ANDDA
AMERICAN NIGERIAN DWARF DAIRY ASSOCIATION
VOLUME 29 ISSUE 2 FEBRUARY 2021

Liquid Gold, or Is It? - Assessing Colostrum Quality

By Clare M. Staveley, DVM - Curbstone Valley Farm

Life sustaining liquid gold, colostrum serves two critical functions in neonatal goats. The first is it provides a newborn with a critical and immediate source of readily metabolizable energy. Goat kids are born with limited glucose reserves, and need access to colostrum soon after birth to help maintain critical blood glucose levels. Glucose is the only source of energy that the brain can use, and as glucose reserves are exhausted, critically low levels can result in neurologic dysfunction, and an inability for the neonate to regulate core temperature.

The second critical function is immune function for neonates. Maternal antibodies do not cross the placenta, so neonates are wholly dependent on antibodies (primarily IgG in goats) in colostrum to provide the passive immunity to pathogens in their environment to protect them from infection during the critical first weeks of life.

There are multiple factors to consider regarding colostrum for neonates at birth. Timely intake is essential, as a kid's ability to maximally absorb colostrum is already waning 6 hours after birth, and significantly reduced by 12 hours.

Volume of colostrum consumed is also important. A kid should consume at least 10% of its body weight in colostrum over at least four feedings in the first 24 hours, with its first feed as soon as a suckle reflex is present after birth. Intake volume can be directly monitored for kids that are bottled at birth, but for those that are dam raised, especially in large litters, special attention should be paid to those smaller and weaker kids at birth to ensure adequate intake during those first few hours of life.

An area frequently overlooked in regards to colostrum is colostrum quality. The principal factor that determines the quality of colostrum is the level of protective antibodies known as immunoglobulins, specifically the immunoglobulin IgG in goats. Does the colostrum have sufficient maternal antibody content to prevent failure of passive transfer of immunity? Is the colostrum that is frozen and banked in the farm freezer of good enough quality to use if required in an emergency? While commercial colostrum substitutes are available, they do not provide the same level of immunoprotection for

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neonates as colostrum produced on-farm. *Note that colostrum must be the first and only fluid put in a neonate's mouth at birth, to ensure that maternal antibody absorption is not disrupted!*

Unfortunately, not all colostrum is created equal. There are numerous factors that can affect IgG levels in colostrum at the time a doe freshens. While the majority of does produce adequate quality colostrum, a doe's disease status, parasite load, pregnancy nutrition, dry period management, time of year, toxemia in late gestation, and even a protracted dystocia or cesarean section, can all impact the level of IgG in colostrum at freshening, and as a result may vary in the same doe year-to-year. [1,2] *A special note regarding C-sections and colostrum. In the event a doe requires a C-section, and no other source of good quality colostrum is immediately available, it is strongly recommended to milk out the colostrum from the doe BEFORE surgery, and refrigerate it until needed, as IgG content declines quickly and may fall too low before post-operative recovery.*

