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Irmgard Aidoo, of Aidoo-Balci Homestead and popular Instagram account @sadie_sankofa. See AnB Homestead on page 22.
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What Can Goats Eat, Anyway?

IT’S KIDDING SEASON, once again! And while we wait for those precious babies to drop, we hope you enjoy more stories about goat care during this suspenseful, wonderful, and frightening time of the year.

But that’s not all that is happening. It’s springtime! Snow melts, grass greens up, and orchards bloom. This is when we start getting variations of the same question: “Can my goats eat this?” So, in addition to all those kidding stories, we have dedicated part of this issue to goat diets.

I live in the High Desert, in an area that I affectionally call “The Devil’s Sandbox.” And as I cultivate my garden and irrigate from my well, I hear of tales of magical lands where livestock food literally comes up from the ground. Where garden and crop water literally just falls from the sky! But here at Ames Family Farm, that isn’t the case. Every bite that my animals eat comes from my own hand — either from hay that I purchased from other farms or from my own garden.

There is an upside, though. I almost never encounter gastrointestinal parasites, unless I purchase a goat from an area where rain actually falls.

I garden organically, and have gotten really good at it, so I have more food than my family can consume. So now half of the garden grows for the goats. During my lunch breaks, I break of chard stems, thin beets, or gather ripe tomatillos. (They will trample each other for ripe tomatillos!) Kochia and lamb’s quarters grow freely if I irrigate, so I let them grow until they’re larger but haven’t yet formed seed heads, then I toss the plants into the goat pen. When a zucchini hides under leaves until it’s the size of a canoe, I drag it over to the goats. Coats stay shiny and goats get excited whenever they see me walk between beds.

We all have different setups, where some people have plenty of pasture for their goats but not many trees. Others have trees but not much grass. And some of us don’t have much at all, so we improvise. I would love to hear stories of how you, personally, feed your goats. What challenges do you encounter? And how do you address those? What advice can you offer to new goat owners who wonder what to feed their caprines?

Email us at goatjournal@gmail.com or send a snail-mail letter to Goat Journal, 1503 SW 42nd St., Topeka, KS 66609.

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Creeping Phlox

I have an erosion problem and am looking for an attractive solution. I wanted to plant lantana and found it poisonous for my babies. (We have nine goats.) I am looking at creeping phlox. Do you know if it’s okay to have around? It won’t be in their fenced-in area, but we let them roam the yard a lot.

— Donna J.

Great question! I looked up *Phlox paniculata*, *Phlox stolonifera*, and *Phlox subulata*, since all of them can be called “creeping phlox,” depending on which website you read. But I have good news regarding all of them. While *Phlox paniculata* has been listed as “edible,” *Phlox subulata* and *Phlox stolonifera* (the one most often referred to as “creeping phlox”) are listed as “not edible but not toxic.” Many university extensions list it as “deer resistant,” which usually means that deer don’t like it all that much while it won’t hurt them. So, you may find the same dynamic with your goats: if they already have bellies full of good feed when you let them into this area, they probably won’t take more than a nibble or two.

I hope this helps!

— Marissa

In response to: “Urinary Calculi in Goats — EMERGENCY!” on our Backyard Goats website:

We snipped the pizzles in two of our boys at three months old after losing one to urinary calculi. No problem with the snipping and, at almost two years old now, no problems.

— Janet M.

*Editor Note —
Read this story at:
backyardgoats.iamcountryside.com/health/urinary-calculi-in-goats*
**Nigerian Dwarf Wethers**

Hello. I’m getting three Nigerian Dwarf wethers this week. The breeder has them on pasture and hay. Once with me, they will only have access to graze while I have them on leashes — we have three acres but not fenced. Anyway, I have a good-sized garden going and wondered if I could grow some vegetables or herbs to replace that forage. I have been advised not to feed them grain. Thank you.

— Kim

Hi Kim,

I grow half of my garden for my goats! Here are a few tips:

- If it’s bad for you, it’s bad for them. This means no green parts of any nightshades (peppers, tomatoes, eggplant, potatoes).

- The parts with the most phosphorus, which causes phosphatic urinary stones, are the seeds. So that means grains, the part of peas/beans/peanuts that humans eat, sunflower seeds, flaxseed, etc., have too much phosphorus for wethers unless you carefully balance it with calcium. But the green parts of those plants have low phosphorus levels, and often the calcium levels are much higher. Cornstalks, young sunflowers, wheatgrass, and peanut plants would all be fine.

- Legume greens (pea greens, peanut greens, alfalfa, clover) have a lot of calcium. So, this is nice to balance with anything high-phosphorus. But remember that too many fresh legume plants can cause frothy bloat.

- Too many brassicas (cabbage, kale, broccoli, cauliflower, turnips, radishes) can block their absorption of important minerals, such as iodine. But that involves feeding them a LOT, such as subsisting on scraps from a cabbage farm or letting them free-graze a rapeseed field.

- Too many of the beet green family (beets, spinach, chard) can block nutrient absorption due to high levels of oxalic acid (the toxin in rhubarb). Again, this would involve feeding them a lot.

- Too many alliums (garlic, onions, leeks, shallots) can cause hemolytic anemia. But see above regarding feeding them a lot.

- Cornstalks can have high levels of nitrates if they are allowed to undergo drought stress.

- As far as herbs, the good ones for you are also good for them. I’ve found they’re hit and miss regarding flavor. Some of my goats go crazy over mint and dill, while others turn their noses up at it. Parsley is full of nutrients for you and them! And while some of my goats love a few green tops of my spring garlic, others go the other direction.

With all this information in front of you, choosing a crop to grow for your goats is probably frightening. But just as with humans, offer a wide variety of safe foods. Start with a little at a time and work your way up. Two big stems of Fordhood chard per day will offer some great nutrients, but a diet of 100% chard will cause problems. Feeding a few pea plants is fine, but turning them out onto a freshly watered alfalfa field could cause issues.

I’m growing a mixture of chard, sunflowers, orach, zucchini, and sweet potatoes (they aren’t in the nightshade family at all). The goats get the rewards when I thin out my beet and carrot seedlings. And I offer them all the safe weeds that sprout up, such as lamb’s quarters, kochia, and purslane.

Happy gardening (and goating)!

Marissa
Button’s Chocolate Truffle, my prized chocolate LaMancha! She has shown personality since day one! La Mancha munchie attitude! — Brittni Phillips

My Kinder buck loves to curl up beside me when I’m working from the back porch. — Melissa Ford

My baby Nigerian Dwarf buck, Doodle, as a kid. He was like an adorable calico kitten. — Brittni Phillips

Sometimes house goats just happen. Standard Nubians, a quad, assisted birth, three pounds — meet Finding Nemo. — Julie Peterson

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Mamma Jude had five babies her first kidding. I kept counting them to make sure I was really counting five! She’s given us five and then four with the subsequent kidding seasons.

— All photos on this page submitted by Haleigh Cammon.

Penny, Jude’s baby from the five, born three years ago.

Little brown baby I found almost dead. It was at 2:00 a.m. and 21 degrees F. Yogi and I worked for hours to save her. She was so tiny she had to use a newborn baby bottle I had around the house. She’s all grown up and stubborn as ever. She lost parts of her ears to frostbite the night she was born.

We call her Rolo because she’s fat and has super short legs!

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WHILE SPRINGTIME GOAT CARE often focuses on does and kidding, don’t forget the male goats in your herd. Serious health issues can result from lumping their care in with late gestation does. Male goats, particularly those with high concentrate — or grain — diets, are at increased risk of developing bladder stones. Bladder stones, medically known as uroliths, can lodge in a male goat’s urethra and prevent urination, and this condition can be life-threatening.

Uroliths can form as precipitates in the urinary bladder of both male and female goats. Male goats, however, risk those stones becoming stuck and obstructing the exit because of their long, narrow urethra (the tube that connects the bladder to the outside world). Several types of stones can form in the bladder — phosphatic, silicate, calcium oxalate, and calcium carbonate.

As one would guess, treatment of urethral obstruction in male goats is expensive and often unrewarding. Prevention of this serious condition is much simpler than pursuing treatment. The prevention of urolith formation primarily aims to control mineral consumption in the diet and increase water intake.

Ensuring a balanced mineral ration can greatly reduce the risk of stone formation. Goats on high concentrate diets should have their diet carefully monitored to ensure that the ratio of calcium to phosphorus is appropriate. If you are not feeding a complete goat feed, it is highly recommended that you consult your veterinarian or an animal nutritionist to ensure that the diet is appropriate. Further,
in animals that do not require supplementation with grain, such as healthy pets or breeding animals in the off-season, it is recommended to avoid feeding concentrates. Healthy animals can meet most of their dietary needs by quality hay and loose or block mineral supplements.

Ensuring appropriate water consumption can be as easy as providing and clean and easily accessible water source. In cold weather or range situations, this can be more difficult. It is imperative to check your water supply daily to ensure that animals have access and clean water. Providing supplementation with salt can also further encourage water intake, and salt can be provided free-choice or sprayed on feed.

In animals with an increased risk of stone formation, the feed additive ammonium chloride can also reduce the risk of stone formation. It adjusts the acidity of the urine to make stone formation more difficult.

Some discussion has been made about the timing of castration causing an increased risk of stone formation in those males. Early castration does result in decreased diameter of the urethra. In male goats intended to be kept as pets, delaying castration can result in a larger urethra and reduce the risk of obstruction. This should not be used as a primary method of prevention, however.

Obstruction of the urethra by uroliths is a serious condition in male goats. Make a thorough health management plan for the male goats in your herd to reduce the risk of stone formation. Utilize your herd veterinarian or a nutritionist if you have feedstuffs or pastures that may increase the risk of urolith formation. If you are concerned that your male goat may be exhibiting signs of obstruction, it is imperative to contact your veterinarian immediately. Rapid diagnosis and treatment can significantly improve the chances of recovery.

**SOURCES**


**DR. KATIE ESTILL DVM** is a veterinarian consultant for Goat Journal, Countryside & Small Stock Journal, and Countryside online. She works with goats and other large livestock at Desert Trails Veterinary Services in Winnemucca, Nevada.

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CONTRARY TO POPULAR BELIEF, goats are quite selective in their dietary choices. Their browsing capabilities allow them to utilize a wide variety of forages found in virtually all types of climates. But, on the flip side, it also means they have a high risk of exposing themselves to all kinds of toxins from plants. A goat may not ingest much of a single toxin, but even small amounts can have negative impacts not immediately noticeable to the naked eye.

What Is Toxicity?
Essentially, a toxin is a type of poisonous substance produced by the cells of living organisms. Nature is abundant with these substances, but what is toxic to a specific species might not be to another. The level of toxicity can also fluctuate from case to case. For example, the amount of any toxic substance consumed plays a significant role in how much damage is done once consumed.

Even the amount of toxin present in a plant at any given time can vary based on its age, point in its lifecycle, and general environment. Many people believe “toxicity” means that an effect should be evident and life-threatening. However, neither of these is entirely accurate. Toxins can be cumulative and/or long-acting. Sometimes they will harm different bodily systems like the digestive, reproductive or mammary — but the animal otherwise appears healthy.

How quickly a toxin acts depends on multiple things. “If (toxins) are water-soluble, then they’re going to be absorbed quicker because of all the fluid within the digestive system,” explains Kevin Pelzer, DVM of Virginia Tech. “Essentially, those fluids migrate through the intestinal cells. If the compound is fat-soluble, it doesn’t get dispersed as quickly. Usually, there’s some act or process that needs to occur within the gut to absorb those fats or those fat-like toxins.”

Another way toxins can impact ruminants is during the fermentation process, where they are activated as the bacteria break them down. Pelzer adds that the GI tract can also absorb some toxins.

Getting Into Trouble
Most goats consume toxic plants by coming across them in the pasture. However, sometimes it happens due to an unsuspecting caretaker.

Accidentally feeding moldy or decaying feed products can cause botulism, a paralytic disease that is usually fatal. But sometimes, feeding seemingly “good” forages can have catastrophic results.

An example Pelzer gives is the very common ornamental bush Japanese Yew. Because it looks like a pine tree, which is perfectly safe for goats to enjoy, this may mislead people to feed it without a second thought. In reality, it is highly toxic due to its high taxine alkaloids.

Specific Toxin Types
Different alkaloid compounds exist across many weeds, including fescue, nightshade, hemlocks, and pokeweed.

Pelzer says that cattle, consuming large amounts of fescue, can suffer decreased conception or stunted growth. On the other hand, goats and sheep don’t tend to consume as much and don’t encounter such drastic side effects.

However, owners should survey the grazing area to see varieties and amounts of high-alkaloid-containing plants before turning goats out.
Many people believe “toxicity” means effects should be evident and life-threatening. However, toxins can be cumulative and/or long-acting. Sometimes they harm different bodily systems like the digestive, reproductive or mammary — but the animal otherwise appears healthy.

Cyanide, one of the fastest-acting poisons, can be found in various fruits and seeds. And because the rumen bacteria directly interact with cyanide’s compounds, goats are even more vulnerable than animals with a simple stomach.

