

Freeze your colostrum in ice cube trays & put into a plastic freezer bag. This way you can thaw a cube at a time for a kid that should need it, and keep from wasting a very valuable resource.

**Goat Care:** Some issues are repeated several times in different areas. Sorry for any confusion.

I have used the following website to help with many of my questions, if you don't find the info here go to [www.goat-link.com](http://www.goat-link.com)

I have a really good vet that has helped me a lot. He has never done unnecessary procedures, but does what is needed immediately. He recommended the following book on goats that has a lot of good information. Goat Medicine- authors Mary C Smith, and David Sherman. He has told me, and I have actually found from experience that all you read on the internet is not always accurate. Be wary of your source. If it does not sound correct, double check with your vet (if you trust them) I have noticed that some vets do not seem to know or care much about goats or their treatment. I trust the above website that was given; it has helped me with all of the situations I have come across. If you cannot afford the above book mentioned and you have a question you are having problems finding the answer to, email me and I will have a look in this book to see what they have to say. Sometimes if you go to Amazon.com and pull up this book it will let you see a page pertaining to what you are looking for.

#### **Breeding tip-**

If at all possible don't just put the buck in with all your does. Keep them separate, the doe will let you know when she is ready. Especially if she is in the pen next to the bucks, she will be flirting with them through the fence; if she is not ready she will just ignore them. I will watch mine in the morning and evening, more if possible when the doe is ready she will be put with the buck for a few days. It is so much easier knowing when they were bred; you will know when to really start watching them when kidding time is close. Try to be with them when kidding time comes, most goats will have no problems, but some can suffer with problems for hours and you will not know they need your help.

**Be very careful with the size of water buckets or troughs when you have baby goats around, they can very easily fall in and drown. I use small dog water bowls in my doe/kid pen. Yes I have to fill them often but the work to fill them is much better than finding one of your special babies floating when you go to feed. (sorry such a graphic thought but it happens, be aware). Think about how little they are, look around your pen, and think.....**

(Be careful using feed/minerals that say for sheep & goats!!!) Sheep cannot tolerate the amount of copper that goats Require.

**Do Not Feed Bucks/Wethers "Grain(sweet feed)".** It can cause major discomfort and death; it is called Urinary Calculi (read more on this below). If they require supplementation beyond hay, feed a grain pellet specifically for bucks, or dry oatmeal, in moderation, is a good choice. I have had good luck feeding a grain from Nutrena called Naturewise 18% goat and lamb creep feed, it has ingredients to help stress, and ammonium chloride to help prevent urinary tract infections in bucks and wethers. This feed is not available in all locations. You can go online to see if you have any Nutrena dealers in your area. You can also buy ammonium chloride in bulk from Hoegger Supply ([www.thegoatstore.com](http://www.thegoatstore.com)) that can be added to loose minerals for your bucks and wethers.

**Goats love treats:**

Fallen tree branches, Grapes/raisins, bread/crackers, animal crackers are a favorite here.

**Feed fresh, nutritious hay,** (with or without alfalfa - as needed). We like to feed a good grass/ alfalfa mix. Pregnant does need the protein in the alfalfa, grass hay has little protein. Provide clean water in a clean bucket (ice free in winter). Pasture area is with grass and alfalfa is ok, watch to make sure not to rich for your goat .If they are in weeded area watch to make sure they are getting enough, you might still need to supplement with hay. There are some weeds they do not like to eat, and it always seems like those are the ones you have the most of. We usually feed enough for one good meal twice a day, they should finish what you give them in about 15 to 20 minutes. If you give to much it will only be wasted.

**You can feed too much grain:** It is easy to overdo it with grain, so watch your animals condition to determine how much/little they may need. From experience I have learned to not feed my does grain during the first four months of pregnancy. My does got to heavy and kids were too large, we had to have two does get caesarean section due to start of prolapse. (Uterus or intestines bulging out from vulva). Which looks like pink bag protruding, I thought at first it was start of labor and the does water was about to break. But it was still a few weeks to early for her to go into labor, and she was showing no discomfort. If this is noticed contact vet asap, going into labor with start of prolapse can result in full prolapsed intestines or uterus and death of your doe and kids. During lactation, more protein is needed, so the last month I start to feed more grain for milk production. During the first four months she should get enough protein from good quality alfalfa.

**Loose minerals**/mineral block that is available at all times, and salt available in a separate dish or block. See more under supplements.

Well balanced grain product for your does which we only feed if a doe is being milked or nursing. It gives them added nutrients & minerals that they need.

**Hoof trimming** is necessary every 4-6 weeks, to keep your animal from developing hoof rot and leg/h hoof issues.

We **vaccinate** annually with c/d tetanus, some will need to give Bo-Se (selenium, vitamin E) and Copper supplements as needed. Selenium can be toxic, some areas of the US have adequate amounts in plants (hay) and additional injections are not needed. Where we live in the four corners is an area where accumulator plants contain over 50 ppm, we give no additional Bovi Sera injections.

Make sure everyone comes running at feed time - If they don't, something is wrong.

Watch your goats coat condition - A dull, course, or thin coat can give you many clues to worm load or nutrient deficiency.

Watch your animals legs for any bowing (back or inward), as this can indicate a nutrient deficiency.

### **Enterotoxaemia & Tetanus:**

By doing a 2 cc sub-Q injection of C&D/Tetanus Toxoid Vaccine 4 to 6 weeks prior to kidding, you will encourage the doe to build up antibodies against Entrotoxemia and Tetanus. These antibodies can be passed through the colostrum to the newborn kids providing them with a measure of protection prior to their own vaccination at 2 weeks. If the doe has never been vaccinated, do a booster 2 weeks after the initial shot.

If your animal has **diarrhea:**

I make it a daily routine at feeding time to glance at the backsides of all my goats. If one has the runs you will be able to tell. I will give them a small syringe of pineapple juice, and 5 grams of probios (make sure container lists goats under the directions, some probios is only for horses.) at first sign of diarrhea, I will clean their backside at this time so you will be able to tell at a glance if the diarrhea is better. I will usually repeat the process in about 8 hours.

Usually this will help if just an upset stomach. If not better within another 6 to 8 hours get sample to vet.

This is the **ONLY** way to find out what you might be dealing with... (Worm load & what type, or Coccidia).

This is the correct way to determine the problem, and also to get the correct medication. Worms & Coccidia are very common, and they are also the #1 killers of goats.

Misc Goat Info pulled from [fiascofarm.com](http://fiascofarm.com)

Goats are ruminants; they have four stomachs. Their stomachs act like big fermentation vats. When you feed a goat, you are actually feeding the bacteria in this fermentation vat. The bacteria, in turn, make the nutrition in the food available to the goat's system. A goat's rumination method of processing food requires plenty of roughage and fiber to work properly. Although the goat's digestive system is similar to that of other ruminants, such as cattle and sheep, who are "grazers" and eat grass, goats are more related to

deer, who are "browsers". As browsers, goats are designed to eat, and prefer, brush and trees more than grass. It is natural for them to nibble a little here, and nibble a little there. Though goats will eat grass, if you are considering getting goats to be lawnmowers, you are going to be sorely disappointed, because they will eat your trees and roses before they will work on the lawn. They really like bark and will strip the bark off trees. (especially pines, cedars and maples, to name a few). Goats could be used to help reclaim grasslands that have been overgrown with brush. Our land was overrun with brambles, wild roses, honeysuckle and 100s of small pine tree when we moved here; these are all gone now.

**Never** make big changes in the way you feed a goat all at once, or feed large quantities of a new food that the goat has never had before, if you do this, you can throw off the bacteria in the goat's rumen, which can cause the goat to bloat, or the rumen to shut down. When changing a goat's diet, do so slowly, to give the bacteria in the rumen time to adjust.

**Copper:** Goats need copper; sheep should not have copper. Due to this, do not feed your goats feed or minerals intended for sheep. If you do, you may experience copper deficiency health related issue with your goats. This may not show up for years, but can be a serious problem.

#### **More information on ruminants** (with 4 stomach chambers)

When a Baby goat/kid is born, the only developed stomach chamber is the abomasum (true stomach)

Baby goats/Kids initially function as a single-stomached animal.

As soon as a kid starts eating solid foods, its rumen begins to develop.

When the kid chews its cud, all 4 chambers are functioning, and the animal has become a true ruminant

4 Stomach Chambers of a Goat:

Rumen ~ Largest chamber, representing about 80% of the stomach (fermentation vat)

Reticulum ~ 2nd chamber, looks like a honeycomb & functions as a fluid pump (actually part of the rumen, separated by a partial wall)

Omasum ~ Also called many ply as it consists of folds of tissue for better absorption (like leaves of a cabbage)

Abomasum ~ 2nd largest chamber & true stomach, where actual digestion occurs.

