

Nigerian Dwarf Goat Care Guide

Goat Vital Signs

Temperature: 102.5 (> 103=High, < 102=Low)

Heart Rate: 70 - 90 beats per minute

Respiration Rate: 12 - 10 breaths per minute

Rumen Movement: 2 - 4 per minute

Behavior

A healthy goat appears contented, alert, has an appetite and chews its cud. Its coat is smooth and glossy, skin is clean and pliable. One can feel the ribs under the skin but bones do not appear to jut out. The manure consists of formed, slightly moist pellets, and the urine should be passed without effort.

Goats are sociable, playful creatures. They enjoy gentle attention; do not play aggressively with them or they will become aggressive (if you rub their head playing butting games they will butt you unpredictably). They especially enjoy a neck or chest rub. They enjoy climbing and jumping on rocks, stumps, and platforms made for their pleasure (and your entertainment).

Care

Goats need to be immunized annually for C/D Tetanus (CDT). You might also think about rabies if that is a problem in your area.

Check your goats at least once a month for worms. This doesn't have to be an in depth, time-consuming check. A quick daily look at body condition and coat quality, spot check eyelid color/anemia (FAMACHA) and gum color should be enough to determine if deworming might be needed. With doing that, it should never get to the point of scours or bottle jaw, which would indicate a major infestation. If you do suspect worms, have a fecal performed to determine the type and level of worms, and how to best treat them. Treat only those animals that need it, not the whole herd. For the majority of worms, we use Cydectin Oral Drench, Valbazen and Levimasole (see attached chart). For tapeworms, we use Fenbendazole, aka Safe-Guard. However, work with your vet and other livestock owners in your area to find what works best there. Coccidia, a different type of intestinal worm, can also be a problem, but are more common in kids under 6 months old or very old animals. Coccidiosis can be treated with Corid, as labeled, or prevented by using a medicated feed. Again, work with your vet to establish the best protocol for your herd.

Do not underestimate the value of a good loose mineral! Goats tend to have a greater need for minerals and are sensitive to deficiencies. The blocks you most often see will not provide them with enough minerals. It would be well worth your time to find a source of loose mineral and provide it free choice. We currently use a 50/50 mix of Sweetlix and Tech-Master Complete.

Hooves must be trimmed about every 3-4 months, and more frequently with better nutrition. The bottom should be flat without edges curling under. Scissor-type garden pruning shears work well.

Periodically check the body condition (whether they are fat or thin) and adjust their feed, or check for signs of illness, as needed. Body condition can be determined by feeling the fat and muscle layers along the ribs and either side of the spine, do not judge a goat by the size of their belly. http://www.luresext.edu/?q=Body_Condition_Scoring

Housing

For their housing you must provide a barn, shed, or a large dog house so they can get out of rain, snow, wind and sun. You must provide a sturdy fence; the best fencing we have found is four foot high (min.) by 16 foot long graduated livestock panels. As you think about fencing, remember that your goal is twofold: to keep your goats where you want them, and to protect them from dogs and coyotes who are their greatest threat. **Never trust a dog or dogs with your goats, with the exception of trained livestock guardian dogs! Dogs are predators—goats are prey.** And, even with LGDs, I would not recommend keeping them with young kids, or young LGDs with your stock until they are properly trained.

Food/Water

Mature, non-breeding animals may be maintained on a good quality hay or browse alone.

Goats need fresh water at all times. A loose mineral supplement formulated for goats (one that contains copper) should be provided.

Goats enjoy a variety of extras, such as a salt block, fruit and vegetable scraps, tree prunings (pecan, oak, fruit, pine, spruce/cedar, maple, willow). Be careful to avoid mold in hay and grain and toxic plants, such as Rhododendron, Azalea, Yew (looks like spruce but no scent), laurel, cherry... these can kill in very small doses. If you are concerned about the plants they might be eating, keep a tube of activated charcoal on hand and be ready to dose. Never change the diet suddenly, always introduce new or extras in small quantities, and do not allow the goat to over-eat.

Males, even more so in wethers, are prone to developing kidney/urinary tract stones (calculi) so should be maintained on a low protein, low calcium diet. A mineral balance achieved with a goat-formula mineral supplement aids in the prevention of urinary calculi. Adding food grade ammonium chloride at a rate of 1.5 lbs per 25 lbs of loose mineral is also helpful in preventing and breaking down calculi, since it is a urine acidifier. But, be cautious because it can cause urine scald.

