

# Vet Call

## Getting a Handle on Your Cattle and Profits

Restraining facilities and handling practices that minimize stress on livestock provide the key to implementation of an effective herd health program that will increase profitability, according to the American Veterinary Medical Association (AVMA).

"Facilities should be designed to make it safe and easy to perform the essential herd health procedures – vaccination, deworming, pregnancy checking, bull breeding soundness examination – that will significantly increase the livestock producer's return on investment," says Leslie Douglas, D.V.M., of Arcata, Calif., a member of AVMA's public relations council.

"Poorly designed facilities or rough handling practices will cause stress that can undo much of the value of a herd health program by contributing to reduced weight gain, lowered conception rate and increased sickness," Douglas says.

"Rough handling of livestock is not only inhumane, but can cause excessive losses due to sickness and slower growth," adds Temple Grandin, Ph.D., of the department of animal sciences, Colorado State University, Ft. Collins.

"Bruises at the packing plant cause slowdowns in the production line and economic loss. Careful handling of livestock in all phases of production is prerequisite to a profitable business," Grandin says.

Grandin, who also operates Grandin Livestock Handling Systems Inc. in Ft. Collins, said minimal facilities for livestock handling include a complete squeeze chute, not just a head gate, an alleyway leading to the squeeze chute, and a set of corrals.

"For producers handling only a few animals, the alleyways and corrals can be rudimentary, but herd health care is virtually impossible without a headgate or a squeeze chute. And a complete squeeze chute provides better control and is less stressful for the animal," Grandin says.

Duane Rice, D.V.M., Extension veterinarian, University of Nebraska, Lincoln, suggests that facilities should have a holding lane with solid sides high enough to prevent the animals from seeing moving objects or people outside the facility, a crowding pen and a single-file lead up chute.

"Before any equipment construction begins, the producer should consult with his veterinarian to determine how elaborate the facility should be to accommodate the health care procedures planned. The cost of better quality equipment will be more than offset by preventing the loss of one animal or averting a single operator injury," Dr. Rice says.

Grandin bases her approach to the design of livestock restraining facilities on some basic principles of animal behavior:

**Vision:** Livestock have wide angle vision and are easily frightened by shadows or moving objects. They are sensitive to light and will move from a dimly illuminated area to a more brightly lighted one, provided the light is not shining directly in their eyes. They have color perception and will balk at changes in color, so handling facilities should be painted one uniform color.

**Noise:** Livestock are more sensitive than people to high frequency noises. Unexpected noises can cause losses in weight gain.

**Isolation:** All livestock are herd animals. They are likely to become agitated and stressed when they are separated from each other. Cattle and sheep are motivated to maintain visual contact with each other. They will follow the leader.

"Understanding these behavioral principles is the key to good handling practices now followed by only about 25 percent of producers," says Grandin.

After confinement for veterinary care, cattle need to be released psychologically as well as physically. "Ease them down. Let them know you have let them go. It's important to them psychologically," Douglas says.

Veterinary students now receive instruction in the value of proper facilities, according to Mark Spire, D.V.M., of the Kansas State University (KSU) College of Veterinary Medicine, Manhattan. A group of KSU veterinary students recently calculated the cost of designing modern restraining facilities, including a squeeze chute and head catch. They then estimated the return on investment for the herd health procedures these facilities make possible.

"Without a way to corral and restrain cattle, many routine practices with significant economic impact are not implemented. When returns from most management practices are compared to annual facility cost per cow-calf unit, facilities are not expensive," Spire says.

For example, facilities with a total cost of \$6,500 to build, depreciated over 20 years, cost \$325 per year excluding yearly maintenance cost. These facilities hypothetically can yield a total return of \$11,922.80 the first year, according to the KSU students. They calculated the return on investment as follows:

PROGRAM	ANNUAL RETURN (per 100-head herd)
Ability to narrow calving interval, increasing weaning weights by 40 pounds	\$3,656.00
Elimination of sub-fertile bulls, increasing calving percentage 6 percent	2,895.00
Implanting calves, increasing weight gains by one-tenth of a pound per head per day	1,291.80
Ability to aid cows with dystocia, increasing calving percentage by 4 percent	1,890.00
Ability to flytag, increasing gains by .09 pounds per head per day	963.00
Dehorned calves bringing \$.40/hundredweight more at market	197.00
Steer calves vs. bull calves get \$.2/hundredweight more at market	343.00
Preconditioned calves get premium of \$.2/hundredweight at market	688.00
<b>TOTAL ANNUAL RETURN</b>	<b>\$11,922.80</b>

Actual figures for return on investment will vary, depending on regional or local differences and other variables. For example, cattle ranchers in Douglas' area of California are achieving calving percentages close to 100 and are weaning some 700-pound calves, with 450-pound weaning weights typical.

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