

Show Tack List

<p><u>Feed Equipment</u> Hay Feeders Grain Pans Hay & Feed Water Bucket Bottles & Nipples</p> <p><u>Health Equipment</u> Scroll down for the Medicine List You should carry everything (except the items that need refrigeration)</p>	<p><u>Grooming Equipment</u> Brush Clippers & Spare Blades Hoof Shears Hoof Rasp Shampoo Towels Cotton Balls Baby Wipes Mineral Oil Scissors Extension Cord Blow Drier Water Hose</p>
<p><u>Miscellaneous Items</u> Goat Registration Certificates Show Entry Papers Hammer, Pliers, Staple Gun Paper Towels Farm Sign Pictures & Business Cards Pen, Pencil, Paper</p>	<p><u>Personal Stuff</u> Drinks, Snacks, Sandwich fixings Extra Show & Street Clothes Bill-of-sale/Receipt Book Check Book</p> <p><u>Clean-up Equipment</u> Broom, Rake, Pitchfork, Shovel</p>

GOAT MEDICATIONS & HOW TO USE THEM

by Suzanne Gasparotto

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Most medications used to treat goats, whether they are prescription or over the counter, are "**off label**" or "**extra label**" usage. Very little medication exists that has been specifically formulated for use on goats. Because of this situation, goat producers are always searching for new medications for their goats' health problems. Unfortunately, too much experimentation is going on with medications without the supervision of a qualified veterinarian. Compounding this is that in many parts of this country, vets know little to nothing about treating goats.

So that is why this column is being written. First, the usual disclaimers. I am **NOT** a vet. I have been raising goats for a decade, and I have an excellent vet who is very qualified to treat goats on whom I rely heavily. I try nothing new relating to goat health without his involvement, advice, and supervision. Use the information provided in this article at your own risk and only **AFTER** you have consulted with a qualified

veterinarian. I am detailing what has worked for me on my goats. The medications are presented in no particular order. I have not addressed withdrawal times for those producers concerned about meat and milk contamination. Some of the products may not be approved for use in food animals; **Gentamycin** and **Baytril** in particular are restricted from usage in certain states.

Tylan 200 (tylosin) - Over-the-counter product for respiratory problems. Use 1 cc per 25 lbs. body weight for five consecutive days intramuscularly (IM). Keeps best in warm climates when refrigerated.

LA-200 (oxytetracycline) - Over-the-counter product for broad-spectrum antibiotic use. I use it very rarely. I don't like the fact that this thick liquid is painful to the goats. Never use LA-200 or any tetracycline product on pregnant does or kids under six but preferably under 12 months old. Interferes with bone & teeth formation both in utero and while kids are growing. Can cause abortion in pregnant does at certain points in the pregnancy, so it is best not to use it at all. The chance for birth defects is highest in the first and second trimesters of pregnancy. Oxytetracycline is sometimes used for prevention of late pregnancy abortion caused by chlamydia and other bacteria susceptible to it. Use 1 cc per 25 lbs. body weight IM every third day for a maximum usage of three doses. The non-sting version of oxytetracycline is called **Bio-Mycin**. Oxytetracycline is sold under several brands names; check the content label for active ingredient. Used at Onion Creek Ranch for pinkeye and infections resulting from hoof rot and hoof scald. In extreme cases, can be used every other day for three doses. For pregnant does and kids under six months old, use as an eye drop. Keeps best in warm climates when refrigerated.

Benzathine Penicillin (long-acting penicillin) - Over-the-counter product used as antibiotic only in specific situations. This medication has been over-used for years and is not effective against many problems for that reason. Used at Onion Creek Ranch for protection against infection in the dam after difficult births and for injuries. Dosage is 5 cc per 100 lbs. body weight IM for five consecutive days. Penicillin is also used in high dosages in conjunction with Thiamine (Vitamin B1) to treat listeria and goat polio. Must be stored under refrigeration.

Banamine (FluMeglumine) - Vet prescription required . Anti-inflammatory that is good for bringing down high fever, stopping severe diarrhea in very young kids, calming the gut in digestive illnesses, and relieving pain and soreness associated with animal bites and other injuries. Cannot be used but once every 36 hours, because it builds up in vital organs and will do permanent damage to the animal, including but not limited to ulcerations in the digestive system of the goat. 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 and bad diarrhea at Onion Creek Ranch would receive an injection of 2/10 cc IM minimum. Keeps best in warm climates when refrigerated.