My grain mix recipes

Does/Kids – 1 cup per animal per day

1 part non-medicated sheep and goat pellet

1 part high protein mare and foal sweet feed

1 part barley or oats

1 part black oil sunflower seed (BOSS)

Loose goat mineral* (make sure it has copper) – about 5% of the total mix

Bucks/Wethers – 1 cup per animal per day

1 part non-medicated sheep and goat pellet

2 parts barley or oats

1 part black oil sunflower seed (BOSS)

Loose goat mineral* (make sure it has copper), with ammonium chloride mixed in at a rate of 1.5 lbs per 25 lbs mineral – about 5% of the total mix.

*I highly recommend Bluebonnet Tech-Master Complete loose mineral.

Breeding

Fertility: Bucklings can be fertile as young as 6 weeks old. Doelings can be fertile as young as 2 months old, but should not be bred until at least 1 year old.

Heat Cycle: every 17-23 days for 2-3 days

Gestation: 145-155 days

I highly recommend NOT keeping your bucks and does together, and instead purposefully breeding selected bucks and does. Keep records on observed breedings, and test for pregnancy, so that you can anticipate when they will kid.

Bucks in rut, does in their last 30 days of gestation, lactating does and growing kids less than 6 months old require more and better nutrition. Consider supplementing breeding animals with copper for higher fertility and virility. Does in their last 30 days of gestation must be giving double rations, with a calcium rich hay such as Alfalfa or Timothy, split up into two servings, in order for their body to keep up with the developing kids and milk production. I personally give each doe ½ flake of alfalfa and a cup of my grain mix, along with their normal hay, at each serving and continue the double rations through freshening and the entire lactation until I dry them off.

Kidding

About half of the time, I find a doe could use a little extra help when kidding, especially if it is their first time. This is one of the main reasons I recommend selectively breeding, testing for pregnancy and being there for the kidding if at all possible. Additionally, the kids could use your help ensuring that airways are cleared, that they are dry and warm, and get their much needed colostrum. Over the years, we've also encountered kids that need help with their joints (hocks and pasterns in particular) until the tendons and ligaments firm up in about a week. We put splints made of narrow pipe foam and tape on those.

A few weeks before kidding, familiarize yourself with the kidding process and positions, and get your kidding bag ready. I always have a lubricant (with gloves if desired), a bulb syringe, a pair of surgical scissors and clamps, floss, umbilical cord dip in a small cup, hand wipes and plenty of towels in my bag. After kidding, I give the new mom Gatorade (molasses water or lemonade could also work), clean up the pen and put down fresh shavings. And don't forget water and a snack for yourself! Taking notes and having a vet on call is also helpful if you're new to kidding.

Lastly, and you can take this or leave it, but in my experience, while Nigerian Dwarfs can breed year round, I would not kid in the middle of winter or summer (depending on where you live, of course). It is just too difficult to regulate the kids' temperatures.

Kid Care

Kids do not have fully developed immune systems are vulnerable to illness, particularly coccidiosis. The first line of defense is getting enough colostrum in them in the first 24 hours. Second is keeping a clean kidding area and preventing cross-contamination from other animals and people. We do twice daily kid checks to make sure eyes, noses and rear ends are clean, that their bellies are full with milk and that they are generally healthy and thriving.

If you notice a kid with scours (diarrhea), do not hesitate to evaluate the situation. Take their temperature to determine if antibiotics might be in order. Run a fecal test, if possible, to see if it is coccidia. In most cases, I will begin coccidiosis treatment even before it is confirmed because 90% of the time that's what it is, and quick treatment can be life-saving. I'd also consider probiotic and electrolyte support and limited doses kaopectate.

Soon after kidding, you'll notice horn points starting to form on their heads. If you don't want horns, be prepared to disbud within the first two weeks. Timing is critical and it is far more difficult to remove the horns after they've already grown. If you're lucky and there are no points by week two, then you probably have a polled (naturally de-horned) kid.

Medicines to have on hand

While I have listed the treatments that we use as a point of reference, always work with your vet to determine the best treatment for your farm.

A note: You'll find that most medications are NOT labeled or approved for goats. However, they CAN be used with the assistance of your veterinarian, to establish extra-label usage.