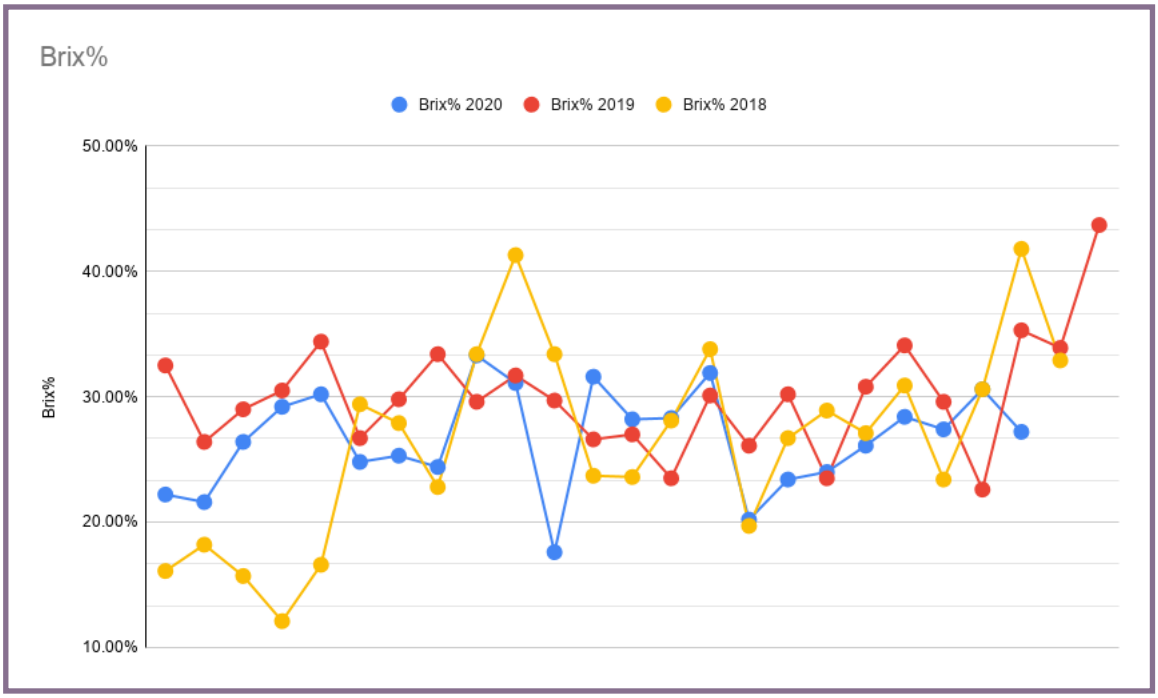

Fig. 1 This graph is a sample of data from my own herd. While most does produce adequate IgG levels, some factors, including inadequate dry period, resulted in some does having lower antibody levels at freshening. 2018 started with a few does with very low levels secondary to issues arising from wildfire smoke exposure. Having this data immediately available allowed kids to be supplemented quickly with high quality banked colostrum.

Dry period management is critical for colostrum quality. For those on DHI testing a lactation year is defined as 305 days, and that value is not arbitrary.

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ANDDA Committee Chair—
Nancy LaMont, Total Performer Committee

A little about me before goats. I was an avid runner, wife and mother of 3 kids, a Mountaineer loving Rock and Ice climbing, a cancer survivor, then lost my husband which gave me the opportunity to start a new chapter.

In 2012, I moved from the city to unincorporated Olympia area to start a new life and a small backyard farm for fun and food. I had not been on a farm before but wanted a complete change of life.

In 2013, I bought my first two half Pygmy and half Nigerian goat bottle babies and I fell in love with them. Their jumping and playing kept me laughing and their snuggles kept me feeling loved.

It didn't take long for me to hear about ADGA Registered goats and goat shows. I got invited to my first ADGA sanctioned goat show in 2014 and showed my goats for the first time in 2015. I was hooked lol. In 2016 I sold most of my small herd and "upgraded" to higher quality/heavier milking lines. I participate as an ADGA Plus herd utilizing the Performance Programs available with ADGA and DHIA.

My mission and focus at N GoatFarm is to always work toward improvement of the breed, conformation & high milk yield. I have a personal goal of mentoring as many those new to goats as I can to give them a good start with goats.

Nancy LaMont @N GoatFarm

www.NGoatFarm.com

Member of ADGA & ANDDA

On Facebook & Goatzz


Love is in the air

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Transfer of IgG antibodies from the dam's plasma, to colostrum, begins around the 3rd month of gestation, approximately 80-90 days post breeding. With 365 days in a calendar year, the 60 day dry period is to make sure that the dam has an adequate period of recovery to ensure adequate colostrum IgG content when she freshens.

As the Nigerian breed improves, and does are selected more for persistency of lactation, or 'will-to-milk', drying a doe off in time for her to have the necessary 60 day dry period can sometimes be challenging. As a result, such does may freshen with inadequate IgG content in colostrum. Volume of colostrum produced may be unaffected, but quality, IgG content, may be poor, and can result in a partial failure of passive transfer in offspring. Note that size of the udder at freshening is NOT an indicator that a doe has produced good *quality* colostrum.

So, as a breeder, how do you know if the colostrum your doe has produced at freshening is good enough? While submitting colostrum samples to a lab will provide IgG content, it is not possible to obtain those results quickly enough to be practically useful. However, there are two simple methods you can use to test colostrum yourself in the barn.

Colostrum quality can be measured using either a calibrated colostrometer, or a Brix refractometer, either manual, or digital 5. (Links to some resources will be provided in the references below).

A colostrometer is a calibrated hydrometer, and measures the specific gravity (SG) of the colostrum. The colostrometer is color coded: green, yellow, and red. Ideally the SG of colostrum will test in the green zone, which is equivalent to high quality colostrum with an IgG level of 50 mg/ml or higher. The advantage is that results are quickly obtained. However, there are two primary disadvantages of using colostrometers. The first is that they take a relatively large volume of colostrum to obtain the result, compared to refractometers. Colostrometers are also affected by ambient temperature, and if read at cold barn temperatures, may overestimate the level of IgG antibodies in solution. [3]

An alternate method is to use a brix refractometer. These are readily available, and easy to use. Traditional optical refractometers are more economical than digital units, but also more fragile in a barn

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environment as they are made of glass, and not very forgiving of being dropped. They also require a sufficient amount of light in the room to read. However, both are easy to use, and unlike a colostrometer, they only require a few drops of colostrum for testing.

