

Combing Cashmere Goats

By Linda Fox
Goat Knoll Farm

I asked an old and wise Uncle once when I should prune my apple trees. His answer: "When your knife is sharp." Unlike apple trees, your goats need to be combed when they start to shed. Shedding depends on the genetics of the goat, on the health of the goat and the weather. If you keep records of your harvest from year to year, you will probably find that an early shedder in one year will be an early shedder in other years. Also, goats that you can comb out in one session—assuming you get the timing right—will probably comb out in one session in other years.

We used to shear most goats on our farm. Once we learned how, we could count on our annual harvest being complete in one day, maybe two. We sheared the entire herd around the first of February. The goats looked punky for a while and we worried some about them being cold and pregnant, but we eased our conscience and their shivers by making sure they had a place to hide from the weather and extra food to burn in those four efficient stomachs. However, the realities of current fiber dehairing options, in my opinion, make harvesting by combing a requirement. So, we comb.

New goat owners may struggle with getting this done. What tools do you use? When do you do it? How do you do it? I haven't been combing goats as long as many people have, so perhaps I'm new enough that I can still relate to the difficulties of a new goat comber.

I decided to do this article on combing because we're doing it this time of year and because I thought there wasn't much out there on the subject. After researching, I find there is quite a bit of reference material out



Much to this young goat's dismay--'Tis the Season!

there and some of it is quite recent. First, I will tell you what we do and then I will summarize the expert advice.

Our System of Combing

The goal is to get all the cashmere fiber off the goat as quickly as possible, with as little guard hair and vegetative matter as possible, without damaging the cashmere, the goat or ourselves. Damage to the cashmere includes breakage and creating noils. An additional goal for me is to keep each goat's fiber separate so that I end up with an accurate record of what this goat produces. This record would include the weight of the fleece, style, length and fineness of cashmere and

any other information about difficulties or ease of combing. Even on a shorn goat, information about the fleece characteristics is important, but in a combed-goat world, I also want to know how easy it was to harvest. When I make decisions about who to keep and who to breed, the efficiency of the harvest will play a part.

What Tools to Use

Over the years, I have accumulated a collection of tools, some more effective than others. I've used a straight comb with widely spaced teeth, a V-shaped combing device and a variety of T-shaped combs with handles. Now, I use mostly T-shaped combs with handles. This seems to be easier on the wrist. However, different tools work better on different fleece types. When I comb, I often try different combs to see which will work best for a particular goat.

Brushes and combs can be found in goat and pet supply catalogues, print and online. You can also find them at feed stores and agricultural supply stores like Wilco. I like to peruse the pet and livestock grooming aisles of Wilco and my local feed store to hunt for new combing tools. Jeffers is quoted often as a good choice for purchasing combing tools.

When to Comb

I start looking for signs of shedding in December. This year, we only had one goat that did serious shedding in December and it was only on his shoulders and front legs. I'm not sure what that means, but I've made a note of it in case this is a pattern for this goat. In some years, I've had several goats that shed out in December.

If I don't see signs of shedding earlier, starting in January, I go through the herd every two weeks to check for shedding. If I start to see obvious signs of shedding (like cashmere on the horns) I will comb the shedders more often.



For record keeping in the barn, where things aren't always neat and tidy, I love this cheap plastic binder-Walmart's finest! Records, camera, cell phone and other essentials fit neatly inside. It snaps shut and can be carried out to the barn, keeping your supplies dry even in the rain. There's a clipboard astener to keep papers in place on the outside. I print worksheets and have them handy to check off the goats and make notes as they are combed. I usually print a new worksheet for each session. I've always thought a laptop computer might be handy in the barn as well, but I don't know how I'd keep the barn cats off the keyboard.

On some of the long haired goats, if you wait to see signs of shedding from a distance, you may be too late. Cashmere can release and hang up in the guard hair, secretly hiding from human eyes. If you wait too long, you may find mats under all that guard hair.

For early combing sessions, we move through the goats quickly. Most just need a quick clean up with the brush. I've found this clean up will pay off in later sessions, when they are shedding in earnest. The goat will be cleaner in subsequent sessions and their guard hair will be less tangled.