1. **Banamine** – for Pain, Inflammation and Fever reduction. This has been indispensable on so many occasions – castrating, disbudding, snake and spider bites, rough kidding, etc. Work with your vet to get a bottle to have on hand!
2. **An Antibiotic** – Only used if a fever is present or if there is a high risk of infection. I use Biomycin, which as of now is still OTC, or work with your vet to have a vial of your preferred antibiotic on hand.
3. **C&D Antitoxin** – You don't need it until you REALLY need it, so it's best to have it on hand.
4. **CDT Vaccine** – Given at least once annually, with a booster for kids. I recommend getting a new bottle every time you vaccinate.
5. **Tetanus Antitoxin** – for unvaccinated kids to be disbudded or castrated where there is a risk of infection
6. **Corid** – Used to treat coccidiosis in kids. There are differing opinions on the use of corid. In my experience as long as it isn't over-used, it poses no problems to kid health. Ask your vet about alternatives if Corid doesn't work for you.
7. **Wormers** – I use Cydectin Oral Drench, Levimasole and Valbazen. See the chart at the end of this guide for goat dosages. Do not give Valbazen to pregnant does and avoid Levimasole in late pregnancy as they can both cause abortions.
8. **Terramycin** - Pink Eye treatment
9. Copper Boluses (COWP) – They now sell these in convenient 2mg capsules. Give once or twice a year, particularly during breeding and kidding season. Copper is a required mineral for goats and this gives them an extra boost. It can also help control round worms. Note! Be sure to check copper levels in your loose mineral before giving supplemental copper. Overdosing can lead to copper toxicity.
10. Bovi-Sera – Optional. Can be used to give newborns an immunity boost.
11. BoSe – If your area is low in selenium, or you buy hay from an area that is low, this may be recommended. Work with your vet.
12. A wound spray and antibiotic gel

Additional Resources

<http://www.adga.org> – About Us-> Dairy Goat Information
<http://www.adgagenetics.org>
<http://www.luresext.edu/> - Langston University's free web based training and tools
<http://fiascofarm.com/goats/index.htm>
<http://www.goatwisdom.com/>
<http://www.tennesseemeatgoats.com/articles2/articlesMain.html>

Supplies

<http://www.caprinesupply.com/>
<http://www.enasco.com/farmandranch/>
<http://www.jefferspet.com/pages/livestock>
<http://www.valleyvet.com/>
<https://www.pbsanimalhealth.com/>
<https://nelsonjameson.com/>

Plans

Hay Feeder

<https://www.premier1supplies.com/img/instruction/127.pdf>

Adjust height for miniatures, Consider adding walls to base and sides to avoid goats going in or under

Milk Stand

https://www.fiascofarm.com/files/Milk_Stand_Plans.pdf

Adjust height for your comfort, Adjust head gate for miniatures, Add steps or a ramp

Mineral Feeder

<https://swampyacresfarm.com/MineralFeeder.html>

Body Condition Scoring

Excerpt from "Dairy Goat Herd Health: Procedures and Prevention" by Chris Duemler, Brodhead Veterinary Medical Center (Chapter 4 of the Langston Dairy Goat Management Courses)

Body condition scoring is done using a scale from 1 to 5 with 1 being extremely thin and 5 being obese.

1. With the goat restrained, palpate or feel the loin area between the withers and the hips. In a thin doe, the loin will be concave. If the doe has a slightly rounded loin, she will score 3.0. A fat doe having a score 5.0 will have a very rounded loin with a trough down the middle of the back that water cannot run off sideways.
2. Then, palpate the central rib area on either side. In a thin doe, your fingers will fall between the ribs. The ribs and intercostal spaces (flesh between ribs) will be level in a doe in good body condition. However, in a fat doe you will have trouble finding the ribs to palpate them.
3. Lastly, palpate the chest pad. This is the hairless, leathery area on the chest between the front legs. Palpate for fat protruding from either side of the chest pad. Goats tend to store a great deal of fat internally before storing it externally. The chest pad fat rolls have the best correlation to internal fat. This is important because excessive internal fat predisposes a doe to toxemia and ketosis. A thin doe will have no flesh around the edges of the chest pad. A chest pad level with the flesh around it indicates a doe in a good body condition. Rolls of fat or flesh protruding from the edges of the front pad indicates a fat doe.



Score 1: Severely concave between spine and ribs. The backbone is very noticeable, ribs are clearly felt and brisket shows no fat.

Dangerously thin! Severely malnourished. Start on supplemental feed, put on good pasture area, get your Vet involved and do a fecal egg count.



Score 2: Slightly concave between spine and ribs. You can feel backbone, ribs are noticeable and brisket is firm.

Moderately thin – Check your pastures and supplemental feed, consider fecal egg count.



Score 3: Neither concave nor convex between spine and ribs. You can feel the backbone, but it does not stand out and you can just feel the ribs and the brisket.

This is the ideal weight.