A brix refractometer measures the sugar content of solution, and yields a result in percent (%) sugar in the solution. Research has shown that a direct correlation between percent brix, and IgG content in colostrum, can be made. **A brix value of 22% is equivalent to 50 mg/ml of IgG, so any value of 22% or higher on a brix refractometer indicates high quality colostrum.** [5]

Determining the quality of colostrum at freshening is quick and easy to do at home, and helps to provide that extra assurance that kids are getting off to an optimum start in those first few critical hours after birth. Assessing colostrum quality also ensures that the colostrum you elect to bank and freeze for emergencies is of the absolute best quality.

Testing is simple, and rapid, especially with a refractometer. I personally keep my refractometer in my pocket while waiting for a doe to freshen. As soon as I strip both teats post freshening, I test a sample from each doe, in her stall, with just a few drops on the refractometer, log the value, and continue on with my normal post-freshening barn routine. A few seconds for an extra step that can have long term consequences for those kids we have waited patiently for, and ensures that each kid is off to the absolute best possible start.

Colostrum that is to be banked and frozen for future use must be collected soon after freshening, as IgG levels in colostrum decline quickly. The advantage of owning your own colostrometer or refractometer is that colostrum collected to be frozen and stored can first be tested to determine if the IgG level is still sufficient. The Brix % can be recorded on the storage container at freezing, and retested when the colostrum has been thawed for use. Providing colostrum is handled correctly, the freeze/thaw process should result in minimal loss of IgG.

As producers, we invest a tremendous amount of time, energy, and resources in our animals to be certain that our herds are healthy, and productive over their lifetimes. While kidding season is perhaps the most hectic period of the year, catching and feeding kids, and tending to newly fresh does, a few extra seconds testing IgG content in colostrum can save both time and money later supporting kids with failure, or partial failure, of passive transfer.

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Colostrometers & Refractometers

Colostrometer: https://dairytechinc.com/store/colostrometer

Refractometers: https://www.midwestsupplies.com/products/refractometer-atc-with-brix-sg-scale

Note that many optical Brix refractometers only read between 0-10% Brix, and are NOT suitable for colostrum testing

Portable Digital Brix Refractometers:

Milwaukee Instruments: https://www.amazon.com/Milwaukee-Instruments-MA871-BOX-Refractometer-Measurements/d p/B00G74Q9PS/

Atago: https://www.amazon.com/gp/product/B004J4XDRK/

References

1. N. Castro, J. Capote, R.M. Bruckmaier & A. Argüello (2011) ***Management effects on colostrogenesis in small ruminants: a review.*** Journal of Applied Animal Research, 39:2, 85-93. https://www.tandfonline.com/doi/full/10.1080/09712119.2011.581625

2. G. Zobel, R. Rodriguez-Sanchez, S. Y. Hea, A. Weatherall, and R. Sargent (2000) ***Validation of Brix refractometers and a hydrometer for measuring the quality of caprine colostrum.*** Journal of Dairy Science 103:9277-9289 https://www.journalofdairyscience.org/action/showPdf?pii=S0022-0302%2820%2930577-4

3. E C Kessler, R M Bruckmaier, J J Gross (2021) ***Short communication: Comparative estimation of colostrum quality by Brix refractometry in bovine, caprine, and ovine colostrum.*** Journal of Dairy Science Feb;104(2):2438-2444. https://www.journalofdairyscience.org/action/showPdf?pii=S0022-0302%2820%2930577-4

4. Munashe Chigerwe and Jill V Hagey (2014) ***Refractometer Assessment of Colostral and Serum IgG and Milk Total Solids Concentrations in Dairy*** Cattle BMC Veterinary Research, 10:178 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4236825/pdf/s12917-014-0178-7.pdf

5. PennState Extension: ***Colostrum Management Tools: Hydrometers and Refractometers*** https://extension.psu.edu/colostrum-management-tools-hydrometers-and-

Goats In Coats

Margaret Giesbrecht, Saddlebag Farm

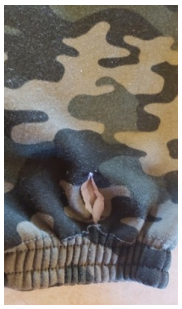
The following is a pictorial on how to make your own goat coat out of a pair of children's sweat pants. I kept it as simple as possible. No sewing machine required. These make for a quick project to prepare for kidding season, and are great to have on hand to help keep those newborn kids warm, if need be.