How to Comb

We prepare for combing by locking the goats in the barn to keep them confined and dry. If it is raining, we lock them in the night before so they have a chance to get dry. We assemble our combing implements, barn worksheet, bags and labels and devise our plan for how we are going to catch, "process" and release the goats. Sometimes we have additional

services the goats require—like hoof trims or vaccinations—that we need to include in our plan. We've found that time spent planning saves time and wear and tear on us and the goats. We know that some of our goats will volunteer to come out, some can be teased out of the pen with grain and some will need to be chased or cornered to catch. If you have nothing but tame, compliant goats, you can skip the rest of this section.

In our barn, we have several pens and gates that open to a center aisle where we will work. We take goats from the pen and put them on a maintenance stand for combing. If you don't have a stand, you can tie them up on a very short leash to a post. When we are done with a goat, we put them in a different pen. We first do the volunteers and the goats who can be lured out with grain. Then, we use temporary panels or gates to make the pen smaller so the remaining goats are easier to catch.

Below--barn worksheet and various combing and grooming tools ready to go.



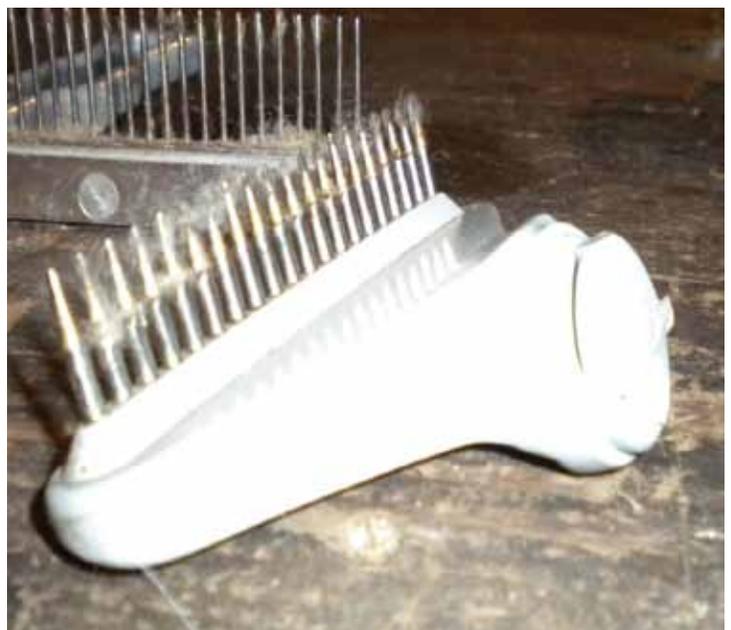
Once the goat is on the stand, I use a brush or other combing tool to remove hay, vegetative matter or mats from the fleece. Anything I can brush off won't end up having to be dehaired out of the fleece. From this brushing, I will also get a feeling for how much the goat is shedding. It is helpful when combing to have an assistant who can help you move the goat in and out, open gates, talk nice to the goat and feed them a little grain. Most of our goats realize that being in the stand is a good thing as they get grain. Some of our goats like to be here for the attention (and grain), most tolerate it and one of them tries to bite me. Good thing for the biter--she has a great fleece.



When I comb, I try not to be too obsessed with picking out stray bits of hay. I will be making one more pass through the harvested fleece before I send them off for processing, so I can do more cleanup than if I choose. If I find a comb-full of fleece that is really hairy or has very short or matted cashmere or a lot of vegetation, I will normally toss it in the trash.

This was my favorite comb in an earlier year although the "rotating teeth" aren't holding up well. This one was well-used for two years and ready to be retired. I'm not sure the rotating feature is especially useful; I think the comb works well due to the spacing of the teeth and their length. This comb needs to be cleaned of the junk built up on the tips of the teeth. The comb works better when it is clean. Jeffers Supply sells this one.

Using the combing tool, I comb through the goats' coat downward, in the direction of the hair growth. I comb from various areas to see how much cashmere accumulates on the comb. From this I will assess if they are shedding or not. If I get quite a bit, I will comb in earnest. Various parts of the goat may shed at different times. In our herd, a lot of the goats shed rear-end first, with the neck shedding last.



If I'm having trouble getting the comb through the coat, because it is thick or long, I will comb with shorter strokes near the belly or lower leg of the goat and work my way up. Even on the dense or long-haired ones, with repeated strokes, the hairs will straighten out and combing will become easier.

This was my favorite comb one year, but the handle broke off and now it isn't as useful. I bought it at Wilco in the dog grooming section. The teeth are sharper than the comb above, so you have to be careful not to rake it on the goat's skin.

