumes antibody-rich colostrum from its mother. Failure to consume sufficient colostrum increases the animal's risk of contracting a disease.

**PATERNAL:** Pertaining to the father or sire.

**PEDIGREE:** A listing of the ancestors of an animal that generally goes back 4 to 8 generations. It is often used to prove parentage for registration in a breed association. A shorter list can be used by producers to trace parentage of animals on their farm.

**PELT:** The skin of a goat.

**PENCIL SHRINK:** A percentage adjustment in live weight, generally between 2 and 4 percent, which is subtracted to ensure that responsibility for weight loss during transport is shared by the buyer and seller.

**PERFORMANCE DATA:** Information related to the growth rate of the goat. This often will include birth to weaning data and adjusted weaning weights. It correctly refers to any weight and animal gain data available on an animal.

**PERITONITIS:** Inflammation of the internal surface of the abdomen. This condition is often the result of infections and certain diseases.

**pH:** How much acid or how much base is in a sample. The lower the pH of a substance, the more acidic the sample. Conversely, the higher the pH, the more basic the sample. A pH of 7 is considered neutral. Normal rumen pH should be around 6-7, depending on the ration being fed.

**PHENOTYPE:** The visible or measurable result of genotype and environment. The phenotype includes an animal's external appearance, measures of its productivity and its physiological characteristics.



PHOTOPERIOD: Length of day (or length of period that that artificial light is provided). This also can be expressed as a ratio of daylight to darkness.

PLACENTA: the membranes that surround the fetus while it is in the uterus. This is also referred to as the afterbirth at parturition.

PLACENTITIS: Abnormal inflammation of the placenta, usually due to infectious disease.

POLLED: Naturally hornless.

POSTPARTUM: Occurring after birth.

ppm: Parts per million.

PREPARTUM: Occurring before birth.

PRIMAL CUTS: Also called wholesale cuts the original cuts resulting from the first division of the fore and hind saddle of lamb or mutton.

PROGENY: Offspring.

PROLAPSE: An interior organ pushing outside of the body cavity.

PROGNOSIS: The chances of an animal having a normal quality of life following a disease or problem. This is reported using the words poor, fair, good, or excellent.

PROLIFIC: Tendency to produce many offspring.

PROTEIN: A nutrient required for growth and the repair of body tissue.

**PROTEIN SUPPLEMENT:** A feed that contains a high density of protein and is used to supply additional protein in the ration.

**PROXIMAL:** A structure that is nearer the main body. For example, the three bones in the foot are designated by the terms proximal, middle, and distal depending on their location relative to the main body.

**PUBERTY:** When an animal becomes sexually mature. This occurs around 4 months of age in most goat breeds.

**PUREBRED:** An individual whose parents are of the same breed and can be traced back to the establishment of that particular breed through the records of a registry association.

**PURULENT:** A term describing pus-like discharge or infection.

**PYELONEPHRITIS:** Inflammation of the kidney, beginning at the "pelvis." Generally due to a bacterial infection.

## Q

**QUARANTINE:** To confine and keep an animal away from the rest of the herd or flock to prevent the spread of disease.

## R

**RACK (meat term):** refers to the rib section of the carcass along the back. This is one of the highest value cuts on a goat and is often used as a roast.

**RADDLE (Marker):** Paint or crayon applied to the male's chest to mark the females he mates.

**RATION:** The total feed given to an animal during a 24-hour period.

**RECESSIVE GENE:** A gene which must be present on both chromosomes in a pair to show outward signs of a certain characteristic.

**RECTAL PROLAPSE:** When a portion of the rectum protrudes from the anus.

**REGISTERED:** A goat whose birth and ancestry has been recorded by a registry association.

**RETICULUM:** The second compartment of the ruminant's stomach. The reticulum has a honey-combed appearance and is the receptacle for metal foreign objects that is swallowed.

**ROTATIONAL GRAZING:** A system by which livestock are allotted to a certain grazing or browsing area for a certain period of time before they are moved to another area.

**ROUGHAGE:** A high fiber, low total digestible nutrient feed consisting of coarse bulky plants or plant parts; dry or green feed with over 18% crude fiber.

**RUGGED:** Big and strong.

**RUMP:** The area between the hip bones and the tail head.

**RUMEN:** The large first compartment of a ruminant's stomach containing a microbial population that is capable of breaking down forages and roughages.

**RUMENOCENTESIS (rumen tap):** When the rumen contents are collected by inserting a needle into the rumen.

**RUMINANT:** Animals that have a four-compartment stomach (rumen or paunch, reticulum or honeycomb, omasum or manyplies, and abomasum or true stomach).

RUMINATION: The process of regurgitating food to be re-chewed.

## S

SAVANNA: Breed of meat goats that originated from South Africa. This breed states that the goats are hardier than some other breeds and have good muscle traits. For more information please see the breeds section in the goat Community of Practice area.

SCALE: A device used to weigh animals, feed etc.

SCOURS: Diarrhea.

SCRAPIE: Scrapie is a fatal, degenerative disease affecting the central nervous system, one of the class of diseases known as transmissible spongiform encephalopathies (TSEs).

SCROTUM: The skin sac or bag containing the testicles of a male animal.

SCURS: A rudimentary horn. A small rounded portion of horn tissue attached to the skin of the horn pit of a polled animal.

