

VET CALL

Chuteside Computers Improve Accuracy, Speed Record Analysis for Beef Producers

Eight minutes was all it took to collect a summary of weights and health data from 413 replacement heifers at Sheek's Land and Cattle Company in Cabool, Mo. The veterinarians involved were able to do this through the innovative use of chuteside computers.

"These animals were vaccinated and de-wormed at the time and, with the chuteside laptop computer program, the data was captured for our office and the ranch's information, plus we knew how that group did at the end of the day," says University of Missouri-Columbia Extension veterinarian Richard Randle.

In the past a veterinarian might take two weeks to a month to move the data from paper forms to computer for analysis, Randle says. "It is time-consuming and it's hard to go back to the office and rewrite notes or punch the data into the computer."

It is important for the owners to have easy access to this information for inventory, management control and health care, says Randle, who has worked with the program for several years.

Laptop computers are surprisingly sturdy and capable of enduring the rigorous activity at chuteside, and the program simplifies the usual procedure where veterinarians work the cattle through the chute and make their medical records and observations in writing.

The major problem with the old system is duplication, both in numbers and in the veterinarian's time and the length of time it takes to get valuable information back to the owners, he says.

On the other hand, the chuteside data capture system is like curb-side service for ranchers and livestock producers, Randle says. "I capture the information at the site at the time."

The veterinarian takes a laptop computer to the rancher's cattle chute. At the side of the cattle chute, information which is usually written hurriedly by the veterinarian or an assistant is entered in the computer, with the animal in the chute. The animal enters the chute, its ID number is entered and the computer returns all past information on the animal as you collect all the new data from body weight to pregnancy testing. With the setup at Sheek's the computer is corrected with the electronic scales.

Sheek's is a large cow-calf operation with an average 3,800 head on 18,000 acres. The plan is to increase this herd to 5,500 in a couple of years. "Using this program the owners can expect to more effectively and more efficiently manage these large groups of animals," Randle says.

The chuteside data capture project, which began last December, was initiated with Jack Whittier from the MU animal science department and Sheek's Land

From the data received on replacement cows at the chutes, nutritional programs can be adjusted for light groups and heavy groups so they will be better prepared for breeding season.

"The need for these records is increasing all the time," he says. "Agribusiness has a narrow profit margin and lending institutions are scrutinizing even successful operations more closely, so good records are a necessity."



A laptop computer can be used at chuteside while working cattle to automatically record herd records, says Dr. Richard Randle, Extension veterinarian at the University of Missouri-Columbia. Information from electronic scales can be recorded automatically into the computer, reducing the chances of human error in writing down the numbers.

and Cattle Company to computerize beef-cow records.

"This program will be used to train veterinarians in collection and analysis of management and health information. It provides this information to cattlemen on the spot for immediate decisions," Randle says.

"At this time, we are in the initial phases and looking at what can and should be added, but we are very happy with the results of the program so far," he says. "It will help us keep valuable information often lost at the chutes, and it is giving us the feedback we need for future management decisions like pasture management and feeding."

From the consumer's point of view and the professional standpoint of the veterinarian, there is the quality assurance factor.

"This system assures that the correct medication will be administered at the correct time, because a complete history for that animal from birth to slaughter is available on site at the chute. As far as disease monitoring and trace back, it is a very effective tool as well," Randle says.

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Veterinary Drug Use in Livestock Production

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Maintaining healthy livestock often dictates that animals be treated with drugs at some point in their lifetime. To avoid residue occurrence while making these health management decisions, it's critical that producers understand the regulations governing distribution and use of animal drugs.

Producers should know the difference between prescription and over-the-counter animal drugs, the conditions for extra-label drug use, the importance of a valid veterinarian/client/patient relationship, and the labelling requirements for animal drugs.

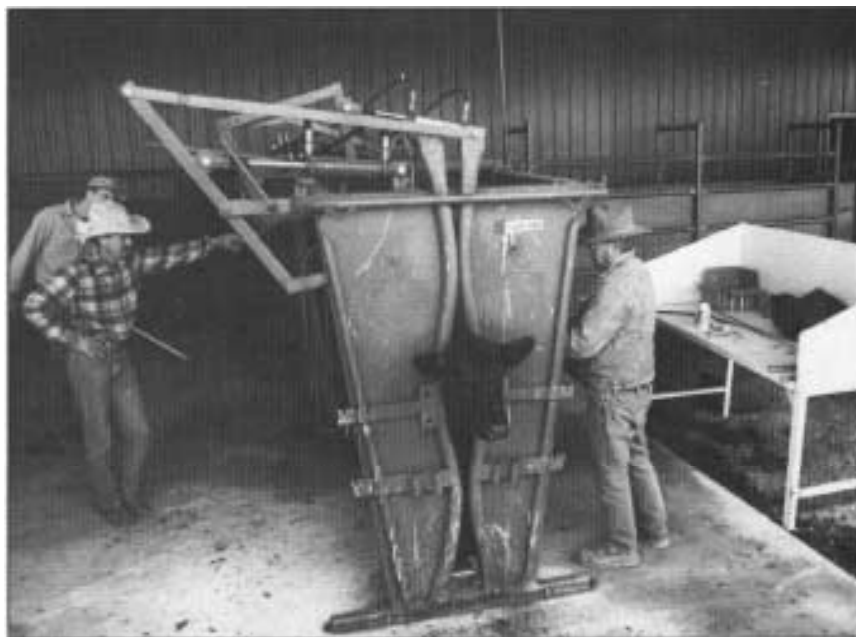
Prescription vs. Over-the-Counter Drugs

One step in the animal drug approach process is to designate products as either prescription (Rx) or over-the-counter (OTC). Over-the-counter products may be purchased by producers at most farm or feed stores.

