

and ten children in our practice on a routine basis. So one of my clients devised it and found that it worked real well and I have used it and have several of them using it now—this reward system. If he has two or three boys he gives fifty cents for every cow that is caught in heat and recorded. That is their allowance, so then they also get a bonus. If that cow is bred and she settles on that service, they get another fifty cents. They have got to get out pretty early and watch pretty close or their brother will get it! So that is something that has worked well for me. And then to make it a little more interesting with the dairy men I kind of play games with them too and I'll try to predict the day the cow will come in heat whenever I examine her. I have noticed in the summertime that the kids will be sneaking out there the day that I'm examining the cows and when I predict that old No. 98 will be in heat on Saturday the kids mark that down in their mind and they go to the card box and say "let's see, who ought to be in heat today." This is something fairly small but it is important in my practice anyway.

A Surgical Stitch

Joseph Wright, D.V.M.
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After I got out of veterinary school at Texas A&M I went to the Mecca up in Ithaca, New York, and tried to learn how to be a little bit better cow doctor and was contaminated by the likes of Dr. Francis Fox and when I came back to the big state I came with the big idea I am a theriogenologist. I had a client size me up pretty well last week as to what I actually do for a living when he called me a common "cow armer." I didn't come with any special techniques or anything to do with cow arming but that pretty well classifies what I do for a living. In fact I came with a surgical stitch and the last thing that I ever wanted to be was a surgeon and I'm sure that as far as the good surgeons are concerned it is probably not a good practice but I've found that it has speeded up a tremendous number of my procedures. For example I think a lot of us consider how many times we have been out on an obstetrics call and faced with the emphysematous fetus. You have to go midline or open it up and then you've got what you thought was the smallest incision you could make and it seemed that it is about 3 feet long. You have to suture it up and you start taking vest over pants sutures, vertical mattresses or horizontal mattresses and you think, well, I spent 20 minutes trying to get the calf out and now I'm going to spend an hour sewing her back up! This particular stitch I found under any kind of pressure situation, particularly on the linea alba or the flank or a dehorning, it works well. This stitch was probably originated by reproductive physiology graduate students in North Carolina. It is used pretty extensively by most of the larger embryo transplant stations that are still doing surgical transfers and putting in the embryos. Once you do a laparotomy and transfer the embryo you have got to sew her back up and I am sure that a number of you are acquainted with a few of the transplant stations that have surgeons that can open up and transfer an embryo and put it back, put the cow back together and send her out of the surgery room in less than 10 or 15 minutes. This stitch is probably the main reason and I have found that it plays a major part in any kind of pressure situation or any kind of a large stitching or pressure incision that you have to close up. I tried this on the linea alba and it never shows up so I picked a Texas Holstein to dehorn. I call it a double lockstitch. It is a continuous stitch so you don't have to stop and tie a knot several times but it is something that you could put into the tension area and as we put in several of them along a line they will share the tension and you won't get the tearing out. You come up with a loop, you go through the skin and the loop before you pull it through as if you were just making a regular lockstitch. You make a complete two twist in that suture so that you've got a loop and then you actually have two twists. Now on a midline incision I'm using extra heavy vetafil, extra heavy suture material and even burying it on the midline. I have buried this on three or four thousand cows. Forty-five to sixty days later you find that there is a lot less reaction to the heavy suture material than to chromic cat gut. But using the former you get too much friction but make a double twist and then pass your needle through the loop and then start your tightening down

process so that when you get done you've got your eye there and then you've got that double twist and then in order to tighten it down, the most complicated point. The first couple of times you do it you need to pull back one direction and then come back and put pressure back the opposite direction. This ties that double loop down real tight and you don't have the tension problem. It will hold in that position and even when you're doing a flank incision and those times when you are trying to pull all of that tissue together you have got to stop and tie a mattress suture or something in there. This thing will hold. Then you can continue, if you don't have a lot of pressure, with a lockstitch or continue to put these double lockstitches in there and it will hold in all of these situations. We'll dehorn anywhere from four to six an hour. The main thing is get it done and get out. We don't do as good a job as we would like to—we left tissue at the top and the bottom but we found that they healed and that flap of tissue goes away and we come out with a pretty good cosmetic job and that is what we were looking for.

Question: Do you ever get sinusitis?

Answer: The only time you should get a sinusitis is if you don't close just like in any closed dehorning. If you leave it open, air gets into the sinus but if you pull the skin edges together, and I've dehorned quite a large number of cows with large horns, some of them will go out that evening and they will have their heads on the ground and maybe miss one meal the next day but then they are back in the feed barn and they never miss another meal. When I'm pushing them for reproductive efficiency I like to get them in within a 30-day quarantine period and build their nutrition status and they'll do it with that type of procedure but they won't if you lop them off and leave them open.

The Use of Prostaglandins

Larry Donovan, D.V.M.
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I noticed on the sheet that I had three different topics. I usually don't need that much room except from a vertical position. Especially in those barns that have put in new pipelines I need a little bit of room. I learned that a long while ago, when I was a student. I was doing some blood testing and I came in for lunch and this fellow looked at me and he had to go way down in the cellar to get the potatoes up and he had to go down a ladder. So he thought I could easily do that by just reaching up and after dinner he said, "You know, I think I have a good job for you." I said, "What's that?" He said, "You could light the northern lights."

