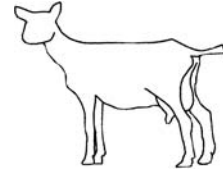


4-H DAIRY GOAT PROJECT HEALTH SUPPLEMENT



Publication No. 4H369E

4-H Veterinary Science project members investigate the normal health of several animal species. It's important that you become familiar with the normal health of your project animals so that you can recognize when one of your animals isn't well.

This Dairy Goat project health supplement should acquaint you with common dairy goat health characteristics.

Think about your doe, buck, or wether. If your dairy goat is normal, she's probably lively, capricious (unpredictable), gregarious (sociable), hardy and resistant to disease. You are important to your goat because it's your job to keep them well and to know when they need veterinary care.

Recognition of the following normal characteristics will help you and your veterinarian work as a team to keep your dairy goat in good health.

You should keep a record of any abnormalities which do occur. This record will be important as a case history when your veterinarian begins to formulate a diagnosis. You can create your own chart or use Wisconsin 4-H Publication No. 4H369A.

Your dairy goat's **attitude** is a characteristic with which only you are familiar. An abrupt or gradual change in your animal's behavior may be an indication of sickness. Does your doe normally come when you call her? Are they normally waiting for you by the gate at milking time? A change in this behavior must have a reason. Try to find the cause.

Your dairy goat's **stance** should be on squarely set, widely spaced, strong, straight legs. Their topline should be level and their head should be alertly carried. These traits will vary with breed and genetic background. However, disease or pain will also cause abnormal conformation. An arched back may indicate abdominal pain. An outstretched neck and sawhorse stance may imply breathing problems. When your doe hangs her head and looks depressed you can probably guess just how awful she feels.

The normal **gait** is a third characteristic with which to be familiar. Your doe should walk gracefully, your buck majestically and your wether probably

obstinately! But whatever the movement, it should be well-coordinated. Jerking, limping or circling are signs of leg, feet or nervous system disorders. Keep track of your dairy goat's **weight**. Normal weight varies with breed, age, pregnancy, and stage of lactation. A pregnant doe soon to freshen will of course be heavier, but don't let your dry does get too fat. This could lead to various reproductive disorders. On the other hand, be sure to increase a heavily lactating doe's feed ration so she doesn't become too thin. You should be concerned with a sudden or gradual weight loss. This is a sign of several common dairy goat diseases, such as Johne's disease.

The normal dairy goat **hair coat condition** is smooth and glossy, although this also varies with breed and age. A Saanen exhibits a much shaggier coat than that of the slick-haired Nubian, for example. And we know a young kid's coat is soft and fluffy compared to the bristly hairs which remain on a body-clipped adult. If one of your animals has a rough coat or hair loss, you may start thinking of nutritional disease or parasitism.

Skin and mucous membrane (color and condition) are important indicators. Normally skin is soft, velvety-smooth and pliable like elastic. These traits can be easily observed on the mammary system. Some udder textures are better than others due to genetics, but a sick animal may have skin with hot spots due to infection and tight skin due to water loss or dehydration. Mucous membranes line all body openings such as the eye, ear, nose, mouth, anus, and vagina. Normally, these membranes should be moist and pink. Some membranes, such as those in your nose, possess tiny hair-like structures called cilia. Cilia prevent dust particles from traveling down your trachea to your lungs. If a membrane is dry or white rather than pink, your goat is not normal. When you press you goat's gum, color should return rapidly. If it does not, your animal may be anemic.

One of the most obvious characteristics to notice about your project animal is their **bodily discharges**. Normal discharges are from the anus and vulva. Fecal droppings should be round, firm and dry. Intestinal problems may cause droppings to become moist. Scours (diarrhea) with blood, mucus or bad odor may even result. This may be

caused by improper feeding, microorganisms, infection or stress. Whatever the reason, your ability to recognize the discharge abnormality may prevent dehydration and further trouble. Two normal discharges are released into the vulva. The urethra and vagina end just inside the vulva. So urine and vaginal secretions are kept separate until they exit the goat. Urine should be clear to yellow, not bloody. Vaginal secretions normally occur during the heat period (estrus) and vary from clear to cloudy. A thicker white discharge may be released after breeding. A thick mucous or bloody vaginal discharge may precede the water bag during kidding.