In making this decision, the Food and Drug Administration (FDA) must abide by federal law (the Food, Drug and Cosmetic Act, or FD&C Act), which states that all approved animal drugs will be designated over-the-counter, provided that a label with adequate directions for use can be written so it can be understood and is likely to be safely followed by the average producer.

Following this mandate, FDA has designated more than 90 percent of all approved large animal drugs for over-the-counter use. The criteria used in making this determination are related to the safety of the drug, the skill required of people administering it, the necessity of accuracy of diagnosis, and several other criteria set forth in FDA policy.

The sale and use of veterinary prescription drugs is strictly regulated by the FDA. Prescription drugs are to be used by licensed veterinarians or sold only on a veterinarian's prescription or order, and only when a valid veterinarian/client/patient relationship exists. Prescription animal drugs can be easily recognized because they all bear a label with the legend: **CAUTION — FEDERAL LAW RESTRICTS THIS DRUG TO USE BY OR ON THE ORDER OF A LICENSED VETERINARIAN.** Other phrases such as "For Veterinary Use Only," "Sold to Veterinarians On-



ly," and 'Restricted Drug' do not refer to the product's prescription status.

Extra-Label Drug Use

Whether Rx or OTC, the FD&C Act makes no provision for animal drugs to be used in any manner other than that explicitly indicated by the manufacturer's label. Included on the label are the species to be treated, disease conditions to be treated, dosages, and withdrawal times. This often creates a serious problem for livestock owners as well as veterinarians because animal drug labels are relatively precise and restrictive. Some of the reasons for the restrictive labels are:

1. Every label claim must be supported by extensive research. Since this type of research is extremely expensive and time consuming, most companies try to get a drug on the market as quickly as possible in the most cost-effective way by demonstrating safety and efficacy for a single claim.
2. In the early stages of product approval, it is not possible to know all of the possible indications for use of a drug. Accumulation of this knowledge may occur over time with clinical use.
3. Labelling for over-the-counter drugs must be as simple and specific as possible if FDA reviewers are to be convinced that the label can be understood by the average layperson.

The FDA has recognized that there is a need for the prudent extra-label drug use in livestock and has formulated ap-

propriate policy. The following points are of primary importance:

1. Extra-label drug use is permitted only when directed by a veterinarian. **THERE IS NO AUTHORITY FOR ANY EXTRA-LABEL DRUG USE BY LIVESTOCK PRODUCERS.**
2. A valid veterinarian/client/patient relationship must exist before a veterinarian may use drugs in an extra-label manner.
3. Veterinarians must have adequate medical justification to substantiate their extra-label drug usage. Specific requirements are:
 - a. A careful medical diagnosis is made by an attending veterinarian within the context of a valid veterinarian/client/patient relationship;
 - b. A determination is made that, there is no marketed drug specifically labeled to treat the condition diagnosed, or drug therapy at the dosage recommended by the labelling has been found clinically ineffective in the animals to be treated;
 - c. Procedures are instituted to assure that identity of the treated animals is carefully maintained; and
 - d. Significantly extended time frame is assigned for drug withdrawal prior to marketing meat, milk or eggs, and steps are taken to assure that the assigned time frames are met and no illegal residues occur

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Certain drugs may not be used in treating food-producing animals even under the cited criteria. This includes chloramphenicol. Also, extra-label use of drugs in treating food-producing animals for improving rate of weight gain, feed efficiency, or other production purposes, or for routine disease prevention are inappropriate as in use for therapeutic purposes other than under the circumstances described above.

Veterinarian-Client-Patient Relationship

An appropriate veterinarian-client-patient relationship exists when:

1. The veterinarian has assumed the responsibility of making medical judgments regarding the health of the animal(s) and the need for medical treatment, and the client (owner or other caretaker) has agreed to follow the instructions of the veterinarian; and when
2. There is sufficient knowledge of the animal(s) by the veterinarian to initiate at least a general or preliminary diagnosis of the medical condition of

the animal(s). This means that the veterinarian has recently seen and is personally acquainted with the keeping and care of the animal(s) by virtue of an examination of the animal(s), are kept; and when

3. The practicing veterinarian is readily available for follow-up in case of adverse reactions or failure to the regimen or therapy.

Label Requirements

Specific labeling requirements exist for all OTC, Rx, and extra-label drug uses. Over-the-counter drugs bear a manufacturer's label explaining their intended use. These labels specify a withdrawal time to be observed when marketing associated products for human consumption.

Prescription drugs must have an additional label supplied by the veterinary practitioner. This label must include directions for use, prescribed withdrawal times, and cautionary statements if not contained on the manufacturer's label. In addition, all Rx drug labels must contain the name and address of the prescribing veterinarian.

Animal drugs used in an extra label

manner also must have a label applied by the practicing veterinarian. This label must contain the veterinarian's name and address, the name of the active ingredient(s), directions for product use, prescribed withdrawal time(s) (even if zero), and any cautionary statements indicated.

Differences exist in how animal drugs can be obtained by livestock producers. Many products are available for producers to buy OTC, while others are Rx drugs restricted to sale and use under a valid veterinarian /client/patient relationship. Regardless of their source or intended use, producers should be reminded to always follow label directions on animal drugs very carefully. Any animal drug use not specified on the product's label is strictly illegal for livestock producers, and is only permitted by veterinarians under certain circumstances detailed in FDA policy.

All Rx animal drugs and any drugs used in an extra-label manner require that the practicing veterinarian supply a label in addition to that provided by the manufacturer. Successful livestock health management must be a cooperative effort between the producer and the veterinarian.