Using Chem-Cast to Dehorn Baby Calves

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I began using Chem-Cast (Bio-Ceutic, 88% Lactic Acid USP) to dehorn baby calves about 18 months ago. I began my experiment with a few Brown Swiss calves owned by a client on a monthly dairy herd health program. The owner had used dehorning paste in years previously with only limited success and it was my hope that I could teach him and others how to dehorn with Chem-Cast.

The technique to inject a small amount of Chem-Cast under the horn bud has proved to be difficult enough that I have not had the owner try to do this himself.

Calves from 1-30 days of age have been dehorned with about equal success, but I feel that calves about 3-15 days of age are easiest. The calf is grasped and restrained in a standing position by the owner who pulls his head as far to the side (caudally and medially) as possible. A 3 ml. leuer-lock syringe with a 20 guage, ¼ inch needle containing about 1 ml. Chem-Cast is used for this technique. I use ¼ to ½ ml. per hornbud; whatever it takes to fill the small area subcutaneous to the horn bud. With the owner restraining the calf I place the syringe in the palm of my hand with my fingers wrapped around the syringe and my thumb resting on the plunger. This way I can rest the back side of my hand on the calf’s head and if he moves, the needle doesn’t come out. This placement also prevents self-injection because the needle is not close to my fingers. The needle is placed so that the tip ends up near the middle of the horn bud and the Chem-Cast is injected. I used to inject ¼ ml on small calves and ½ ml. on larger calves but have found it easier to inject until no more material can be injected. It takes moderate pressure to inject the Chem-Cast because of the viscosity of the material and relatively small area to fill. This is why a leuer-lock syringe is a must!

Within 30 days, a small scab forms where the Chem-Cast was injected and this falls off around 60 days post treatment. By 90 days there is virtually no horn tissue present if the technique was adequate.

The success rate of this technique was determined by examining calves at 4-10 months after using Chem-Cast to dehorn them. I scored each horn on a scale of 0-10 with zero being all the horn was present and 10 equalling a perfect job of dehorning.

On the first 50 calves treated in this manner, I achieved about a 65% success rate (horn score 7-10). I felt that any heifer with a score poorer than 7 would need some additional dehorning if she was to be a show animal. Steer calves with scores lower than a 5 were additionally dehorned because of the possibility of further horn growth in the feedlot, but those above 5 were left alone. The horn tissue in these calves had been adequately destroyed to prevent much additional growth.

I expect my success rate to improve as I do more calves, but I doubt we will ever reach 100% success. The two biggest problems with the technique deal with restraint. The first is just inadequate restraint where the calf moves during the needle puncture or injection and the second is when I have to make 2 or more punctures with the needle due to movement. When this occurs, you can actually see the Chem-Cast leak out of the initial needle puncture sites. I usually know immediately if the procedure is going to be a success, and I have considered using dehorning paste concurrently on calves that I am fairly certain will not be adequately dehorned by injection, but I have not done this yet.

As I stated at the beginning, I intended this to be an easy procedure to be used by our clients to dehorn calves where paste dehorning was not possible or produced inadequate results. As of now, I have not had anyone want to try it! I think it looks more difficult than it actually is. Without doubt,
restraint is the most important aspect of this procedure.

The places I see this technique to be of most benefit are in smaller dairy herds on a monthly herd health program. I'm sure a very adept owner could be taught to do this, but risks of self injection would need to be discussed. I have also used this technique in beef herds when they have only a small percentage of horned calves. It seems we are out at most of the beef herds every 4-6 weeks during calving season so dehorning these calves at a young age is convenient if they are in an area where they can be caught easily. I hesitate to inject beef calves with Chem-Cast in the summer and then turn them out. I had one dairy calf develop a mild fly strike (1-2 larvae) under the scab in July of this year so now I spray some fly spray on the calves done in the summer and instruct the owner to check them closely at feeding time.

I am going to continue to use Chem-Cast in this extra-label manner to dehorn some calves, but I will continue to look for an even better way to successfully dehorn baby calves.

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**Graphing DHIA Records to Help Motivate Dairy Clients**

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Record keeping is not a favorite task of many of our clients. Our dairy producers on DHIA have the advantage over our other food animal clients of having a very valuable set of records generated monthly. The sad truth is that many dairymen spend a few minutes at most reviewing these records. Most, roughly know their reproductive and production figures, but only roughly, and many do not know if they have progressed or regressed over the past 6 months.

My way of becoming more involved in their herd's production and reproductive efficiency was by studying the herd summary sheet (the yellow sheet on Iowa DHIA) before and after each herd health visit. I then take this copy back to the office to graph out the selected data. After about 4-6 months, I can begin to see some trends where we are improving and where we need more improvement. I use the graphs not only to motivate clients, but also to spot problems early so that immediate action can be taken. The data I graph out is days open, first service conception rate, services per conception, days to first breeding, freshening interval, milk and fat production, and income over cost.

I started the graphs primarily due to one client that was, in my opinion, on the verge of folding. It was a typical, small, "family farm" type of herd where I not only became their veterinarian but also their friend. I suppose this was my way of doing a little extra to try to help them improve. This particular owner was so excited about this progress once we started the graphs that he always had his records spread out on the counter as I came in the milk house so I could immediately see his improvement over the previous month. This is what convinced me to use graphs for my other herd health clients.

We started on a herd health program in September 1983 and improvements have been made in all phases of his production and reproduction. In fact, this herd was one of the most improved in our county with an increase in milk production of nearly 3000 pounds per cow in one year.

When the records were copied and sent to the owner in December 1985, the owner took them along to show his banker, and loans that were difficult to secure in 1983 were now much easier to obtain. These records in graph form were easy for the banker to read and understand, and he was impressed with the owner’s progress.

It takes very little time to do this extra work for my herd health clients, and I think it is well worth the effort. It has allowed me to be much more involved in all aspects of these dairy herds. We anticipate purchasing a computer and programming it to do our herd health records for us. I encourage any of you with dairy herd health clients to graph their most important DHIA data to help them spot problems early and initiate appropriate action.

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**Chain Tie Downs**

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This is a four-foot piece of welded link chain. It has a grab hook on each end and it is used for a number of different purposes. The main purpose that I use it for is treating cows in tie stalls with milk fever, ketosis, mastitis, or any intravenous injection that I want to give. The top drapes over the cow's neck. One end loops around each side of the stanchion bar, and you tie the animal up with a halter and that is it. They can't come over the top of the stanchion on you. They can't