Ruminants require the proper proportion of roughage to grain in order to maintain good rumen action.

Adult goats that lack adequate fiber in their diets lose rumen capacity, and their digestive systems begin to function more like those of a single-stomached animal. Too much grain in relation to roughage works against rumen muscle tone.

When too much fiber is fed without necessary amounts of energy to aid digestion, rumen impaction may result.

When a ruminant eats, food mixes with saliva and is sent down to the 1st & largest

compartment of the stomach (rumen)

To help fiber break down, soft masses of "cud" are sent back by the rumen to the mouth for re-chewing.

In both the rumen & the 2nd chamber (reticulum), fatty acids and vitamins produced during fermentation are absorbed into the goat's bloodstream. In the 3rd & 4th chambers (omasum & abomasum), food is further liquefied and broken down so that more of its nutrients can be absorbed.

### **Housing:**

Provide draft free housing for your goat with bedding that is clean and dry.

I prefer shavings over straw, as it is more absorbent, and I believe it to be more comfortable for them to lay on.

Make sure that any enclosed space is kept clean and free of strong urine odor. Fresh air is necessary even in the cold of winter.

During those long, cold winter months you can also provide a heat lamp or a goat coat on the nights that are below freezing,

but I believe they stay plenty warm with their thick winter coats, and a draft free, dry house & a friend or two to snuggle up to for warmth.

### **Fencing:**

We use a non climb horse fence for our pens, 2x4 inch squares too small for goats to get heads through or unwanted critters to get in also the right size for babies.

Some have found, through years of trial and error, that cattle panels are the best fencing to use for goats.

Easy to install using steel fence posts. Sturdy and strong enough to withstand your goats abuse. You can buy gates made from the same material as well, or use a chain link gate or devise one of your own. You might want to get the combination bottom style if you are housing young goats that can escape through the bottom panels. You can easily attach screen or wire to the bottom temporarily for those small escape artists. Once they are about 6 months old even most miniatures are too big to fit through the regular cattle panels.

### **Feeders:**

I've found that it is difficult to keep goats from wasting hay. Any feeder you have chosen, hay bag, hay rack, milk crate, Expensive feeder or whatever you might use, goats will eat what they pull out of the feeder in their mouth, and let the rest fall to the ground where it is Now Bedding or garbage for us to clean up.

Feeders should be at eye level or lower, as chafe falling into the goats eyes can cause eye irritations & pink eye. I have noticed if goats are fed too much, more hay is wasted, if they are still eating after 15 to 20 min you are overfeeding. Cut back a little each day until you notice they are cleaning up all the excess.

The following feeders work well , They are from Sydell, whose link is on the links page. These feeders are nice because they can feed many goats and the adult goats can not get in it. They can be raised or lowered for different size goats.





### **Supplements:**

Loose Minerals should be available to your goats at all times. Provide a feeder in a dry location. Baking soda can be added to loose minerals; it helps expel gases from the rumen. My goats eat it like candy.

There is a special buck mineral available. However, I choose to feed all in my herd the same mineral, but I add "Ammonium Chloride" to my buck minerals as it is a preventative for urinary calculi.

The following auto dog feeder is the one I use for minerals. It works well to keep the minerals dry and clean. Another reason I like it is because it keeps my chickens out of the minerals so they don't eat it or scatter it. I get it from Jeffers supply whose link is also on the links page. It is called the Aut-O-Dine feeder and is around \$27.00. I also keep a salt block under it to keep the goats from standing on the block, but they still have access to it.



You fill it from the top, you can adjust the flow of minerals to the bottom tray, and the goats push open the bottom to get to the minerals. It works great. I also put some baking soda in the bottom for them to get to if they want it.





### **Poison Ivy**

Treatment for Poison Ivy ~ A product called Rhus Tox, which is sold in health food stores for arthritis.

It comes in little tablets & 5 tablets of the 30c Rhus Tox dissolved under the tongue several times a day will clear a poison ivy rash faster than steroids & makes you immune to poison ivy allergies as well.

### **Iodine Deficiency:**

Very common in grazing stock and goats are particularly susceptible. Iodine is related to the functioning of the thyroid gland.

Thyroid hormones are required for the normal development of the fetus. Thyroxin does not pass from mother to fetus.

The fetus has to make its own. The iodine status of the doe during gestation is therefore very important. (Iodine does pass from doe to fetus across the placenta.) It is evident that thyroid hormones are very much involved in the normal growth and development of

the fetus and thyroid gland deficiencies can result in a higher proportion of weak or still born kids being born than would otherwise be the case. Prevention Supplementing with iodine can be accomplished by feeding out as a supplement in troughs. Drenching should take place 4 weeks before mating, 6 to 8 weeks before kidding and 2 weeks before kidding.

### **Copper deficiency:**

Can be the result of low levels of the mineral in the soil and in grass/hay/grains raised on the soil. However, both the feed and the soil can have adequate copper but its absorption can be interfered with by minerals known as copper antagonists: lead, iron, manganese, various sulfates, cadmium, and molybdenum. This is secondary copper deficiency.

Congenital copper deficiency is the term used to describe the kid who did not receive sufficient copper in utero.

Copper is essential in the proper development of the central nervous system, correct bone growth, and hair pigmentation.

Copper-deficient goats have difficulty conceiving kids and, if bred, abortions are not uncommon. Kids who appear to be fine at birth but develop symptoms at around three months of age are said to have the delayed form of copper deficiency.

Secondary copper deficiency tends to be more responsive to treatment than primary copper deficiency.

Insufficient weight gain, poor appetite, and weight loss are seen in copper-deficient goats of growing age.

Adults display more subtle signs of copper deficiency. They are generally unthrifty, anemic poor milk producers, and sometimes have diarrhea.

The most visible sign of copper deficiency in adults is loss of hair, and/or hair color.

Copper is essential for melanin production that causes hair pigmentation.

Hair discoloration occurs when copper-containing enzyme is missing. On a black goat, you might see brown coloration behind the rear legs & thin tail hairs, to the point that you can see the tail stub through the hair.

Other symptoms which may indicate copper deficiency are difficulty in conceiving kids, delayed shedding of hair coat, extreme hair loss, lowered libido in males, slight hoof deformities, bent legs in yearlings, and other immune-deficiency problems such as frequent bouts with pneumonia, mange or fungus-type lesions, and lice infestation. Copper deficiency may play a role in Floppy Kid Syndrome if the dams were copper deficient, leaving the kids with only enough stored copper for a week ten days after being born.

Copper can be given to pregnant does and newborns (SQ) in the form of copper glycinate or orally in the does' drinking water via copper sulfate. Severely copper-deficient goats are sometimes given copper boluses which attach to the inside of the body and slowly deliver copper at a predetermined rate. It is possible to induce copper toxicity in goats.

Copper accumulates in the liver. Red/brown urine may be a sign of copper poisoning. Do NOT use products labeled "for sheep & goats" because they are insufficient in the amount of copper needed by goats.

## **Goat Hair Loss**

Here is a few more reasons for hair loss in goats.

Besides copper deficiency, lack of other vitamins and minerals can be a problem: Vitamin A, Zinc, Iodine or selenium can also cause hair loss and just needs to be treated with a good mineral supplement to their diet.

Parasite and fungus:

Both internal and external parasites are know to cause hair loss. Internal would be worms that can be checked for by your veterinarian. External can be mange, lice, mites, fleas etc. Which can usually be treated by a good dust powder for pets. Ringworm is a which can also cause hair loss.

Hormones:

Some Does can sometimes lose hair before, during or after giving birth. This is due to the fluctuation of hormones.

Trauma and Stress:

Stress induced hair loss caused by a physical injury or isolation of a sociable animal usually occuring on the goat's back. Stressed goats rub obsessively on objects in their surroundings until hair is worn off in an area.

## **Enterotoxemia:**

Also called "Overeating disease". This occurs when specific bacteria (Clostridium perfringens, type C or D), infects the rumen when an animal is suffering from indigestion. This bacteria quickly multiplies, taking advantage of the acidic environment to produce its own toxins, poisoning the animal.

When the balance of bacteria in the stomach is thrown off (by eating too much pasture or grain...etc.), C. perfringens become prolific and produce toxins. Animals suffering from this disease may exhibit twitching, a swollen stomach, teeth grinding and fever. There is no effective cure. It is usually fatal and does not respond well to any treatment. This can be prevented by annual vaccination and by avoiding abrupt changes in your goat's diet.

Animals on pasture or those at risk of getting into the grain shed and devouring the rations should be vaccinated.