1. LIST OF MATERIALS:

- one pair size 5T child's sweatpants
- one package Heavy Duty Velcro brand Stick-on Fasteners
- Measuring tape
- Scissors

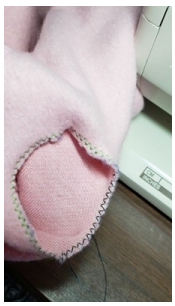
Note: This size fits a newborn Nigerian Dwarf kid

2. INSTRUCTIONS : Cut sweatpant legs apart, starting at the crotch, going upward toward the waistband. First on one side of the crotch seam, then on the other. We want to cut it out entirely to remove excess bulk. Find the place where the width of the pant leg equals 7 inches, as close to the bottom of the pant leg as possible. Mark the spot. Go down about inch, towards the bottom of the pant leg and make another mark. At each of those marks, measure in from the leg seam about 1 1/2"inches. This will be the room between their front legs. Draw a 1 1/4"inch circle and cut it out with scissors. Draw a circle inside the one you just cut for the other side. Cut it out. These holes are for their front legs. If you want extra room to get those wiggly baby goat legs in, you could cut a slit in between those two circles, opening the area up a bit more.



The leg seam will come under their belly. The waistband will be by the kid's back end, and the ribbing at the bottom of the pant leg will come just under their chin. I left extra room in the neck and tummy area to allow for freedom of movement. Next we need to take the pant leg and close the crotch seam back up, attaching one side to the other. It can be done with the Velcro fasteners or a sewing machine, if you have one. Please be aware, if you put this in the wash, it needs to be air dryed as the glue on the Velcro fasteners will come undone in the dryer.

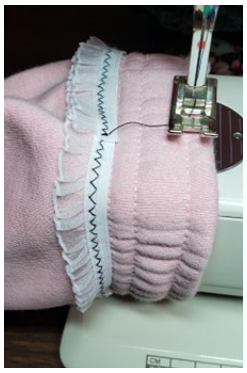
On the OUTSIDE of the pant leg crotch area, we need to stick 4 or 5 of the fasteners. Use the rough side of the Velcro here. Move the edge over a bit and attach the soft, fuzzy side of the Velcro to the INSIDE of the other side. Make sure to match the placement of the fasteners to the first side, as shown.



You can also cut a few slits for their back legs, right

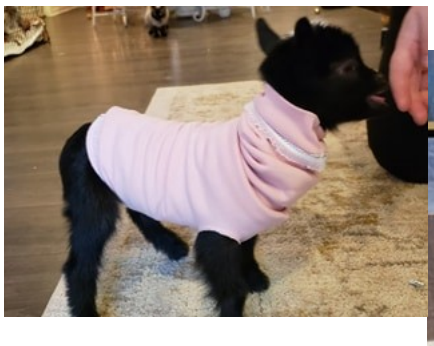
next to the waistband, about the middle of the pant leg. Make it about 1 1/2" long.

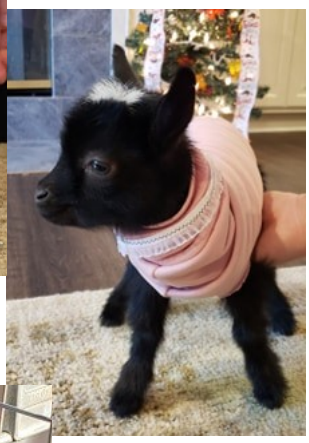
If you have a sewing machine, you can sew together the crotch seam, zigzag around the holes and slits we cut out, and/or add a bit of trim. 🙂



These could be made double layered, using the other pant leg, but that would also require a sewing machine.

And there it is. A finished goat coat, ready for the kidding kit.





Find out how Spalding Laboratories Bye Bye Insects work on page 12!

Livamol with BioWorma: Review Part 1

Shannon Lawrence Yellow Rose Farm

Background Information: I live in Shady Dale, GA on 7 acres. I have a herd of around 55 goats that rotationally graze 2 – 3 acre pastures. We have lived on this property for a little over 10 years. The southeast is well known to be heavily concentrated with parasites, most importantly are Barber Pole (Haemonchus contortus).

What is Livamol with BioWorma (BioWorma)?

Livamol with BioWorma is a feed additive that is top dressed onto your goat's feed. It contains a natural fungus *(Duddingtonia flagrans)* that helps break the life cycle of nematodes/roundworms (including Barber Pole). The fungus passes through the digestive system and gets expelled into the pasture in feces.