Thiamine (Vitamin B1) - Vet prescription. Used in conjunction with large dosages of antibiotics to treat listeria and goat polio, diseases which demand veterinary

assistance or death is highly likely. Moldy feed and hay cause these illnesses. Dosage is 1 cc up to three times per day IM. Keeps best in warm climates when refrigerated.

CD/T (Clostridium Prefringens Type C&D - Tetanus Toxoid)- Over-the-counter product to provide long-term protection against overeating disease 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. Can be given either IM or SQ. The directions on the bottle are to use it SQ, but some breeders who have large numbers of goats find IM injections to be easier and faster. 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. Must be stored under refrigeration.

C&D Antitoxin - Over-the-counter product that can be safely used for many problems. Severe diarrhea in very young kids, toxicity situations in which the goat is frothing at the mouth, 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 overuse. This product provides short-term protection (just a few hours) but works quickly towards solving the immediate problem. Young kids should receive a minimum of 3 cc sub-cutaneously (SQ) up to three times a day; adults should receive 10-15 cc, depending upon size of the animal. C&D Antitoxin negates any protection previously given by 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. This is extremely important to remember. Must be stored under refrigeration.

Pepto-Bismol - Over-the-counter product to control diarrhea in kids under one month old. Use up to 2 cc every four to six hours for newborns; 5 cc over the same timeframe for kids approaching one month old. Follow up with oral ruminant gel (Probios) to repopulate the gut with vital live bacteria used for digestion. Do not use Immodium AD to control diarrhea in goats, because it stops the peristaltic action of the gut and death is a likely result of its use.

Spectam Scour Halt - Over-the-counter product to control diarrhea in adults and kids over one month of age. Scour Halt is a pig scour medication which works well on goats. Follow label directions when pumping this pinkish-red liquid into the goat's mouth. Follow up with oral ruminant gel (Probios) to repopulate the gut with live bacteria necessary for food digestion.

Immodium AD - Do NOT use this product for diarrhea or anything else on goats. It can stop the peristaltic action of the gut and cause quick and horrible death.

Oral Ruminant Gel - Over-the-counter product which should always be used after the completion of antibiotic therapy and treatment for diarrhea/scours. Probios is a well-known brand name. Also works well when shipping goats. Take along several tubes and administer Probios to each animal at least once per day during the entire journey. Helps lessen the stress and settle the stomach. Keep refrigerated in warm climates.

Dexamethazone - Vet prescription. This is a very dangerous drug which should be used only under the supervision of a vet and as a last resort after other treatment has failed. "Dex" has lots of 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. Can cause abortion, so do not use on pregnant does. Vets use Dexamethazone to induce labor in pregnant does when the slow introduction of labor over a 48-hour period is desired. Dex interferes with the functioning of the goat's immune system. And usage of this drug must be tapered off slowly; serious health 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 warm climates when refrigerated.

Tetanus Antitoxin - Over-the-counter product for short-term protection against tetanus and tetanus-like infections. 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, the producer will have to re-vaccinate with tetanus toxoid or CD/T (the complete two-injection series given 30 days apart) to reinstate long-term protection. Keeps best under refrigeration.

Mineral Oil - Over-the-counter product . The throat of a goat does not recognize mineral oil as a substance to be swallowed; this product can easily be aspirated into the lungs. If mineral oil must be used on a adult goat (never use it on kids), a sufficiently long stomach tube must be used as the means of delivery. This is a task for a vet. A very "tricky" task fraught with danger to the goat.

Milk of Magnesia - Over-the-counter product that is useful for constipation and toxicity reactions, including Floppy Kid Syndrome. Use as oral drench at a rate of 15 cc per 60 lbs. body weight. Don't ever be without this very helpful yet common product.

Fleet's Enemas - Over-the-counter product that is also useful for constipation and toxicity reactions, including Floppy Kid Syndrome. Interestingly, if you ever have a baby girl born with her vagina turned out, use a children's Fleet's enema (or generic equivalent) to move her bowels for the first time ("pass her plug") and the vagina will return to its proper position. Just make sure you put the enema into the rectal opening . . . and not the vagina! I prefer children's enemas over Milk of Magnesia in very young kids who have been stressed or are ill with another problem.