Young nursing kids are at risk, especially if their dam is producing lots of milk.

Goats kept on dry lots with absolutely no chance of getting excess grain may not need this vaccine.

## **Johne's Disease:**

This disease is caused by mycobacterium paratuberculosis. Goats are infected as kids by indirectly ingesting stool from infected adults. This disease has a 1-5 year incubation period. Bacteria damage the intestinal lining, resulting in malabsorption of nutrients and wasting. The animal will become anemic, weak and develop a poor hair coat. Diarrhea may be a symptom.

Johne's disease can spread through a herd. Goats can be carriers of the disease and show no signs of infection.

The disease is passed through droppings, which can be consumed by other goats that

then become infected.

Diagnosis is made by blood test (AGID tests) or fecal testing. Unfortunately, results take about 10 weeks, and can often be inconclusive. Some goats are unapparent carriers and may not show the virus at the time of the tests.

These goats can test negative by culture. Treatment is not effective and the disease is contagious.

No vaccine currently available in the U.S.

**CAE:** My herd tested neagative 11/2011

Caprine Arthritis Encephalitis is a problem to be enlightened about, as it can be quite a problem in goat herds.

This is a disease that contributes to the early demise or crippling of many goats. It is caused by a virus that is carried in both milk and colostrum, and is easily absorbed by a kid. This virus does not cross the placental barrier, which means\ CAE clean kids are born from infected does. If kids are pulled at birth (never nurse from dam), and are fed "heat treated"colostrum and milk, they can escape this crippling disease. CAE can be detected by a blood test.

Young animals afflicted with this disease tend to exhibit neurological symptoms.

Weakness and lack of coordination begins in the hind legs and progresses to include the forelegs. Kids do not run a fever and remain bright and alert, though most do not survive the disease. Some kids may show signs of arthritis or pneumonia. Older animals, usually over a year, will develop swollen knees, stifles or hocks with a slowly progressive lameness. They lose body and coat condition. Pneumonia, wasting and udder edema also may occur with this virus.

### **White Muscle Disease:**

Nutritional muscular dystrophy is characterized by a muscle malfunction involving leg and/or heart muscle. It is caused by mineral deficiencies, especially selenium. Selenium is a trace mineral and is required by the body in small, but specific amounts. Too little can cause deficiency symptoms and too much can cause toxicity. Both can be fatal.

Many disorders of goats are now associated with selenium deficiency

These include white muscle disease, retained placentas, infertility, slowed growth and other related problems.

Usually young animals exhibit the most symptoms, while older animals may have equal problems that are not as clinically apparent. Selenium deficiency affects the muscular system, although other systems may be affected as well, including the liver, gastrointestinal system and reproductive system.

Animals affected from birth to 3 months of age may show difficulty in rising and unsteadiness standing or walking.

Animals with affected heart muscle may exhibit pneumonia like symptoms that will not respond to treatment.

Older animals may have weak pasterns as their only physical sign of deficiency. Some animals don't grow properly, and this is usually evident by 4 months of age. The lack of proper growth is often accompanied by a liver disorder.

Pregnant does are more readily affected by a selenium deficiency since they must supply selenium for both themselves and their kids. Some does will fail to "take", when bred; others will absorb the embryo if there is a lack of selenium.

Selenium deficient does can have difficulty during delivery due to lack of uterine tone, which is needed to expel kids.

To prevent this deficiency, use an injectable selenium (Bo-Se), as per the need of your animals. Only use if your area is lacking, it can be toxic.

### **Caseous Lymphadenitis (CL):**

At one point, CL was the most common Caprine disease in the U.S. It is caused by (*Corynebacterium pseudotuberculosis*).

This organism has a thick outer wall and survives well even in harsh environments. It can enter the body through lightly abraded skin. It is carried to the local lymph node and the node becomes abscessed. 75% of the abscesses occur in the head and neck area. External abscesses are not uncomfortable to the goat and rarely cause clinical signs, though they are unsightly and may rupture. The pus emitted from a ruptured abscess will spread the disease to other goats. It is best to surgically remove the smaller abscesses before they rupture. If surgery is not an option, isolate the goat before the abscess ruptures. You may lance the abscess, but don't do so without first determining that it is definitely an abscess.

To do this, you gently insert a needle into the possible abscess and draw back on the syringe plunger. If it is an abscess, pus will fill the syringe. Some lumps on the body are caused by hernias and should not be cut open. Some lumps are caused by c/d tetanus vaccinations, which leave a lump, and should not be treated as CL.

If you do determine that a lump is CL, and you proceed to lance it, you will need to flush the wound with iodine and peroxide twice daily, so that the wound heals from the inside out. Do not allow the outside of the wound or incision to heal too quickly, or the whole process will repeat. Keep the wound covered with antibiotic ointment and bandage to heal thoroughly. Do not return the goat to the herd until the wound is healed.

CL is far easier to prevent than to treat, and retention of an animal with this ailment is a personal choice.

### **Bloat:**

#### **Early Symptoms of Bloat**

1. Goat shows signs of tight rumen area- left side being much fuller than the right side- air pocket can be heard when tapped on the left side upper left quadrant.
2. Off feed
3. Hanging head or holding neck straight out
4. Grinding teeth
5. Moaning or groaning
6. Crying out while kicking at belly (if this is a wether make sure to determine that this is Not urinary calculi)

7. Goat not chewing cud
8. Goat not belching (goats belch many times an hour typically)
9. No rumen sounds when you put your ear to left side (normally should sound like a "gurgling stomach")

### Late Stages of Bloat

1. Goat crying out in pain
2. Obvious extreme distress
3. Gasping for air
4. Tongue and lips turning blue
5. Goat down and unable to rise
6. Eyes starting to "roll" back in head
7. Goat lays down on it's side with legs stretched out straight

### What causes Bloat in Goats?

1. Too much gas forming in the rumen and not being expelled by belching
2. Obstruction in mouth or throat not allowing gas to come up and out
3. Eating too much grain or rich hay - causing an imbalance in the rumen flora
4. Any illness or medications (antibiotics) that may inhibit the natural flora from breaking down the ruminal contents
5. Being let out to eat lush pasture while the dew is still wet
6. Laying in a manner where the head is downhill making the rumen lay in a more forward direction and placement thus not allowing the gas to come out.

### Quick Reference for Immediate Care with Bloat

1. ALWAYS

check first for any obstructions in the mouth or throat that can be causing the bloat!

2. Get goat on it's feet if down and start walking it around
3. Elevate front end of goat if laying down
4. Massage & Pat rumen (**high on left side of goat behind last rib**) to help release gas ( the same method as you would use to burp a baby)- you may also have to "knead" the air poicket to get the gas moving.

5. If goat start to belch up gas, then give it a tablespoon either dry or in a small amount of water, some baking soda about a TBSP for an adult goat or a tsp for a younger goat
6. If the gas does NOT come up with belching while massaging the rumen and the goat has had access to lush grass pasture all of a sudden, Then administer flavored oil (corn or olive oil) carefully via tubing
7. If all other methods are not producing a relief from the excess gas, then is the time for the decision to use the trocar or call a vet if possible

I always have baking soda available for my goats to eat as they need it for bloat preventative.

You should always have Bloat Release or Therabloat on hand as well as Probios, which replaces good bacteria needed to help the rumen function properly. These items are very reasonably priced, and if you have need of the product, it can easily save your goats life and save you a hefty vet bill. If an animal tends toward bloat, feed the most course hay you can find as the softer grassy hay seems to aggravate this condition almost as much as grazing on fresh grass.

Vegetable oil can also be used as a preventative or treatment if bloat occurs although the Therabloat or bloat release is the better remedy.

### **Coccidiosis:**

A contagious one celled organism which can cause severe diarrhea and weight loss, especially in young animals.

It is generally transmitted through fecal matter in the soil from infected animals.

Kids are more susceptible to this condition than are adult animals. First sign is generally diarrhea & poor condition, such as bloated belly & looking Ribby.

It is very important to stop diarrhea quickly so that it does not cause dehydration, or worse yet, Death.

I always recommend having a fecal run when dealing with persistent diarrhea, as you want to treat immediately with the proper medication.

You need to know for sure if you're dealing with worms or coccidia, or both.

There are a few different treatments for coccidiosis.

Sulfa meds (Sulmet or DeMethox) can be added to the water, but then you can't be sure how much of the medication the animal is getting. I like to treat each animal individually to be sure of exact dosage.

Therefore I use Sulmet with a dosing syringe, so that each animal gets what it needs.

I have found that Sulfa drugs are more effective in treatment of coccidia than any other medication available.

