GEDEMARK

Elastrator Dehorning of Goats

By D.J. Gundlock

Mirrored from Goats Canada with permission of D.J. Gundlock.

In 1998, I purchased 60 does for my commercial meat goat herd. These does ranged in age from three months to four years, the majority of which were horned. My decision to dehorn these animals was based upon the following:

1. Risk to the goat - horned animals have a greater chance of being hung up or tangled in the fences and feeders.
2. Risk to other goats - horned animals can do more injury and damage than dehorned goats. Our Canadian winter weather often hits -40 Celsius, during which time the herd is confined indoors. With close confinement comes the increased likelihood of butting and rough housing, which again can lead to injury.
3. Risk to handlers - in handling the goats for vaccinations, trimming feet, etc. I have been repeatedly bruised, gored and scraped by the horned animals. A secondary concern is for my young children, aged 4 and 6, who are in frequent contact with the herd.

After talking to other producers who had tried the “elastrator method” of dehorning, I was impressed with the reports of lack of stress to the animals. So, this method was chosen over surgical removal. The bands were placed on in late October, well after insect season had passed just prior to the winter snows.

Applying the bands was fast and easy. One band was placed around each horn with the elastrator pliers, and rolled as close to the skull as possible. Apply duct tape to front of horns to discourage rubbing bands off.

The Process: how it works

The dehorning process followed three stages:

1. Blood supply from skull to horn was cut off due to the constriction caused by the elastrator band.

2. In younger animals, the band closes in on the soft tissue of horn, severing the horn over time. In older animals, the horn becomes brittle or changes shape.

3. Blunt force or trauma causes horn to change shape or position. Some bent forward, sideways or laid flat back against the head and neck of the does.

4. Blunt force causes removal of horn. The most contributing factor to the final removal of the horns was catching and bumping on feeders, as well as head butting other goats, causing the horn to fall off.

Results: 3 to 12 months of age

This group had the greatest and most rapid success rate in dehorning. This would appear to be due to the softness of the horns. The bands were able to constrict the blood supply quickly, closing in gradually until the horn was severed or bumped off. Within the first 21 days, approximately 75 percent of this group had lost both horns.

The most rapidly dehorned were the Nubians, Alpines and other dairy crosses. These horns tended to be relatively equal in circumference from base to tips, thus preventing the bands from rolling off. The slowest to dehorn were the Boer and Boer crosses. These horns tend to be wider at the base, rapidly narrowing to the tips in a conical fashion. The bands tended to roll partially or totally off of these horns. However, the Boer crosses tended to detach flush with the skull, with little or no chance of scur growth due to the removal of a wider area of horn plate.

Results: 12 to 48 months of age

There was a wide variance in horn width and length in this group, due to both age and breed of the animal. The younger the animal, the more rapid the dehorning. In the older does with horns longer that 5 inches length, there were not many visible signs that the dehorning process was effective. In many cases, I were surprised to see a doe missing a horn. The oldest doe also had the longest horns, which she lost without incident. One fell off within three weeks while the second dried out and changed shape over several months prior to falling off. This doe was not adversely effected by the process, as she delivered , nursed and weaned kids within the same time span.

Recommendations for Success:

1. Season: undertake this task once the fly season has passed, to reduce chance for irritation, infestation and infection.

2. Handling: do not grab or handle goats by the horns or attempt to pull the horns off. The horns can become painful to touch, the equivalent of having a tooth pulled, so it is best to leave them until the fall off of their own accord. This also reduces the chance of prolonged bleeding, as blood supply vessels may not have been severed or dried up completely.

Those that appeared to experience the greatest amount of bleeding with removal were the 6 - 9 month old bucks, who aided their horn removal with their daily head butting sessions. Although they appeared sorry looking, the dehorning process did nothing to curb their natural aggression. They continued to act masculine, fighting and competing for does during breeding season.

3. Check bands weekly and add new bands immediately as required. Some bands will break from rubbing or crack as they age. Some does will rub the bands until they roll off the horns. Replace with new bands immediately to retard new growth and duct tape bands onto the horns of any culprits who insist of rubbing them off.