Naxcel (ceftiofur sodium) - Vet prescription. Excellent 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. So draw up 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 it in the freezer. Syringes thaw quickly, but hold the needle cap up, because sometimes the medication will settle into the needle cap and will be lost when you pull the cap off. 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's of Naxcel IM over the five-day course of treatment. Naxcel is more expensive than some other products, but it is a top-of-the-line antibiotic for caprine health use.

Nuflor (Florfenicol) - Vet prescription. Used at Onion Creek Ranch when Naxcel does not resolve the health problem. Administered IM every other day for a maximum of three injections. This is a very thick liquid, so use Luer Lock syringes, or the needle may shoot of the syringe, causing this relatively expensive medicine to be wasted. Dosage is 1 cc per 25 lbs. of body weight. Keeps best under refrigeration in warm climates.

Baytril (Enrofloxacin 2.27%) - Vet prescription. A broad spectrum antibiotic to be used only after other antibiotic therapies have failed. Can cause tenderness and swelling in joints. Comes in injectable and tablet form. Injectable is more expensive but easier to use on very large goats. Tablets are sized by weight of animal and scored for breaking into pieces. Injectable is dosed at 1 cc per 20 lbs. body weight for five consecutive days. Baytril is quite good for gut-related illnesses. Tablets are also used for at least five consecutive days.

Vitamin B12 - Vet prescription. This red liquid is wonderful for use on goats who are anemic from worms or stressed from just about any illness. Administer 1 cc per 100 lbs. body weight. Keeps best long-term if refrigerated.

Red Cell - This over-the-counter product can be purchased at discount stores (Wal-Mart), feed stores, and mail-order houses. Generally thought of as a "horse" medication, Red Cell can be used to combat anemia in goats. Packaged in quart bottles, use it in conjunction with Vitamin B12 injections or as a stand-alone treatment. Red Cell should be administered daily via mouth for at least one week in no less than three cc amounts for an average-sized goat.

To-Day (cephapirin sodium) - Over-the-counter product for mastitis treatment. 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.

Lactated Ringers Solution - Vet prescription. For rehydrating kids and young goats. Using a 60 cc syringe with an 18 gauge needle attached, draw out the LRS, warm it in a pot of water, 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. Never be without this

inexpensive life-saving product. Use in conjunction with Re-Sorb oral electrolytes solution. Keeps best long-term if kept refrigerated.

Re-Sorb oral electrolytes- Over-the-counter product that comes 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 into pans of drinking water. Each packet should be mixed with 1/2 gallon warm water. Use in conjunction with Lactated Ringers Solution on extremely dehydrated kids. Store in a cool, dry place. Never be without this inexpensive life-saving product.

Oxytocin - Vet prescription. Used at Onion Creek Ranch when a doe kids and does not pass her afterbirth. Must be used before the cervix closes (within approximately five hours after kidding). Causes contractions that expel the afterbirth. This is not a comfortable experience for the doe, so use it sparingly. Dosage is 1.5 cc per 100 lbs. body weight. In warm climates, keeps best when refrigerated.

Propylene Glycol - Over-the-counter oily liquid for ketosis in does. Comes in one-gallon containers. Use 5-6 cc twice a day for an average-sized doe until she gets back on feed. Administer orally. If this product is not available, use molasses or Karo syrup.

Molasses/Karo Syrup - See propylene glycol.

Kopertox - Over-the-counter product for hoof rot and hoof scald. Blue-green liquid for topical application as a "liquid bandage."

Ivomec 1% cattle injectible - Over-the-counter product for eliminating stomach worms. A clear, oily liquid, works best if used orally at a rate of 1 cc per 75 lbs. body weight. Do not under-dose. Achieves a quicker "kill" via oral dosing.

Valbazen - Over-the-counter de-wormer of the "white" wormer family. Causes abortion in pregnant does at certain points in the pregnancy (very high risk of abortion if used in first trimester of pregnancy). For safety, never use on pregnant does.

Diatomaceous Earth (DE) - This product is being used by some producers as a "natural" de-wormer. There currently exists great controversy over DE; users are "believers" of an almost religious fervor. However, this writer has been unable to find any scientific evidence of DE's effectiveness in controlling internal parasites as of this writing. It is effective on external parasites. Testing of this product is underway by several animal health research facilities, and hopefully DE can be documented as helpful in controlling worms in goats. If a producer chooses to use DE as a food additive, make certain that "food-grade" DE is purchased. Further, it is important to check fecal samples regularly for worms while using DE.