SECOND CROSS: Progeny resulting from the mating of true half-breeds and a distinct breed.

SEPTICAEMIA: A serious infection in which the bloodstream is invaded by large numbers of causal bacteria which multiply there.

SERVICE: Mating.

SETTLED: A female that is pregnant.

**SICKLE-HOCKED:** Condition when an animal has too much angle or set to the hock. This condition, when viewed from the side is identified as the animal having their feet too far under the animal while the hock is in the correct position behind the animal.

**SIRE:** Male parent.

**SKIN TENT:** When the skin of an animal is gently pinched and pulled outward. A dehydrated animal's skin will not rapidly return to its normal position or shape.

**SMOOTH-MOUTH:** An animal that has lost all of its permanent incisors, usually at 7 or more years of age.

**SOUNDNESS:** When an animal is free from disease and lacks structural defects that affect its usefulness.

**SOREMOUTH:** A highly contagious, (also to humans), viral infection that causes scabs around the mouth, nostrils, and eyes and may affect the udders of lactating does.

**SPANISH:** A breed of goat that was identified in the South West part of the country and is believed to have originated from goats brought over by the Spanish explorers in the 1700's. Efforts are underway to better categorize this breed and establish breed registry. For more information please see the breeds section in the goat Community of Practice area.

**STANCHION:** A device for restraining a goat by the neck for the purpose of feeding, milking, hoof trimming or artificial insemination.

**STANDING HEAT:** The period in which the doe or ewe will stand still and accept the male for breeding.

**STILLBIRTH:** A fetus born dead. There can be many possible causes some related to disease others due to nutrition or conditions in the uterus at or before the birth process starts.

**STOCKING RATE (per acre):** The number of animals that can be pastured on one acre, or the number of acres required to pasture one animal.

**STRUCTURAL CORRECTNESS:** Free from any conformational abnormalities which includes the skeleton, feet, and legs of the animal.

**STYLISH (Tracking):** An animal possessing an attractive, pleasing conformation or way of movement.

**SUBCUTANEOUS (SQ) INJECTIONS:** Insertion of the needle just under the skin and not into the muscle. This is important because SQ injectables are designed for a slower rate of absorption.

## T

**TAPEWORMS:** Long, ribbon-like segmented flatworms that can inhabit the gastrointestinal tract of animals.

**TATTOO:** Permanent identification of animals produced by placing ink under the skin, generally in the ear, or in the tail web (of the LaMancha goat) using a tattoo gun with digital (sharp needle-like) numbers.

**TEASER:** A male that has been vasectomized and is used to indicate which females are in estrus.

**TETANUS:** Also called Lock Jaw is a condition caused by poisons produced by *Clostridium tetani* which is a bacterium found in the soil. Symptoms usually appear within 7 to 14 days of exposure and include stiffness and soreness that progresses through the body until the whole body is paralyzed within 48 hrs of first appearance.

**TOTAL DIGESTIBLE NUTRIENTS (TDN):** A measure used to indicate the energy in a feed or of how much energy an animal requires.

**TOXEMIA:** Generalized poisoning, due to soluble (usually bacterial) toxins entering the bloodstream.

**TOXIN:** Any poisonous substance of biological origin.

**TOXOID:** An immunizing agent against toxins produced by bacteria. Most often form of immunity to tetanus.

**TRACE MINERALS(TM):** Minerals that are required in very small amounts.

## U

**UDDER:** The mammary gland of sheep and goats that secretes-milk.

**UMBILICUS:** The area where the umbilical cord was attached during gestation. This is commonly known as the "belly button."

**UNDERSHOT or BULL DOG MOUTH or MONKEY MOUTH:** The lower jaw is longer than the upper jaw, and the teeth extend forward past the dental pad on the upper jaw.

**UPGRADE:** The process of grading up from a commercial animal to a specific breed through the use of backcrossing. This results in animals that are often referred to as percentage or full blood animals by breed associations.

**URINARY CALCULI:** A metabolic disease of males characterized by the formation of stones within the urinary tract. It is caused primarily by an imbalance of dietary calcium and phosphorus.

**URETHROSCOPY:** An examination of the urethra using an endoscope.

**UROLITHS or UROLITHIASIS:** Describing a variety of stones that are found in the urinary system. These include kidney and bladder stones.

## V

**VACCINE:** A biological product that is injected into an animal to stimulate an immunity to a particular disease.

**VAGINAL PROLAPSE:** The protrusion of the vagina in ewes or does during late pregnancy.

**VEIN:** Blood vessels in the body that carry blood towards the heart.

**VIRULENCE:** The ability a microorganism has to cause an infection or disease. Microorganisms which have the ability to cause more severe disease are said to be highly virulent.

## W

**WASTY:** a:) Too much fat on the carcass; b:) An animal that has a paunchy-middle.

**WATTLE:** A small fleshy appendage attached on or near the throat area of the goat and which serves no known function.

**WEAN:** To separate nursing offspring from their mothers so that they no longer receive milk.

**WEANER or WEANLING:** An animal that has been weaned from its mother or has stopped suckling its mother. **WETHER:** A male sheep or goat that has been castrated.

**WHITE MUSCLE DISEASE:** Problem in young goats caused by a deficiency of selenium and/or vitamin E. It causes kids to be weak at birth and shortly after birth. The condition impairs the animals ability to transport oxygen properly and if not treated can result in death within 48 hrs of birth.



