

# Basic livestock vetting

By Marcella Shaffer

**F**or a moment, think about these scenarios: It is late afternoon and you notice your horse has stepped on a rusty nail. You call the animal clinic and are told that the veterinarian is just leaving on an emergency call and won't be available until the next day. You are also instructed that you should come by the clinic and pick up a tetanus antitoxin injection and administer it intramuscularly to your horse immediately. Do you have the knowledge to do this or do you frantically try to locate another veterinarian?

The family milk cow is not eating. She has a runny nose and is coughing. When you call the veterinarian, the first question that is asked of you is "What is her temperature?" Do you know how to take a cow or other animal's temperature?

A magazine article cannot replace the skills and wisdom of a veterinarian, but there are many medical treatments and procedures that livestock owners can perform themselves. After you have become established with a veterinarian, many will willingly give you advice over the telephone as to what course of treatment you should pursue. This can help reduce the costs associated with owning livestock and alleviate suffering or even save the animal's life when a veterinarian isn't available.

Most experienced livestock owners administer medicines, routine vaccinations, and other shots when needed. They also perform common procedures like de-worming, treating wounds, de-horning, castration, etc. and keep a reserve of commonly used medical supplies and medications on hand.

There are two very important things to remember when treating your livestock. First, always follow the directions given by a veterinarian or those on the medication label carefully. If in doubt, contact the veterinarian before administering. Second, do not attempt any procedure that you do not feel capable of performing. Enlist the help of another more experienced person or wait for the vet.

## Taking a temperature

An animal's temperature is a very important factor when diagnosing an illness and prescribing medications. This is often the first question a veterinarian will usually ask when you call them. Being able to answer the question is as important as taking the temperature accurately.

Any animal that acts abnormally should have its temperature taken before any medications or treatments are given. If medications are given prior to this, you will not know if the animal had an abnormal temperature and the medication changed it, or if the animal had an abnormal temperature at all. When an infection is present, often there will be rise in body temperature as the body's defense mechanism tries to fight the bacteria. A subnormal temperature is often a sign of shock. Just like humans, normal body temperature can vary from animal to animal. Unless you have too many to check, it is a good idea to have a record of each of your animal's normal temperatures.

An animal's temperature is taken rectally. This is the best way to obtain an accurate reading of the body temperature. You can use a veterinarian thermometer, or a digital one for humans will do fine. Never leave the animal unattended while taking a tem-



perature. Maintain hold of the tail and the thermometer at all times during the process. A thermometer can become "lost" meaning an unpleasant retrieval for both you and the animal. Lubricate the thermometer and insert into the animal's rectum. Depth will depend upon the size of the animal, but generally 1-2 inches is sufficient. Wait for the required amount of time—thermometer beeps or 3-minute lapses, depending upon the type of thermometer used. Remove and obtain a reading. Cleanse the thermometer after use.

## Injections

Injections are often used to administer medications because of the ease and rapid absorption rate. Most vaccinations and emergency drugs, some de-wormers, and many antibiotics are administered by injections. The injection methods most commonly used by livestock owners are intramuscular (IM) or subcutaneous (SQ or Sub. Q.) IM injections are given in muscle mass. This is usually the side of the neck, in the hindquarters, or in the shoulders. SQ injections are given just under the skin. Any area that has loose skin is suitable for SQ injections.

## ANIMAL TEMPERATURES

The following presents the average temperature range for some species of adult animals. All temperatures are given in degrees Fahrenheit.

Cattle	101-102
Goats	101-102
Horses	99-101
Sheep	101-102
Pigs	101-102.5
Rabbits	101-103

Syringes are calibrated in milliliters (ml) or in cubic centimeters (cc). Likewise, many medications are prescribed in ml or cc. Both amounts are the same. Some medications come in pre-measured and filled syringes and are ready for administration. For those medications that don't, you will need to fill the syringe using the calibrations on it to determine dosage. To fill a syringe, remove the foil cap that covers the rubber top on the medication bottle. Hold the bottle upside down and insert the needle through the rubber and into the fluid. Pull back on the plunger of the syringe until the desired amount is withdrawn, using the calibrations on the syringe to determine dosage. Remove the needle from the bottle and inspect the syringe for air. Holding it pointing upward and flicking it with your finger will cause any air bubbles to rise. Squeeze out a

small amount to insure all the air is exhausted. Replace the cover on the needle until ready to administer.

Animals don't like shots any more than humans. Restrain the animal or have someone hold it for you. Offering food will sometimes act as a distraction while the shot is being given.

Select the site and cleanse with alcohol. Though it is impossible to sterilize any skin that has hair on it, using sterile needles and cleansing the site will help prevent infections and complications.

SQ injections are less painful and more easily given but always read the label or ask your vet. Drugs that are meant for IM can cause irritation and abscesses if given SQ. Locate an area with loose skin (neck, flank, etc.) and inset the needle under the skin. You can feel the needle penetrate and break through. Inject the medication and remove the needle. Rub the site vigorously to help absorption and prevent leaking. If administering a large volume, use several different sites instead of just one.

IM injections are a little more difficult for beginners, but will get easier with each injection given. After selecting and cleaning the site, remove the needle from the syringe. Be careful not to depress the plunger while removing. Smartly slap or firmly punch the injection site several times.

This will condition the animal and cause the nerves in the skin to tingle, thereby reducing the needle prick. Quickly plunge the needle into the muscle, but avoid going deep enough to hit bone. Attach the syringe and draw back slightly on the plunger. If blood enters the syringe, you have hit a blood vessel and the needle should be retracted or advanced, or the needle removed and another site selected. Inject the drug and remove the needle. Massage the area after the injection.