Don't let much cashmere build up on the comb. After every few strokes, cashmere should be removed to avoid repeated abrasion on the collected cashmere. Careless combing can mat and cause noils in the cashmere. These may cause breakage in the dehairing process, or may cause the cashmere to be removed with the guard hair.

I keep a labeled fleece bag for each goat. I use those ever-present plastic shopping bags from the grocery store (recycle!) with a masking tape label with the goat's name or tag number. I place temporary nails around the edge of one of our kidding stalls on which to hang the bags. I sort them by sex and age so I can find them easily. As soon as a goat is done or if the bag gets full and I need to start a second bag (good goat!) I take the bag up to the house.

Combing sessions seem to be a case of diminishing returns once the goat is shedding. After the bulk of the cashmere is harvested, in subsequent sessions, you can still comb out more cashmere. However, subsequent combings will contain less and less cashmere and more and more guard hair. At some point, you need to decide that the goat is done and this will be before you get that absolute last cashmere hair from the goat. Sometimes I put down a goat as almost done and in the next combing session I get only a little cashmere with a large percentage of guard hair. I usually end up not putting this last bit of hairy cashmere into the bag or bagging it separately to decide later if I want to just toss it or downgrade my processing batch by including it.

After Combing

When the last goat is done being combed for the season, or when you are so sick and tired of combing that you decide you're done whether they are or not, it is time to assess your fiber and package it up for processing. This is the fun part. I go through



Placing a handful of fleece in the bag after removing it from the comb. I'm using the little round-headed comb with the two rows of V-shaped comb on this goat. I bought this comb at Cynthia Heeren's booth at Black Sheep Gathering.



The stash of partially-filled bags of cashmere, hanging from temporary nails in a vacant kidding stall in the barn. They are easily accessible for me to grab when I have a goat ready to comb. I add to the bag each combing until the goat is done. Having them hanging keeps them away from the barn cats and easy to find the one I want.

all fleeces to grade them and weigh them. I pull out the fleeces that I want to save for fleece competitions or goat shows and package the rest for sending to a mill for dehairing and other processing. I might also save out a few fleeces for hand dehairing or for potential sale as raw fleeces. After the harvest is complete, my goal is to get this final chore done and fleeces sent off to the processor as quickly as I can. The quicker I get them off, the sooner I will have my saleable produce returned to me! Also, moths are especially fond of dirty cashmere and I don't want to share my harvest with them.

Other Thoughts

Sometimes I harvest a fleece that has very little guard hair in it that might be suitable for quick hand dehairing. Last year, I had several fleeces from wethers that I found could be hand dehaired effectively. I classify a hand-dehairing potential as any fleece that I can dehair one ounce or so of cashmere in "TV evening".

On our farm, harvesting from kids is problematic. It seems like they often pick up a lot of dirt and seeds in their coats and after these are removed, there isn't much fiber left. It also seems that they may develop mats overnight. I don't know if this is because of the finer fleece or if they just get dirtier because they are closer to the ground. I try not to get too obsessed with kids fleeces. As long as their fiber is fine and crimpy, I don't cull them for length or excessive vegetative matter attraction in this first year. However, they do go on "the list" to be watched the next year.

I have read that long-haired goats are hard to comb. I don't believe this is true. Most of my long-haired goats are easy combers. Using scissors, you can trim off some of the long hair before you comb, being careful to trim only the guard hair that extends beyond the cashmere. Sometimes I will trim hair, especially around the rear and back



This is a longer comb. It works well, due to the good spacing and the length of the teeth. However, it covers a wide swath on the goat which causes more pulling on their hair. (They don't like this.) I've used it anyway by angling it so that only about half of the comb is combing through the goat's hair. This comb is very sturdy. No little wobbly rotating teeth here! I found this comb at Wilco in the horse grooming section; I think it's a mane comb. I've used this comb for several years. On a recent trip to Wilco, I got a brilliant (maybe) idea. I bought another one and, using a hacksaw, cut off the ends so it's about half as wide. I've used it for several years now and it has become my favorite comb for most goats. Stay tuned.



This is my first string of combing tools. From left to right, the grooming brush that I use to clean up the goat before combing, the hacksawed-off mane comb, the mat rake with the (bent) rotating teeth, and the small round-headed wood brush with 2 rows of V-teeth.

legs, figuring that this might also help a new hungry kid find food quicker. However, even on an untrimmed goat, I have found if you comb the tangles out of the guard hair, the cashmere can be easily combed through it.