Those wanting to provide fresh fruits as a special treat to their goats need to be highly cautious never to feed the seeds. High levels of cyanide can occur in apple seeds, cherry and peach pits, and bitter almond.

Cyanide can also be found in various pasture plants, including Russian knapweed, certain hemlocks, cassava, and even wild carrots. When plants have young foliage, levels are highest, so do spring pasturing with great care.

Other toxins present in plants cause lesser-seen metabolic issues. Plants in the Brassica genus are a great example, and brassicas include Brussels sprouts, cabbages, radishes, turnips, and rhubarbs. While consuming some brassicas in small amounts may not be harmful, overconsumption of certain types can cause significant issues due to high oxalate levels. Brassicas can also cause nitrate poisoning due to high nitrogen fertilizers.

But we should remember that toxins can lurk in all these places. Identifying questionable plants and monitoring how much they consume all contribute to long-term safety.

JACLYN KRYMOWSKI is a graduate of the Ohio State University with a B.S. in animal industries. A dairy enthusiast, she milks, raises, and shows registered Alpines and Nubians. You can find her blog at theherdbook.com.

Sources
THOUGH GOATS HAVE a reputation for eating everything from laundry to tin cans, they’re usually pretty good about avoiding toxic foliage. Usually — but not always.

Most caprine owners have a decent grasp of what shrubs and ground plants their animals should avoid and what is safe. But what about trees?

Goats have a high tolerance for bitter plants or plants with high tannin content, which is why they can tackle some obnoxious weeds. However, this tolerance can backfire with toxic plants such as milkweed or cherry.

Plant poisoning in goats is dependent on many factors: how much material was consumed, the animal’s age and size, the portion and age of the plant eaten, the amount of ground moisture (drought makes certain plants accumulate toxins), the animal’s health, whether a goat is lactating, the season of the year, etc.

A huge factor in poisoning is whether the nutritional needs of the animals are being met. Under normal circumstances, goats avoid poisonous plants. Overgrazing, drought, or unbalanced rations can drive goats into eating toxic plants. Sadly, a major reason behind poisoning in goats is starvation, when the animals are desperate and will eat anything.

But goats are also just plain curious, a trait that can get them in trouble. If they’re able to browse on a wide variety of plants, nibbling on a plant with poisonous compounds may not be fatal (with a few exceptions) because the detrimental effects are diluted. While proximity to toxic plants is crucial in

Under normal circumstances, goats avoid poisonous plants. Overgrazing, drought, or unbalanced rations can drive goats into eating toxic plants. Sadly, a major reason behind poisoning in goats is starvation, when the animals are desperate and will eat anything.
prevention, sound management is more critical. It’s up to you to know what toxic plants are in your area.

There are two types of poisoning: chronic and acute. Chronic poisons accumulate over time. Acute poisons are immediately life threatening. Goats may also get “mechanical injury” by consuming plants with spines, fine hairs, burs, alkali crystals, or other abrasives that can damage the gut.

Symptoms of plant poisoning can range from mild (reduced activity, reduced food intake) to severe (lack of coordination, convulsions, blindness, erratic behavior, quick death). Treatments must be rapid: remove the animals from the pasture where the toxic plants are found, get the affected animals into dry, warm, shaded areas, let them drink clean water, and (of course) call a veterinarian immediately.

Over 700 plants in North America are considered toxic, not to mention hundreds of exotic species used as ornamentals. There are fewer trees that cause issues. Here are some of the most common toxic trees:

- Alder buckthorn
- Arborvitae (thuja tree)
- Avocado
- Azalea
- Bitter almond
- Black locust
- Boxwood
- Buckeye (horse chestnut)
- Calotropis
- Cherry
- Chokecherry
- Chinaberry tree (Persian lilac, white cedar, Texas umbrella tree)
- Elderberry
- Golden chain tree (*Laburnum*)
- Holly (trees or bushes)
- Honey mesquite
- Kentucky coffee tree
- Lasiandra (glory bush)
- Laurel (all types)
- Mountain cedar (eastern red cedar)
- Mountain laurel
- Spruce (in quantity)
- Plum
- Ponderosa pine (in large quantity)
- Red maples
- Red pine (in large quantity)
- Rhododendron (very deadly)
- Savin juniper (*Juniperus sabina*)
- Sugar gums and many eucalyptus
- Wild cherry
- Yew (all species, including African and Japanese)

It’s worth noting what trees you might find regionally or specifically on your property. The Prunus genus of trees, for example, consists of plums, cherries, peaches, nectarines, apricots, and almonds and are common on homesteads. These trees can cause significant distress to goats if the leaves are consumed when wilted. Bitter almond leaves contain the compound cyanogenic diglucone.

While sweet almond (*Prunus amygdalus var. dulcis*) does not contain toxic chemicals in the nut and the leaves are toxic while wilted, bitter almond (*Prunus amygdalus var. amara*) contains toxic chemicals in the nut and leaves.

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amygdalin, releasing toxic hydrogen cyanide in the animal. Wild cherries are common in some areas and have resulted in many goat deaths. Animals ingesting wilted cherry leaves experience the release of cyanide (HCN) into the bloodstream. This potent toxin can cause symptoms within 15 to 20 minutes of ingestion. References state that if the animal does not die in the first hour, there is a good chance for recovery. The limp leaves (green or partially yellowed) which are still connected to the plant stems are the most dangerous. Once the leaves have fallen off, the toxicity drops.

Some tree parts are fine in small amounts. Oak leaves, for example, are fine in limited quantity; but over time, they may cause damage to the bone marrow, ultimately resulting in anemia. Goats often eat black locust leaves with no ill effect; other times, they can cause taxalbumin, leading to death.

In short: Research what trees your goats have access to. When in doubt, don’t permit goats to eat a particular type of tree.

With all this scary stuff, are there any trees safe for goats to eat? Of course! Consider the following list, though keep in mind too much of anything can be bad, so these items should only be fed in moderation:

- American sweetgum
- Apple
- Bay (leaves)
- Birth
- Brazilian pepper tree
- Cottonwood
- Dogwood
- Elm
- Hazel
- Magnolia
- Mountain ash
- Mulberries
- Oaks (bark, twigs, leaves, acorns) in small quantities
- Poplar
- Southern bayberry
- Staghorn sumac
- Tree of heaven
- Wax myrtle
- Willows

A note about evergreen trees: There is a lot of conflicting information about which ones are safe for goats. Yews of all sorts are wildly poisonous. Juniper, spruce, Douglas fir, hemlock (the tree, not the poisonous plant), ponderosa pine, red pine, and cedar can be eaten in small amounts. Still, they can be problematic if ingested in large quantities. The key to letting goats eat evergreens is knowing the species (to avoid the poisonous varieties) and moderation in other species.

Obligatory disclaimer: This article has been vetted by Dr. Katie Estill DVM but is not meant to constitute veterinarian advice. If you have a question about the toxicity of a particular plant in your area, consult your local veterinarian and/or county extension service.

PATRICE LEWIS is a wife, mother, homesteader, homeschooler, author, blogger, columnist, and speaker. An advocate of simple living and self-sufficiency, she has practiced and written about self-reliance and preparedness for almost 30 years. She is experienced in homestead animal husbandry and small-scale dairy production, food preservation and canning, country relocation, home-based businesses, homeschooling, personal money management, and food self-sufficiency. Follow her website http://www.patricelewis.com/ or blog http://www.rural-revolution.com/.
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feature :: rejected kids

Is Your Mother Goat Rejecting Her Kids?

By Kate Johnson

GOOD PARENTING IS VITAL in raising happy, healthy, and well-functioning kids. This is true whether we’re talking about human or goat kids! But in the goat world, the father’s only role is to help create the kid, so actual parenting is all up to the mom. And some are better suited for the task than others.

So, just what does it mean to be a good goat mama? Two main functions go into good mothering: keeping the baby safe and keeping the baby fed. And to do both, moms need to know who their babies are, so recognition is paramount. Genetic temperament determines much of the ability for a goat to parent well. Still, the doe’s nutritional intake may be a factor in how well she recognizes her babies.

Recognizing Baby:
• Licking: The first thing a good goat mama will do is lick her kids as soon as they’re born. This will help her recognize her baby’s particular scent while also drying the baby off and stimulating it to stand up and root for food. A “bad” mama might not have much interest in cleaning her baby. If it is cold out and you’re not present at the birth, the baby may become hypothermic. It also means that the doe may not bond with her baby, leading to feeding and protecting issues later on. So, the first indication of whether a goat mama will take her parenting role seriously may be whether or not she licks her babies clean and dry.

• Visual and acoustic recognition: A doe will begin to recognize the look and sound of her kids within hours of birth. This will help her to be a better mom to her kids. But it has been found that underfeeding during the second half of pregnancy can reduce the dam’s ability to recognize her offspring. Therefore, you must provide proper nutrition for your pregnant does throughout their pregnancy to ensure the best mothering instincts.

Keeping Baby Safe:
• Producing enough milk: The first factor is whether the doe produces enough milk to adequately feed her babies. First fresheners may not produce as much milk as they will in subsequent years, or their milk may not come in as quickly, meaning that you may need to supplement. Dams with more than two kids may also have trouble producing enough milk to feed them all.

• Allowing them to nurse: No matter how much milk the doe is producing, though, if she doesn’t stand still for her babies to nurse, they won’t get what they need. If a mother seems to be rejecting her kids or is not producing enough milk, you need to intervene — and quickly. A newborn kid MUST have colostrum within the first hours of life, so if mama won’t or can’t provide it for them, you will have to.

What to Do if a Mother Goat Rejects Her Kids:
If your doe rejects her kids, be sure that there isn’t some physical reason, like mastitis or some other discomfort to address separately. If the teat is very warm or swollen or the udder is hard, you may need to predators, and is careful about where she steps. Lack of recognition may hamper all of these things. If she doesn’t recognize her kids, she won’t know who to protect! If a mother seems to have little interest in staying near her babies, she will likely also have little interest in feeding them.

Feeding Baby:
If you plan to bottle-raise your newborn babies, having a doe with good mothering instincts may not be that important to you. But if you plan to allow the dam to raise her kids, even if just in the beginning, having a doe that can and will feed her babies is crucial.

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treat it for mastitis. Or if the doe seems off, either from labor and delivery or an underlying issue, address it as well. I suggest goat owners have a veterinarian check on any doe that seems to be rejecting her kids, to rule out any physical problems with the dam. If the doe is otherwise healthy, you can try holding her to allow babies to nurse or put her on a milk stand and allow babies to nurse there. You will also want to separate them from the rest of the herd and keep them penned together in a relatively small space to encourage bonding. Sometimes with new moms, it can take a day or two for them to settle into motherhood, and by helping them connect this way, the nursing baby can get what it needs and will help stimulate oxytocin, the hormone that helps in mothering.

• **Teat size, shape, and position:** Even the best moms with adequate milk supply may have trouble feeding their newborn kids if their teats are too big, oddly shaped, or in a position that makes it hard for babies to find. You may need to help babies latch on at first or even squeeze out some of that excess milk that makes the teat too big to fit in a tiny newborn mouth. I have one such doe in my herd. She is a fantastic mother and a huge producer, but her teats are relatively big and hang low, and her newborns often need a little help latching on in their first few days.

Once a bad mama, always a bad mama? Not necessarily. Many first-time moms are a bit slow to warm up to motherhood, and then they’ve got it down by the second year! If a doe has a harrowing birth, she might reject a kid, or if a kid is deformed in some way, she may reject it, but then she may go on to be a perfect mom to future kids. While mostly temperament, breed, and genetics determine mothering, circumstantial reasons can cause a goat to reject her kids, so I always give my does a second chance. And if a doe is a great producer or a good show goat or has a sweet personality, I might decide it’s worth it to bottle-feed her babies to keep her in my herd even if she is a repeat bad-mama-offender. You may base that decision on your personal needs and goals.

It has been found that underfeeding during the second half of pregnancy can reduce the dam’s ability to recognize her offspring. Provide proper nutrition throughout pregnancy to ensure the best mothering instincts.

**SOURCES**

**KATE JOHNSON** raises Nubian dairy goats in Longmont, Colorado, at briargatefarm.com. She is an active leader in the local 4-H Goat Program and a Superintendent for her county’s fair. She also runs a cheesemaking school at theartofcheese.com.
PHOTO ESSAY :: AIDOO-BALCI (AnB) HOMESTEAD

The Evolution of AIDOO-BALCI (AnB) HOMESTEAD

BY IRMGARD AIDOO
As a small family operation, the goal of AnB Homestead is to lead a green, sustainable lifestyle — both for our animal family and our human family — in which our four-legged and feathered friends provide our family fresh milk, eggs, fertilizer for our vegetables, and tons of joy and love.

One of the things Ercan and I talked about when we first met was having backyard chickens. The dream came true in 2017 when we found a breeder who was still selling chicks after the season had ended. We bought seven Australorps and waited anxiously for them to start laying eggs. We were delighted with our fresh eggs, but we wanted more animals and knew we needed a larger backyard.