My topic is prostaglandins, mainly vs. the silent heat cow. For the past 18 months we have had an opportunity in our practice to use prostaglandins for numerous conditions affecting the dairy cow. Both the naturally occurring F-2 alpha and the synthetic prostaglandins were used to treat metritis, mummified fetus, mating, cystic ovaries, inducing heat in heifers, anestrous, sub-estrous or silent heat cows as well as initiating parturition. It seems that every herd has a few cows that will not show heat that can be detected by a good herdsman. Many of these cows had post-partum checks which often stimulates estrus in a few days. You also find those signs of metritis, and these cows usually have a functional corpus luteum. These cows are usually high producers, eating a balanced ration and even with an increased intake of minerals, mainly phosphorus and vitamins, they may not be seen in heat for three to four months after calving. We have taken the approach that these cows are actually physiologically cycling. So by palpating the ovary for a CL, we inject prostaglandin into these cows and artificially breed them in 72 and 96 hours regardless of the physical signs of heat. The inseminator will breed the cows and they often say, "well, that cow just doesn't feel like she is in heat," but many of these cows get with calves. There are other methods to do this. I think on a real good cow that you want to use special semen, maybe you should wait until she has a natural standing heat and then breed her. Now the conception rate on a limited

number, approximately 50 cows, was 63%. A few of these cows did not conceive from the first injections but did show strong heat in three weeks' time and become pregnant and it could be that in some we had missed a low grade infection. Prostaglandins can also be used to synchronize heats in dairy heifers that are not checked so closely by the farmer. I've only used this approach in one herd. We treated 16 heifers, they were checked first to make sure that they had a functional corpus luteum. They were injected and bred at 72 and 96 hours and out of these 14 got with calf. Prostaglandins are also useful to induce labor in cows that are overdue, cows that are leaking milk which oftentimes predisposes to mastitis, and heifers nearing calving and a bit on the small size. These animals usually calve within 24 hours and practically all in 36 hours. In cows that are prone to milk fever, prostaglandins can regulate the calving date so better utilization of vitamin D can be obtained so you can treat these cows with injectable vitamin D, 36 hours later inject them with prostaglandins, then you will hit pretty well the optimum range. There seems to be less retained afterbirth in these cows than those induced by steroids. Prostaglandins have a stimulating effect on the smooth muscle of the uterus and this probably accounts for the fact that these cows calve in this 36-hour period. Prostaglandins should not be a substitute for good nutrition or good management but aid them. It is important to get a good breeding history and perform a physical examination of the genital tract before administering these drugs. It is very easy to be told the cow had been bred 3 months previously and quickly palpate only for the stage of pregnancy and miss a 40-day breeding. If this cow is injected you have a disaster. Since a functional CL has to be present on the ovary in order to benefit from prostaglandins in inducing heat by this method, it is very obvious that identification of this structure by the veterinarian is imperative. For anyone who has limited experience in ovarian palpation a trip to the local slaughterhouse to examine a number of CL's would be very useful. The corpus luteum is not present in the ovary 4 days before ovulation and four days later. In dairy herds where milk quotas have to be maintained on an even basis, and the attainment of 12-month calving intervals is very popular, prostaglandins should be an aid to these goals. We've used both Lutelase (Upjohn) and Estromate (ICI).

Question: What dosage do you use?

Answer: With the Estromate, they are all intramuscular, we use 2 cc. Estromate is cleared in Canada and now can be used. Lutelase we were using with permission and we used 3 cc to induce heifers in heat and 5 cc in cows. And for pyometra we would use Estromate 2 cc, and Lutelase, 5 cc. That would be 25 mg of Lutelase. The Estromate is synthetic and a bit more stable.

Moderator: They are still lucky in Canada they can still get it and we can't get it down here at the price range that he's getting and so we can't use it. Well, we can use it but it will cost a lot more than it does up in Canada.

Calving Equipment Holder

E. P. Baker, D.V.M.
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Ladies and gentlemen, as Mark Anthony said as he walked into Cleopatra's tent, "I didn't come here to talk." I came to show you a practical calving box that was developed through a farm and ranch practice where fetotomy is the common procedure. Are you one of those veterinarians that when you are on a calving call, you head for the barn with your calf puller and an optimistic smile and then when difficulties arise, you run back and forth to your vehicle for each different piece of equipment? If you are, why not pull your act together and take everything you are likely to need on that first trip? Let me show you all that's in this box. Soap, one 60-inch OB chain, two 30-inch OB chains, one pair of eye hooks welded to a 30-inch chain. D-handles, torsion rod. For fetotomy we have a skinning chisel, spool of fetotomy wire, cutters, wire cutters for cutting the wire, handles for the wire, a leader for getting that wire or even an OB chain in those hard-to-get places, needle for threading the wire, fetotome—actually it comes in two parts, I left the other heavier business end in the interest of traveling light on the plane—but it does fit in here quite handily; craze hook. We also keep a small jar of vaseline for the shredded ends of the fetotome after we have cleaned it. In this tray we also keep a scalpel handle and a packet of disposal blades. This kit has seen heavy use for the last 14 years. It took the punishment of Western Airlines to break off one of the catches. It is light and easy to make and professional looking. Do yourself a favor, make yourself a calving box. Don't leave home without it.