The fungus lives in the feces where it captures, paralyzes and consumes infective larvae. "*Did you know:* It has been estimated 10% of the parasite population is within the host animal vs 90% is on the pasture*. http://www.wormboss.com.au/tests-tools/management-tools/drench-resistance/using-refugia-to-prolong-drench-life.php Duddingtonia flagrans*". The fungus does not live very long in the feces, so there is NO residual effectiveness. The fungus has no effect on your goat's digestion OR worms that are currently inside your goat.

Livamol with BioWorma can be effective in breaking the life cycle of Barber Pole worms, if you feed it properly, feed it every day, and stay on top of your FAMACHA by deworming your goats when needed.

My goats eat a textured feed with molasses. The BioWorma usually sticks to the feed and is ingested by the goats. This is a totally new (to us) process for helping to control internal parasites so resistance should not be an issue.

There are several things to consider:

Cost: It is not cheap, but neither is dying livestock.

- My goats took a bit to get used to the flavor on their feed. I started with smaller amounts and worked my way up. I have heard of a goat getting into the bucket of BioWorma and eating mouthfuls of the product. Other than an upset stomach, the goat is doing fine.
- Trying to make sure that in a large herd, EVERYONE is getting the required amount daily can be an issue because they tend to not like the taste. As with any supplemental feeding product, there is not going to be 100% transmittal into the feces. BioWorma suggests there is an approximate 70% effectiveness.

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- BioWorma contains a fungus that dies in the manure under 40 degrees Fahrenheit. So feeding it during the winter is not recommended.
- It does not help to control any parasites that your goats already have, so you still need to treat them and keep them parasite free…hahaha
- There is no buildup of the fungus, so you have to continually feed it for it to remain effective…$$

My thoughts on Livamol with BioWorma: I fed it for about 2-3 months before winter set in. I will start it again in the spring, because I live in Georgia and I do have problems with internal parasites including Barber Pole. I am going to continue to feed the Livamol with BioWorma over the spring and summer and will come back with another update.

Please review the material on the www.bioworma.com website and watch the video. I found this information very useful.

Managing Flies

Dawn Robnett—Mesquite Valley Farm

If you have livestock, you most likely have an abundance of flies. As with anything, managing them successfully requires a multi-pronged approach. Leave one important factor out and your success rate falls dramatically.

I am an avid organic gardener that utilizes beneficial insects to manage the lion's share of my pest management program, so when I discovered that I could utilize parasitic wasps to manage flies, I was thrilled. I learned early on however, using them successfully, isn't as simple as releasing them and walking away.

A Quick Fly Primer

Before you begin your fly management program, it's important to know what type of flies are plaguing you because it helps to determine how to manage them. Unless you have or live near cattle, you are most likely dealing with the common filth/house fly and the Biting Stable fly (usually found when horses are within a ¼ mile).

Flies have four stages in their life cycle. Adult flies lay eggs on or close to a larval food source of rotting organic matter (i.e., manure but also compost piles, rotting hay, etc.) the eggs hatch within hours into larvae (maggots). The larvae feed and in approximately 5 days they pupate forming a cocoon. Inside this cocoon they metamorphosis into an adult fly which takes about 3 days. The pupa is also the stage that flies "hibernate" when the temperature drops below 47°F which allows them to make it through the winter.

How Parasitic Wasps Do Their Job

The best way to control flies is to disrupt their life cycle. That's where fly parasites do the heavy lifting. Did you know that for every one female fly that doesn't hatch, means 900 fewer flies? Each female parasitic wasp (fly parasite) kills up to 75 fly pupa during her lifespan. Since I like math, that's 67,500 flies that will never bother you or your livestock thanks to one little parasitic wasp. These parasitic wasps look for fly pupa so they can breed and when they find one, they lay their eggs inside the pupa which kills the fly before it has a chance to hatch.

A Management Program That Works

What we've found to substantially reduce our fly population is a fly program that includes manure management, capturing adult flies, and fly parasites.

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Manure Management

There are times of the year where you can be a bit more lax in your pen cleaning but during the warm humid months, is not one of them. Keeping pens, barns, and coops clean and dry is key to keeping the maggots away. With all of the hay waste from goats, we really have to stay on top of it during our summer rainy season else we will find maggot patches under all of that “bedding”. If you find one, get that bedding up and dry out that ground, if you can.