Our chickens shared the converted shed with Ercan’s childhood friends: homing pigeons. In 2019, we found a property that had been neglected for a long time. We knew we could transform the backyard and have the homestead we dreamt of. The minute we became interested in the property, other buyers wanted it. We wrote a letter to the seller explaining why we wanted the property and all its possibilities. Luckily, we got the house.

Ercan had a dream (the kind you have while you are actually sleeping) of raising goats. He secretly did his research, found some goats for sale in Upstate New York, told our little boy, and they worked together to convince me. Boy, am I glad I said YES! Since we were such newbies, and the next day brought four does home, the chicken fence Ercan put up didn’t hold up our new goats, which resulted in them doing a neighborhood tour with people calling the police. It was the day of the Super Bowl, and our community page was full of colorful comments — with Brady being the G.O.A.T. (greatest of all time), our goats were seen as a sign that the Patriots would win yet another Super Bowl. Over the last couple of years, we’ve had several babies that brought joy to many families around our town. We shared our baby goats with new goat enthusiasts, as well as our first-hand experiences and the knowledge we gained by researching.

How do we make this operation sustainable? We rehome our goats as pets or for small-scale breeding to keep our herd manageable, considering the size of our homestead. The rehoming fee goes to the goat shelters’ improvements and their food and vet expenses. We also offer advertising and stud services with our cutest and friendliest goats, a.k.a. “model kids.” One of our baby goats was recently featured in an ad campaign for a hard seltzer.

Instagram: @sadie_sankofa
Facebook: AnB Homestead; Sadie Sankofa Lifestyle
We wanted more animals and needed a larger backyard. Our chickens shared the converted shed with Ercan’s childhood friends: homing pigeons.
We’ve had several babies that brought joy to many families around our town. We shared our baby goats with new goat enthusiasts, as well as our first-hand experiences and the knowledge we gained by researching.
Bottle-Feeding Baby Goats

By Kate Johnson

Once your kids arrive, you will need to decide if they will be dam-raised or if you will be bottle-feeding baby goats. Reasons to bottle-feed range from promoting friendliness to managing the dam’s udder. Or you may be forced to bottle-feed because the dam can’t or won’t let the kids nurse or a kid is too weak or compromised to nurse. Whatever the reason, you likely have many questions, including:

- What kind of milk to feed baby goats?
- How to get a baby goat to bottle feed?
- How much milk to feed a baby goat?
- How long to bottle feed a baby goat?

What Kind of Milk to Feed Baby Goats:

When bottle-feeding baby goats, they first need colostrum. Ideally, the dam will produce enough colostrum that you can express her own into a bottle and immediately feed it to the kids. But suppose her fresh colostrum is not available for some reason. In that case, your other choices are to feed fresh colostrum from another doe that kidded at the same time, feed frozen colostrum that you saved from a previous kidding, or feed kid colostrum replacer. For this last choice, it is vital to ensure it’s kid colostrum replacer and not milk replacer. Newborn kids absolutely must get colostrum in the first 24-48 hours of life, or their chances of survival are low. Do not substitute any homemade replacer at this stage, and don’t try to get by with regular whole milk.

Once you get the newborn kid through the first 24-48 hours, then you can switch to milk. Ideally, you will have fresh goat milk available, as this is best. Many goat owners who choose to bottle-feed will milk the dam and immediately transfer the milk to bottles and feed it to the babies. Other goat owners prefer to heat-treat the milk to eliminate the risk of potentially passing CAE or other diseases from the dam to the baby. I do my CAE tests while my does are pregnant so that I know they are negative; then I feed the mother’s milk to the babies raw, which feels more natural to me, and I believe it contains more of the beneficial antibodies than heat-treated milk does. But if you do choose to heat-treat, remember that colostrum cannot actually be pasteurized because it will curdle, so it must be gently heated to 135 degrees F and held at that temperature for one hour. Regular milk can be pasteurized at 161 degrees F for 30 seconds.

If you don’t have fresh goat milk, then your choices are goat milk replacer or milk from another species. I have seen goat milk replacer recipes, but the advice I get from my veterinarian and goat mentors is that whole cow milk from the grocery store is adequate and appropriate if I don’t have, or don’t want to use, powdered replacers.

How to Get a Baby Goat to Take a Bottle:

If your newborn is healthy enough to have a strong sucking reflex, getting it to take a bottle will be relatively simple. I like to use the little red “Pritchard” nipples for newborns because they are smaller and easier to suck. Don’t forget to snip the tip of the nipple as it doesn’t come with a hole in it! Hold the bottle at an angle so that the milk flows downward, open the baby’s mouth with your fingers, and stick the nipple inside. I find it helpful to put gentle pressure on the top and bottom of the muzzle to help the baby hold the bottle in its mouth at first. A strong kid will generally be hungry and start sucking enthusiastically.

Colostrum cannot actually be pasteurized because it will curdle, so it must be gently heated to 135 degrees F and held at that temperature for one hour. Regular milk can be pasteurized at 161 degrees F for 30 seconds.
If the baby is too weak to suck, you may need to feed a few drops at a time through a medicine dropper. (Be careful not to put too much on its tongue or side of its cheek at once, or it could go into the lungs.) Or you may need to tube-feed the baby. I’ve also had babies that just needed to wake up a bit to get the sucking response going. I find that using a supplement like Nutri-Drench, some Caro syrup, or even coffee, rubbed on their gums is often enough to give them a little energy boost and get them eating.

How Much to Feed a Baby Goat:

How much your babies need depends on whether they are full-sized breeds or miniature breeds and how old they are. In general, try to feed three to four ounces per five pounds of weight per feeding. At first, you may be feeding every three to four hours, and then after a few days, you’ll spread this out to four feedings a day. You can drop that back to two or three feedings a day at about three weeks of age and then down to twice a day by six to eight weeks. You can feed once a day for the last month, as they should be eating some hay and grain by then, if not sooner.

Here are two useful charts to use as a starting point. You may need to modify the schedule and number of feedings per day based on your time constraints, but this is a good place to begin:

### Bottle-Feeding Nubian Goats (or other full-sized breeds):

<table>
<thead>
<tr>
<th>Age</th>
<th>Ounces per Feeding</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2 days</td>
<td>3-6 ounces</td>
<td>Every 3-4 hours</td>
</tr>
<tr>
<td>3 Days to 3 weeks</td>
<td>6-10 ounces</td>
<td>Four times a day</td>
</tr>
<tr>
<td>3 to 6 weeks</td>
<td>12-16 ounces</td>
<td>Three times a day</td>
</tr>
<tr>
<td>6 to 10 weeks</td>
<td>16 ounces</td>
<td>Twice a day</td>
</tr>
<tr>
<td>10 to 12 weeks</td>
<td>16 ounces</td>
<td>Once a day</td>
</tr>
</tbody>
</table>

Source: Kate Johnson at Briar Gate Farm

### Bottle-Feeding Pygmy Goats (or other miniature breeds):

<table>
<thead>
<tr>
<th>Age</th>
<th>Ounces per Feeding</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2 days</td>
<td>2-4 ounces</td>
<td>Every 3-4 hours</td>
</tr>
<tr>
<td>3 days to 3 weeks</td>
<td>6-8 ounces</td>
<td>Four times a day</td>
</tr>
<tr>
<td>3 to 8 weeks</td>
<td>12 ounces</td>
<td>Twice a day</td>
</tr>
<tr>
<td>8-12 weeks</td>
<td>12 ounces</td>
<td>Once a day</td>
</tr>
</tbody>
</table>

Source: Melanie Bohren at Sugarbeet Farm

How Do You Bottle-Feed a Baby Goat?

As a general rule of thumb, I try to feed doelings for at least three months and bucklings or wethers for at least two months. Sometimes I go longer if I have extra milk, but this seems to get them off to a good start, and by two to three months, they are eating grass, hay, and even some grain, so their need for milk reduces.

Bottle-feeding baby goats is a time commitment, but it’s also a fun way to bond with your babies and make them oh, so friendly!
SOMETIMES, CIRCUMSTANCES make artificially raising a kid goat best for the kid or the dam. It is essential that when we raise a baby of another species, we consider the risk of imprinting.

Imprinting is when an animal no longer recognizes you as a different species, and it is easy to do inadvertently, especially when raising bottle baby goats. Aggression toward humans is often a symptom of blurred boundaries. Unlike aggression from a goat feeling threatened by a history of abuse, the imprinted goat feels no threat and does not recognize a hierarchy. It does not see itself as different from the handler and will challenge the handler as one of its own. Bottle-feeding is not a recipe for disaster; it depends on how you bottle-feed.

Charlotte Zimmerman of High Uinta Goats, LLC rents pack goats to the public. They have both dam-raised and bottle-fed goats. “It is important that a goat’s first interaction heavily involves its mother or another goat. This is the first 24 to 48 hours and will forever impact its interactions in the herd and with its handler.”

In our herd, we start them on a bottle for a week — and then switch them to a bucket to lessen the degree of imprinting on us — so they stay goats. We bring the bottles to them; they stand on the ground to eat and never leave the herd. While very fond of us, many still retain attachments to their mothers. Although they don’t feed them, mothers nurture, discipline, and protect them.

There is a wide spectrum of imprinting; it ranges from benign to dangerous, depending on how the kid is isolated from other goats and handled by people. It is more often hazardous in the case of imprinted intact males when they become bucks, but it can result in pushy, demanding, disrespectful animals of any gender.

Elisa Teal of Dreamcatcher Dairy Goats in Spirit Lake, Idaho, sees a difference between two of her artificially raised bucks. One was raised exclusively on the bottle; the other was started on a bottle and switched to the bucket. “The bottle-fed buck is the only buck we’ve owned who is relentless during rut, and he is obsessed with trying to mount us humans. The other acts like a typical buck in rut and doesn’t come after us. It makes me want to rethink some things. Luckily, he is not aggressive, but we plan to castrate him.”

Micki Ollman has an end-of-life sanctuary for farm animals, Sherrod Grove Stables, in North Carolina. They took in an abandoned goat who gave birth to twins and was unable to nurse them because of
Unlike aggression from a goat feeling threatened by a history of abuse, the imprinted goat feels no threat and does not recognize a hierarchy.

mastitis. Micki raised the bottle babies in the house, as part of the family. They even traveled with them. The male, Fergus, was left intact. As he went through puberty, Micki says, “He was still my boy, always a sweetheart.” Then Fergus was moved to another pasture so he wouldn’t breed his mother or sister. For a year, he followed the same routine, with Micki coming into the pasture to feed him. Then one day, two-year-old 200-pound Fergus attacked her. “I honestly thought I was going to die. I felt helpless and was completely unprepared. I would have never believed it until it happened to me. He knocked me to the ground. I put my feet up, and he slammed the soles of my boots. He gored me in the arm and side. It went on for 30 minutes before I was able to get away. He bruised my legs from my hips to the soles of my feet.” She is unsure if Fergus meant to hurt her or wanted to play. “I don’t think he realized I couldn’t play that way. I never allowed him to jump on me or head butt, but he had never been with goats other than his mother and sister. I was his herd.” Micki shared her experience with other goat people and was surprised to hear that her experience was not uncommon. Fergus was not aggressive with anyone else — only Micki, the person that raised him.

There is a difference between socialization and imprinting. Imprinting is not required for a goat to be a friendly pet. Holding, cuddling, and playing with baby goats to help them learn to trust humans is different. It is called socialization. We prefer socialized dam-raised kids, as they learn herd “manners” and how to be a goat. We separate them from their dams at weaning, and they crave contact. It is a window of opportunity to create a bond but requires an investment of time.

It boils down to what do you want from your goats. Do you want an “in your face, in your pocket, attention hog?” Bottle feed by hand, with baby in your lap. Treat it like a member of your family. Do you want a loyal friend? Bottle/bucket or dam feed; and love of them every single chance you get, as many times a day as you can manage. The more time you spend with the goat, the more loyal it will be. Allow it time and opportunity to be a goat also.
Baby Nigerian Dwarf Goats for Sale!

Striving for Excellence in Breeding Nigerian Dwarf Goats

STORY AND PHOTOS BY REBECCA KREBS

Breeders offer thousands of registered baby Nigerian Dwarf goats for sale each year. The brisk demand and the ever-growing number of enthusiasts reflect this relatively new breed’s explosive popularity, contributing to its establishment and rapid improvement as a practical dairy goat. However, the popularity has also resulted in many sellers capitalizing on the demand by flooding the market with poor-quality Nigerian Dwarf kids advertised and sold as “excellent” registered breeding stock. This is a significant issue that we breeders must address if we are serious about improving and promoting the Nigerian Dwarf breed.

Nigerians have a unique set of dairy merits — their small size makes Nigerian Dwarf goat care and handling easy compared to larger dairy animals. Their milk’s superior butterfat content is ideal for cheese, butter, and soap. These merits guarantee that the Nigerian Dwarf’s popularity will continue to increase with the current trend toward homesteading. The only danger is that the propagation of so many inferior, unproductive goats will undermine public confidence in the breed’s dairy potential. I have already seen many breeders with low standards harm their own herds’ reputations; educated customers become wary of them as word gets around that “you have to be careful what you buy from so-and-so.”