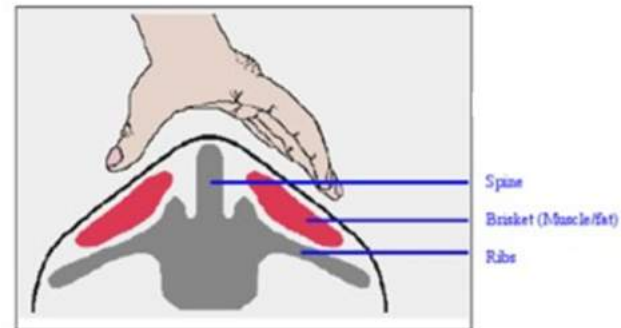
Score 4: Slightly convex between spine and ribs. It is difficult feeling backbone and cannot feel ribs.

Overweight – Need to cut out supplement feed.



Score 5: Severely convex between spine and ribs, the top of the back feels flat. You can not feel backbone or ribs, brisket wobbles when touched.

Obese! Take action, reduce feed or type of feed, may have difficulty with reproduction, difficult births and heat stress.



Corid Dosage Chart

For Coccidiosis in Kids

Dose per day for 5 days

96 mg of amprolium in every 1 ml of corid 9.6% liquid

220 mg of amprolium in every 1 g of corid 20% powder (dry, not mixed with a liquid)

Goat Weight (lbs)	9.6% amprolium solution (cc/ml)	mg	Grams of 20% powder <i>Add as much liquid as desired to make 5 doses</i>
X	Y	(y*96)	(y*96)/220
5	1.25	120	0.5
7	1.75	168	0.8
10	2.50	240	1.1
12	3.00	288	1.3
15	3.75	360	1.6
17	4.25	408	1.9
20	5.00	480	2.2
22	5.50	528	2.4
25	6.25	600	2.7
27	6.75	648	2.9
30	7.50	720	3.3
32	7.75	744	3.4
35	8.75	840	3.8
37	9.25	888	4.0
40	10.00	960	4.4
42	10.50	1008	4.6
45	11.25	1080	4.9
47	11.75	1128	5.1
50	12.50	1200	5.5
52	13.00	1248	5.7
55	13.75	1320	6.0
57	14.25	1368	6.2
60	15.00	1440	6.5
62	15.50	1488	6.8
65	16.25	1560	7.1
67	16.75	1608	7.3
70	17.50	1680	7.6
72	18.00	1728	7.9
75	18.75	1800	8.2
77	19.25	1848	8.4
80	20.00	1920	8.7
82	20.50	1968	8.9
85	21.25	2040	9.3
87	21.75	2088	9.5
90	22.50	2160	9.8
92	23.00	2208	10.0
95	23.75	2280	10.4
97	24.25	2328	10.6
100	25.00	2400	10.9

Goat Guideline for Anthelmintic Dosages (internal parasite dewormers) July 2006

Important --- Please read notes below before using this chart

Animal Weight		Oral dosing. <i>Note: 1 ml = 1 cc</i>						Subcutaneous injection
		Valbazen Albendazole ¹ 20 mg/kg 2 ml/ 25 lb	SafeGuard Fenbendazole ² 10 mg/kg 1.1 ml/ 25 lb	Ivomec Ivermectin ³ 0.4 mg/kg 6 ml/ 25 lb	Levasole Levamisole ⁴ 12 mg/kg 3 ml/ 25 lb	Cyductin Pour on Moxidectin ⁵ 0.5 mg/kg 1.1 ml/25 lb	Cyductin Drench Moxidectin ⁶ 0.3 mg/kg 3.4 ml/25 lb	Cyductin *Injectable* Moxidectin ⁷ 0.2 mg/kg 1 ml/ 110 lb
lbs	kg							
20	9.1	1.6	0.9	4.8	2.4	0.9	2.7	0.2
25	11.4	2.0	1.1	6.0	3.0	1.1	3.4	0.2
30	13.6	2.4	1.4	7.2	3.6	1.4	4.1	0.3
35	15.9	2.8	1.6	8.4	4.2	1.6	4.8	0.3
40	18.2	3.2	1.8	9.6	4.8	1.8	5.4	0.4
45	20.5	3.6	2.1	10.8	5.4	2.1	6.1	0.4
50	22.7	4.0	2.3	12.0	6.0	2.3	6.8	0.5
55	25.0	4.4	2.5	13.2	6.6	2.5	7.5	0.5
60	27.3	4.8	2.7	14.4	7.2	2.7	8.2	0.5
65	29.5	5.2	3.0	15.6	7.8	3.0	8.8	0.6
70	31.8	5.6	3.2	16.8	8.4	3.2	9.5	0.6
75	34.1	6.0	3.4	18.0	9.0	3.4	10.2	0.7
80	36.4	6.4	3.6	19.2	9.6	3.6	10.9	0.7
85	38.6	6.8	3.9	20.4	10.2	3.9	11.6	0.8
90	40.9	7.2	4.1	21.6	10.8	4.1	12.2	0.8
95	43.2	7.6	4.3	22.8	11.4	4.3	12.9	0.9
100	45.5	8.0	4.6	24.0	12.0	4.6	13.6	0.9
105	47.7	8.4	4.8	25.2	12.6	4.8	14.3	1.0
110	50.0	8.8	5.0	26.4	13.2	5.0	15.0	1.0
115	52.3	9.2	5.2	27.6	13.8	5.2	15.6	1.0
120	54.5	9.6	5.5	28.8	14.4	5.5	16.3	1.1
125	56.8	10.0	5.7	30.0	15.0	5.7	17.0	1.1
130	59.1	10.4	5.9	31.2	15.6	5.9	17.7	1.2
140	63.6	11.2	6.4	33.6	16.8	6.4	19.0	1.3
150	68.2	12.0	6.8	36.0	18.0	6.8	20.4	1.4