Beneficial Nematodes

If you just can't keep up with pen cleaning to the level needed then there is another alternative called beneficial nematodes. Steinernema carpocapsae are microscopic organisms that occur naturally in soil throughout the world. These specific beneficial nematodes are parasitic to insect pests that typically have a developing (larval or pupal) stage of life in the soil. They will not harm mammals, aquatic life, birds, reptiles or amphibians. They are applied to the soil and the nematodes locate pests and enter through various body openings or directly through the body wall. Once inside, the nematodes produce bacteria that is injected into the pest's blood which creates food and a hospitable environment for their own reproduction. As the food resources within the dead pest become scarce, the nematodes exit and immediately begin searching for a new host. As long as there is a suitable host, they will continue to survive and parasitize. Plus this version of nematode go after are: fleas, caterpillars, cutworms, sod webworms, pill bugs, maggots, worker and soldier ants, and many more.

Capturing Adult Flies

This is where knowing the type of flies you have comes in handy. Trapping adult flies means you shorten their life and they don't get to lay any more eggs. The common filth fly can easily be trapped with stinky and sticky traps. I highly recommend the use of Starbar brand traps because they work and they are easy to get at your local Tractor Supply. We've purchased other brands and have found that many are not engineered correctly and the flies you've trapped easily escape rendering the trap useless. We use the sticky traps in our milk parlor and barn area where stench is not wanted. If you have biting stable flies, there is a special sticky trap made by the same company that attracts those flies. A word of caution when using stinky traps if you have livestock guardian dogs, hang those traps high as the dogs like to get into them.

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Fly Parasites

There are a few things to know about fly parasites and you'll hear mixed reviews about them. When we first started using them, we didn't think they really made much of a difference because we didn't order enough. Usually the sellers of these beneficials help you calculate how many you need but you need to keep that updated if your animal load grows. Another thing to consider is properly releasing them. In our area, we have a thriving ant population, and we are in a migratory path for wild birds. We also have chickens. All of these critters love to feed on parasitic wasp cocoons. Usually, you can just dig a shallow hole add the fly parasites and cover with a little dirt to hide them from ants, birds, and wind. This application is great for pastures. For us, our ground is so hard, digging even a shallow hole is work so we've found that making a bag out of simple window screening and hanging them in various key areas works very well.

Fly Parasite Release Bags: If you want to make your own release bags, simply cut some window screening, fold it in half, use duct tape or similar type tape to tape up the sides and punch a hole on top for hanging. When your predators arrive, fill the bag, hang it and when they hatch, they will crawl through the screen holes and go to work. These predators will travel up to 150 feet. We divide ours up so they don't have to travel as far for a more even coverage.

If I've convinced you to try Mother Nature's approach to fly management, you're probably wondering where to get them and what they cost. There are two companies that I have done business with and have found to be reputable. I'm sure there are others but these I can recommend.

Spalding Labs sells parasitic wasps they've trademarked Fly Predators®. They blend several types of parasitic wasps. You can select your preferred program and they will bill you right before each shipment. You can find them at: https://spalding-labs.com/ - Member Coupon on Page 9!

Arbico Organics also sells parasitic wasps called Fly Eliminators. They too have different programs for you to choose from. They require up front payment for the program but if you want to try them before committing, you can order a free trial. They also sell the beneficial nematodes to combat the maggots. This is where I order my beneficial insects for my garden, as well.
Fly Eliminators: https://www.arbico-organics.com/category/fly-control-program
Beneficial Nematodes: https://www.arbico-organics.com/category/fly-control-program

CHAFFHAYE—A Talk with Dustin Gaskins, Field Nutritionist

Member Coupon on Page 18!

How does Chaffhaye compare to alfalfa hay or pellets?

Chaffhaye is premium cultured alfalfa, that during the culturing process, the nutrients in the alfalfa are broken down or "predigested" so that the animal is able to utilize more of the nutrients from the hay when compared to alfalfa hay and pellets. With this process, it also has all-natural probiotics, and prebiotics to help maintain an overall healthy digestive tract of the animal.

How do you determine if it is spoiled or the probiotics? (white spots)

The white spots in Chaffhaye are the beneficial yeast colonies that make our product unique and beneficial to your animals. These yeast colonies can be any given size, but should always be a white color. The determining factor on spoilage will be smell. Many of our customers love the smell of Chaffhaye, which will be a distinct smell of sweet molasses and cut alfalfa combined. If your bag has a sour or musty smell that may mean you are experiencing a spoilage issue that we will be happy to address. It is important to remember, that Chaffhaye is a live feed and that each, small batch bag will be unique. We encourage customers to inspect each bag before feeding for punctures or tears to guarantee freshness.

Best way to store Chaffhaye in each season?