Some of these “breeders” are, of course, no more than kid mills with the sole goal of pumping out kids for cash. Others are well-intentioned individuals trying to make their homesteads profitable by selling most of their kids as registered breeding stock since they can charge more for those than for unregistered pets. Or they might mistakenly equate cute and colorful with conformationally correct. However, dairy goat breeders that understand and adhere to high standards for breeding stock selection ultimately realize more profits because they earn customers’ trust. These breeders can promptly sell kids while commanding top-dollar prices.

For both the success of the breed and our reputations as breeders, it behooves us to institute careful selection policies and offer only quality baby Nigerian Dwarf goats for sale as registered breeding stock.

A quality Nigerian Dwarf dairy goat conforms to the Nigerian Dwarf standard for correct conformation, dairy characteristics, and productivity as recognized by registries such as the American Dairy Goat Association, the American Goat Society, and the Nigerian Dairy Goat Association.

We must familiarize ourselves with the standard to make proper decisions about which kids qualify to register and sell as breeding stock. Studying dairy goat judging scorecards and training material, linear appraisal scoring systems, and program information about milk production offer deeper insights. Registries provide these
resources on their websites or in their membership material.

It is helpful to supplement study with attending shows or linear appraisals to see real-life examples of good and bad traits in dairy goats. Participating in these events with our goats is beneficial, but if we cannot do so, simply watching and listening as veteran dairy goat judges and breeders share their wisdom is an invaluable learning experience.

Once we understand dairy goat conformation and production, we can adequately evaluate our goats’ genetic potential. Poor-quality goats are unlikely to give rise to high-quality offspring spontaneously. Dairy goats are female-centric livestock (female traits are the most economically valuable), so it is necessary to consider the dam’s, sire’s dam’s, and other close female relatives’ conformation, udder structure, and milk production when analyzing a kid. To this end, long-term milking and recording milk production are important routines to include in a breeding program. They verify whether a doe has the production capacity and stamina over a complete lactation to make her a genetic asset for breeding Nigerian Dwarf goats.

Selecting a kid for traits that won’t be apparent until adulthood, such as milk production, relies entirely on the information collected from its mature relatives. On the other hand, many of a kid’s structural traits are obvious within a few weeks of birth and should be evaluated for conformity to the standard before the kid is considered for breeding stock. Just because its pedigree is impressive doesn’t mean the kid is. Some say that it doesn’t matter what the kid looks like — as long as the parents are nice, it carries the genetics to produce excellent offspring. In my observation, this argument is only valid for kids coming out of highly consistent, genetically homogenous herds. Even some top-performing Nigerian Dwarf herds are not yet consistent enough to ensure that a mediocre bloodline representative will produce superior offspring. While there are notable exceptions, a so-so goat is a genetic gamble unless it has mature, full siblings that dependably produce quality offspring.

We should hold buck kids to an exceptionally high standard before registering or selling them as breeding bucks. A doe produces relatively few kids, so working a fault out of her line has little negative impact on the rest of the herd if appropriately planned. But a buck can contribute genetics to every kid born in the herd, potentially setting the entire breeding program several years behind if he passes on a problematic fault.

So, what do we do with kids that don’t qualify as breeding animals? The current market comes to our aid here, and castrated male kids (wethers) easily find their niche as loving family pets. Unregistered doe kids are often in even higher demand than wethers because there tend to be fewer females available for pets.

No goat is perfect. Each breeder must decide which faults they will tolerate and which ones they won’t. Breeders also naturally emphasize different features in their herds — for instance, breeders that use milk machines may not have a size preference for their does’ teats. In contrast, hand-milkers are sticklers for large teats since they are decidedly easier to hand-milk. Breeders must make these types of program policies individually with due consideration as to how they will affect personal satisfaction, breeding goals, sales, and the future of the Nigerian Dwarf as a respected dairy goat.

**REBECCA KREBS** is a freelance writer who breeds registered Nigerian dwarf goats at Krebs Dairy Goats in the Rocky Mountains of Montana. She enjoys pouring over pedigrees and participating in the DHIR milk test program. Find her farm online at www.krebs.farm.
SUPERFETATION IN GOATS is a rare but possible circumstance when a doe gives birth to kids of different gestational ages. The simple explanation is that the doe somehow cycled into her next heat a few weeks after being successfully bred and was then bred again, with both pregnancies continuing. This is common in some freshwater fish species and small mammals, such as the European brown hare. It is hypothesized in other animals but not proven. How could this happen? Why doesn’t it happen more often? We will need first to explore the goat reproductive system.

When a goat (or most other mammals) ovulates, the release of the egg from the ovary makes a spot that produces progesterone. If the egg is fertilized and implants, this spot, known as the corpus luteum, continues to produce progesterone throughout the pregnancy, which prevents further ovulation, among other things. Progesterone also prevents any future sperm or bacteria from entering the uterus by forming a mucus plug right inside the cervix (opening to the uterus). The body is rather good at preventing the possibility of superfetation or another pregnancy occurring after the first begins. (Spencer, 2013) (Maria Lenira Leite-Browning, 2009)

The corpus luteum does not prevent the doe’s ovaries from releasing multiple eggs simultaneously or within a day or two of each other. This can cause another interesting phenomenon of the same litter of kids having multiple sires. The buck’s sperm has a lifespan of only 12 hours, so being bred by multiple bucks is entirely possible. This is called superfecundation.

While not impossible, several factors must come into play for superfetation to happen in a goat. First, the progesterone levels must not be able to prevent ovulation. Whether this occurs because the levels are lower than in a normal pregnancy or because the ovary could develop and release another egg regardless of hormone levels, we may never know. Because goats form a mucus plug on the uterine side of the cervix, sperm from another mating would need to bypass this plug somehow. A poorly defined cervical seal is possible and may allow this. Last of all, the sperm would need to traverse somehow the pregnant uterus, which will be larger than usual with obstacles (developing kids) to overcome.

Many biological processes occur to prevent the possibility of superfetation, but we all know that nature isn’t perfect. Animals with a bicornuate uterus (having two “horns” rather than one large body) have a greater
chance of experiencing superfetation, especially if the first pregnancy only has young developing in one horn. This would allow the fertilized egg to have a space to implant that wasn’t already supporting growth.

Superfetation can only occur in goats (or other animals) with a heat cycle shorter than the length of pregnancy. Seasonal breeders cycle every 18-21 days during the “heat” season. Because three weeks pass between ovulation, the second pregnancy would be underdeveloped when the first is ready for birth. It is unlikely that the underdeveloped kid would survive — however, a few documented instances have occurred of an animal giving birth to fully developed young several weeks apart.

The animals experiencing superfetation as a normal part of breeding do not express it in the same way as accidental superfetation. The American mink and European badger experience superfetation in which breeding happens before the birth of the first litter, but the embryo experiences “diapause.” Diapause is when the embryo stops developing for a time before resuming development. Sometime after birth, the new embryos continue development. The European brown hare has a similar system in which they enter estrus shortly before giving birth, and the fertilized egg implants shortly after the birth of the current litter. These forms of superfetation may be more properly termed “superconception” and “superfertilization,” because neither have two fetuses developing simultaneously but weeks apart in developmental age. (Roellig, Menzies, Hildebrandt, & Goeritz, 2011)

Superfetation is an exciting explanation for size discrepancies in the birth of kids. However, other factors can cause kids to be significantly different in size yet have the same conceptual age. Genetic defects can cause one kid to be unhealthy, thereby smaller. Often kids are just different sizes, even in the same conception. Does may abort one or more fetuses but retain others, carrying them to term. Some does may also steal the kids of another who birthed unobserved and birth their own later, causing confusion.

While superfetation in goats may be rarer than many believe, it is hardly impossible. There are not many ways to prove a case of superfetation, which is why it has not been extensively studied. A pregnancy would need to be followed with ultrasound imaging from the beginning to confirm superfetation. However, I don’t believe there are any “superfetation police” out there, ensuring that every claim is verified.

Have you experienced superfetation in your herd?

REBECCA SANDERSON grew up in a very small town in Idaho with a backyard full of chickens, goats, sometimes sheep and ducks, and other random animals in addition to the cats and dogs. She is now married with two little girls and loves the homesteading life! Her husband is very supportive (tolerant) of her continued experiments in making many items from scratch and he even helps sometimes.

SOURCES
Why do goat birth defects happen?

By Karen Kopf

The goat fetus goes through known developmental stages within the womb. If all goes well, the outcome is a healthy baby goat. Unexpected outcomes range from unusual to unsustainable deformities in rare cases.

When a three-legged calf was born on their ranch, Shelby Hendershot became fascinated by the odd and unusual. She created a Facebook group called “Livestock Born Different” as a place for people to share their animals and to acquire specimens to photograph, preserve, and feature in a future book. She doesn’t diagnose causes within the group, though people with similar experiences share their knowledge. She is not alone in her interest; a branch of science called teratology studies developmental abnormalities.

Not all birth defects are genetic. Teratology focuses on teratogens, which disrupt pregnancy or fetal development. There are four categories: physical agents, metabolic conditions, infections, and chemicals. Radiation from x-rays or elevated temperatures from an environment or illness are examples of physical agents. Metabolic conditions relate to nutrition and can be as simple as a deficiency or as complex as a disorder. Infections from some bacteria and viruses are known to impact gestation. Chemicals from medication or plants can also have adverse effects. In many cases, the effect depends on timing and point of development.

In 2017, a one-eyed goat born in India captured the world’s attention. The condition is called cyclopia and results when the...
brain’s hemispheres do not divide, nor do the eye sockets. In most cases, the condition is rare, but in the 1950s some ranchers in southern Idaho had as many as 25% of their lamb crops with facial deformities. The Poisonous Plant Research Laboratory in Logan, Utah, determined that a plant growing in their environment, *Veratrum californicum*, California False Hellebore, was the cause. The specific chemical was not isolated until 1968 and appropriately named Cyclopamine.

Cleft palate (palatoschisis) and other skeletal malformations of the spine, limbs, and ribcage can be genetic in goats and environmental. *Conium maculatum* (poison hemlock), *Lupinus formosus* (luna lupine), and *Nicotiana glauca* (tree tobacco), all alkaloid plants, induced defects when consumed between 30-60 days gestation (Panter, Keeler, Bunch and Callan, 1990.) In a cleft palate, the roof of the mouth fails to fuse, leaving an opening. In some cases, the lip is also affected. Kids born with a cleft palate may have difficulty nursing and risk aspiration (breathing milk), resulting in pneumonia.

Other facial deformities, often due to inbreeding, are parrot mouth and monkey mouth — overbite and underbite, respectively. While animals with this deformity are generally only mildly affected, it is not recommended to use them in future breeding.

**ACHONDROPLASIA** — or dwarfism — can result in short limbs, but in some cases, it results in abnormal spine growth. It is caused by a genetic mutation, though only one in five human cases is inherited. It is autosomal recessive, which means two copies of the mutated allele are needed. The risk of autosomal recessive traits being expressed increases with inbreeding.
Nicole Kiefer of Sunset Goat Ranch, in central Texas, has raised Boer and Boer cross goats for 14 years as a hobby. She purchased a group of does from a local auction and had a buck from a neighbor. She had a farm-sitter who didn’t close a gate, and the bucklings covered their dams and siblings. As a result, some of the offspring were closely inbred. A set of twins was born: one normal, the second without a neck, no tail, closed ears, and his rectum almost on top of his back. “He was adorable. We named him Quasimodo. He looked like a little white buffalo when he ran. He was so fast; we couldn’t catch him.” Then a second set of twins were born, both without necks. In cattle, the young are called “bulldog calves,” also called “short spine syndrome.” Nicole had never seen it or heard of it in goats. She shared pictures on the “Livestock Born Different” page and found she wasn’t alone.

Quasimodo required no assistance, but the second twins couldn’t stand for a few weeks, and Nicole raised them on the bottle. They were accepted and jumped and played like other goats when they returned to the herd. One of the twins only lived six months, and the other passed at one year, the cause unrelated to his birth defect.

Interestingly, a fetus’s brain forms simultaneously as the skin and hair. Abnormal scalp and hair patterns with absent or aberrant whorls may be seen on the heads of children with abnormal brain development (Wade and Sinclair, 2002.) A long-standing practice of predicting temperament by the pattern and position of a whorl on horses and cattle has a basis in brain science. While we don’t tend to examine the whorls on a goat’s face with much interest, this year, one of our kids presented with a fascinating pattern. Angelika is a Saanen cross with a facial rosette that is impossible to miss. She has other abnormalities but has never required special care apart from the herd.