## Y

YEARLING: A male or female sheep or goat that is between 1 and 2 years of age.

## Z

ZOONOSIS or ZOONOTIC: Any animal disease that can be spread to humans.



**Glossary of Medications  
for Project Participants  
(Compiled May 2015)**

## A

A-180 (donofloxacin) - Vet prescription. Injectable respiratory antibiotic (Pfizer). Neither I nor my vet have been very pleased with this product. Nuflor Gold and Excenel RTU (listed herein below) have worked better for us.

Albadry Plus - Teat infusion medication containing procaine penicillin and novobiocin sodium for treating mastitis in non-lactating goats. Also used to dry up lactating goats. Also can be applied topically to staph infections. You never really know which mastitis medication is going to work unless you have the udder's contents tested to find out which bacteria is causing the problem.

Albon (Sulfadimethoxine 12.5%, or its generic equivalent DiMethox 12.5%) - These products are the drug of choice for preventing and treating Coccidiosis. Give orally undiluted to kids at a rate of 3-5cc and to adults at a rate of 5-10cc for five consecutive days. Mixing with drinking water as directed on the label is another option, but I recommend against it. Sick goats should be treated individually with oral dosing for five consecutive days. Buying the gallon jug is the most cost-effective purchase. Will not work with automatic waterers due to continual dilution of the product.

Alushield - Aluminum-based water-resistant aerosol bandage for topical use only.

## B

Banamine (FluMeglumine) - Vet prescription required. Anti-inflammatory that helps reduce fever, soothes irritation in the gastro-intestinal tract (gut) when diarrhea or other gut-related digestive illnesses occur, relieves pain and soreness associated with animal bites and other injuries. Use no more frequently than every 12 hours (stomach ulcers are possible) unless goat is close to dying and risk is worth taking. Dosage is 1 cc per 100 lbs. body weight IM, but can be used at a rate of 1/2 cc per 25-30 lbs body weight if necessary. A newborn kid with fever at Onion Creek Ranch would receive an injection of no more than 2/10 cc IM. Keeps best in hot climates when refrigerated. Never be without this essential medication.

Baytril 100 (Enrofloxacin 100 mg/ml) - Vet prescription. Baytril 100 (not Baytril 2.27%) is approved for use in livestock. (cattle in certain circumstances). Usage in goats is "off-label" or "extra-label," but this antibiotic is being used in goats by some veterinarians. The appropriate IM dosage is 4 cc's per 100 lbs. of body weight for five consecutive days. Do not use the single-use dosage; goats need five-consecutive-day application. This medication is very effective against gut-related illnesses and works synergistically (better together than individually) with SMZ (sulfadimethoxazine with trimethoprim). Some jurisdictions prohibit use of Baytril or Baytril 100 in any form (injectable or tablets) in food-production animals; check with your vet. If you have a sick goat on which no other antibiotic is working, Baytril 100 is the ultimate in effective antibiotics. Do not use without vet supervision.

Biosol (Neomycin Sulfate) - Over-the-counter sulfa-based antibiotic for using with scouring kids and adults when Coccidiosis is not the underlying illness. Works effectively against E.Coli and other digestive-system bacterial infections. For kids, give 3 cc orally every 12 hours until diarrhea has stopped and feces is normal. For adult goats, use 5 cc to 10 cc orally and as directed for usage in kids. Do not overdose; constipation can result.

BoSe and MuSe - Vet prescriptions are required for both products. (MuSe should not be used with goats; it is too strong and is a horse medication. Use BoSe with goats.) Injectable medication for selenium deficiency. Since selenium deficiency exists at different levels throughout the United States, it is critical to follow your veterinarian's directions on the usage of these products, as well as supplemental loose minerals containing selenium. See GOAT MEDICINE by Dr. Mary Smith for a map of the United States indicating areas of selenium deficiency. Most of the East Coast, down to Florida and westward through the Great Lakes region, plus the West Coast, including California and parts of Nevada and Idaho, are selenium deficient to different degrees. Selenium deficiency shows itself in goats most often in the form of weak rear legs in kids. Older goats look "pathetic," don't put on weight, have weak legs, and generally stay in poor condition and poor health. Selenium deficiency causes Nutritional Muscular Dystrophy (White Muscle Disease). Selenium is toxic at low dosages, and the dosing margin of safety is narrow. The addition of selenium to feed is controlled by US law. In some areas, producers only need to provide loose minerals containing selenium. In other regions, selenium injections are necessary. When BoSe injections are required, they are usually given at birth and again at one month of age (one-half cc IM). Pregnant does usually receive injections four to six weeks before kidding, and bucks usually are vaccinated twice a year. Adult dosage of BoSe is 2-1/2 cc per 100 lbs bodyweight given IM. It is critical that producers understand that selenium supplements must be determined and supervised by your veterinarian because selenium levels vary widely across the USA.