¹ **Valbazen** Suspension (11.36 % or 113.6 mg/ml): *Do NOT use in pregnant does in the first trimester of pregnancy.* Meat withdrawal time is 9 days and 7 days for milk (FARAD).

² **Safe-Guard/ Panacur** Suspension (10% or 100 mg/ml): Approved in goats at 5 mg/kg with meat withdrawal time of 6 days and no withdrawal period for milk. Although the label dose in goats is 5 mg/kg, it is generally recognized that 10 mg/kg dosage is required for good efficacy. At 10 mg/kg dosage, meat withdrawal is 16 days and 4 days for milk (FARAD).

³ **Ivomec Sheep Drench** (0.08% or 0.8 mg/ml): Protect from light. Coughing may occur during and following drenching. Meat withdrawal time is 14 days (FARAD).

⁴ **Levasole Soluble Drench Powder (Sheep)**: Oral solution ONLY. To prepare use 1 packet (13 gm/11.7 gm active ingredient) dissolved in 262 ml [8.9 oz.] water (44.7 mg/ml) {or 52 gram packet dissolved in 1048 ml water [35.4 oz.].} NOTE: This is different dilution from the label directions for administration. Meat withdrawal time is 4 days (FARAD).

⁵ **Cyductin Pour on for cattle** (0.5% or 5 mg/ml): Meat withdrawal time is 23 days. *Not for use in lactating dairy goats.*

⁶ **Cyductin Drench for sheep** (.1% or 1 mg/ml): Meat withdrawal time is 14 days. *Not for use in lactating dairy goats.*

⁷ **Cyductin Injectable for cattle** (1% or 10mg/ml): GIVE SQ. Meat withdrawal time is 30 days. *Not for use in lactating dairy goats.*

NOTE for Guideline for Anthelmintic Dosages in Goats

The attached chart was developed by Ray M. Kaplan, DVM, PhD (University of Georgia) and modified by Patty Scharko DVM, MPH (University of Kentucky.) and Lionel Dawson DVM, PhD. (Oklahoma State University). It is provided as a possible guideline for anthelmintic (deworming) dosages for goats. Producers should consult their veterinarian for advice on their specific management situation for determining dosages for their herd. **With the exception of fenbendazole administered at the 5 mg/kg dose, these drugs are not approved by the Food and Drug Administration (FDA) for use in goats, and when used in goats are considered extra-label use (fenbendazole at the recommended dose rate of 10 mg/kg is considered extra-label usage). The FDA regards extra-label use of drugs as an exclusive privilege of the veterinary profession and is only permitted when a bona fide veterinarian-client-patient relationship exists and an appropriate medical diagnosis has been made. The chart is intended to serve as guideline for improving accuracy when dosing goats with an anthelmintic, but these drugs should be used in goats only when appropriate veterinary advice has been received.**

Drug resistance in parasites of goats is extremely common. The effectiveness of an anthelmintic should always be tested before being used by performing a FECRT (Fecal Egg Count Reduction test) or larval development (DrenchRite) assay if available.

**** The current recommendation is to use the Cyductin cattle injectable formulation and NOT the pour-on formulation (orally) or the sheep oral drench. When administered by subcutaneous injection, moxidectin provides improved drug levels as compared to when administered orally.**

Information contained in this document is part of a web-based training and certification program for meat goat producers (<http://www2.luresext.edu/goats/training/ga.html>) that was developed with funding received by Langston University from USDA/FSIS/OPHS project #FSIS-C-10-2004 entitled "Development of a Web-based Training and Certification Program for Meat Goat Producers."

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