



Cattle Producer's Handbook

Animal Health Section

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Vital Signs in Animals: What Cattle Producers Should Know About Them

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Disease may be defined as “any abnormal structural or functional change in the tissues of the body.” Though diseases have many direct and indirect causes, such as trauma (wound or injury), parasites, congenital (present at birth), viruses, and others, they all affect to some degree the vital signs of the body.

In animal physiology, “vital signs” pertains to the **temperature, respiration rates, and pulse** of the body. Obviously, there are other important functions in the body, but these three are fundamental for the maintenance of life. Without them all else is secondary.

Animal owners need not only to recognize changes in the condition and appearance of their animals, but also to learn to what extent an abnormality may be reflected in the vital signs of the body. Usually, the first signs of disease are slight and may go unnoticed. The observant individual who detects the early symptoms and initiates the proper action can play a big role in disease control.

The vital signs of the body, what they might mean and how they may aid the stockman in describing symptoms to the veterinarian, are described and illustrated in the following discussion.

Temperature

Temperature is defined as “the degree of heat of a living body.” An animal’s temperature is actually the result of the balance between heat produced by the basal metabolism¹ and muscular activity of the body, and the heat lost from the body. Approximately 85 percent of heat loss is through the skin; the remainder is by the lungs and through digestive and urinary secretions. The actual regulation of body temperature is accomplished

¹Sum of all energy and material transformations that occur in body cells of an animal when it is at complete rest.

mainly through thermo-regulatory centers located in the brain.

An animal’s abnormal temperature may play a part in the veterinarian’s ultimate diagnosis of a disease. The visual symptoms of abnormal temperature are often the first noticeable clue the owner may detect. When an animal’s temperature is above normal limits, it’s considered to have a **fever**; if it’s below normal, it’s called **hypothermia**.

Domestic animals do not have constant normal temperatures and considerable variations will be found in the temperature of normal animals under different conditions. In general, animal temperatures will vary, depending on physical activity, stage of pregnancy, the time of day, and environmental surroundings.

In the United States, body temperature is measured with a clinical Fahrenheit thermometer. The thermometer has a scale ranging from 94° to 200°F, and each degree is divided into fifths.

The procedure for taking an animal’s temperature is: (a) shake the mercury column into the bulb end of the thermometer; (b) moisten or lubricate the tube; (c) insert the bulb end through the anus into the rectum. Insert the full length of the tube into the rectum. Leave the thermometer in the rectum for about 3 minutes. Note: Most animals object to insertion of the thermometer in the anus so use an appropriate restraint on the animal.

The normal temperatures for different animals are as follows:

Horse	99.5° to 101.3°F
Foal	99.5° to 102.2°F
Cattle	100.4° to 103.1°F
Sheep and goats	102.2° to 104.9°F
Swine	100.4° to 104.0°F