**OTHER “SKIN DISORDERS” ARE GASTROSCHISIS AND OMPHALOCELE — where the abdominal wall or umbilicus do not close, due to genetic defects or teratogen. The kid is born with internal organs outside of the body cavity in these cases. In other cases, such as “atresia ani” (imperforate anus), the cavity fails to open, and the kid cannot void waste. Surgical correction is possible, but the survival rate is not high, as these defects generally co-occur with other disorders.**

Sometimes the deformities are so great that the fetus is not viable; the doe reabsorbs it, or the fetus dies before birth. This can result in abortion, but they can be carried to term with developing fetuses. If the kid is born at term, developed but nonviable, it is stillborn. If a kid is born at term, at an arrested state of development and decayed, it is
Mummification occurs when a kid dies in utero and the doe’s body isolates it to protect herself and the other kids from infection. Mummification generally presents as discoloration and sunken eyes.

A preterm death. The doe’s body isolates the kid and protects itself and the other kids from infection through mummification of the undeveloped kid. Mummification generally presents discoloration and sunken eyes. It is best to handle aborted, stillborn, and mummified kids as an infectious biohazard. The only way to know what caused the kid to stop developing is to have a necropsy performed. While many disease processes can cause preterm death, disease is unlikely to affect only one fetus. The most common causes are: poor fetal attachment to the placenta, a congenital defect that prevents the kid from being viable, inadequate nutrition to support the developing fetuses, or maternal/fetal injury such as a blow to the side. We have seen two mummified kids in the hundreds of kids born on the ranch — one in a set of quintuplets and one in a set of triplets. The surviving kids were completely unaffected, as were the does.

Some defects are cute, and the others catastrophic. Breeders can lessen the risk of deformities by pairing unrelated animals to prevent the genetic risk of inbreeding and monitor their goats’ environments to reduce teratogens. However, random mutations can and do occur even in the best-managed herds. When a baby goat presents with a birth defect, the breeder faces difficult decisions. Will the goat enjoy the quality of life? Can the breeder provide any needed supports or interventions? If the animal can survive and thrive, it can enjoy life but should be removed from breeding herds. The breeder should be prepared to execute humane euthanasia if the animal suffers.

It can weigh heavily thinking of all of the things that can go wrong, but more often than not, everything goes right.
MEDICALLY, A URACHUS is the remnants of a tube connecting the fetal urinary bladder to the amniotic sac through the belly button. It is how the fetus urinates during the first few weeks of gestation. During normal development, as the pregnancy progresses, this channel is sealed off. The tube becomes a fibrous cord between the bladder and the belly button called the median umbilical ligament.

Patent urachus is a syndrome that occurs when this opening does not seal off correctly, and urine leaks through the umbilical cord. It can be a congenital defect but can also occur related to birthing trauma, causing tension on the umbilicus or partial urethral obstruction. In some instances, it can even happen when the cord stump is damaged enough that the tube reopens.

A friend of a friend had a doe born with patent urachus, and I, being the anatomy and physiology nerd that I am, was instantly interested and just a little emotionally invested. I did a deep web dive to learn more about the finer details, then reached out to Julie Peterson, famous goat guru of my area and owner of the goat.

“Be cool,” I thought and cold-called her. Thankfully Julie was more than happy to answer my questions and share her experience.

The mother of the doeling was a 2018 Nubian that Julie had retained for her breeding program. Last year she had a single kid unassisted, and it was her first freshening. The birth had gone great, and both mom and kid were doing well.

“We normally do three-hour checks on our newborn kids, and this doeling was born late in the afternoon. So, at the next check, we noticed wetness around the cord.” At first, Julie thought it might be bleeding. The dam was attentive to her kid, and the cord was short from her cleaning the site. “After the baby nursed, we witnessed a stream of clear liquid from her belly. We were shocked, and we double-checked that she was indeed a doeling.”

A Story of Patent Urachus

BY LACEY HUGHETT
Common signs of patent urachus are incontinence, urine leaking from the belly button, urine scalds on the belly, and lasting umbilical wetness. Julie Googled her concerns and came up with a tentative diagnosis. She also reached out to other local goat owners and spoke with her daughter, who was doing pre-vet work at the state university, who confirmed the diagnosis.

She found some information online about horses with patent urachus, but not much about goats with the condition. Luckily, the situation in foals usually corrects itself within 72 hours as the opening heals and closes. If it doesn’t, vet care is needed. Julie planned to call the vet and set up an appointment the next morning if there were no signs of improvement.

At the next three-hour check, they saw the doeling urinate out of both the belly button hole and her urethra, so they knew she could go normally. The doe was healthy, happy, and behaving normally, so Julie penned her up in a clean stall with her dam, and they monitored the situation.

The next day, 24 hours later, the doeling urinated normally, signaling that the hole had closed. “There were cheers,” Julie reported. “She went on to be a normal, healthy goat without any further medical concerns.”

Julie Peterson’s Nubian kids.
Anyone who has spent time watching for a specific goat to do a particular behavior related to a health concern can relate to Julie’s relief. Goats do not like to perform while we are watching, and the waiting game is undoubtedly a nerve-wracking one.

In rarer cases, the opening does not heal, and the kid continues to urinate from its belly button. When the area does not close on its own, the animal is more likely to get urine scald or infection. Creams can be used as a barrier to discourage scalding, and broad-spectrum antibiotics could be given to fight or treat an infection. Interestingly, vets can prescribe antibiotics that are more concentrated in the urine to help with antibiotic access to the infection site.

If an infection is the result or cause of patent urachus, a veterinarian needs to be on board. Not all types of antibiotics can treat this kind of infection, and the ones that do may require the vet to monitor kidney function and enzyme level. It can become serious if not treated correctly.

Patent urachus is not as common as some other kinds of kidding crises, so it’s not as spoken about in goat circles. But it’s still a fascinating condition to learn about, a great talking point, and an excellent addition to anyone’s knowledge base.

Patent urachus usually resolves on its own without treatment.
A normal live birth in goats occurs at 145-155 days. Day 147 is 21 weeks’ gestation, or approximately five months.

LENGTH OF FETUS AT 30 DAYS: 1.4 cm  |  LENGTH OF FETUS AT 145 DAYS: 43.0 cm

20 days (3 weeks)
Heartbeat becomes apparent.

21-35 days (3-5 weeks)
The lung buds branch and form into the two principal bronchi.

28-35 days (4-5 weeks)
Limb buds become apparent.

35-42 days (5-6 weeks)
Differentiation of mouth, hoof digits, and dew claws.

42-49 days (6-7 weeks)
Nostrils and eyes become apparent; mammary buds form in females; empty scrotal sacs form in males. Jugular vein is barely visible through pink skin.

42-84 days (6-12 weeks)
Differentiation of bronchial divisions; their air-conducting system becomes established, lined with pseudostratified and/or single-walled columnar epithelium.

49-56 days (7-8 weeks)
Eyelids close; ear canal opens; membranous soft center develops in the top of the head.

56-63 days (8-9 weeks)
Jugular vein, facial vein, and scrotal vessels become visible; nostrils open.

70-77 days (10-11 weeks)
Hairs appear on eyelids.

77-84 days (11-12 weeks) — Horn pits appear; ear veins become prominent; hairs grow on eyelids and muzzle.

84-91 days (12-13 weeks) — Hairs appear on forehead; pigmentation develops around horn pits; testes become palpable in scrotum.

91-98 days (13-14 weeks)
Skin is whitish and thicker. Jugular, facial, and scrotal veins are no longer visible; ear veins are visible. Hairs appear along top of the neck. Top of the head hardens. Respiratory bronchioles develop quickly, primitive alveoli develop, respiratory bronchioles and primitive alveoli are lined by cuboid cells.

98-105 days (14-15 weeks)
Temporary tooth buds just appear. Hair appears around eyes and muzzle, and on chest; eyelids separate.

105-112 days (15-16 weeks)
Body sparsely covered with hair, except limbs. The respiratory divisions develop dramatically; lungs assume a more “aerated” appearance.

112-119 days (16-17 weeks)
Dense hairs cover body and limbs; tooth buds become prominent.

119 days (17 weeks)
One to three incisors barely erupted in females at birth; incisors at gum line in males at birth.

119-154 days (17-22 weeks)
Alveoli develop and differentiate into flattened (type I cell) and cuboid (type II cell) epithelial cells — here the baby can breathe on its own.
I’ve bred dairy goats for about 12 years and last year was the first time I used a kidding camera! What was I thinking before? That multiple nighttime trips to the cold barn were fun? That being unable to run errands a week before or after due dates was a minor inconvenience? Well, call me slow. Still, I finally realized there was a better way to be present when new kids arrived without upending my life.

Farm security camera choices were overwhelming, so I asked for advice from someone who had already done the work: my good friend Laurie Stutz at Tall & Small Dairy Goats near Fort Collins, Colorado. She replied that “Purchasing a barn camera is on the top of my list of must-haves to make it through kidding season … worth its weight in gold. Save just one kid, and you’ve more than covered the coast of the entire setup.” Laurie used a Google NEST camera, and since she was happy with hers, that’s what I bought. It was easy to purchase and install. With a little help from my husband, we were up and running in no time.

I lost a lot of sleep the first night because I was so darn curious about what my doe did all night that I couldn’t stop staring at the monitor from the comfort of my bed. I was amazed at how much she moved around in her stall. But after the first night, I only checked in occasionally. I also ran errands, checking on her from the grocery store or waiting in line at the post office. And when two of my three first kiddings happened during snowstorms, it was a joy to sit by the fireplace sipping a glass of wine, eating goat cheese, and watching the goat stall on my kidding cam until delivery was imminent. Yes, worth its weight in gold!

Emily Hansen of Blessed Quiver Farm in Ignacio, Colorado, shared how her Reolink Argus Pro Cam saved her sanity as well as a doeling’s life. Her doe went into labor on a cold February day when Emily was home with four young (human) kids. She couldn’t camp out in the kidding stall the whole time but watched on the camera and ran out when the doe started pushing two healthy kids. She thought the doe was done, so she went back inside, but as she watched on the camera, the doe started pushing again. After 30 minutes with no new baby emerging, Emily went back out to the barn, rearranged the stuck doeling, and
pulled her out safely. I’d say her camera paid for itself that day!

**Convinced? Here are some things to consider before purchasing your Nanny Cam:**

**“MUST-HAVE” FEATURES:**

1. **Remote viewing on phone or computer:** Run errands, stand inside — no need to be tied to the barn 24/7 around due dates.

2. **Good night vision:** Be able to see what’s going on in the barn while you’re warm and cozy in bed.

3. **Weather-resistant design:** Even if your camera is going in a barn stall, buy something intended for outdoor use. There will be wild temperature fluctuations, dust, moisture, and potential wind in your barn.

4. **Sound:** Be able to hear what’s going on so you can listen for that “pushing” vocalization.

**OTHER FEATURES TO CONSIDER:**

1. **Wireless vs. wired:** If you have electricity and an outlet near your kidding stall, a plug-in may be fine. But if you want more flexibility in placing your camera or having no electricity, consider a long-range wireless camera that runs on batteries.

2. **Barn camera without Wi-Fi:** If you don’t have internet, have no fear. You can purchase a cellular wireless barn camera. You can also get barn camera systems that connect and run on their proprietary networks once turned on.

**OTHER CHALLENGES AND SOLUTIONS:**

1. **Batteries:** Some versions use up battery power quickly, and although they may come with rechargeable batteries, these can be expensive. Other systems only use the battery when you are actively watching, which makes them last a lot longer. And still other models have optional solar chargers.

2. **Metal barns can interfere with Wi-Fi signal:** I have a wooden barn and had no problem having my Wi-Fi go through several walls between my house and the kidding stall. But if you have a metal barn, a Wi-Fi extender can improve the connection.

3. **Privacy concerns:** Some people may be concerned about hackers breaking into their security systems or being spied on and listened to by someone else. If this device were in my home, I’d be more concerned about these issues than with a camera focused on my kidding

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stall. If hackers want to watch my does labor and deliver, have at it! But seriously, there are ways to protect yourself from intrusions, including:

- Choose a router with Wi-Fi protected access, which encrypts your data.
- Use a strong password.
- Use two-factor authentication if it’s offered.

https://www.usnews.com/360-reviews/security-cameras/how-to-keep-your-security-cameras-safe

WHERE TO BUY BARN SECURITY CAMERAS:

Expect to spend $70 to $200 for a decent camera. There are hundreds of options, and this is not meant to be an exhaustive review, but here are some thoughts about where and how to buy yours:

1. My favorite method is word-of-mouth: Talk to friends about models and what they like and dislike about their systems. Then find out where they got theirs and how satisfied they were with the shopping experience.

2. For advice and to have your questions answered by a live salesperson, consider shopping at a store like Best Buy, Radio Shack, Lowe’s, Home Depot, or Target.

3. Shopping online is sometimes more efficient. Comparison-shop and read reviews at all of the above store websites plus Amazon.

4. If buying American is important to you, look for Honeywell, Ubiquiti, Speco Technologies, and Digital Watchdog.

https://www.a1securitycameras.com/non-chinese-security-camera-manufacturers

Most security cameras come with a limited warranty, but check the details for the specific camera you choose.