Before you read the expert advice, be warned that the experts don't always agree. Like most goat things, people have their own opinions, preferences and systems for management. Systems are also partly dictated by size of the herd. I certainly learned a lot from reading advice from others and have a list of new techniques I want to try.

Advice from the Experts

Combing Your Goats, Eileen Cornwell, Royal Cashmere Goats, Nevada, NWCA Quarterly, Winter 1999.

Climate affects when goats will shed. In colder climates, the goats may hang on to their coats through late March, some as late as May. Harvesting by combing reduces the amount of the guard hair that will need to be removed by the dehaier. On a shorn fleece, as much as 75% of the weight may be guard hair; on a combed fleece, harvested at the proper time, the guard hair weight can be reduced to 10-20% of the weight. A combed fleece costs less to process than a shorn fleece because the processing fees are based on the incoming weight of the fleece. Less weight also costs less to ship. An animal ready for combing will generally release fibers on the neck first. If you think a goat may be ready, you can gently tug on the neck fibers. If it comes off with a gentle tug, the goat is ready; if you pull it out by the roots, it is not. Often goats will hold patches of their fleece along their belly or shoulders longer than the rest of their fleece. You can usually comb out the entire fleece from an animal in two combing sessions, a week or two apart. Fleece can be collected in about two 10-15 minutes session.



For combing, it helps to have an assistant who will help you with moving the goats and to talk nice to the goat to reassure it that all is well.



That last six goats from today's combing--they didn't volunteer and they couldn't be lured out of the pen with grain. So, using a long gate we scrunched the down to a small area where we could grab them easily. Maybe next time they'll volunteer!

Hand Combing and Hand Dehairing Your Own Cashmere, Carol Spencer, Foxmoor Farm, Silverton, Oregon.

Feeding wheat germ oil may eliminate dandruff problems. It is important to keep your goats' coats clean before combing begins. To do this, use a soft natural bristle brush and brush them against the guard hair grain and then brush again with the guard hair grain. Combing begins in March, when you see cashmere loosening near the ears and top of the neck. Don't be in a hurry to comb—wait until the cashmere is fully loose and comes off easily in several areas. Breeding does will shed fleece shortly after kidding. If you wait until you see tufts of hair on your fences and in the brush, you are too late and a lot of your fleece will be lost. To comb, use a natural bristle brush for clean up, a large pin brush and an 8" large toothed metal comb. Use the pin brush to brush in 6" strips from the backbone, down the goat's side to the belly. This loosens the cashmere. Then use the 8" metal comb to gently pull out the cashmere in handfuls. It usually takes only 30 minutes to comb the whole animal and the entire harvest is done in one session. One of the breeding bucks sheds in two sections, two weeks apart. As the bucks get older and are used more for breeding, the fleece will generally be too sticky and matted and most of the fleece will be discarded. Carol's entire article can be accessed from her web page [here](#):

Combing Tips from Pat Fuhr, Giant Stride Farm, Onoway, Alberta, Canada, CashMirror, January 1998. In 1997, Pat Fuhr successfully combed over one hundred goats. The secret is to not waste your time—if the goat's cashmere isn't lifting out, just move on to the next goat. All goats seem to follow their own shedding patterns and you need to learn to identify when they shed. Pat prefers the goats that shed the earliest (January) because you will get very little guard hair (maybe 5 to 10%). Pat preferred combing even when shearing was a viable



Lovely cashmere coming out easily--very little guard hair.

option because of the severe cold weather in her area. Advice includes getting your labeled bags ready in advance and trying to work through the whole herd once early on to see who's shedding and who isn't. Start with the longest and finest haired goats first as these are the ones whose cashmere will mat if the shedding gets ahead of you. Use a dog flicker to lightly comb over the surface of the fleece to remove surface vegetation and dirt. Soiled or stained fiber should either be discarded or kept in a separate bag. Work over the coat using a comb that has a few widely spaced teeth. Use a wooden comb with a rounded head that has 22 straight teeth that look like small, dull nails formed in two concentric, V-shaped rows. It is called a Heavy Duty Wood Rake and can usually be found with dog grooming products. Adult bucks will usually be too dense and matted to comb. Wear clothing that doesn't build up static or you may end up the looking like a giant cotton ball.