In this test project, I did not reband after the first month. The does had all been exposed to the bucks and were left alone until after freshening. At that time, those requiring new bands had them added.

4. Band close to skull: The closer to the skull the band was seated on the horn, the more rapidly the dehorning occurred. The horn detached at the skull instead of leaving a scur of horn. I tried notching the horn base with a hand saw to hold the bands in place. It proved too difficult to saw and needless to say, the goats let us know that it hurt. I have better success using a horse hoof knife, and slicing a small V shaped notch in the sides of the horn at the junction between horn and skin. The best solution is to apply cotton adhesive tape to the horn base and then apply the band over top, so the band is held in place by the adhesive. As well, cotton tape or duct tape over top the bands may work in holding the bands in place, by preventing the goats from rolling them off.

5. Wait for sufficient horn growth: The most obvious scur growth after dehorning occurred in the youngest doe, a three month old Toggenburg Alpine cross, whose horns were approximately 2 - 3 inches long at the time. I believe there would have been greater success in her case if I had waited until the horns had matured and hardened somewhat.

6. Clip the area: Use electric clippers to shave the front of the horn base. This allows the rubber band to grip into the skin at the horn base for a firm hold. Banding over top long hair often allows the band to roll or slide up along the hair.

The accompanying pictures speak for themselves and I was delighted with the results. No disinfectants, antibiotics or antiseptics were used, either topically or systemically during this process. There were no infections or complications arising in any of the goats dehorned. The does have kidded on schedule and do not seem to be any worse for the experience. I would recommend the process as an easy and economical alternative to surgical removal of horns for does and kids. However, I would caution attempting to use this process in goats with very large horn (over 8 inches in length or 3 inches in diameter) as the blood supply to these horns is significantly greater than those I dehorned and may be at greater risk for blood loss than what I experienced in this trial.

The Dehorning Pictures page shows photographs of banding and the various stages of horn removal.

About the author:
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Three month old Boer cross buck: horn base has been shaved with electric clippers and the dark line is drawn on to show where the skin intersects with the horn. This band is perfectly placed, as it is "hooked" beneath the base of the horn and sunken into the soft tissue.

Side view of the same buck above. I had drawn a red line to show the proper placement of the band, but covered it up with the band. That is the faint red showing under the green. This band is not likely to slip or be rubbed off.

Horns laid back in final stage before detaching.

Different view of same doeling. Note that the elastrator band has almost returned to normal size, about 25% of the horn width.

One down - one left to go. On the brown buck, there is a triangle where the horn was. Below and to the front of that is a glossy area that is actually dried blood from the horn detaching.

Same buck as above, with a good example of the clotted blood on top of the head where horn detached.

The horn base has detached, with the horn rocking backward to expose the base.

The largest set of horn removed with bands, from a 2 year old Alpine cross doe.

A four year old Pygmy Doe.

Same doe from above. Note how the left horn has tilted backward but the right horn has flattened in thickness, and also rotated prior to falling off.

Failure: this doeling shows two common failures. Horn on the right had band rubbed off. Horn on left had band applied too high, allowing horn growth to continue. Solution: shave base, reband and apply tape across bands to prevent rubbing.

From base measured up the front of the horn to the tip, Horn #1 measured 8.75" and shows the hollowness of a typical large horn. Horn #2 is 6.75 inches and clearly shows the elastrator still embedded in horn, with blood and vessel clotting on the inside. Horn #3 is 5.5 inches and shows how a horn will "deflate" and collapse onto itself prior to detaching. Horn #4 is 3.75 inches and was a pliable horn on a young goat, that actually pinched the outside edges of the horn together while detaching.

Another view: Horns #1 and #3 have sharp edge where they torn / detached from the skull. Horn #2 with the elastrator highlight for viewing. Horn #4 shows another example of blood clotting, filling in the hollow portion of the horn, as the soft out covering of the horn was actually pinched together into the middle.

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