CoRid is used to treat, but we are finding that the CoRid is no longer effective.

Albon is the alternate used, and has been a bit more effective in treating, yet not 100%, and sometimes must be given at such a high dose that it's dangerous for the animal you are treating.

When treating with CoRid & Albon:

Give vitamin B/Thiamine shots (every day), to eradicate the risk of polio, related to depleted vitamin B in the goats system, due to illness & use of these meds. In some cases the cure can be fatal when it comes to these meds, so we always take the precaution of giving vitamin B with every dose of meds.

Also, keep in mind that you should replenish the gut with live bacteria via "probios", after use of antibiotics.

Antibiotics kill good bacteria as well as bad, and good bacteria must be reintroduced.

### **Pink Eye:**

A contagious eye ailment. This looks like a foggy eye. You will notice that the animal holds its eye squinted shut, and it seems that the eye is causing them pain, which it is. You must treat this problem immediately & aggressively to avoid it spreading to your other animals & to avoid more serious eye problems, such as blindness. Penicillin may be used, as well as LA 200 (Not in unison).

You would give a sub Q shot daily, as well as treating with the penicillin squirted from a syringe directly into the eye as well.

Draw fluid out of bottle with needle, then remove the needle & put a drop or two in the affected eye to treat (2 x per day).

1 shot of penicillin per day. You must continue this process until all fogginess is gone, and the animal shows no tenderness & is not sensitive to light in the eye.

### **Urinary Calculi or Urethral Obstruction:**

Male goats, especially wethers, are at risk of urethral obstruction from small bladder stones.

The Male goats penis is long and has an "S" shaped curve (sigmoid flexure). The urethra, through which the urine passes, is small in all males and may be smaller in wethers because of stunted development, which causes bladder stones to lodge and obstruct the urethra. The goat will strain to urinate, exhibiting discomfort when lying down, and occasionally cry out in pain.

Dampness and occasional crystals may be found around the opening of the penis. As the ailment progresses, the urethral tissue swells around the stone and no urine can pass. The bladder fills to over normal capacity, and if the obstruction is not relieved, either the bladder or urethra will rupture to relieve the pressure. This is painful and often fatal.

It is easy to mistake a straining goat as constipated, causing many goats to mistakenly be treated with laxatives.

Caused by an improper ratio of calcium to phosphorus in the diet. Corn contains high amounts of phosphorus, thus is not good for bucks. Sweetened Grain is a contributor to this factor in males, and should be avoided.

Ammonium chloride added to free choice trace minerals is a good preventative and definitely worth your time & expense.

The additional salt/minerals consumed will result in the buck drinking more water, therefore washing out his system.

Always have plenty of fresh, clean water available. Especially in the warmer summer



months, make sure to refill water buckets every day, as stale warm water is not as quickly consumed as fresh, cold water.

Anti-inflammatory drugs and smooth muscle relaxants may enable the goat to pass the stones. Treatment of the blocked goat requires removal of the obstruction. If the stone is in the urethral process, an extension of the urethra, located at the tip of the penis, it is simply amputated with scissors. If stones are caught at the sigmoid flexure, they must be removed surgically.

If the obstruction cannot be relieved, surgery can be performed to create a new urethral opening under the goats tail and bypass most of the penis. This procedure "perineal urethrostomy", will eliminate the breeding capabilities of the buck.

If there are stones remaining in the bladder, the vet can perform a cystotomy to remove the stones at the time of surgery.

**Ketosis:** See about this under the pregnancy issues and prevention.

### **Yearly Vaccinations Necessary:**

c/d Tetanus - Dosage is 2 cc's. First year it must be given twice. Booster 21 days after initial vaccination.

Bo-se (selenium & Vitamin E) - most areas are deficient in this trace mineral. Dosage is 2.5 ml per 100 lbs. Use a weigh tape for adult animals, and use a scale (bathroom scale will work), for younger kids as the tape isn't precise enough at lower weights.

Give Pregnant Does their Annual c/d Tetanus & Bo-Se (not needed in some areas) shot 1 month before their approximate delivery date.

If the doe is given these vaccinations at least 3 weeks before delivery, the kid is covered by this vaccination until they are about 8 weeks old. I would still give 1 cc of c/d Tetanus at disbudding to be safe.

Always keep epinephrine with you any time you are giving shots to your animals.

You never know what might cause anaphylactic shock, and you must be prepared.

Epinephrine is to be given in the muscle at first sign of anaphylactic shock (1/2 to 1 cc).

### **Kid Vaccinations:**

If Doe was vaccinated at least 3 weeks prior to delivery:

c/d tetanus: 2 cc's at disbudding, 2 cc's at 8 weeks, and another 2 cc's 21 days after that.

This completes the yearly vaccinations required for this kid.

If Doe was not vaccinated prior to delivery of kids:

Bo-Se: 1/10th cc at birth (if in a deficient area) c/d tetanus: 2 cc's at disbudding, 2 cc's at 8 weeks old, and 2 cc's again 21 days later.

c/d Tetanus:

For those of us that show, and do not want a noticeable lump on our goats neck, you can give this shot along the rib cage behind the front leg, Sub Q.

### **Where to vaccinate:**

We all know that the c/d tetanus shot, which is to be given sub Q (under the skin),

leaves a bump that lasts quite a while.

Because of this, many people have started giving this shot I.M. (in the muscle). This is not the correct way to give this shot.

Giving in the muscle distributes the medication too quickly and doesn't give the proper protection for this vaccination.

You must give the c/d tetanus shot sub Q for it to be an effective vaccination.

### **Calcium Requirements:**

Pregnant does and does in milk require plenty of calcium so that they do not begin leaching calcium from their own bones to replace what they are producing in milk for the kids needs. You may want to provide a calcium drench, but be careful to use the proper dosage.

### **Doe in Milk:**

Keep a close watch on your does condition, and if it begins to deteriorate, take action. You might want to increase grain or feed a better quality hay/alfalfa. Protein requirements are high during production of milk, especially for the feeding of multiple kids. Feed your doe appropriately. If you see her condition deteriorating, increase feed ration.

### **Penicillin:**

Must be refrigerated. To give a penicillin shot. This is a shot to be given I.M. When given, you must draw back on the syringe to be sure you do not see blood before giving this shot. If you see blood, it means you have hit a vein, and if you give this shot directly into a vein, you will KILL the animal. Also, always have epinephrine (1/2 to 1 cc - to be given I.M.) on hand when giving this shot, as it is higher risk for anaphylactic shock reaction.

### **Epinephrine:**

Must be refrigerated. If ever you need it, you will need it immediately. You will not have time to run to the refrigerator to get it. (1/2 to 1 cc - to be given I.M.) This shot is given to save an animal having a negative reaction to any vaccine.

### **Feeding:**

Goats need roughage to keep their rumen working properly. Hay should be the main diet.

Grain provides a lot of protein in a small amount of feed and because of this, should be fed with great care.

Feeding grain to a wether, for instance, can lead to urinary tract blockage.

During Gestation (5 months):

Grain is a necessary supplement to the pregnant does diet, as is Alfalfa which provides

much needed Calcium and protein. Most grass hay does not give these nutrients. I usually start graining about 1 month prior to expected kidding date, so that they don't become too fat, but it will help them right at the time they will need to begin producing milk for their kids.

As a doe becomes larger in the last month of gestation, the stomach is restricted and she cannot eat as much, so you must make sure that what she is eating is high enough in protein to fill the requirements for her and her unborn kids.

If not, you risk Hypocalcemia and ketosis. A pregnant doe should get plenty of exercise and fresh air, and stay in premium condition for kidding.

Long range consequences of nutritional imbalance:

You affect the condition of the fetus as well as the kid (after birth), if you have not fed the doe appropriately during gestation.

The long range effects last beyond birth, and can cause a kid that was malnourished during gestation to have problems that could have been avoided. A friend learned this lesson the hard way, purchasing a doe that was pregnant. The doe was extremely undernourished when she came, 2 weeks prior to kidding. She was not able to provide milk for her kids and one of her kids died before birth. Another kid that I received from the same breeder as a 9 week old was never right, and her legs began to bow at 20 days of ownership. I had started supplements and the best feed upon her arrival, as she was so thin and tiny, but it did little to no good, as the damage had already been done. This doe went on to have multiple problems, which eventually led to her being euthanized at 9 months of age.

### **Water:**

Clean, fresh water must be available always, as goats will go off feed without it, and will choose not to drink out of a dirty water bucket. Use an electric bucket in the winter as goats will drink water that is a little warmer in the winter, and they cannot break through even the thinnest of an ice coating and will go without if it freezes over. If you have small kids, don't water in large buckets because they can fall in and drown.