Combing Cashmere Goats, Diane Thompson, Riversong Farm, Nazko, British Columbia, Canada, NWCA Quarterly, March 2009. Diane Thompson is a retired goat farmer now. She used to

comb 100 to 200 goats per year, so she has obviously learned a few good tricks. The goats in their herd begin to shed anytime after December. The shed cycle is an individual trait, as well as being related to the time of breeding and kidding. Pregnant does will generally shed before they are due to kid. Timing is everything as the cashmere loosens from the follicles and sheds before the guard hair does. Because cashmere processing is expensive and based on total harvested weight, you want minimal guard hair in your harvest. Over the years, the fiber sent to mills for processing ranged from 70%-90% cashmere by weight and this was directly related to how well the harvest was timed. Goats should be dry when combed and you should avoid combing on really cold days—Diane quotes -20°F as being really cold. Their combing season is January 1st – March 31st, with the bulk of the harvest in February.



Select 4-5 goats per day to comb; the goal is to keep the daily number small enough so that the job stays enjoyable. It takes a while to develop a trained eye to spot a goat whose cashmere has “lifted”. Cashmere grows from different follicles than the guard hair and loosens earlier. As the cashmere is released, it slowly moves out of the goat’s coat. You need to look for clues in order to find the goat that is shedding. For goats with shorter guard hair, you might notice the cashmere looking more uneven in length or some tufts sticking out. A goat whose horn is sporting cashmere is likely shedding. In longer haired goats, you might see cashmere peeking out where it had been hidden before or sometimes the coat just looks fluffier than normal. If you see a goat that looks like it might be shedding, grab a tuft of cashmere. If it slides out easily, it’s ready; if it doesn’t, the goat can wait for another day. Use a plastic garbage bag placed in a bucket for tossing your harvest into. You can also put a form in the bag with fleece grading information and other notes. Restrain the goat in a stanchion, or using a halter, tie them securely to a post.



This is GK Ripley confined on the grooming stand. I combed her out today and have a very large bag of fiber. One photo is the side I had just finished combing and the other had not yet been combed. Can you tell which? The lesson here, you can't always tell if they're shedding unless you catch them to look.

Use a classic dog brush (the one with a gazillion little short ½" wires) to clean off surface hay, grain, poo balls and matted cashmere, although if your timing is right, there shouldn't be any matted cashmere. For the actual combing, the weapon of choice is a 3" dog rake with one row of ¾" teeth. Another comb that works well is a small round rake with two rows of 1" teeth set in a "V" pattern.

Start combing on the side, in a vertical line from the withers to the elbow. Comb softly down the one line until the hair and cashmere lie in the same direction—this usually takes 5-10 strokes. Then, change the angle of the comb by lifting the handle to a 45 degree angle, rotating the teeth so they are going into the hair about the same angle as a hoe into a garden. Continue to comb until all the cashmere has been lifted from this line, removing the cashmere from the comb after every 4-5 strokes. When this line is done, move down the goat about 1" for each subsequent line, repeating the process. This minimizes the pulling on the hair and if the properly done and if the goat is ready to comb, the cashmere should just roll out, leaving almost all guard hair on the goat.

Generally the neck is the last part of the goat to shed. If the rest of the goat is shedding nicely and the neck is not, you can either come back to the neck another day or comb it out anyway. It will just be tougher to comb out. If you're combing a lot of goats and need to finish each in one session, you'll just get all you can while the goat is restrained, even if it's more resistant.

Bucks are combed the same as does, although it won't be as pleasant. Combing goats with poor differentiation between cashmere and guard hair can be difficult; this might be a problem on those first fleeces. You might need to clean off the comb between goats. If the comb gets sticky and dirty, it will be harder to slide it through the fiber. When everything is right, it's a 20-30 minute job per goat.



Lucy trying to get as much hay in her fleece as possible before she is up for combing.



Jaws, the biter, and why we keep her.

Diane has a great [You-Tube video](#) about combing goats. If you haven't seen it, you will want to check it out.

While You're Combing Those Goats

This is a good time to think about which fleeces to save out for fleece competitions and goat shows. Generally the fleece competitions are in the fall and open for anyone who wants to enter. It is a good inexpensive opportunity to get an expert opinion on the quality of your fleece.

Also, to enter a goat other than a kid in a cashmere goat show, you will need to have their current fleece in a bag. 50% of the goat show score is based on what's in the bag.

So, keep an eye out for those special fleeces and maybe take special care in combing out those prize-winning entries.



Lucy trying to get as much hay in her fleece as possible before she is up for combing.