While I mainly use my barn camera to watch for signs of labor and delivery, there are other useful reasons to have a barn camera. This includes checking on mama and baby after delivery to make sure mom is eating, and babies are nursing and active. You might also be on the lookout for predators or other intruders. The bottom line is that a kidding camera keeps you more connected to your animals. And who knows what you’ll learn from watching them when they don’t know you’re looking!
10 WAYS TO IDENTIFY GOAT PREGNANCY

By Gail Damerow

If you must know whether your goats are pregnant, you can spend money on blood tests, X-rays, or ultrasounds. But all pregnant goats show some visible signs.

1. FAILURE TO RETURN TO HEAT.
The heat cycle can be from 17-25 days. Pregnant does will display little interest in bucks. At the end of the breeding season, an unsettled doe may not come back into heat.

2. APPETITE GOES UP, MILK PRODUCTION GOES DOWN.
A pregnant doe's appetite gradually increases. Milk production may decrease as her udder recedes. If still milking, stop no longer than 120 days after breeding, to give her body a rest.

3. THE DOE'S BELLY TIGHTENS.
Two weeks after breeding, her belly will tighten. Firmly press your fingers against her belly just in front of her udder. A settled doe's belly will feel tense and tight. An unbred doe's belly will feel soft though she may tense out of nervousness.

4. THE DOE'S PERSONALITY CHANGES.
Thanks to the hormone progesterone, a doe that is normally friendly toward you may become standoffish. A typically shy doe may suddenly become your best friend. This change only lasts during the pregnancy.

5. THE BUCK'S PERSONALITY CHANGES.
If the doe is still housed with the breeder buck, an otherwise gentlemanly buck may become aggressive toward the bred doe or start keeping her away from the grain feeder.

6. THE DOE'S BARREL SWELLS.
Some pregnant does fill out right away. Others don't show until several months after being bred, appearing to balloon overnight. If you measure each doe's barrel at the time of breeding, and then regularly each month, you can detect gradual increase.

7. THE DOE'S SHAPE CHANGES.
The doe's right side may stick out farther than the left. Swelling on the left side indicates a full rumen, although multiple kids may press into the rumen and cause her to bulge out on the left as well, giving the doe a boat-like appearance. Some does develop a saggy belly. Others barely show until six weeks before labor begins.

8. THE DOE SNORES.
All goats sometimes snore when they’re resting, especially while taking a siesta on a hot summer afternoon. But during pregnancy they snore more and louder than usual.

9. THE DOE'S UDDER SWELLS.
The udder may not fill out until days before kidding. During a doe's first pregnancy, her udder should gradually develop about six weeks after she settled and become rounded by 12 weeks gestation.

10. THE KIDS MOVE.
About four months gestation, you may feel movement, especially if the doe is carrying more than one kid. If you like surprises, you could always use the wait-and-see method. You will know your doe was successfully bred when kids suddenly appear in your barn.

*Original story by Gail Damerow, published in 2015.*
The Power of Grazing for Wildfire Management

IN 2021, WILDFIRES BURNED more than six million acres in the United States. From Texas to Colorado and up and down the West Coast, they destroyed range, forest, grassland, and structures, stretching crews from coast to coast as firefighters mobilized to battle the blazes.

In California, significant resources are invested annually to protect life and property in preparation for fire season and reduce available fuel.

Since the 2018 Camp Fire, the most destructive and deadly wildfire in California’s history, the state has continued to invest in innovative, multi-pronged fire-management strategies for areas where machines and people really can’t go: hungry goats.

California’s Department of Water Resources (DWR) is one agency that has used goat (and sheep) grazing during the past few seasons, specifically in the area around the reservoir Lake Oroville, which was heavily affected by that devastating fire.

Kryssy Mache, Environmental Scientist with the Oroville Field Division (OFD) of the California DWR, manages that division’s Fuel Load Management Program. Grazing was first used as a strategy around Lake Oroville the following spring.

“The goal of this grazing project was to reduce resprouting from burned trees and shrubs and to keep grass height minimal,” said Mache. “It is good to have many tools in the toolbox. DWR has hand crews, heavy equipment, grazing, prescribed fire, mowing, and herbicide application to achieve fuel load management plan goals. Each treatment method
has advantages and disadvantages, and costs vary. A combination of treatment types is often the preferred approach."

**Spring Time is the Right Time**

DWR tries to schedule grazing projects in the late spring or early summer when vegetation is thriving to minimize ground fuel growth and thin ladder fuels — the plants that help fire climb — which helps lessen the spread and intensity of a potential fire.

How long the goats need to work depends on the acreage, terrain, how accessible it is, and the number of grazers available. Land managers can graze from five to more than 100 acres depending on funding and available resources.

The goats graze on grasses, leaves, poison oak, and various shrubs and trees, making them effective tools to reduce ground fuels and overgrown vegetation. Additionally, standing on their hind legs, they can take down those ladder fuels up to six feet high, reducing the risk of ground fires reaching into trees. And they love to eat weeds, especially invasive ones.

Scheduling grazing projects in late spring or early summer minimizes ground fuel growth and thins ladder fuels.
Local Projects for Local Contractors

That first year, contractor Capra Environmental brought in 400 Boer Spanish cross goats and Dorper sheep to graze about 10 acres in five days.

To prepare for the 2021 fire season, DWR partnered with Butte County Fire Safe Council and Hanski Family Farms LLC to graze two more areas in and around Oroville.

First, five acres bordered private property to the east and the Feather River to the west were cleared in only a few days.

“This was to help lessen the spread and intensity of a fire so we can keep it out of residential areas,” said Mache.

Then in June, 1,600 goats and sheep grazed approximately 35 acres along with the Federal Energy Regulatory Commission (FERC) project boundary that borders Kelly Ridge to the west and Lake Oroville to the east. CAL FIRE had previously identified the Kelly Ridge area as an area of great concern because wildland and development meet and are densely populated. Users of the popular Dan Beebe and Bidwell Canyon trails immediately noticed fewer shrubs and grasses along the trail.

DWR plans to continue to expand grazing efforts to focus on various areas of critical infrastructure around Lake Oroville and areas adjacent to residential areas — so if the Lake Oroville area is home, be on high alert for working goats.

A Sustainable Fuel Management Solution

Grazing is gaining popularity across the country as a sustainable method to minimize risk and reduce wildfire spread through vegetation management by reducing ground fuels. State, federal, local agencies, non-profits, and private property owners now use grazing as a highly effective tool, both in the efficiency of the goat’s work and the cost.

The American West’s vastness and the diversity of its landscapes make many wildfire-prone regions particularly challenging for humans and machines. Getting there is hard enough in the first place, with roads and even towns and cities scarce and far between and forest access roads often accessible for only a short time each summer.

It’s a good thing goats are sure-footed and always hungry.

JENNY ROSE RYAN is a writer, editor, and communications consultant in the Pacific Northwest who tends an urban menagerie that includes hens, dogs, guinea pigs, and whatever she says yes to next. Originally from rural northwestern Wisconsin, she seeks to honor the hardworking farm workers and tillers of the land by bringing her city soil back to life and helping to empower others in their own attempts.

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HAVE YOU EVER THOUGHT ABOUT whitewashing your barn’s interior? No? Well, maybe you should. If you think whitewashing was relegated to the realms of 19th-century fiction, think again. This ancient technique is every bit as useful in modern times.

Whitewashing — the process of painting surfaces with a lime-based spread — dates back literally thousands of years. Ancient Mesopotamia, Egypt, Greece, and Rome had whitewashed structures. More recently, it’s strongly associated with Medieval and Renaissance Europe and Colonial America.

Whitewash was popular for mildew prevention and prized for its antibacterial properties. It brightened dark interiors, discouraged pests, helped with odor control, and was considered a general disinfectant. It was also far cheaper than paint and, as Tom Sawyer famously demonstrated, took no particular skill to apply.

Whitewash Today
Why should you consider whitewash today? Essentially, it was used historically for the same reason: to brighten dark interiors, help control pests, and for its general antibacterial properties.

Whitewash is powdered lime mixed with water. Specifically, it is hydrated lime (also known as mason’s lime), NOT garden lime (dolomite). (Don’t get these two types mixed up because they’re completely different...
Because whitewash is made with hydrated lime and salt, applying it to a surface is nothing more than a thin hard rock coating as the whitewash crystals interlock. Hydrated lime is very inexpensive; a 50-pound bag costs about $12 and looks like a sack of concrete.

Unlike paint (which is applied to the surface), whitewash is drawn into the substrate (wood, concrete, etc.). For this reason, it’s an ideal medium for rough or porous surfaces. Since whitewash seeps into tiny cracks and imperfections, it aids in sanitation by coating and smoothing over hard-to-clean rough surfaces, discouraging insects from laying eggs and sealing cracks against bacteria.

Because whitewash is water-soluble, it may wear off faster on exterior surfaces. However, it should last a good long time on interior surfaces.

What Can be Whitewashed?
Throughout its history, whitewash has been used on endless structures, both commercial and agricultural. Tombs, temples, churches, homes, the Greek Acropolis, the Roman Colosseum — all have seen their share of whitewash.

There isn’t a farm structure that won’t benefit from a coat of whitewash in modern times. More and more people use it for chicken coops, rabbit hutches, goat or cattle barns, horse pens, dairy barns, etc. Whitewash is safe and non-toxic for all animals.

Traditional whitewash is just that — white — but it can easily be tinted using dry pigments, the kind used to tint brick mortar. These pigments come as a fine powder that will blend easily with the hydrated lime and come in a wide variety of colors. If tinting your whitewash, mix the hydrated lime, salt, and tint together DRY until the resulting powder is uniform before adding it to the water. When tinting, it’s best to mix a test batch and apply it to a stand-alone piece of wood to gauge the color. Let the test board fully dry before adjusting the amount of tint.

Some people will claim thinned-down paint is “whitewash,” but it’s not; it’s just thinned-down paint.

How to Whitewash
Because lime is caustic, wear protective clothing, dust masks, gloves, and eyewear when mixing the dry lime into the water. Lime can poof up and get into eyes and noses as a dry powder. Lime will make the skin feel dry, but it’s easily washed off. However, eyes and lungs are a different matter — don’t take chances.

Before applying, brush down and wash off any debris on the surface (loose particles, dirt, lichen, etc.).

To prepare whitewash, mix six to eight cups of hydrated lime and two cups of salt in a gallon of water. Mix the salt with the water first (warm water will speed up the dissolving process, though it’s not critical), then add the lime. Mix until it has the consistency of pancake batter, adding a bit more lime or water as needed. Sometimes letting the whitewash sit for an hour or two will help thicken it, especially if you started with warm water. Some people even let the mixture sit overnight. Remember, whitewash will be thinner than commercial paint.

For proper application, first, damp down the surface. (If the surface is too dry, the lime will be powdery. There is no surface tension if the surface is saturated and the whitewash won’t adhere.) Damping is just that: a swipe with a wet cloth to give a damp sheen to the surface.

Apply the whitewash with a roller, paintbrush, masonry, or paint sprayer. (Professionals seem to prefer brushes.) Don’t apply it too thickly because it might crack when drying. Remember, whitewash is a wash, not paint. It will look transparent when applied, but it will dry opaque. You may want to use more than one coat, but let each coat dry for 24 hours so it can soak in and cure. Whitewash has no paint fumes.

Some professional whitewashers recommend three coats for interior applications and four for exterior surfaces to maximize sanitizing properties. Other professionals say one coat will do the trick and last for years. One coat will undoubtedly give that rustic touch for the homesteader who wants to brighten the interior and add a bit of old-world charm.

Because whitewash is water-based, do not apply when the temperature is less than 40 degrees F, especially if there is a risk of frost. Depending on the texture and how porous the surface is, one gallon of whitewash should cover anywhere from 325 to 650 square feet of surface area.

Go ahead and tap into your inner pioneer and whitewash your barns, coops, stalls, pens, or hutches. You’ll be glad you did.
SPRING ON A GOAT FARM is an exciting time. The grass is turning green, adorable kids are arriving, and the goat milk is beginning to flow again. I have very fond memories of being on my uncle’s farm in Ohio one Easter and feeling like it was the perfect place to be to celebrate this season of rebirth and renewal.

Easter basket cheese is an Italian tradition found in a few select markets during this holiday season. It’s a smooth, soft cheese usually sold right in the basket it’s made in. While typically made with cow milk, I have made it with goat milk with excellent results. Your baby goats might be getting most of the milk at the beginning of the season. If you can get a little for yourself, this festive seasonal basket cheese is so easy and delicious; it is a great way to restart the cheesemaking season and celebrate the arrival of spring.