### **More on Hoof Care:**

Keep hooves trimmed as overgrown hooves can cause leg and feet problems.

Trimming should be done approximately every 4-6 weeks, but younger kids hooves tend to grow a bit quicker, so keep an eye on them.

When it's muddy & wet outside the last thing you probably want to do is pick up their feet, but it is the best time to trim hooves, as the mud really softens them up, and they should not be left in mud with over long hooves, because this is the perfect condition for foot problems to develop due to mud & bacteria being trapped inside.

Those young goats can sometimes put up quite a fight when you are trying to trim those back feet, and you or your goat can get jabbed with those sharp tipped nippers. I have developed a very easy way to stop the kicking & fighting of those young ones.

If you have them on your milk stand, simply sit under them so that their back legs can stand between your legs.

This way you can trap the foot you're not trimming, while you trim the other. It helps to support them while you have one foot up, and it gives your back a much needed break from leaning over. You will find that they do not kick and struggle as much using this method. It's a little messier, but if you're wearing your barn grubs, as you should be, it really doesn't matter. Wearing light, soft leather gloves while trimming hooves is also a very good idea. It will save your hands from blisters & maybe a snip from the nippers too. Happy trimming!

**Check coat and skin** occasionally for mites, fleas or ring worm or any other nasty feeding creatures. If you see any bald spots always check it out as it can be caused by any one of these problems.

Check your goats ears occasionally for ear mites. Head shaking can be a clue. In the winter/spring it's not uncommon to have to dust your goats for mites.

### **Worm control:**

In an effort to avoid immunity to wormers it is very important that you worm only when necessary.

You can quickly find out if your goats carry any worm load by having a fecal done, or by purchasing your own supplies to check for worms. The vet or you can collect fecal matter from the goat and you or your vet can do a worm count.

You will also want to check for coccidiosis. Worms & coccidiosis are invisible killers and can take a goat down quickly.

Many people check the gums of the animal for paleness, which indicates worminess in goats, but to be sure of what type of worm you need to treat for, a fecal is your best indicator. There are wormers on the market to treat for different types of worms. You can find this information in any of a number of different catalogs that sell these products.

There is a new system designed to control the parasite *Haemonchus Contortus* in sheep & goats. This parasite is one of the most problematic among small ruminants. The parasite sucks large amounts of blood from the true stomach of the animal, and the result is a severely anemic animal. This new system, called Famacha, involves checking the under eyelid of the animal for color. You want to see a healthy pink/red coloring to the eyelid and eye tissue. If you see pale or white, you are looking at an animal that is definitely carrying a load of these worms, and you would want to treat that animal.

Beware of wormers that are not safe for pregnant animals. If they are labeled as such, follow instruction. Do not worm a pregnant animal with such a product, as you seriously risk losing the kids.

I believe it is important to worm a pregnant doe about 1 month before delivery, with a wormer labeled safe for pregnant animals.

It is a time when she is more susceptible to any risk of worms and the possibility of transmitting them to the kids.

You should always worm a doe within days after kidding as well. Some worms are just

waiting to infect those newborn kids,  
and you must protect them!

### **Dehorning or Disbudding:**

This is a procedure that many people abhor and cannot bring themselves to perform. The option is to take your animal to the vet or find someone locally that can perform this procedure for you. I do my own disbudding, as it can get costly being that it may have to be done more than once, especially on young bucks, and sometimes for persistent growth in does as well. Keep in mind that you may need to touch up horns if you see growth, but it is well worth the effort, as animals with horns cannot be taken into a show ring. You can read about dehorning in the Hoegger or Caprine goat supply catalogs, [www.goat-link.com](http://www.goat-link.com) also has pictures helping with this procedure. And they give a pretty good description of the task. Some like to use caustic paste for dehorning, but this must be used **very,very** carefully, follow directions, don't use too much, and make sure it only goes where it is supposed to go. You must keep kid seperated for up to an hour, some will bundle and hold them so they cannot scratch at horn area and get paste on hoof and take the chance of getting it in the kids eyes.

### **Tattooing:**

This is another, not very pleasant task, that many would rather not have to perform. Some have opted to microchip instead. The problem with that can be a floating chip that can't be located, and having no identification for that animal. It's still a good idea to tattoo for backup identification. But I have found that even the tattoo's can fade away and cannot be read. At this point in time ADGA does not accept micro chipping as the only means of identification. Tattooing can be tricky. You will probably want to have the guidance of someone that has done it before. You must be very careful to place the tattoo correctly, in the correct ear and such. You will want to have a piece of paper to test the tattoo letters on before you actually tattoo the animal's ear. Make sure that you can read an ear tattoo before taking an animal into the show ring, as the judge must be able to identify that animal by the tattoo in case of a win. In my experience tattoos don't stay for long, especially in dark ears, and many times must be done again. This can be very frustrating and worrisome, as you do not want a tattoo to become unreadable. I've found that green ink works the best, especially in the dark ears. You can read about the procedure for tattooing in the above mentioned catalogs. You would do well to order each of these catalogs. Hoegger (800) 221-4628 / Caprine (800) 646-7736.

### **Ringworm:**

Fungus - Very contagious, Hair loss and scaling, Can be transmitted through direct

contact, even to humans.

Treat with antifungal cream applied directly to area and may need treatment a few times a day until gone. You can use antifungal foot cream purchased from Wal-Mart, as well as the higher priced products for treating fungus.

This can be transferred to your animal through soil or wood that emits a spore.

### **Soremouth:**

Virus - Very contagious. Scabs or open sores on lips, face, ears and sometimes udders. Contagious to humans, so use care during treatment. Treat with ointments or creams to help soothe pain. You can choose to isolate effected animals and let it run its course, generally 2-4 weeks. As sore mouth heals & sores dry up, scabs fall off.

These scabs are very infectious. It is very important to completely disinfect pen area & be sure to clean up ground & bedding/feeding areas.

### **Needles & Syringes:**

For these miniature small ruminants I never use a needle longer than 1/2 inch. It's not necessary to use a longer needle, even with the adult animals. You can order these needles separately or by the box from many goat catalogs, as well as the syringes you would need. I would recommend having plenty on hand at all times for your needs. Never use a needle more than once!

You may re-use the syringe, and I do when I'm giving shots to a bunch of animals at the same time.

I would also recommend having different size syringes as well, for dosing recommendations.

You should keep 6 cc & 12 cc syringes on hand as well as the more common 3 cc syringes.

### **Goat Pregnancy Issues and Prevention**

The overall nutrition and health of your does is the single most important factor in avoiding goat pregnancy issues and ensuring healthy kids. Make sure that you are providing high quality feed and maintaining a stress free environment. Poor nutrition, cold weather, or overcrowding can all lead to abortion. Below we discuss the most common goat pregnancy issues and how to prevent them, Ketosis, Selenium Deficiency, Milk Fever, and Entrotoxemia/Tetanus. For any of the following pregnancy issues, or any other issues, remember, an immune system boost can make the difference. Keep Bovi Sera on hand always!

### **Ketosis: (Pregnancy Toxemia)**

Ketosis occurs within the last few weeks of pregnancy. Common symptoms include loss of appetite, spastic motion, twitching ears and inability to stand. Labored breathing, coma and death can result. Provide a sufficient, balanced diet with no sudden or drastic changes, high quality hay and at least a half-pound of grain daily and at regular hours. Exercise is also essential to build strong bodies and good appetites. At the onset of any symptoms the Keto-Nia Drench or several pumps of Nutri-Drench daily can reverse the condition.

Not contagious. This is pregnancy toxemia attributed to low blood sugar. Most often seen in late pregnancy, and first weeks of lactation. Usually brought on by a combination of an increase in grain, and the inability for the animal to eat enough roughage, due to the large area that multiple kids take up in the stomach area.

Doe will be lethargic and go off feed. Cut back all grain intake until you have this issue resolved.

Do not be afraid to give high doses of propylene glycol (6-12 cc's), 2-3 times per day. Feed only roughage until the animal is eating well, then you may reintroduce grain. Propylene glycol cannot hurt them, and it will turn them around quickly, which is what is needed.

Always keep propylene glycol on hand for kidding season.

Home remedy for Ketosis:

White or brown sugar, corn syrup, molasses or honey can be used in a pinch.

### **Selenium Deficiency**

Selenium Deficiency symptoms include skin disorders, white muscle -disease (a type of muscular dystrophy), lowered reproduction and conception rate, decreased milk production and milk quality. Soil deficient in selenium produces plants with the same condition which results in your does not having enough selenium.