Unlike traditional bailed hay, Chaffhaye is packaged in heavy duty, weatherproofed, plastic bags. For best results of long term storage, we recommend storing in a dry climate-controlled area. However, a large majority of our customers find that bags can be stored outside without any issues.

How long does an open bag stay fresh?

Chaffhaye has a shelf life of 16 months from the date it is packaged as long as it is unopened. Once opened, Chaffhaye will keep for 7 to 10 days, as long as the bag is rolled down to keep oxygen exposure minimal.

Can this be fed free choice?

Chaffhaye can absolutely be fed free choice. We encourage our customers to experiment with Chaffhaye in their feeding programs to see what works best for their animals.

What trace minerals are included, specifically molydbendum?

The trace minerals that can be found in Chaffhaye are Copper, Manganese, and Molydbendum, Molydbendum's level is at 1.87 PPM.

Do you have bloat issues with this product?

With Chaffhaye, we see little to NO bloating. This is great news for those folks constantly fighting the dreaded “hay belly”. Because we are a cultured feed, most of the natural sugars and carbohydrates in Chaffhaye are broken down during the culturing process. This in turn, reduces the amount of gasses produced to break down feed in the rumen.

Dewormer Chart for Goats

Important --Please read notes below before using this chart

1 ml = 1cc	Valbazen (albendazole) ORALLY	SafeGuard (fenbendazole) ORALLY	Ivomec Sheep Drench (ivermectin) ORALLY	Prohibit (levamisole) ORALLY	Cydectin Sheep Drench (moxidectin) ORALLY	Rumatel (morantel) Feed Pre-mix ORALLY
Weight Pounds (lbs)	20 mg/kg 2 ml/ 25 lb	10 mg/kg 1.1 ml/ 25 lb	0.4 mg/kg 6 ml/ 25 lb	12 mg/kg 2.7 ml/ 25 lb	0.4 mg/kg 4.5 ml/25 lb	10 mg/kg 45 gm/100 lb BW (Durvet)
20	1.6	0.9	4.8	2.2	3.6	
25	2.0	1.1	6.0	2.7	4.5	11 grams
30	2.4	1.4	7.2	3.3	5.4	
35	2.8	1.6	8.4	3.8	6.5	
40	3.2	1.8	9.6	4.4	7.3	
45	3.6	2.1	10.8	4.9	8.2	
50	4.0	2.3	12.0	5.5	9.0	23 grams
55	4.4	2.5	13.2	6.0	10	
60	4.8	2.7	14.4	6.6	11	
65	5.2	3.0	15.6	7.1	12	
70	5.6	3.2	16.8	7.7	12.7	
75	6.0	3.4	18.0	8.2	13.6	34 grams
80	6.4	3.6	19.2	8.8	14.6	
85	6.8	3.9	20.4	9.3	15.4	
90	7.2	4.1	21.6	9.9	16.4	
95	7.6	4.3	22.8	10.4	17.3	
100	8.0	4.6	24.0	11.0	18	45 grams
105	8.4	4.8	25.2	11.5	19	
110	8.8	5.0	26.4	12.1	20	
115	9.2	5.2	27.6	12.6	21	
120	9.6	5.5	28.8	13.2	22	
125	10.0	5.7	30.0	13.7	22.7	56 grams
130	10.4	5.9	31.2	14.3	23.6	
140	11.2	6.4	33.6	15.4	25.4	
150	12.0	6.8	36.0	16.5	27.3	68 grams

Valbazen Suspension (11.36 % or 113.6 mg/ml): 20 mg/kg orally; withdrawal time is 9 days for meat and 7 days for milk Do NOT use in pregnant does in the first trimester of pregnancy

Safe-Guard/ Panacur Suspension (10% or 100 mg/ml): the label dose in goats is 5 mg/kg, but a 10 mg/kg dosage is recommended. At 10 mg/kg, withdrawal time is 16 days meat and 4 days for milk. Add 1 day for each additional day the drug is used (e.g. if administered 2 days in a row then withhold milk for 5 days after 2nd dose).

Ivomec Sheep Drench (0.08% or 0.8 mg/ml): 0.4 mg/kg orally; meat withdrawal time is 14 days and milk withdrawal is 9 days.

Prohibit Soluble Drench Powder (Sheep): (Note that this drug is also sold as Levasol and Tramsiol) 12 mg/kg oral dose with meat withdrawal of 4 days and milk withdrawal of 3 days. Solution prepared by dissolving a 52 gram packet in 1 quart (943 ml) of water. This yields a solution with 49.6 mg/ml. If dosing kids, it is safer to dilute further (1 packet in 2 quarts of water), and then administer twice the amount listed on the chart. The larger volume administered will then provide a wider margin for safety if there are small errors in dosing.