## C

C&D Antitoxin - Over-the-counter made-for-goats product that can be safely used for many problems. Severe diarrhea in very young kids, toxicity caused by plants, poisons (bites, overeating disease, bloat, ruminal acidosis, and ingestion of toxic substances like azaleas and antifreeze are several examples), one of the products administered to combat Floppy Kid Syndrome . . . these are a few of the applications of this very versatile product which is almost impossible to overdose. This product provides short-term protection (about 12 hours) but works quickly towards solving the immediate problem. Follow label directions. Always have this product on hand; there is no substitute for it. Must be refrigerated. C&D Antitoxin negates any protection previously given by the CD/T vaccine. Therefore, the producer must wait for at least five days after completion of C&D Antitoxin therapy and re-vaccinate the animal with the initial CD/T injection and the booster 30 days thereafter.

CD/T (Clostridium Perfringens Types C&D & Tetanus Toxoid - Tetanus Toxoid)- Over-the-counter made-for-goats product to provide long-term protection against overeating disease (types C&D) and tetanus. Newborn kids and newly-purchased animals should be vaccinated with 2 cc (kids at one month of age) and then a second vaccination should be given 30 days later (kids at two months of age). Two injections 30 days apart are required in order to provide long-term protection. Annually thereafter, one injection of 2 cc per animal will renew the protection. Give SQ. Do not be surprised if it makes a knot at the injection site. This is the body's reaction to the vaccination, and in most cases, it eventually goes away. CD/T is one of the few medications which is not based upon body weight. Every goat, from one month of age up to the biggest buck, should receive 2 cc SQ. Must be stored under refrigeration.

Caseous Lymphadenitis (CL) vaccine for goats - Introduced in May 2012 by Texas Vet Lab of San Angelo, Texas, see the May 2012 and July 2012 issues of MeatGoatMania for articles on how to use this wonderful product. Over the counter in some states; prescription item in other states. Jeffers can tell you what each state requires. Call 1-800-533-3377 and ask to speak with their CL vaccine expert.

Chondroprotec - Topical skin regrowing medication. See my article in the January 2013 issue of MeatGoatMania to read about and see photos of this amazing product. Vet script.

Colostrum Replacers and Supplements - Do not confuse these two types of products. Newborns must have colostrum during the first hours after birth. If the dam is colostrum deficient, the producer must use a colostrum replacer. The best colostrum replacer is colostrum saved (and frozen) from does on your property who have already kidded. This colostrum will have the antibodies needed to provide the kids the needed immunity to the infectious organisms present in your particular location. If you don't have a supply of frozen colostrum, then you must use a commercially-prepared goat colostrum replacer (\*not\* "supplement"). \*A reminder: Do not use colostrum or colostrum replacer beyond the first 48 hours of the kid's life. Switch to goat's milk or goat's milk replacer. Colostrum has already done its job for the newborn after 48 hours and the kid's body can better digest goat's milk.

CoRid (amprolium) - Over-the-counter product for preventing and treating eliminating coccidiosis. Comes in granular packets and gallon liquid. This product is a thiamine inhibitor, and most professionals are recommending against its use. Albon or its generic equivalent Sulfadimethoxine 12.5% (Dimethox 12.5%) is preferred over CoRid. If you must use CoRid, buy the gallon liquid and maintain better control over dosages. Follow package directions. Rule of Thumb: For prevention of coccidia, use 2 oz. per 15 gallons of water; for treatment, use 3 oz. CoRid per 15 gallons of water. Limit the goats' water supply to one source and treat for five consecutive days. For animals severely infected with the coccidia parasite, mix 1 oz CoRid in 5 oz. water and orally drench the sick goats twice a day for five consecutive days; kids should receive 20-40 cc of this mixture twice a day, while adults should receive 40-80 cc. This is a higher-than-label dosage but what it takes to control coccidia in goats. Use Thiamine (Vitamin B1) daily dosing at 4 cc per 100 lbs bodyweight given IM or SQ when using CoRid.

## D

Dewormers, Feed-based - Feed-based dewormers are usually not effective, in my opinion. Dewormers are dosed based on an individual goat's bodyweight; there is no accurate way to do this with feed-based dewormers. Further, the goat needing the dewormer the worst will also be the least aggressive goat who will get less feed, therefore a lower dosage of the feed-based dewormer. Unless you can control the precise amount of feed that each goat receives, I recommend against using feed-based dewormers.

Dexamethasone - Vet prescription. Cortico-steroid. Use sparingly, with great care, and preferably under the direction of a vet. Dex can have bad side effects. Used for swelling and inflammation once infection is under control. Do not use if broken bones exist, because it interferes with bone repair. Do not use on pregnant does unless you are deliberately trying to induce labor. Used to induce labor in pregnant does when the slow introduction of labor over a 48-to-72 hour period is desired (example: Ketosis). Dex interferes with the functioning of the goat's immune system. Usage of this drug must be tapered off slowly; serious problems can occur if Dex is given in large amounts and then suddenly stopped. Tapering off over five days is a normal procedure, i.e. reducing the dosage each day for five consecutive days. Dosage varies depending upon the problem being treated. Keeps best in hot climates when refrigerated.

Dextrose Solution (50%) - Although this is an over-the-counter IV product in a bottle, use 50% Dextrose Solution with weak newborns by slowly dropping one or two cc in the mouth and under the tongue for quick energy. Can be mixed half and half with water and offered short-term to weak goats or kids who are either having trouble digesting milk or have overeaten on milk (Floppy Kid Syndrome) and need to be taken off milk for several days until the toxicity caused by undigested milk has been removed from their bodies.