Golden Blend Minerals contain the correct selenium/vitamin E levels for most locales and is our recommended solution for this issue as well as many other mineral related problems. Customers are advised not to use any additional selenium/vitamin E supplementation. Consult a veterinarian who knows goats if you are still in doubt.

If necessary, administer injectable Vitamin E/selenium (you will have to get this from a vet) before breeding and 4 to 6 weeks prior to birthing. The adult goat dosage is 1 to 2 times that of - sheep and for normal size kids the minimum sheep dose is recommended. WARNING: Selenium can be toxic if over-dosed

### **Milk Fever**

Milk Fever is a blood calcium deficiency that occurs in does just before or after kidding. Milk Fever occurs when there is a sudden increase in requirement for calcium and the doe does not have access to the calcium required. The calcium is then pulled from the blood stream. If severe enough, symptoms of milk fever begin

True Milk Fever is fairly rare in goats but may occur in very high-producing animals. Normal labor and lactation in goats is typically accompanied by mild hypocalcemia

(lower-than-normal calcium levels). If these levels become extreme, Milk Fever occurs. **Symptoms:** Weakness in hind quarters, back feet dragging, constipation and inability to withstand normal labor.

**Treatment:** The most effective treatment is the administration of an IV calcium supplement but requires veterinary assistance because constant heart monitoring is necessary. There may also be other complications such as retained placenta, Entrotoxemia and mastitis. All these considerations should be addressed by a health care professional.

**Prevention:** Typically a twin bearing doe will need 8 grams of calcium and 4 grams of phosphorus per day during the last 30 days of pregnancy until just before kidding. Alfalfa is a great source of calcium and can provide calcium reserves required for labor and lactation. Avoid significant diet changes (or fasts) prior to kidding.

### **Entrotoxemia & Tetanus:**

By doing a 2 cc sub-Q injection of C&D/Tetanus Toxoid Vaccine 4 to 6 weeks prior to kidding, you will encourage the doe to build up antibodies against Entrotoxemia and Tetanus. These antibodies can be passed through the colostrum to the newborn kids providing them with a measure of protection prior to their own vaccination at 2 weeks.

If the doe has never been vaccinated, do a booster 2 weeks after the initial shot.

### **Kidding:**

Before your kids are due I would recommend you go to [www.goat-link.com](http://www.goat-link.com) and read up on the kidding procedure, it really helped us at kidding time.

Molasses and/or Goat Nutri-Drench for replacing mom with vital minerals and vitamins after kidding, also for quick energy that was depleted during delivery. A bucket or bowl that holds at least a gallon for the warm water you will mix the molasses into. (I use about 1/3 cup to a gallon of water). Ours will drink every drop. **I always try to be with the doe when her time comes, she can be in labor for hours and be in major stress and you won't know. After about 20 minutes of hard labor with no kid produced, she will need assistance or you could lose her and the kids.**

I had a newborn kid and I realized she was keeping her eyes closed or when she tried to open them they were watery. I was so worried she had something major wrong with her eyes. After examining her in the daylight, I realized her eyelids were turned in at the top and her eyelashes were irritating her eyes. I held her and kept moving her little lids trying to turn them back to where they needed to be. It took a few times on each lid but they finally stayed correct. I put a few drops of visine morning and night for a few days and finally she was able to open them normally.

### **Kidding Kit Necessities:**



Clean bucket & Surgical soap (dish soap in a pinch) ~ just in case you need to assist.  
Lubricant in tube that you can throw into hot soapy water to warm up.  
Rubber gloves, Dish rag to wash up doe prior to assisting,  
Iodine for dipping naval cord of kid and bottles & nipples for those of us that bottle feed.  
I keep a plastic tub w/towels & soft, warm blanket near kidding stall for newborns.  
Nutri-drench for weak kids. The 1st thing kids should have in their belly is colostrum.  
Do not feed/tube a cold/chilled kid ~ Warm them 1st.  
If you have to assist by turning or pulling a kid ~ be sure to treat doe with penicillin shots  
(2 cc/1 x per day - 3 days)

If you need to bottle feed new babies use goat milk if at all possible. If you don't have goats you can milk try to find someone who does. See more info below.

### **Colostrum (First Milk)**

\*Baby Goats NEED colostrum for the antibodies they get from the goat moms. While they probably will not "die" from not getting colostrum, they will survive and thrive much better With it. Colostrum is the first milk goat mom's produce. It is thick and full of antibodies. The Baby Goat can ONLY assimilate the properties of these antibodies for the first 24 hours of life. After the first 24 hours of their life, the colostrum is good for them but is only rich milk. The antibody properties while still in the colostrum can no longer be utilized by the baby goat's body. The first 12 hours of the baby goat's life is most vital for utilized colostrum benefits. The second 12 hours they still utilize the properties of the colostrum but not 100% as they did in the first 12 hours. Ideally- The newborn baby goat needs to have it's first drink of colostrum within the first 20 minutes of life.

### **Bottle Feeding Baby Goats**

The most important thing I can stress when feeding bottle baby goats is to try and do what a natural goat mom would do- The first few days goat moms allow the babies to eat many times per day but if you watch them they only eat a small amount each time, as they get older, mom will only stand to allow them to nurse for a certain amount of time and then walk away- so babies learn to eat more at each feeding - giving bottle babies 2 or 3 huge bottles a day in the first weeks is not only harmful for the baby's digestive system but really not fair to the baby.

After they receive colostrum (Mother's first milk) For the first 24 hours of life, bottle fed kids should be fed fresh (or frozen) goat's milk if at all possible. If you cannot get fresh goat's milk, you can use whole (not 2%) cows milk from the store. I do not recommend using fresh cow's milk UNLESS you know for a fact the farm is certified because the transfer of Johne's or CAE to a baby goat from the cow's milk is possible. **In a PINCH You CAN** use Canned milk ONLY if you read the ingredients- do NOT used what is called FILLED Evaporated milk- Many canned milks are part soy, Never use this. **Use only whole canned milk if you need to.(Diluted in half with water) Carnation canned cow's milk** is whole milk without soy and is safe to use.  
**DO NOT FEED POWDERED MILK REPLACERS/FORMULA!**

## **Milk Replacers Kill Baby Goats!!- Milk Replacers KILL Baby Goats!!! MILK REPLACERS KILL BABY GOATS!!!!**

I know this is ridiculous to put this way BUT Please people.. Trust me.. while there may be an unusual case of milk replacers NOT killing baby goats BUT they do more than they do not Unless the breeder is able to get the scouring baby turned around before they die! I cannot stress this hard enough.

Real whole milk, even raw milk from a cow, is much better for them than milk replacer , which can cause diarrhea and floppy kid syndrome. Very often, problems with bottle fed kids stem from the use of milk replacer.

### **Guideline for Bottle Baby Dairy Goat Feeding Schedule Pygmy and Nigerian Goat Baby Amounts in [ ]:**

- \* Day one- 2-4oz. [1-3] (per feeding) colostrum, every 2-3 hours.
- \* Day two- 3 oz. [2-3] (per feeding) colostrum if you have it or whole milk, 8-10 times a day
- \* Day three- 4 oz.[3] (per feeding) colostrum if you have it or whole milk, 8 times a day
- \* Day four- 6oz. [4-5] (per feeding) whole milk, 7-8 times a day.
- \* Week One - 6-8oz [4-5] (per feeding) whole milk, 7-8 times a day.
- \* For the next 2 weeks-6-8oz.[4-6] (per feeding) whole milk, 6 times a day.
- \* For the next 2 months-10-12 oz.[6-8] (per feeding)whole milk, 4-5 times a day.
- \* For the next 1 month or 6 weeks-10-12 oz. [6-8] (per feeding)whole milk, 3 times a day.
- \* 10-12 oz. [8-10] (per feeding) once a day for the next 2 months.

**This is JUST a guideline- Adjust as needed - start with the recommended amount and feel the baby's tummy- Stop when it feels full but not tight- measure what is left in the bottle and feed what the baby ate- as the baby grows add to that amount according to size.**

For More info on bottle feeding baby goats go to [www.goat-link.com](http://www.goat-link.com) They have info on pritchert nipples that work great, and how to get a baby goat to accept the bottle. Make sure you put milk bottle in hot water to warm milk, DO NOT put bottle in microwave it will kill good stuff in the milk that the babies need.

### **Kick start for weak newborn:**

Karo syrup in 2 pints of water, or give black coffee. These should be followed up with colostrum which every newborn requires .

### **Recipe for Colostrum Replacement:**

3 cups whole milk, 1 beaten egg, 1 tsp cod liver oil, 1 Tbs sugar.