Cydectin Sheep drench (1 mg/ml): use orally at 0.4 mg/kg orally; for a single dose the meat withdrawal time is 17 days and milk withdrawal is 8 days. Note that these withdrawal times are only applicable for the sheep oral drench at the dose given here. Higher doses will require a longer withdrawal time.

Morantel tartrate (Rumatel) recommended label dose for goats is 10 mg/kg, orally. There is 0 (zero) withdrawal time for milk in lactating cattle and dairy goats. Meat withdrawal time for goats is 30 days. Because of the large differences in morantel concentration among the various products, it is important to carefully read the label and make sure you are dosing correctly. The dosage on the chart above is for Durvet Rumatel. {With Durvet Rumatel, feed 0.1 lb (45 grams) per 100 lbs. BW; and with Manna Pro feed 1.0 lb per 100 lb. BW}. There is also a highly concentrated form called Rumatel 88, but this is meant for mixing into large volumes of feed (feed 0.1 lb (45 gram) per 2000 lb BW). Note that the 10 mg/kg dose used for the chart is the label dose; administering 1.5 – 2X this dose may improve efficacy. If an elevated dose is used then withdrawal times would need to be extended.

NOTE on Guideline for Anthelmintic Dosages in Goats

The attached chart was developed by Ray M. Kaplan, DVM, PhD, DACVM, DEVPC (University of Georgia) with subsequent contributions by Patty Scharko DVM, MPH (Clemson University). It is provided as a possible guideline for anthelmintic (deworming) dosages for goats. Producers should always consult their veterinarian for advice on their specific management situation, for determining which of the dewormers remain effective on the farm, and for determining the most appropriate dosages for their herd. Meat and milk withdrawal times listed in this document are based on the most current information available from FARAD as of it's writing. Be aware that these recommended withdrawal times may change over time as new pharmacologic information is obtained.

With the exception of fenbendazole administered at the 5 mg/kg dose, these drugs are **not** approved by the Food and Drug Administration (FDA) for use in goats, and when used in goats are considered extra label use. Fenbendazole at the recommended dose rate of 10 mg/kg is also considered extra-label usage. The FDA regards extra-label use of drugs as an exclusive privilege of the veterinary profession and is only permitted when a bona fide veterinarian-client-patient relationship exists and an appropriate medical diagnosis has been made. The following chart is intended to serve as a guideline for improving accuracy when dosing goats with an anthelmintic, but these drugs should be used in goats only when appropriate veterinary advice has been received. Cattle pour-on dewormers should NEVER be used in goats to treat internal parasites.

Drug resistance to multiple drugs and sometimes to all available drugs in parasites of goats is extremely common. The effectiveness of a dewormer should always be tested before being used by performing a Fecal Egg Count Reduction Test (FECRT) or DrenchRite larval development assay (contact Sue Howell in Dr. Kaplan's laboratory [706-542-0742; or drenchrt@uga.edu] for more information about the DrenchRite test, current cost = $450).

To improve the effectiveness of deworming treatments, multiple dewormers may be administered at the same time sequentially. It is important not to mix the different drugs together as they are not chemically compatible. They should be given separately, but can all be given at the same time, one right after the other. It is always recommended to treat goats selectively given their individual need for treatment based on FAMACHA score, fecal egg count, body condition score, and other health measurements as a guide. This recommendation is even more important when using drugs in combination. If all animals in the herd are treated, resistance to the dewormers will develop rapidly, and if using a combination there will be nothing left to use when this happens.

ADDITIONAL NOTE ON CYDECTIN: For a short period, it was recommended to administer Cydectin (moxidectin) by injection. However, new information suggests that the oral route is preferred. If the cattle injectable is used, FARAD recommends a 120-130 day meat withdrawal time. NOTE that the cattle pour-on formulation should NOT be administered to goats orally – this is not permissible under extra-label use law. ALWAYS use the sheep oral drench. Check http://www.acsrpc.org/ website for more information on drug choice and drug resistance.

Updated September 2014

Recipe of the Month—Homemade Teat Wash

By: Patti Monson, Prima Wara Farms

2 T Dr. Bronner's No Scent Baby Soap
25 drops of Lavender oil
15 drops of Tea Tree Oil
8 drops of Geranium Oil

In a 16 oz empty bottle, add the 2 T of Dr. Bronner's soap, then fill the remaining bottle with water. Add the Lavender, Tea Tree and Geranium oils. Turn to mix.

Learn more about Chaffhaye from a Field Nutritionist on page 15.

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Editor:
Karen Goodchild
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