One of the things that makes this cheese very unusual is that it only consists of milk and rennet, the enzyme that coagulates milk. There is no culture used at all, which contributes to the mild, smooth taste and texture and lets the flavor of the milk shine through. While I love spooning the cheese right from the basket into my mouth, many people use Easter basket cheese as a cooking ingredient, similar to ricotta, or they crumble it onto a salad. The most famous recipe for Easter basket cheese is the traditional Italian Easter pie. Many Italian Catholics traditionally serve this decadent meat-and-cheese pie at noon the day before Easter to celebrate the end of Lent. But you can enjoy it any time you want a hearty, delicious meal!
FRESH EASTER BASKET CHEESE RECIPE

1. **HEAT**: Heat 1 gallon of whole milk to 90 degrees F.

2. **COAGULATE**: Remove from heat. Add 1 tsp of rennet diluted in non-chlorinated water. Let set for 45 minutes.

3. **CUT**: Cut the curd into small pieces and stir gently for five minutes.

4. **FILL BASKET(s)**: Scoop curds into baskets (you may wish to line with cheesecloth, at least until you’ve flipped the cheese). Let drain 30-45 minutes or until firm enough to handle.

5. **FLIP**: Flip the cheeses and return to baskets. Allow draining for one hour.

6. **FLIP & PRESS**: Flip again, place a follower or lid or another basket on top, and then place a one- to two-pound weight on top. Let drain overnight.

7. **SALT**: Option #1: Take out of the basket, sprinkle with salt, and return to basket. Option #2: Set the basket with the wheel of cheese into a brining container (five parts water to one part salt) for 20 minutes.

8. **REFRIGERATE**: Leave in basket and store in the refrigerator to firm up. Eat within a few days, use it as an ingredient in a recipe, or freeze.
ITALIAN EASTER PIE RECIPE

PIE DOUGH:
• 2½ cups flour
• 2 Tbsp sugar
• 1 tsp salt
• 1¼ cup (or 2 ½ sticks) butter or a mix of butter and shortening
• 3-5 Tbsp ice cold water

1. Cut the butter into the flour, salt, and sugar mixture using a food processor.

2. Sprinkle several spoonfuls of ice water on the mixture and mix together until the dough sticks together.

3. Divide dough into two balls; refrigerate for 30 minutes.

4. Brown the meat, breaking it up into bite-sized pieces. Add the onions to the mix.

5. Add the cooked meat and onions to the other ingredients in a large bowl and mix well.

6. Roll out the dough into ⅛-inch-thick circles.

7. Transfer one layer of dough to a deep-dish pie plate.

8. Pack the meat and cheese mixture tightly into the pie dish.

9. Top with the other dough circle and pinch the edges together.

10. Cut slits on the top of the dough and brush with a wash of egg yolk and milk or cream.

11. Bake at 350 degrees F for 50-60 minutes. Let sit for 15-20 minutes before serving.

Recipe adapted from: https://rightfromthecowsmouth.wordpress.com/2014/04/17/know-your-cheeses-basket-cheese-an-easter-favorite/

PIE FILLING:
• 1 to 1¼ pounds of mixed meats (Italian sausage, pepperoni, salami, prosciutto, ham, etc.)
• 1 small onion, chopped
• 1 pound fresh Easter basket cheese
• 1 pound ricotta cheese
• 1 cup shredded mozzarella
• 1 cup shredded provolone
• ¼ cup grated Parmesan
• 3 eggs
• Black pepper to taste

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O RIGINALLY FROM THE MIDDLE EAST, the Nubian Ibex is currently a vulnerable population with wild numbers estimated at around 1,200. Hunting decimated the population of the Nubian Ibex in the last century. Still, protections, wildlife reserves, and breeders in the United States have helped bring that population back up in recent years. One of those breeders is Porter Valley Ranch.

Located in Oklahoma, the Porter family are multi-generational ranchers. However, only the last two generations have bred rare and exotic animal breeds. Their philosophy is that it takes the same amount of land, feed, and care to raise exotic breeds as the standard breeds, but the exotic breeds yield a much higher return. While there is a better return on their time invested, Josh and Rachel Porter also realize that some of these rare breeds, including the Nubian Ibex, can be more fragile, and losing one is more detrimental to the operation.

Choosing the Nubian Ibex

Josh’s dad was the first to bring the Nubian Ibex to the ranch after years of trying out many other exotic breeds such as longhorn cattle (rarer at the time than now), textile sheep, and whitetail deer. The choice to remain with the Nubian Ibex as a ranch focus was partly due to his background as a pastor. Through his study of animals and the Bible, Josh’s dad believes the Nubian Ibex to be the same breed as the ram that Abraham sacrificed on the mountain in place of his son, Isaac. He felt a personal connection to this particular breed of Ibex.

Josh has continued the breeding of Nubian Ibex but is working to improve the breed. Most Nubian Ibex in the United States are owned by zoos or private owners who usually bought a second-generation Ibex from a zoo. This gives a fairly limited breeding pool. Many of the Nubian Ibex are inbred and not very healthy. They are prone to parasite overload and often struggle to reproduce either through failure to settle pregnancy or the kids not living long past birth. The best way to combat this is to bring in some different genetics. However, breeding a different goat to an Ibex does not give you a true Ibex.

Improving the Nubian Ibex

Josh’s program to bring health back into the Nubian Ibex population is long-term. It takes at least four or five generations after crossing a single goat into the Ibex line before the offspring start to look like a full-blooded Nubian Ibex. Josh and Rachel’s goal is for the “finished product” to be at about 90% Nubian
or retained. Any offspring sold directly benefits the sons, teaching them a return on their work. The Porters also share much of their business knowledge through their blog and YouTube channel. While they are new to the “homesteading” community, they firmly believe that even hobby farmers can make their hobby self-sustaining. While we often accept that our hobbies cost money (especially goats), there are ways to ensure that you can afford to keep enjoying your hobby long-term, especially if they happen to be Nubian Ibex.

Livestock Fit the Owners
You may now be asking where any money might be in breeding these Nubian Ibex if they are often fragile or their genetics are too watered down. There is undoubtedly a market for exotic animals in the U.S., but it is often seasonal. Hunting ranches will often buy exotic game for hunters, and there are occasionally large sales for exotic animals. If seeking to purchase at these sales or ranches, be sure to research if you need a permit to own your desired animal.

Josh Porter believes that a person’s livestock should reflect their personality. It is easier to build a bond with animals you are interested in and connect with. Josh’s herd is currently split between his ranch and his dad’s ranch. The ones at his ranch are just as bonded with his family as the dogs. While most ranches raising Nubian Ibex require a 10-foot fence to contain them, Josh’s bonded herd are kept in a four-foot fence. Then one can easily jump it, and one does occasionally graze a different area before jumping back in. However, Josh has found that even though the Ibex is considered an exotic wild animal, it can easily be a loveable pet if raised as one.

Business Practices
At Porter Valley Ranch, there is a passion for teaching basic business principles. Rachel and Josh are both entrepreneurs at heart, and they wish to share their knowledge. This begins at home with their sons. They give their sons each a sheep or goat with the expectation to care for it. The sons decide if their animal breeds and if it is sold or retained. Any offspring sold directly benefits the sons, teaching them a return on their work. The Porters also share much of their business knowledge through their blog and YouTube channel. While they are new to the “homesteading” community, they firmly believe that even hobby farmers can make their hobby self-sustaining. While we often accept that our hobbies cost money (especially goats), there are ways to ensure that you can afford to keep enjoying your hobby long-term, especially if they happen to be Nubian Ibex.

Instagram: @portervalleyranch
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BREED PROFILE: Arapawa Goat

A Rare and Useful Goat Worth Conserving

BY TAMSMIN COOPER

BREED: Arapawa goats are named for the island where they have lived feral for at least 180 years.

ORIGIN: Arapaoa Island (previously spelled Arapawa) in Marlborough Sounds, which is a network of sea-drowned valleys at the northern tip of South Island, New Zealand.

HISTORY: Ocean explorers James Cook and Tobias Furneaux sailed from England with goats on board in 1772 and took more on board at Cape Verde Islands. In 1773, they anchored at Ship Cove across the Queen Charlotte Sound from Arapaoa Island. Here they gifted a breeding pair of goats to local Maori. They set a breeding pair wild on a remote cove in Arapaoa Island in June. Cook also lost a buck at Ship Cove during their stay. A local population may have arisen from these goats, although Cook later heard that the feral pair on Arapaoa Island had been hunted and killed. However, Arapawa goats closely resemble the Old English goats that were boarded as ship goats, not the Cape Verde goats, who were described as “a few long-legged goats, with straight horns and pendulous ears.”

Captain Cook returned in 1777 with “English goats” and goats boarded at the Cape of Good Hope “intended for New Zealand.” A breeding pair of which the female was already pregnant was gifted to a Maori chief. There are several accounts of free-roaming ship goats, notably an English buck, and the goats on board likely interbred. This would account for the Old English appearance of Arapawa goats, while genetic evidence shows traces of African ancestry.

By 1839, British colonial administrator Edward Wakefield recorded his observations of Arapaoa Island children being “... active and hardy as the goats with which the settlement also swarmed.” It appears that goats lived feral and domesticated on the island and surrounding areas of the Sound, as they do in much-reduced numbers today.

In the 1970s, the New Zealand Forest Service attempted to eradicate feral goats from Arapaoa Island, which were perceived as destructive to woodland. Betty and Walter Rowe had recently moved to the island with their three children after moving to New Zealand from suburban Pennsylvania in 1969. The family's goal was a more natural and self-sufficient lifestyle in a rural environment. As Rowe got to know the feral goats as she wandered through the countryside, she felt strongly moved to prevent their eradication. She aimed to save the goats with dedicated volunteers, finally establishing a 300-acre reserve in 1987 with 40 head. Many goats were sent to the mainland to be conserved by enthusiasts.
In 1993, three does and three bucks were imported for the 17th-Century English Village at Plimoth Plantation (now renamed Plimoth Patuxet) in Massachusetts. Owners managed breeding to provide maximum genetic diversity, and herds were distributed to several breeders from Massachusetts to Oregon. In 2005 and 2006, further imports of semen from various bucks allowed the expansion of the gene pool in America. In 2013, New Zealand’s Department of Conservation permitted breeders to recover three bucks and six does from the feral population, which has enabled them to expand the breed’s genetic diversity.

**CONSERVATION STATUS:** With a tiny population, this goat is extremely rare and listed as “Critical” by the Livestock Conservancy. In 2019, there were 211 recorded in the U.S.; in 1993, a maximum of 200 in New Zealand; and in 2012, 155 in Britain.

**BIODIVERSITY:** DNA analysis has revealed that Arapawa goats are unique and only distantly related to other breeds, making them a conservation priority as a source of adaptive genes. Some relationship was found with goats from South Africa. Descent from the Old English goat is more difficult to prove as both populations are very small and have evolved in isolation for many generations. Analysis also shows relatively high inbreeding due to their long isolation and small population size. Conservation breeders are careful to ensure breeding pairs are not recently related.

**DESCRIPTION:** Medium-sized, light framed but strong-legged, with a round belly. Females are slender, while males are stocky. The facial profile is straight to concave. Ears are erect with a crimp that frequently folds the tips down to eye level. Horns curve backward with a slight outward twist. Males’ horns are thicker, flatter, and sweep outwards. Hair is usually short, thick, and fluffy, often lengthening at the top of the legs and along the spine, but may be long everywhere. A thick undercoat grows for winter. Females are frequently bearded, and males grow thick beards. Wattles are absent.

Arapawa kids. Photo credit: Marie Hale (flickr.com) CC BY 2.0 (creativecommons.org)
COLORING: A wide variety of patterns and colors exist, blending various shades of black, brown, cream, and white. Dark or pale facial stripes are common.

HEIGHT TO WITHERS: Does 24–28 in.; bucks 26–30 in.

WEIGHT: Does 60–80 lb.; bucks up to 125 lb., average 88 lb.

POPULAR USE: Currently kept in conservation herds to preserve their contribution to goat biodiversity. However, their small size, self-reliance, and frugality would make them ideal multi-purpose goats for the homestead.

PRODUCTIVITY: Does breed in all seasons, and twins are common.

TEMPERAMENT: Alert and wary when feral, they become friendly and make excellent family goats if handled gently in early life. Active, suited to ranging and foraging, else opportunities to exercise must be provided.

ADAPTABILITY: Hardy and self-sufficient in their native terrain and well-adjusted to cold temperatures. Does make excellent mothers.

QUOTES: “At our small farm, we are using the goats, now 18 of them, to clear underbrush from a forest of red oaks, which they do with relish ... Birthing is unassisted. Health issues are almost nonexistent.” Al Caldwell, former registrar of AGB, 2004, Rare Breeds NewZ 66.

“When the first Arapawas arrived ... I fell in love with their disposition. One was such a sweetheart, basically almost a gentleman.” Callene Rapp, current registrar of AGB, quoted by Amy Hadachek, 2018, Goat Journal 96, 1.

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RAISING GOATS NATURALLY, 2ND EDITION

Responding to questions and concerns from readers all over North America and beyond, this fully revised and expanded edition of Raising Goats Naturally will help readers work with nature to raise dairy goats for milk, cheese, meat, fertilizer, leather, fiber, and soap—without relying on drugs or following the factory farm model! This unique, fully illustrated guide will provide you with the information necessary to help your herd thrive like never before.