## Colostrum Trick :

**Banding young bucks**, some say to wait as long as possible due to having more of a chance for urinary tract calculi when banded too soon. Some prefer to have them cut by the vet, quick procedure, not too expensive. We use the callicrate wee bander it is a newer type of bander that uses more tension, kids are up and nursing within a few hours. The Callicrate Wee Bander is a high-tension banding tool for newborn animals. Proper and consistent band tension negates blood flow, triggering a natural pain blocking effect. Each latex rubber Wee Loop has a built-in tension lock ring for proper tightness without crimping or cutting. Spring loaded bander tension rod senses proper tightness. [www.CallicrateBanders.com](http://www.CallicrateBanders.com)

## Misc Goat information

Average Goat Life span:

Does = 11-12 years average age, but... usually the death in does is kidding related. Does that are "retired" from breeding around age 10 live longer... up to 16-18 years. I just recently found a doe who was 24; she was retired from kidding at age 10.

Wethers = 11-16 years average age

Bucks = 8-10 average age - bucks usually live shorter lives than does and wethers due to the stresses of going into rut each year; this really takes a lot out of them

This information found at [www.fiascofarm.com](http://www.fiascofarm.com)

- Temperature = 102.5 - 104 - This varies depending on the temperature of the goat's surroundings.
- Pulse rate = 70 - 80 beats per minute
- Respiration = 15 to 30 per minute
- Rumen (stomach) movements = 1 - 1.5 per minute
- Puberty = 7 weeks - 8 months (separate bucks from does at 2 month)
- Estrus/Heat Cycle = 17 to 23 days
- Full growth size: Most goats do not reach their full size until they are about three years of age. (They keep growing for about three years)

## Line-breeding and Inbreeding

The old saying goes: "If it works it's called Line-breeding and if it doesn't, it's called Inbreeding." This saying puts a very complicated subject very simply, but it has some truth in it. I also like to say: "There is no better way to improve your herd than with Line-breeding, BUT there is also no better way to ruin a herd."

Line breeding (breeding closely related animals) can quickly improve a herd because the good qualities of the animals get accentuated. BUT the bad qualities are also accentuated. Because of this, you have to think about what you are doing, look at the animals and use your head. You can't just simply go by some arbitrary "rule" like "it's OK be breed grandfather to granddaughter", but look at the individual goats and decide if their particular good traits out weigh the bad traits.

Since we only keep very good bucks, we do not worry that much about "bad" traits, since if our buck had discernable bad traits, we wouldn't use him for breeding purposes. We do do a lot of Line-breeding with our herd.

The only hard and fast rule that I know of is do not breed a full brother and full sister. In some circumstances, it is ok to breed father to daughter, but we hardly ever do that. We much prefer to breed grandfather to granddaughter, uncles to niece, etc. I would recommend that unless you are an experienced breeder with good stock, you will probably have healthier animals by starting out incorporating genetic diversity into your herd as opposed to Line-breeding; start out with a buck that is totally unrelated to any of your does, and then work from there. Eventually you can't help but Line-breed because no one that I know can afford to buy a new buck every year. The most important thing is to start with good stock and keep more than one buck so you are not forced to keep breeding the same buck to all your does every year. We have quite a few does, but we may or may not breed them all each year, it depends on their growth and how their heats fall in with our breeding program. We only breed 3 does in each "batch". We take a two week break between each batch before breeding starts again (or course, heats don't always fall in with this perfectly). We do this because we want to be able to give each doe her own kidding stall for two weeks and we also want to be able to spend one-on-one time with the kids (so they will grow up friendly and loving to humans). If we were to breed all our does at once, kidding season would be a madhouse/three ring circus, with no room in the barn and there would be no way we could spend time each day with every kid. The way we handle our breeding, makes kidding season controlled and very enjoyable for everybody (humans, does and kids).

### **Misc Milk Information: Why is Raw milk better?**

**Reference: USDA National Nutrient Database for Standard Reference, Release 16**

#### **This breakdown in Per CUP (8 oz.) of milk:**

<b>Nutrient</b>	<b>goat milk</b>	<b>cow milk, whole 3.25%</b>	<b>human milk</b>
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Weight (edible portion)	244 g	244 g	246 g
Water	212.35 g	215.50 g	215.25 g
Calories	168 kcal	146 kcal	172 kcal
Protein	8.69 g	7.86 g	2.53 g
Total lipid (fat)	10.10 g	7.93 g	10.77 g
Fatty acids, total saturated	6.507 g	4.551 g	4.942 g
Fatty acids, monounsaturated	2.706 g	1.981 g	4.079 g
Fatty acids, polyunsaturated	0.364 g	0.476 g	1.223 g
Cholesterol	27 mg	24 mg	34 mg
Carbohydrates	10.89 g	11.03 g	16.95 g
Sugars	10.86 g	12.83 g	16.95 g
Calcium	327 mg	276 mg	79 mg
Iron	0.12 mg	0.07 mg	0.07 mg
Magnesium	34 mg	24 mg	7 mg
Phosphorus	271 mg	222 mg	34 mg
Potassium	498 mg	349 mg	125 mg
Sodium	122 mg	98 mg	42 mg
Zinc	0.73 mg	0.98 mg	0.42 mg
Copper	0.112 mg	0.027 mg	0.128 mg
Manganese	0.044 mg	0.007 mg	0.064 mg
Selenium	3.4 mcg	9.0 mcg	4.4 mcg
Vitamin C	3.2 mg	0.0 mg	12.3 mg
Thiamin	0.117 mg	0.107 mg	0.034 mg
Riboflavin	0.337 mg	0.447 mg	0.089 mg
Niacin	0.676 mg	0.261 mg	0.435 mg

Pantothenic Acid	0.756 mg	0.883 mg	0.549 mg
Vitamin B-6	0.112 mg	0.088 mg	0.027 mg
Vitamin B-12	0.17 mcg	1.07 mcg	0.12 mcg
Folate, total	2 mg	12 mcg	12 mg
Folic acid	0 mcg	0 mcg	0 mcg
Vitamin A, IU	483 IU	249 IU	522 IU
Vitamin A, RAE	139 mcg_RAE	68 mcg_RAE	150 mcg_RAE
Retinol	137 mcg	68 mcg	148 mcg
Vitamin E	0.17 mg	0.15 mg	0.20 mg
Vitamin D	29.28 IU	98.652 IU	9.84 IU
Vitamin K	0.7 mcg	0.5 mcg	0.7 mcg

Pasteurization destroys enzymes, diminishes vitamin content, denatures fragile milk proteins, alters vitamin B12, and vitamin B6, kills beneficial bacteria, promotes pathogens and is associated with allergies, increased tooth decay, colic in infants, growth problems in children, osteoporosis, arthritis, heart disease and cancer.

Heat alters milk's amino acids lysine and tyrosine, making the whole complex of proteins less available; it promotes rancidity of unsaturated fatty acids and destruction of vitamins. Vitamin C loss in pasteurization usually exceeds 50%; loss of other water-soluble vitamins can run as high as 80%; the Wulzen or anti-stiffness factor is totally destroyed. Pasteurization alters milk's mineral components such as calcium, chlorine, magnesium, phosphorus, potassium, sodium and sulfur as well as many trace minerals, making them less available. There is some evidence that pasteurization alters lactose, making it more readily absorbable. This, and the fact that pasteurized milk puts an unnecessary strain on the pancreas to produce digestive enzymes, may explain why milk consumption in societies that drink pasteurized milk has been linked with diabetes.

Pasteurization destroys all the enzymes in milk -- in fact, the test for successful pasteurization is absence of enzymes. These enzymes help the body assimilate all bodybuilding factors, including calcium. That is why those who drink pasteurized milk may suffer, nevertheless, from osteoporosis. Lipase in raw milk helps the body digest and utilize butterfat.

Butterfat has a cortisone-like factor which is heat sensitive (destroyed by heat) that prevents stiffness in the joints. Raw Milk contains beneficial bacteria as well as lactic

acids that allow these beneficial bacteria to implant in the intestines. Once heated, milk becomes rotten, with precipitated minerals that can't be absorbed (hence osteoporosis), with sugars that can't be digested (hence allergies), and with fats that are toxic. (4)

Raw milk has been used as a therapy in folk medicine. It has been used in the pre-insulin days to treat diabetes, as well as eczema, intestinal worms, allergies, and arthritis, all for reasons which can be understood when we realize just what is in milk -- such as the cortisone - like factor for allergies and eczema.(4)

My personal opinion is raw milk produces much better cheese... cheese with body and character. Pasteurized milk cheese can be flat.