Diatomaceous Earth (DE) - This product is being used by some producers as a "natural" dewormer. DE does not kill internal parasites (worms). There is no scientific evidence of DE's effectiveness in controlling internal parasites. It is somewhat effective on external parasites like flies. Every controlled test done to determine efficacy of this product in killing internal parasites (worms) in goats has failed. If a producer chooses to use DE as a food additive, make certain that "food-grade" DE is purchased and use DE in conjunction with an ethical (commercially-produced) deworming product. Check fecal samples regularly for worms while using DE.

Dopram V- Vet prescription. Eliminates respiratory distress in newborns caused by troubled births, including C-sections. Drop 2/10 cc under kid's tongue immediately upon birth to stimulate lung activity. Use on "pulled" kids since the normal squeezing of the body during the delivery process is altered. This liquid medication keeps best under refrigeration. Always have Dopram V on hand.

Draxxin (tulothromycin) - Vet prescription. Injectable respiratory antibiotic. Very expensive product that purports to be a one-time-only usage antibiotic. Because goats have the fastest metabolism of all ruminants, they need to be dosed daily. Nuflor Gold and Excenel RTU given daily work in my herd and are far less expensive. I don't recommend using Draxxin.

## E

Electrolytes, Oral (BounceBack/ReSorb or equivalent) - Over-the-counter product packaged in powdered form. For rehydrating sick animals, regardless of age. Can be used as an oral drench, put into baby bottles for kids to suck, or mixed in drinking water. Each packet should be mixed with 1/2 gallon warm water. Use in conjunction with Lactated Ringers Solution on extremely dehydrated kids or adults. Store in a cool, dry place. Never be without this product.

Entrolyte - (Do not mistakenly purchase Entrolyte HE). Over-the-counter oral calf nutrient product packaged in powdered form. For rehydrating and providing nutrition to sick goats who are not ruminating or otherwise not eating. Contains 13+% protein in addition to electrolytes. Stomach tube this complete feed for goats off-feed. A 100 lb goat needs one gallon of fluids daily. Start slowly, dividing the dosages into two to four dosings. NOTE: As of January 2008, this product is no longer available from Pfizer. REPLACEMENT PRODUCT: Mix a package of electrolytes such as Bounce Back or ReSorb and add 8 to 12 oz milk replacer.

Epinephrine - Vet prescription. Used to treat Shock. Always have it on hand when giving injections. You will not have time to go get it. Dosage is 1 cc SQ or IM per 100 pounds body weight.

Excenel RTU - Prescription injectable antibiotic. Ready-to-use equivalent of Naxcel. Effective against respiratory and urinary tract infections. Dose daily at 6 cc per 100 lbs bodyweight. Day One: dose twice 12 hours apart. Days 2 through 5: dose once every day. I actually prefer Nuflor Gold over this product.

## F

Ferrodex 200 iron injection - Injectable iron supplement for treating anemia. Interchangeable with oral Red Cell or oral Lixotinic.



Fleet's Enemas or generic equivalent - Over-the-counter product that is also useful for constipation and toxicity reactions to clean out the intestinal tract. If a doeling is born with her vagina turned inside out, use a children's Fleet's enema to move her bowels for the first time ("pass her plug") and the vagina will return to its proper position. Make sure to put the enema into the rectal opening . . . not the vagina.

Formalin (10% buffered formaldehyde) - Classified as a disinfectant, this product works well when injected into CL abscesses and also is very effective in treating hoof rot/hoof scald. Vets may recommend against using Formalin because this is off-label usage; if the producer doesn't use it properly, the vet might be held legally and financially responsible. See my articles on these topics on the Articles page at [www.tennesseeatgoats.com](http://www.tennesseeatgoats.com) for usage and dosing instructions. I am now recommending not using Formalin but rather lancing and cleaning out abscesses because too many goat raisers are not using it correctly.

Fortified Vitamin B Complex - Over-the-counter product. This product can be used interchangeably with Thiamine when Thiamine alone is needed since it has 100 mg/mL thiamine in it. Products without "fortified" in the label have inadequate levels of thiamine present. If such products must be used, then the dosage must be increased to achieve a thiamine level of 100 mg/mL. Example: If the product has only 25 mg/mL, then the dosage given must be four times the "fortified" product's amount. B vitamins are water soluble; a healthy rumen produces B vitamins daily. B vitamins may be given to any sick goat. Use thiamine dosage.

## G

Gentamycin Sulfate - Injectable prescription antibiotic. Not authorized for use in all jurisdictions in food animals due to concern for antibiotic build-up in meat. Works extremely well when used in conjunction with penicillin in the treatment of post-birthing infections and other bacterial infections. Mixed in equal parts with Dexamethazone and Sterile Water, the resulting product is a very effective eye spray for treating Pinkeye. Do not use on ulcerated eyes.

Gentosin Spray - Topical prescription spray useful in treating non-ulcerated eyes having Pinkeye. See Gentamycin Sulfate.

GoatADE - Oral quick energy supplement for stressed and/or off-feed goats. This product is sold by Register Distributing. (<http://www.goatsupplies.net/firms.com>). Contains many of the vitamins, minerals, and nutrients that a sick goat requires to survive its illness. Superior to NutriDrench. Mixes well with propylene glycol and mineral oil for flavored dosing. Furney Register can be reached at 1-888-310-9606.