GK Mini Me waiting patiently to lose her fleece.

Combing the Doelings

By Linda Fox

Reprinted from CashMirror Magazine May 1999

I've never had much success combing the goats—even in the early years, when we only had three. Timely combing is just one of those things that doesn't happen here, despite all the best-laid plans. For shearing, both Paul and I share the chore, but combing requires too much extended bent-back work, so the chore falls to me, the person closest to the ground.

The first year we had goats, I combed the three girls much too late. By the time I salvaged the cashmere, only a few matted remnants were still hanging in the ends of the guard hair. I retrieved what I could, bagged it, stored it and later sold it, guard hair, mats and all.

We had a professional shearer come in the next year. We had more goats by then and decided we were too big to attempt to comb them all.

The year after, we couldn't find anyone to shear for us at the time the goats needed to be sheared so, after a brief and unsuccessful attempt at shearing our own goats, we decided to comb the herd. Perhaps we could hand dehair our crop. We still had lots of goats, but we had all year to get through the stack so why not give it a try?

I don't remember any free time activities that spring except catching and combing goats. On the long-haired goats, we first cut back the guard hair to supposedly make combing easier and also to avoid the dreaded Short Low Yield category of the commercial buyers. Combing was a chore. It was hard work, most of our goats fought it, and we didn't get to it nearly often enough. I'm sure that half the crop was lost to the wind.

I hand dehaired a bit of the stack of combed crop for my own spinning use during the next year, but even after the next year's harvest, most of the combed cashmere was still stored, with all guard hair still intact. We eventually sent it out for commercial processing.

In theory, it sounds like an excellent idea to hand dehair cashmere, but around here, it just doesn't happen. I enjoy hand-dehairing, but my hands are usually busy with other projects.

In subsequent years, we sheared most of the goats, except for a handful of goats which have cashmere that I especially like to spin. Those I will patiently comb and, over the following year, usually get those wretched guard hairs removed from the fluff.

This year (1999) I decided to give combing another chance. I decided to comb the 20 doelings kept from the 1998 kidding year. They are small so they shouldn't have as much cashmere on them and they should be easier to restrain. The additional handling should also pay off in friendlier adult does. And, if all else fails, I should have good data on how long it takes to comb and over how many separate combing sessions. At the least, it would make a good story.

On February 12th, I labeled 20 bags, assembled supplies, printed a barn worksheet from the computer data base and headed for the barn. The plan was to comb these doelings every Friday. I would comb on them for as long as it took and for as many Fridays as they were still shedding. At the end of the harvest, I would analyze my notes and draw conclusions about who shed when and how much and how long one can expect the whole process to take.

I spent most of that day in the barn. In addition to combing, I also gave them their annual CD&T booster, wormed them and trimmed their feet. I decided to train them to jump up on the milking stand for their maintenance chores.

Most of the doelings were not shedding yet and those that were shedding were releasing mostly on their rumps. Ha! My first bit of useful data!

The next Friday (2/19), I took the box of sorted-by-number, partially-filled, individually-labeled bags and a new computer-generated worksheet to the barn and combed the girls again. It took most of the afternoon. They were shedding more than last week, but not much. I took good notes on who I liked and who I didn't and noted who needed to be culled.

I was too busy the next two Fridays (2/26 & 3/5) to comb on the doelings. The next time I got to it again was March 7th, a little over two weeks since the last combing. The goats who

Combing the Doelings - continued

had not yet started shedding at the last combing were now beginning to release. For one goat, this was her last combing. All of her cashmere had been released over the course of three weeks.

On March 16th, a little over one week later, I combed them again. Five more doelings hit their last combing. It seemed that later combings bring out more guard hair with the cashmere. Of the 14 remaining doelings, 11 had released most of their cashmere, one loaded one had just started to release and for the two who escaped into the pasture before I could catch them, I had no idea of their status.

Unfortunately, that is the last time I combed them. From afar, it looks as if some of them still have a few cashmere remnants. I should catch them all one more time, comb anything out that's left, make a few final notes, weigh their little bags and try to draw some conclusions. However, as usual, the plan was good, but the follow through (and therefore, the data) will be somewhat incomplete. Maybe next year I need to be less ambitious and choose 5 or 10 goats to study instead of 20.

The good news is that these doelings are considerably friendlier than the prior year's crop and this gave me a good chance to get to know them up close and personal.



Jaws, the biter, and why we keep her.