Efficient Facilities for Handling Cattle

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It is well known to the seasoned practitioner that the livestock facilities you must use can make or break you. The practitioner is exposed to all types of restraining devices—all the way from the lariat to super effective, quietly operating hydraulic mechanisms. At any facility, design must be such to protect people and livestock from injury and to move animals smoothly. We all know that once you have been on a specific farm or ranch to work a considerable number of cattle, it is relatively easy to predict working time the next time you are called to that place. As human nature is, we know that only some operators will improve their facilities to enhance safety and working time.

Another facility concern that may arise is the close scrutiny we may be receiving from animal welfare groups on humane animal treatment and the potential for various legal implications, whether right or wrong.

Generally, once the client's facilities are known, the practitioner will build into his planning one of four options.

1. The present facility is satisfactory.
2. Encourage the client to bring animals into the clinic to use the veterinarian's facility.
3. Charge higher fees to poor facility clients as the danger and time to work cattle is increased.
4. Arrange to move equipment to client's premises to make the facilities work.

During my years in practice I learned that the many wasted hours, energy expended, and compromised safety did not have to occur.

The following tips are examples of practices that either I, or some of my collegues utilize in Nebraska to curtail the dollars lost due to faulty equipment or poor facility design.

1. At the clinic a perimeter fence is one of the greatest ways to prevent an escaping animal from going "down town" or to the far reaches of the "wilderness".
2. Producer with a lariat—you know you're in trouble if this is all that is available.
3. If no corrals are available it is feasible in some practices to take portable panels to the working area.
4. A portable calf table on wheels is handy and valuable in saving time and it is safe for man and animal.
5. A portable chute with easy let down wheels and ramp to attach to the back of chute prevents "dig out" behind chute.
6. Carry extra panels inside the chute to facilitate adapting to or narrowing owner's facilities.
7. A converted W.W. chute to hydraulic controls along with utilization of a Powder River head catch to serve as a tailgate makes a great chute out of a mediocre one. Hydraulic cylinders can be supplied from tractor hydraulics if coupling design is correct, or be driven by electric motor drives to the pump.
8. An electric generator (12,000 W) powered by tractor p.t.o. to supply power to electric motor that drives the pump on hydraulic chutes.
9. A gate control powered by a garage door opener is another time saving practical application in a sorting alley or to divert animals from one pen to another.
10. A full length power winch mounted at the top of a stationery cattle chute in the operating room is extremely handy to: 1) pull heads around for eye surgery; 2) help cast animals for abdominal or other surgery requiring recumbency; 3) elevate or lower various parts of the animal to aid in establishing better access to difficult surgical areas; 4) to allow a single technician to easily prep animals before surgery—but should be used with care.
11. A hydraulic operated tilting, modified Powder River equipment that makes foot trimming easier and safer regardless of size of the animal.

NOTE: In addition to the speaker's ideas, recognition is credited to the veterinarians at the St. Paul and Aurora, Nebraska, Veterinary Clinics.

Sterilizing Calf Pens to Control Salmonellosis

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Salmonellosis can be one of the most difficult diseases to control on the dairy farm. In our practice the response to treatment with antibiotics has been disappointing especially when one considers the long term cure rate. Likewise the use of commercial autogenous bacterins have been of limited value. In addition, the frequent and often fatal reactions in both calves and adults to the bacterins limits the value of these products.

With this in mind I have looked for other methods of controlling this disease. As in other fecal borne diseases

breaking the transmission cycle of the organism through sanitation is presently the most effective and safe method of control. Limited success in getting producers to use disinfectant solutions especially in the winter months resulted in recommending the following methods of sterilizing calf pens:

1. *Propane flame.* Wooden, concrete or metal calf pens or hutches can be flamed with a propane burner. One can flame the pens by applying the flame much like a paint brush. The ground the pens are on can be literally cooked. Occasionally the wooden pens will be scorched and one must use caution when working around flammable materials.

2. *Fumigation and formaldehyde gas.* Fiber glass hutches that cannot be flamed and small airtight buildings can be sterilized with formaldehyde gas. The gas is produced by placing one pound of potassium permanganate in a stainless steel container to which is added one liter of commercial formaldehyde solution. The volume of gas produced is enough to fumigate 500 feet^3. The hutch or building should remain closed for three to four hours for maximum effect. One should avoid breathing the fumes. This gas is relatively effective in the presence of organic material. Dead flies inside the building during the fly season are a good indication of an adequate volume of gas being produced.

Embryo Transfer Tips

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While I tried to make this presentation a light-hearted one, borrowing an idea or two from the television shot *Dragnet,* I did present two ideas that have been helpful to me in my embryo transfer work.

The *first,* and the one on which the presentation dealt entirely, was a simple idea designed to hold a cow's tail out of the way during embryo transfer or any other procedures in the perineal area of a cow. A black rubber tie-down strap that is usually used to hold a tarpaulin on a truck bed plus a handle from the end of a set of battery jumper cables are fastened together and attached to the chute in which you are working. It can be positioned so that when attached to the tail there is some tension on the rubber strap. This will keep the tail cleanly out of the way even when the cow moves forward or backward. In the event the tail is left attached when the cow leaves the chute, the handle will automatically be pulled off when the rubber strap stretches to the limit without amputating the tail as happens many times when rope is used to tie the tail. Battery handles and rubber tie-down straps can be found at all automotive supply stores or at your local flea market.

The *second* tip involves a homemade disposable embryo filter that can be made for under about 20 cents. Materials needed include flexible plastic drinking cups (2) with their bottoms cut out, and a piece of 80 micron nylon screening material. A 4"x4" piece of the 80 micron filter is laid on top of one of the cups and the second cup is then placed on top of the screen and pushed downward into the first cup—sandwiching the screen between the two cups. The second cup (or inside one) should be cut so that it is only one-half as tall as the outer cup to facilitate removal of the screen for rinsing.

The flush media containing the embryos is poured through the cups. Then the filter screen is removed and held over an embryo transfer dish. The debri and embryos are washed off the filter surface and into the embryo transfer dish for searching. The filter is rinsed with PBS by a syringe and a 20 gauge needle. The filter is then thrown away and the cups are saved and resterilized.

I sterilize the filters by placing ten of the 4"x4" sheets into a zip lock sandwich bag, adding a 4"x4" piece of cardboard to keep the filters flat, and then sterilize with Ethylene Oxide. The cups are sterilized the same way with ETOH. I have found that the cups can be protected very well by putting about twenty sets of them (one set equals one long and one short cup) into a piece of clear PVC 3" tubing with caps on each end and sterilizing them in that tube. Plastic or paper wrapping does just as well. The address to obtain the 80 micron material by the yard is: Tetko, Inc., 420 Saw Mill River Road, Elmsford, New York 10523, telephone (914) 592-5010. Product #HC3-80.

Using Peak Milk as a Monitor of Dairy Herd Production

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An emerging area of the veterinarian's involvment on a dairy farm is production management consultation. As a production consultant you are expected to monitor herd production and make recommendations that keep production at a profitable level. I have found that monitoring peak milk yield on individual cows and on the herd average gives me a quick and accurate assessment of the dry cow program and the fresh cow production level.