CoRid (amprolium) - Over-the-counter product for preventing and eliminating coccidia. Comes in granular packets and gallon liquid. Use 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. Your vet will never tell you to do this, but this has long been used at Onion Creek Ranch and found to be very effective in counteracting coccidia infections.

Dopram - 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. May also be used when kids are pulled out of their dams. This liquid medication keeps best under refrigeration.

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

Primor - Vet prescription. Oral antibiotic that comes in tablet form, by weight of animal, for gut-related infections. 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 match the goat's weight for the next 9 consecutive days. This is a very good and much under-appreciated antibiotic for use on sick goats.

Theodur - Vet prescription. Often used when bronchitis exists to clear air passages. Precise dosage is not known for goats, but this writer has, under vet direction and supervision, use 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.

Bo-Se and Mu-Se - Vet prescriptions are required for both products. 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 page 541 of **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 can cause **Nutritional Muscular Dystrophy**, also known as **White Muscle Disease**.

Selenium is toxic, and the 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

with selenium. In other regions, selenium injections are necessary. When injections are required, they are usually but not always given at birth and again at one month of age. Does usually but not always receive injections four to six weeks before kidding, and bucks usually but not always are vaccinated two times each year.

It is critical that producers understand that selenium supplements must be determined and supervised by your veterinarian because the selenium "count" varies so much by area of the country.

Colostrum Supplements and Replacers - 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 frozen colostrum taken from does on your property who have already kidded. This colostrum will have the immunities needed for your particular location. If you don't have a supply of frozen colostrum, then you must use a commercially-prepared goat colostrum replacer. In such instances, usage of colostrum supplements along with the replacer is often helpful.

Hoegger Supply Company, a mail-order house in Fayetteville, Georgia, carries a product called **Goat Serum Concentrate** which is helpful in supplying antibodies which newborns must have but are not present in the powdered colostrum replacers. **Hoegger** can be reached at 1-800-221-GOAT.

A reminder: Do not use colostrum or colostrum replacer beyond the first 24 hours of the kid's life. Switch to goat's milk or goat's milk replacer. The kid's body cannot absorb and digest colostrum after the first 24 hours of life. The colostrum will have done its job and the kid's body will then need milk rather than colostrum.

Epinephrine - Over-the-counter product. Very inexpensive. Never be without it. Used to counteract shock in animals. Always carry it with you when giving injections. You will not have time to go get it. Dosage is 1 cc SQ per 100 pounds body weight.

Synergized De-Lice - 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. Follow the directions carefully, and do not use on kids under one month old. Maximum application is three ounces per animal, regardless of weight. I use a discarded permanent applicator squeeze bottle from my hairdresser to apply this product. The bottle tip is just the right size. For kids under one month of age who have lice, use a kitten-safe powdered flea control product. These products contain pyrethrins, which are much safer for very young animals.

This listing is by no means comprehensive, but is a good overview of medications available for goat health problems. I repeat . . . **I am NOT a vet. I do NOT encourage anyone to use these products and/or dosages without the direct supervision and**

direction of a veterinarian. I write this article primarily to convince goat producers to develop a relationship with a good goat vet and rely heavily on that person's expertise. Secondly, I want to stop producers from experimenting with medications on goats which in many instances result in their deaths. This is what has worked for ME, in my area of the USA, and on MY goats. Many variables can affect the usefulness of this information, some of which could include the breed, sex, age, and reproductive status of the goat; the climatic conditions and general cleanliness under which the goats live; and a host of other variables.

Consider this listing to be a guide by which you are pointed to a qualified vet in order to obtain help for YOUR animals. Remember, what works for me may NOT work for you in your goat-production operation.

Thanks to Ms. Suzanne Gasparotto for allowing us to re-print this article.

**Ms. Gasparotto raises Tennessee Meat Goats at her
ONION CREEK RANCH in Buda, Texas**

She has an extensive web site at tennesseemeatgoats.com
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**"If It Doesn't Have A CERTIFICATE OF AUTHENTICITY
from Onion Creek Ranch, It ISN'T a Tennessee Meat Goat."**