I believe the American public these days are way to obsessed with "antibacterial". It's gotten to the point of being dangerous because some bacteria is good and necessary. People are turning themselves into "bubble boys" never being exposed to anything, hence, when they are exposed to a bad bacteria, they get very sick. People who are exposed the good and bad all the time in there lives build a resistance, and when exposed to a bad bacteria, their bodies have developed the antibodies to fight it off.

I'm not saying raw milk has bad bacteria, actually it's the opposite. The milk has good bacteria which can fight off any dangerous or bad bacteria present in the milk or that may fall into the milk. If you pasteurize the milk, thus killing the good bacteria, then any bad bacteria that may manage to get into the milk will multiply and grow quickly, because pasteurized milk is the prefect medium for bacteria to grow and there is no longer any good bacteria present to fight the bad bacteria off. This is why milk from the store goes bad, turns lumpy and horrible, where raw milk (if it's around long enough) just naturally turns pleasantly sour and becomes like buttermilk.

I use nothing but raw milk. I figure, why bother going to all the trouble of raising my own goats for milk and then ruining it by killing off all the good live things it contains and destroying the nutrients? If your goats are healthy and you follow sanitary procedure, there is nothing better for you than raw milk. If using raw milk, it must be handled correctly, everything must be sanitary and the animals that the milk comes from should all be healthy and happy.

### **Info about goat milk:**

Normal goat milk fat has a much higher concentration of so called medium chain fatty acids (MCT), caproic, caprylic, capric, lauric, myristic (33%) verses cow milk fat (17%), and lower in stearic and oleic (27%) lower than cow milk fat (45%) . Much documentation exists showing the uniquely beneficial effects of those MCT, medium chain fatty acids in various medical problems, disorders and diseases, such as those

suffering from malabsorption syndromes chluria, steatorrhe, hyperlipoproteinemia intestinal resection, coronary bypass, premature infant feeding, childhood epilepsy, cystic fibrosis, gallstones, angcontributeto general thriftiness of children. (5)

Goat milk provides 13% more calcium, 25% more Vit B-6, 47% more Vit A, 134% more potassium and 350% more niacin than cow milk. Goat milk is higher in chloride, copper and manganese and none of the controversial bovine growth hormone (BGH) (5)

Lactose intolerance, allergies and goat milk:

Goat milk, like cows milk and human milk, contain lactose, but many people (but not all) with lactose intolerance and cow milk allergies can drink goats milk. Why? It is because of goat milks superior digestibility. Goat milk is more completely and easily absorbed than cows milk leaving less residue behind in the colon where it can literally ferment and cause problems. The digestibility of goat milk can be attributed to it's casin curd, which is both softer and smaller, thus easy to digest. Another big difference between cow and goat milk is found that the average goat milk fat globule is about 1 1/2 to two microns compared to cow at 2 1/2 to 3 1/2 microns another factor in ease of digestion. Goat milk contains more essential fatty acids (linoleic & archidoic acids) and higher proportion of short chain and medium chainfatty acids than cows milk. The fat can be more readily digested and absorbed because lipases attack ester linkages of these fatty acids more readily than those of longer chains (cow) And unlike cows milk, goat milk does not contain agglutinin; as a result the fat globules in goat milk do not cluster, again allowing the ease of digestion and absorption. (6)

What about fat content?

Not all fat is bad; there are "good fats" and "bad fats". You need some fat in your diet, but you need to keep in mind that too much of anything (including a good thing) can be bad for you.

Butterfat contains vitamins A and D needed for the assimilation of calcium and protein in the water fraction of the milk. Without them, protein and calcium are more difficult to utilize and possibly toxic. Butterfat is rich in short and medium chain fatty acids which protect against disease and stimulate the immune system. It contains glycospingolipids which prevent intestinal distress, and conjugated linoleic acid which has strong anticancer properties.

## **Milking Sterilize Information**

It is not difficult or complicated to sterilize. I use Clorox bleach; yes there is a difference in bleaches and Clorox, in my humble opinion, is the best. Clorox has good quality control and it is formulated in a way that it won't your burn your skin quite as easily as cheaper bleaches. Use plain ol' Regular Clorox Bleach, not the scented kinds.



To create my sterilizing solution I fill up one side of my two sided sink with water and add 1/4 Cup of bleach for every 2 gallons of water. Let whatever needs to be sterilized sit in the water at least 2 minutes, then let drain and evaporate for at least 15 minutes before using. The chlorine in the bleach dissipates during this evaporation time and will not effect your cheesemaking. You can also sterilize all your equipment by boiling, but this takes more time and energy (and is just too doggone hot in the summer). The sink full o' bleach water method is convenient because you can use the same water to sterilize your morning milking stuff, then use it for the day's cheese or yogurt making equipment (including the cheesecloth- it helps keep it nice and white). You can even use this left over sterilizing water for sterilizing canning stuff as you get ready to can the bounty from your garden. I sterilize my big 4 gallon cheese pot by adding a couple inches of water and bringing it to a rolling boil with the lid on for at least 5 minutes. This steam sterilizes the pot and lid.

You need to wash your doe, or cow's, udder before you milk her and dip her teats after. You can buy all kinds of products to do this with, but I have found it's cheaper and easier to use bleach (Clorox). Yes, not only can you use bleach to sanitize your milking utensils, but you can also use it to wash your doe's udder and dip her teats. Bleach is very effective in controlling and preventing mastitis (an inflammation of the mammary gland caused by bacteria). And interestingly enough, I have found that my homemade bleach wash made with Clorox is gentler on my doe's udders than commercial products. I have not had a case of "udder pox" or mastitis since I've started using Clorox udderwash/teat dip. Please do not use cheaper bleach for the wash, it will be harsher on your and your doe's skin.

Make only enough of this wash/dip for each milking. It does not keep. The bleach disperses fairly quickly and you can't guarantee the mixture's sanitizing strength/ability after a few hours. To make an udder wash/teat dip just mix:

To use, wash udder with wash/dip and wipe dry with a clean paper towel. Milk the goat. After milking, dip the teats in the teat dip and let "air dry".

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Wash your doe or cows's udder well with your udder wash and dry with **adisposable paper towel**. Never place a "soiled" towel back in the wash.

After you've milked her out remove the pail, cover it and put it aside. Now, dip her teats. You may have seen "teat dip" in a spray, but to be honest, my does hate the spray and I try to keep the milking time a pleasant experience for everyone. Also, I think you get better coverage with the real dip. For a **teat dip cup** I use disposable 3 oz. "Dixie" cups I buy at Sam's for \$5 for 500. I'm not usually a big fan of disposable things, but when it comes to milking, disposable can be a good thing. Disposable means less chances of spreading any contaminates that may be lurking and waiting to spoil your milk or give your doe mastitis.

Now, if you're a good record keeper, you should weigh the milk on a good **scale** and record on your **milk record sheet**. It is standard practice to measure milk by weight (pounds) as opposed to volume (gallons). You may not think you care about keeping this kind of record, but you'll be

surprised at how useful it is. You will be able to track any drop in production that may be an indicator of some health problem that you may miss other wise.

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Make only enough of this wash/dip for each milking. It does not keep. The bleach disperses fairly quickly and you can't guarantee the mixture's sanitizing strength/ability after a few hours. To make an udder wash/teat dip just mix:

- 1 oz (2 T) of bleach (Clorox only)
- one quart of water
- a drop of blue Original Formula Dawn dish detergent (DO NOT use any other formula!)

I like to use the blue, Original Formula, Dawn dishwashing detergent, it's the best I have found. Like Bounty paper towels, I'd never use anything else. Dawn (the blue, original formula) is safe to mix with bleach. You must be very careful when mixing bleach with other products because toxic vapors can result.

To use, wash your doe or cow's udder well with your udder wash and dry with a disposable paper towel (Bounty) . Never place a "soiled" towel back in the wash. This will help keep the wash clean and reduce the risk of spreading any "nasties" from animal to animal. Milk the doe or cow. Now, dip her teats. For a teat dip cup I use disposable 3 oz. "Dixie" cups I buy at Sam's for \$5 for 500. I'm not usually a big fan of disposable things, but when it comes to milking, disposable can be a good thing. Disposable means less chances of spreading any contaminants that may be lurking and waiting to spoil your milk or give your doe mastitis. You can use the same cup for all the does you are milking at that time. Dip the teats in the teat dip and let "air dry".

You do not put it around the goat's ankles and the hobble does not even fit correctly around the ankles if you try to use it that way. A goat cannot kick if you squeeze tight on the *upper* rear leg. When you squeeze the ligament on the back of their leg it makes it almost impossible to lift their leg. Knowing this, I figured out the correct way to use this goat hobble. See the photos below:

The hobble should be secured nice and tight so it squeezes the back ligament.