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BUILD YOUR OWN FARM TOOLS

Whether you can’t quite find the exact tools you need for your farm, or you think you can improve on what’s available, or you like to build your own, Build Your Own Farm Tools, provides tons of inspiration and hard-learned lessons on creating customized equipment. Projects range from the super-simple (requiring a half-day to make) to the more complex and includes how-to-photographs and illustrations with variations for customizing the finished implement.

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Whether you are a budding cheesemaker, avid do-it-yourselfer, foodie, homesteader or cheese professional, this complete course in beginning cheesemaking from one of North America’s foremost instructors is packed with everything you need to create delicious, nourishing and beautiful classic cheeses and other dairy delights.

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THE SMALL-SCALE CHEESE BUSINESS

In The Small-Scale Cheese Business, respected cheesemaker, instructor and speaker Gianaclis Caldwell walks you through the steps and decisions you will face when considering a career in the cheese-making industry. Going far beyond the issues of caring for livestock and basic cheesemaking, Caldwell explains business issues such as analyzing your suitability for the career, sizing up the market, ensuring safety and efficiency, and more.

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STAY TUNED

For more than a decade, Gianaclis Caldwell and her family have operated Pholia Farm Creamery, an off-grid, raw milk goat cheese dairy. In Holistic Goat Care, Caldwell offers a comprehensive guide to maintaining a healthy herd of goats, whether they are dairy goats, meat goats, fiber goats, or pet goats. Holistic Goat Care will empower even novice goat owners to confidently diagnose and treat most of the ailments that goats might experience.

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COMPACT FARMS

Small is beautiful, and these 15 real farm plans show that small-scale farmers can have big-time success. Compact Farms is an illustrated guide for anyone dreaming of starting, expanding, or perfecting a profitable farming enterprise on 5 acres or less. The farm plans explain how to harness an area’s water supply, orientation, and geography in order to maximize efficiency and productivity while minimizing effort.

Item #8189 $19.95 Sale price: $16.96

New Item!

GRIT GUIDE TO RAISING FARM ANIMALS

To help ensure readers are receiving the best advice on raising farm animals, GRIT has compiled 100 pages of the best articles, written by livestock experts, into one simple, helpful guide. The second edition of GRIT’s Guide to Raising Farm Animals features more than 47 keys to finding the best animals for your homestead. Plus, you will find helpful advice on providing the best care for your livestock in the heat and cold, how to protect your herd from predators, and so much more.

Item #8038 $6.99 Sale price: $5.59

THE SMALL SCALE DAIRY

Whether you are a budding dairy farmer, a home dairy producer, or simply want to produce nourishing, healthy, farm-fresh dairy delights, The Small-Scale Dairy is packed with all of the skills and advice you need to produce quality milk. Whether you have a one-cow home dairy, a small herd or a 50-goat operation or are simply a curious Enlightened consumer, this book is an invaluable resource for achieving your goals.

Item #7045 $34.95 Sale price: $27.96

HOLISTIC GOAT CARE

For more than a decade, Gianaclis Caldwell and her family have operated Pholia Farm Creamery, an off-grid, raw milk goat cheese dairy. In Holistic Goat Care, Caldwell offers readers a comprehensive guide to maintaining a healthy herd of goats, whether they are dairy goats, meat goats, fiber goats, or pet goats. Holistic Goat Care will empower even novice goat owners to confidently diagnose and treat most of the ailments that goats might experience.

Item #8244 $39.95 Sale price: $33.96

TO ORDER, CALL 970-392-4419 OR VISIT: Shop.IAmCountryside.com
**The Good Living Guide to Keeping Sheep and Other Fiber Animals**
This book serves as a comprehensive and inspiring full-color guide to small-scale fiber farming and wool crafting. Author Janet Garman provides expert knowledge on the basics of properly raising sheep, goats, llamas, and various other animals, as well as concise instructions for shearing, sorting, skirting, and more for these animals. Enthusiasts will also find recipes and instructions for natural, plant-based dyes and advice for selling your finished yarn.

*Item #9625  $14.99  Sale price: $12.74*

**The Small-Scale Dairy**
The Small-Scale Dairy includes everything you need to know in order to successfully produce nourishing, healthy, farm-fresh milk. Applicable to keepers of cows, goats or sheep, author Gianaclis Caldwell offers a holistic approach that explores the relationships between careful, conscientious management and the production of quality milk. Whether you have a one-cow home dairy, a 50-goat operation or are simply a curious consumer, this book is an invaluable resource for achieving your goals.

*Item #7045  $34.95  Sale price: $27.96*

**Temple Grandin’s Guide to Working with Farm Animals**
Award-winning author Temple Grandin is famous for her groundbreaking approach to decoding animal behavior. Now she extends her expert guidance to small-scale farming operations. Grandin’s fascinating explanations of how to analyze herd animals’ behavior and of how to understand how they think — (describing their senses, fears, instincts, and memories) — will help you handle your livestock safely and effectively.

*Item #8402  $19.95  Sale price: $16.96*

**Milk Soaps**
Handmade soap is made extra-special with the addition of milk! Soaps enriched with milk are creamier than those made with water, and milk’s natural oils provide skin-renewing moisture and nourishment. In Milk Soaps, expert soapmaker Anne-Marie Faola, demystifies the process with step-by-step techniques and 35 recipes for making soaps that are beautiful and useful. For beginners and experts alike, this focused guide to making milk-enriched soaps offers an opportunity to expand their soapmaking skills in new and exciting ways.

*Item #9696  $21.95  Sale price: $18.66*

**ElectroStop Plus 10/42/12 Starter Kit (Black/White)**
Contain a small flock of sheep or a small herd of goats with this complete fence system. When properly electrified, ElectroStop is effective for controlling the movement of meat and dairy goats, flighty breeds of sheep or to enclose rams and bucks. Add rolls (up to 4 more) to create a larger enclosure. Starter kit includes 100ft roll of 42” double spike electric netting, four 42” support posts, fence energizer, and 5-light wireless fence tester. Best when used as a temporary boundary fence that is moved often (daily or weekly).

*Item #8344  $483.60  Sale price: $469.09*

**The New Livestock Farmer**
If you’ve ever wanted to know what it takes to raise, market, and sell animal products, The New Livestock Farmer is the book for you. Rebecca Thistlethwaite and Jim Dunlop have put together a complete guide for raising everything from poultry to goats and rabbits to beef. The book provides a wealth of information about breeds, animal husbandry, processing, and the business side of livestock farming.

*Item #7630  $29.95  Sale price: $25.46*

**Butchering Poultry, Rabbit, Lamb, Goat and Pork**
Butchering Poultry, Rabbit, Lamb, Goat, and Pork uses detailed, step-by-step photography to show every stage of the butchering process. From creating the right pre-slaughter conditions to killing, skinning, keeping cold, breaking the meat down, and creating cuts of meat you’ll recognize from the market, author Adam Danforth walks you through every step, leaving nothing to chance.

*Item #7110  $27.95  Sale price: $23.76*
Name: __________________________________________

Each issue, we will offer a chance to win official Goat Journal swag! Enter to win a mug by completing this puzzle, using answers found in this issue. The winner will be chosen randomly from all correct submissions returned by April 1, 2022.

ACROSS
1. Previous spelling for Arapaoa Island:
7. Brassicas can cause issues due to high _____ levels.
10. When an animal doesn’t recognize you as a different species:
13. When an animal gives birth to offspring of different gestational ages:
14. Colostrum cannot be pasteurized because it will _____.
   Gently heat to 135 degrees F instead.
15. Condition where bladder stones lodge in a urethra:
16. Condition when urine leaks through an opening at the umbilical cord:
17. The scientific study of developmental abnormalities:

DOWN
2. When an animal carries a litter of offspring with multiple sires:
3. Chemical in California False Hellebore that can cause cyclopia:
4. Bitter almond leaves contain cyanogenic _____ amygdalin.
5. Breeders adhering to high standards realize more profits because they earn customers’ _____.
6. Genetic condition also known as dwarfism:
8. Middle-Eastern goat with a wild population estimated at around 1,200:
9. A doe’s _____ intake may be a factor in how well she recognizes her babies.
11. Toxic conifer commonly mistaken for pine or fir:
12. Italian cheese sold in the baskets it’s made in: _____ basket cheese.

Print, fill out, and send to: Goat Journal Reader Contest
1503 SW 42nd Street,
Topeka, KS 66609

Print, fill out, then take a picture and email to: goatjournal@gmail.com

Message your answers to: goatjournal@gmail.com

Mug available for purchase at: iamcountryside.com/shop

The winner of the November/December Reader Contest is Michelle Sheely. Enjoy your mug, Michelle!
Show us your artistic side! Send photos of your finished coloring pages to goatjournal@gmail.com and we will display them in our next issue. (Be sure to tell us if your goats did the coloring!)
GOAT JOURNAL :: COMING ATTRACTIONS

STAY TUNED!

June is National Dairy Month! Stay tuned for our May/June 2022 issue, with great stories on:

- The Best Dairy Goat Breeds
- Milking Goats with Extra Teats
- Buying Goats and Avoiding Scams
- Photo Essay: Tilton Hollow
- Curse of the Billy Goat
- Sanitation in the Goat Pen
- Healthful Herd: Rumen Buffers
- PLUS Back From the Vet, a new cheesemaking story, Secret Life of Goats, and MORE!

GOAT JOURNAL :: COLORING PAGES

A. Hello! My daughter, Keilah age 11, colored these pages. She really looks forward to getting the new coloring page in each issue! — Krystal

B. Here is my goat coloring picture. Sorry, goat ate the first picture. — Jon Wells, Jarrettsville, Maryland

C. By Zazie Seale, age 11.
BEST OF THE BEST
Caprikorn Farms, home of Award-Winning Saanen Dairy Goats, received Elite Doe listing for 18 out of the top 19 Elite Does!

Call for a catalog or Visit caprikornfarms.com
Price list and videos are available.

OUR CUSTOMERS SAY IT BEST

“The Caprikorn does are amazing. They so outclass the rest of the herd it’s not funny.” — Trent Hendricks, MO

“A big congratulations to your TOP TEN DOES last year. I keep reading on and on and kept seeing all yours listed. Yea Caprikorn!” — Tom & Roni, CA

“We have 144 CAPRIKORN HOT SAUCE daughters. The YEARLINGS from him tower over a lot of the older does.” — Keith, New England

“We LOVE our Caprikorn Farm goats – they are not only very productive, they are lovely personalities - smart, but not overly pushy.” — Bedford Blueberry Goat Farm, MA

“I would say you are probably the top herd in the nation now with those classification scores and that milk production.” — Janelle Anderson, 30-year Saanen Breeder, NE

“Our KID ROCK daughters are milking 10 pounds at 10 months of age!” — Emanuel Schneider, PA

“By the way, HOT ROD is doing great. His girls have had their first kids. He definitely improved our genetic pool.” — Andrea Gauvreau, Quebec

“Scott, bought seven does from OK. Had never seen such milk or quality in a goat herd. When asked about the genetics he said ‘they were Caprikorn.’ They are doing 18 pounds a day. The yearlings are doing 13 pounds a day.” — Thomas Childress, Hereford Breeder, TX

“I am overly pleased with EARTHMAN and the improvements that I can already see that he has made to our farm.” — Wendy, Bootleg Farm, GA

“My name is Shereen and I bought a buck from you a couple years ago. Fantastic buck - I love this buck!” — Shereen Wilcox, PA

“We have 105 does … Just so you know the Caprikorns are the nicest and largest ones. We can always pick them out just by looking at them.” — Lori Lyons, WI

“Dear Scott, that is some Sales List! I know your goats are the BEST!” — Brad Parker, Pipe Dreams Fromage, PA

“Hey Scott, I got to milk some of your best goats when Alice was here; was impressed!” — Levi Peterschein, IA

“The Caprikorn girls are doing FANTASTIC! They are exceeding our expectations. They are always coming in with full bags and they don’t want to slow down production very quickly when it is time to start drying up.” — Jared Rebling, Brighton, IA

“AMBER is a milk machine. I appreciate the temperament of all your goats; they are so nice and loving!” — Scarlett Payne, Utica, OH

“A lot of the ones we have from your bucks freshened at 11 months and they’re just fantastic.” — Keith Tifft, VT

“DILL and DYLEX are amazing, and as milking yearlings were amazing also … ” — Lila Stref, SD

“I appreciate that you are willing to refund our deposits; we have decided to back out of all 11 dairy goat kids.” — Trisha Bickel, Hamburg, PA

“I have appraised all the major Saanen herds and you have the best feet and legs.” — Linear Appraiser American Dairy Goat Assn., 2013

“I am so very glad to be able to work with you as you are one of the most reliable and honest goat breeders I know. It is such a pleasure to have complete confidence in a purchase to know that it will be totally as represented.” — Teddy West, OH

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✔ Fewer severely affected udders
✔ Fewer bacteria in milk = less discarded milk from high somatic cell counts

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