Granulex - Topical spray for removing dead and dying skin. May be no longer available.

## I

Imodium AD - Do NOT use this anti-diarrheal with goats. It can stop the peristaltic action of the gut, causing rapid and painful death.

Ivomec 1% injectable dewormer - Over-the-counter product for eliminating stomach worms. This clear liquid works best if used orally at a rate of 1 cc per 50 lbs. body weight. Do not under-dose. Store at cool temperature and keep out of sunlight. Achieves a quicker "kill" via oral dosing. Also used in treatment of Meningeal Deerworm Infection. Clear dewormers do not kill tapeworms. Ivermectin 1% is one of several dewormers used to kill stomach worms.

## K

Kopertox - Over-the-counter product for hoof rot and hoof scald. Blue-green liquid for topical application as a "liquid bandage." Applied topically to the hoof and used in conjunction with Oxytetracycline 200 mg/ml injections.

## L

LA 200, Maxim 200, Biomycin (oxytetracycline 200 mg/ml) - Over-the-counter broad-spectrum antibiotic. Thick (use an 18 gauge needle and give SQ over the ribs) and may sting. Oxytretracycline 200 mg/mL must be used to treat abortion "storms." No vaccines are available to treat abortion diseases in goats and no off-label vaccines are effective in preventing abortion diseases in goats. Oxytetracycline 200 mg/ml is the goat producer's only choice. Also used to treat Pinkeye, even in pregnant does, as an

abortion organism can cause one strain of Pinkeye. Used both injectably for all Pinkeye and topically (in non-ulcerated eyes) for Pinkeye. Sometimes effective in treating hoof rot/hoof scald infections. Use 1 cc per 20 lbs. body weight SQ daily for a minimum of five consecutive days. The non-sting version of oxytetracycline 200 mg/ml is called Biomyacin. Oxytetracycline 200 mg/ml is sold under several brand names; check the content label for correct 200 mg/ml strength. Turns a dark red when opened and air enters the bottle, but if kept under controlled climatic conditions and used before the expiration date, it should work fine.

Lactated Ringers Solution - Vet prescription. For rehydrating kids and young goats. Comes in IV bag but use SQ. Using a 60 cc syringe with an 18 gauge needle attached, draw up LRS, warm in a pot of water, check temperature as you would a bottle of milk for proper heat, and inject 30 cc under the skin (SQ) at each shoulder. Can be used several times a day until the goat's electrolytes are in balance. Will be absorbed by the goat's body very quickly if dehydration is present. Never be without this inexpensive life-saving product. Can be used in conjunction with oral electrolytes (BounceBack/ReSorb). Refrigerate when storing.

Lime sulphur dip 97.8%. Used topically for mites and staph infections on the skin.

Lutalyse -- Prescription injectable. Used to cycle does into heat or induce abortion in doe accidentally bred to wrong buck. Give 2 cc on the seventh (7th) day after observed breeding. Do not repeat.

## M

Masti-Clear - Procaine-penicillin-based teat infusion for lactating does for treating mastitis.

Micotil - Never use Micotil with goats. This cattle antibiotic causes immediate heart attack and death in goats.

Milk of Magnesia - Over-the-counter laxative product that is useful for constipation and toxicity reactions (to move toxic materials through and out of the body), including bloat, overeating disease, and Floppy Kid Syndrome. Use as oral drench at a rate of 15 cc per 60 lbs. body weight every four to six hours until the feces goes from normal to

clumpy then back to normal 'pills.' Always keep the animal hydrated with electrolytes (BounceBack/ReSorb or equivalent) when using Milk of Magnesia or other laxatives. Useful with mastitis by increasing magnesium levels in goat's body. Keep MoM on hand at all times.

Mineral Max (MultiMin) - Vet prescription. Cobalt-blue colored injectable liquid that must be used very sparingly in goats suffering from severe mineral deficiencies. Help with weak labor contractions. Overdosing is easy - builds up in fatty tissues.

Mineral Oil - Over-the-counter laxative product. Because mineral oil has no taste, a goat's throat does not recognize mineral oil as a substance to be swallowed; this product can easily be aspirated into the lungs. Must be stomach tubed. If stomach tube is not immediately available, mix mineral oil with GoatADE to flavor it and very carefully and slowly orally drench it into the goat's mouth.

Molasses/Karo Syrup - Use orally with kids when quick energy is needed. Can be substituted for propylene glycol when treating ketotic does.

## N

Nasalgen IP - Intra-nasal vaccine of short duration. I administer to goats when shipping.

Naxcel (ceftiofur sodium) - Vet prescription. Broad-spectrum antibiotic used primarily at Onion Creek Ranch for respiratory illnesses (pneumonia). Comes in two bottles . . . one bottle contains a powder which must be kept refrigerated even while in powder form, and the other bottle is sterile water. When the two are mixed, they keep for only seven days. Draw syringes in dosages of 1/2 cc, 1 cc, 2 cc, and 3 cc, put needle caps on them, place the filled syringes in a ziplock bag, label and date it, and put the bag in the freezer. Syringes thaw quickly, but hold the needle cap upright, because the medication will settle into the needle cap and will be lost when the needle cap is removed. . Dosages on the bottle are insufficient for goats. If newborn kids have respiratory distress or E.Coli infections, they must receive a minimum dosage IM of 1/2 cc daily for five consecutive days. A 100 pound goat needs at least 5-6 cc of Naxcel IM over the five-day course of treatment. FORMERLY used at Onion Creek Ranch . . . I no longer use Naxcel but instead use Excenel RTU, the ready-to-use equivalent product that doesn't require refrigeration or mixing, or Nuflor Gold.