## Oral medications

Oral medications are usually given for gastrointestinal related troubles or systemic therapy. If not done properly this can be a real chore because of livestock's size and strength. Restraining the animal is the first step in administering any oral medication.

Liquids are usually given as a drench, using a drenching bottle or a syringe. Never use a glass container which can break if the animal bites it or you bang it against the animal's teeth. Medications can be made more palatable and acceptable by mixing with honey, molasses, or corn syrup. Small amounts should be given instead of one large one to give the animal time to swallow in between. First tilt the animals head upward but not so much that its mouth is higher than its eyes. Over tilting the head will contribute to choking. Try to keep the animal calm to prevent gasping which can lead to aspiration. Next insert the tube of the drenching bottle or the syringe between the animals teeth, over the tongue, and toward the throat. Administer slowly. If choking occurs, stop and wait for the animal to recover.

Pills or boluses are easiest to administer when given with a balling gun. First lubricate the bolus with shortening or cooking oil. Place the bolus in the gun and insert the gun between the teeth, over the tongue, and to the throat. Depress the trigger to pop the bolus down the animal's throat.



Medications are sometimes given with a stomach tube. A flexible tube is inserted through the mouth or nostril and down the throat. Once the tube is in the stomach, liquids are pumped through it with a pump. Care must be taken not to mistakenly insert the tube into the lungs or to damage the esophagus with the tube. This can be a risky procedure unless you know what you are doing.

Many medications are intended to be mixed with the animal's feed or water. Though very easy to administer, getting the animal to eat or drink it is the hard part. If the medication is to be added to the water, flavoring the water for several days before adding the medicine will help to mask the taste. Molasses, Kool-Aid, or pickle juice often works for flavorings.

Medication added to the feed can also be disguised by adding molasses or corn syrup to the feed. If this doesn't work, apply a small amount of Vicks to the animal's nose so that it smells the Vicks instead of the medication. When administering medicated food or water, no other nourishment should be given until the animal has consumed the medication.

## Basic first-aid

All animals are susceptible to accidents or injuries. When dealing with cuts or miscellaneous injuries, the most important thing is to remain calm and not panic. Analyze how bad the animal is really injured, then call your veterinarian and describe the injury to them *exactly*. Over and under exaggeration of animal's injuries makes it impossible for your veterinarian to make an informed decision about whether or not a visit is necessary and what course of treatment is indicated.

Most small wounds and many larger ones heal without suturing. First control bleeding if necessary by using direct pressure on the wound. Cleanse with mild soap and water or antiseptic wash, gently rinsing away dirt, debris, etc. Trim hair away from the wound.

If you or the vet decide against suturing, keep the wound as clean as possible. Bandaging is usually not required unless directed to do so or the wound is especially large. Apply an antibiotic cream or powder to the area. If it is fly season, the wound must be protected. Flies will lay eggs on the wound and surrounding area, resulting in maggots. Apply an ointment in and around the wound that will control flies.

Fractures and dislocations often result from fighting, becoming entangled in a fence, feeder, or other equipment, or being struck by an automobile. You can suspect a fracture if the limb dangles and the animal will not walk on it. Contact your veterinarian. Until help arrives, try to keep the animal quiet and unmoving unless it is in a dangerous or inconvenient place. If you have to move the animal, do so very slowly and carefully.

Shock is a life-threatening condition. It is exhibited by rapid breathing and pulse, weakness, prostration, and often subnormal body temperature. If the cause is apparent (falling through the ice and becoming severely chilled or heat exhaustion), alleviate the cause and contact your vet for further instructions. If the cause cannot be determined, such as after trauma or an accident, contact your veterinarian immediately. Internal bleeding is a possibility.

When providing first aid to an animal, if in doubt perform the same treatments as if the animal was a human.

## The medicine cabinet

One of the most important things you can have in your medicine cabinet is a good home vetting book. It can be a tremendous help when a veterinarian is not available. Both the Merck Vet Manual and A Veterinary Guide for Animal Owners, by C.E. Spaulding, D.V.M. are excellent books.

Needles and syringes are generally purchased in disposable plastic form. I clean and reuse both the needles and syringes with alcohol and hot water,

although needles will dull with repeated use. 20-gauge needles in 1-inch lengths are good all-purpose sized needles. A 3cc syringe is sufficient for most uses but larger ones may be needed for larger animals (when giving an antibiotic to a sick cow or horse for example). For this purpose and for washing wounds, I keep 60cc syringes in stock.

Some drugs and medicines, like antibiotics and de-wormers, are administered according to the animal's body weight (E.g.: 1 ml per 100 pounds of body weight). Weight tapes are available that will provide you with a reasonable estimate of the animal's weight if you do not feel comfortable guessing.

Check with your veterinarian for their recommendation on what drugs you should keep on hand. Also store the drugs and medicines in accordance with the label instructions. A tetanus antitoxin, Tetracycline, Procaine penicillin G, Betadine or other broad-spectrum antiseptic, antibacterial ointments, alcohol, Kopertox, blood stopper powder, petroleum jelly, hydrogen peroxide, and the old stand-by Bag Balm are good to have. Epinephrine is a powerful, quick acting, drug that is used in the treatment of circulatory collapse and anaphylactic shock. When one of these problems arise, it must be administered immediately to save the animal's life. Keeping a bottle of this on hand for quick administration when ordered by the vet can mean the difference between an animal's life and death.

Vetwrap is a valuable supply to have on hand. This unique bandage sticks only to itself and does not require pins. It is excellent for holding a dressing in place. Elastic bandages are wonderful for temporarily holding ice or heat packs on extremities. Gauze dressings for humans are handy to have, and sanitary napkins perform wonderfully when applying direct pressure on a wound. Thermometers, balling guns, and drenching equipment are almost a necessity. Δ