Niacin (Vitamin B3) - Give 1000 mg daily orally (crushed/dissolved) to does having weak labor contractions until kidding occurs.

Nolvasan - Bolus used inside uterus after difficult delivery to prevent metritis or vaginitis.

Nuflor Gold (florfenicol) - Vet prescription. Excellent respiratory antibiotic that is also used to try to prevent mastitis from becoming systemic. I tend to use Nuflor on adults and Excenel RTU on kids, but they are interchangeable. Administered IM every day for a maximum of five injections. This is a very thick liquid, so use Luer Lock syringes, or the needle may blow off the syringe, wasting the medicine. Dosage is 6 cc per 100 lbs bodyweight and is administered for five consecutive days; newborn kids needing this antibiotic should receive no less than 1/2 cc. Keeps best under refrigeration in warm climates. NOTE: Because goats have the fastest metabolism of all ruminants, off-label medications that state every-other-day usage or one-time usage do not work. Goats must have daily administrations of medications.

O

Oxytocin - Vet prescription. Used at Onion Creek Ranch when a doe kids and does not pass her afterbirth within 24-36 hours of kidding. Dosage is 1.5 cc per 100 lbs. body weight. In warm climates, keeps best when refrigerated.

P

Penicillin, Benzathine (long-acting penicillin) - This over-the-counter antibiotic has been overused for years and is no longer effective against some illnesses. Dosage is 5 cc per 100 lbs. body weight IM for five consecutive days. Must be refrigerated. Do NOT use this type of penicillin when Listeriosis or Goat Polio is the suspected illness. I don't keep this type of penicillin in stock any longer.

Penicillin, Procaine (300,000 IU) - Procaine Penicillin must be used in high dosages in conjunction with Thiamine (Vitamin B1) in the treatment of Listeriosis and Goat Polio. Also is used to treat infection resulting from injuries, bites, and after difficult birthings. Over-the-counter product. Must be refrigerated. Always have this product on hand.

Peppermint Oil Cream (Cai-Pan) - Topical application to congested and/or mastitic udders.

Pepto Bismol (pink bismuth) - Over-the-counter product to help with irritation/distress caused by diarrhea in both kids and adults. Use up to 2 cc every four to six hours for newborns; 5 cc for kids approaching one month old; as much as 10 to 15 cc for adults. Before using Pepto-Bismol when diarrhea is present, first determine the cause of the problem. See my article on Diarrhea on my website's Articles page: <http://www.tennesseeameatgoats.com>. Follow up with oral ruminant probiotics to repopulate the gastro-intestinal tract (gut) with live bacteria needed for digestion. Do not use Immodium AD to control diarrhea in goats; it can stop the peristaltic action of the gut and cause death.

Pirsue - Vet prescription mastitis medication. Expensive but excellent product.

Pneumonia Vaccines- Presponse HM and Poly Bac Somnus - Both vaccines are newer than and in my opinion afford better protection against pneumonia than the Colorado Serum product mentioned below; they are also more expensive. Dosage is 1 cc for goats under 60 lbs and 2 cc for goats over 60 lbs, with a two-injection series 21 days apart the first time and annually thereafter. The extra cost is reduced by the lesser amount of vaccine needed for the 60 lb & under goats.

Pneumonia Vaccine (Mannheimia Haemolytica Pasteurella Multocida Bacterin) - Over-the-counter injectable pneumonia vaccine by Colorado Serum. Made for goats. Requires two initial injections of 2 cc each 30 days apart for all young goats and any new purchases brought onto the property, then booster annually thereafter. Follow bottle directions. Give first injection at one month of age in conjunction with first deworming and first CD/T vaccination. Repeat at two months of age, then annually thereafter. Dosage is 2 cc for all goats, regardless of age, sex, weight, or breed.

Polyserum or Bovi Sera - Over-the-counter injectable immune system boosters. Given SQ. Advisable to use with any ill goat.

Primor - Vet prescription. Oral sulfa-based antibiotic. Tablets sized by weight of animal for gut-related infections, including Coccidiosis. Tablets are scored for easy breaking to fit appropriate weight of sick animal. Primor 120 is for 5-15 lb goats; Primor 240, 10-30 lb goats; Primor 600, 25-50 lb goats; and Primor 1200, 50-100 lb goats. Give two times the appropriate weight's dosage the first day, and then dose to the goat's weight for the next 9 consecutive days.

Probiotics, Oral - Over-the-counter oral ruminant gel which should be used in conjunction with antibiotic therapy, treatment for diarrhea (scours), and when shipping goats. Take along several tubes and administer it to each animal at least once per day during the journey. Helps lessen stress and settle the stomach. Probios is a well-known brand name. Keep refrigerated in warm climates.

Propylene Glycol - Over-the-counter clear oily liquid for ketosis in does. Provides quick energy. Comes in one-gallon containers. Use 50-60 cc twice a day for an average-sized adult doe until she begins eating again. Administer orally very slowly and best if mixed with GoatADE for flavor so the goat can taste it and know to swallow. If this product is not available, use molasses or Karo syrup. Freezes at temperatures well above 32°F, so store indoors under controlled temperature.

## R

Rally or Recovr - Injectable antihistamine for toxicity problems. Vet prescription.

Red Cell - Over-the-counter oral iron supplement made for horses. Use in treating anemia. Interchangeable in usage with oral Lixotinic or Ferrodex 100 iron injections.

## S

Safeguard (Panacur) dewormer - Another "white" dewormer. Currently worthless in killing stomach worms in most areas, despite claims on label. Kills tapeworms.

Spectam Scour Halt - Over-the-counter sulfa-based antibiotic product to control diarrhea in kids. Scour Halt is a pig scour medication which works well on goat kids. Usage with adult goats may cause cessation of peristaltic action of the gut. Follow label directions when pumping this pinkish-red liquid into the goat's mouth. Follow up with oral ruminant gel to repopulate the gut with live bacteria necessary for food digestion.

Sterile Water - Vet prescription. Used in mixing medications.

Sulfadimethoxazine with Trimethoprim (SMZ) - Sulfa-based oral prescription antibiotic. Available in both liquid and tablets. Use to treat watery diarrhea and other gut-related illnesses. Used with Baytril 100, SMZ is synergistic (better than by itself) in treating E Coli and other difficult to cure infections. Excellent product.

Synergized DeLice or generic equivalent - Over-the-counter product. Permethrin is the active ingredient in this oily product which should be applied along the backbone from base of neck to base of tail. (This back drench works on goats because external parasites are the target; back drenches don't work for treating internal parasites such as stomach worms.) Follow the directions carefully, and do not use on kids under 3 months of age and pregnant does. Maximum application is three ounces per animal, regardless of weight. Use a discarded permanent squeeze bottle to apply this product; beauty shops will save them for you. The bottle tip is just the right size. For kids under three months of age and pregnant does, use a kitten-safe or puppy-safe powdered flea control product or carefully apply 5% Sevin dust. These products contain pyrethrins, which are much safer for very young animals. Cylence is another topical product used to kill lice.

## T

Tagamet - Over-the-counter product. Use in conjunction with Primor for gut-related pain resulting from illnesses like coccidiosis. Dosage is one half of a Tagamet HR200 (200 mg) for 3-5 days.

Terramycin - Over-the-counter product. Ophthalmic ointment used to treat Pinkeye, particularly in ulcerated eyes.



Tetanus Antitoxin - Over-the-counter product for immediate and short-term protection against tetanus (lockjaw). Tetanus is fatal if not promptly treated. Comes in single-dose vials; use the entire vial IM for adults; cut it back proportionately for kids. No sooner than five days after this medication is last used, you must re-vaccinate with tetanus toxoid or CD/T (the complete two-injection series given 30 days apart) to reinstate long-term protection. Keep refrigerated.

Theodur - Vet prescription. Often used when bronchitis exists to clear air passages. Precise dosage is not known for goats, but I have, under vet direction and supervision, used 1/2 tablet per day on a 15-20 pound kid. Theodur suppresses the appetite; the producer must make sure that the animal is kept hydrated.

Thiamine (Vitamin B1) - Vet prescription. Used in conjunction with large dosages of antibiotics to treat listeriosis and goat polio, diseases which demand veterinary assistance or death is highly likely. Moldy feed and hay cause these illnesses. Dosage is 4 cc per 100 pounds bodyweight up to three times per day IM, or SQ. Keeps best in warm climates when refrigerated.

Thrush Buster - Thrush prevention/Treatment - topical product that prevents and treats hoof scald (between toes).

ToDay (cephapirin sodium) Over-the-counter product for mastitis treatment in lactating does. Milk out the bad milk/pus/blood and infuse one tube of To-Day into each infected udder for a minimum of two consecutive days. Use the alcohol wipe provided to clean the teat thoroughly before infusing medication to avoid introducing new bacteria into an already-infected udder.

ToMorrow (cephapirin benzathine) - Over-the-counter product for mastitis treatment in dry does.

Triple Antibiotic Ophthalmic Ointment - Vet prescription. Use topically to treat Pinkeye, particularly in ulcerated eyes.

Tylan 200 (tylosin) - Over-the-counter antibiotic for respiratory problems. Use 1 cc per 25 lbs. body weight for five consecutive days intramuscularly (IM). Keeps best in warm climates when refrigerated. The prescription products Nuflor Gold and Excenel RTU are far more effective than Tylan 200. I no longer keep this product on hand.

## U

Universal Animal Antidote Gel - Give orally when toxicity is suspected or diagnosed.

## V

Valbazen - Over-the-counter "white" dewormer. Can cause abortions in pregnant does at certain points in the pregnancy (high risk of abortion if used in first trimester of pregnancy). For safety, never use on pregnant does. "White" dewormers kill tapeworms. Dosage is 1 cc per 25 lbs. bodyweight given orally.

Vitamin B-12 - Vet prescription. This red-colored injectable liquid is essential for use with goats who are anemic from worms or stressed from just about any illness. Administer 4 cc per 100 lbs. body weight IM. Keeps best refrigerated.

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