Your ability to recognize changes in these excretions may mean the difference between getting your doe bred or not.

Most discharges from the eyes, ears or nose are signs of irritation or infection and are not normal. Teary eyes or runny nose may be due to dusty hay or something more serious. You must keep track of these occurrences and use your best judgment.

Goats can't talk like people but they can be very **vocal**, some breeds more than others. For example, a Nubian owner must realize his animals "maa" at the slightest inconvenience. Saanen owners appreciate the calm manner and quiet **voice** for which their breed is known. A doe "bleats" more at milking time, when she's in heat, ready to freshen or separated from her kids. Your goat may call you if she isn't feeling well.

A healthy goat has a good **appetite**. They eat well, but doesn't like dirty or stinky hay. They can be very fussy about their feed. Dairy goats are browsers not grazers as are other ruminants. They can successfully digest twigs and bark but certainly prefer delicate alfalfa leaves. They don't like to eat things close to the ground. You've probably caught your goat stretching up the trunk of a tree to reach the leaves!

You should know if your doe devours her feed ravenously or gingerly minces through her grain. Know what is normal for your goat, so when her appetite changes you'll be aware that her health may have changed.

The first and largest compartment of your goat's stomach is the rumen, and it should be active if all is well. **Rumination** is easy to check. Watch the left side of your goat's abdomen or press and feel if you can't see movement. The rumen should rotate about twice each minute. If your doe's rumen isn't working she won't have a cud to chew

either. Cud-chewing is called mastication. Belching of gas in the stomach is called eructation. Mastication, rumination and eructation are three processes necessary for proper digestion.

And you know how important digestion is to **milk production**. Do you know the average milk yield of your doe? Milk yield is influenced by genetic background, but a drop in milk production may signal disease such as mastitis. Five pounds or 2 1/2 quarts of milk per day is common for many does. This results in a record of 1,500 pounds of milk in 305 days or 10 months. Some do produce five pounds every day for 10 months, others peak in 30 to 90 days after freshening and drop off slowly.

This record depends on breed, age, lactation, genetics, and environment. Consider all these factors when you determine what is normal for your doe. You have a great influence on your doe's production. Proper management can improve milk yield and flavor. Inability to recognize normal yield, consistency, color or flavor can lead to disease.

Dairy goat milk is normally whiter than dairy cattle milk. (Yellow carotene is present in cow milk but is converted to Vitamin A in goat milk.)

Goat milk tastes delicious but may vary in richness depending on the breed of the goat. Nubians have a higher butter fat percentage (as do Guernseys), whereas Saanens produce larger yields and lower fat content (as do Holsteins). Protein content also affects flavor due to lipase enzyme activity. Feeding weeds, poor sanitation and improper cooling can off-flavor milk also.

It's important that you understand these relationships so that you can distinguish them from milk problems caused by disease. Mastitis causes lumpy, stringy, watery, bloody or off-flavored milk.

The following set of normals should be checked when any of the previous characteristics are noted to be abnormal.

Whenever you see an abnormal sign you can check your goat's **temperature** with a rectal thermometer. Clean the thermometer thoroughly and shake it down well below the normal range of 101° to 103° F. Lubricate it with KY or petroleum jelly. Be sure your goat is restrained properly.

Insert the thermometer gently into the rectum and remove after one minute. The normal temperature should be 102° F.

Hold your hand or mirror in front of your goat's nostrils to check their **respiration rate**. Twelve to 20 and sometimes 50 breaths per minute is normal. Warm weather may cause panting which is about 250 breaths per minute.

Listen for congestion with your ear against your goat's ribs or with a stethoscope. Congestion is a sign to report to your veterinarian.

Your goat's **pulse** should be strong and steady. Place your hand over the heart at the floor of the chest. Feel the pulse with your fingers, not your thumb. Your thumb has its own conflicting pulse. Fifty to 115 beats per minute is normal. Seventy-five is average.

Normal **blood pressure** is like yours, 120/80. This is difficult to check on a goat.

If membranes have indicated an abnormality to you, such as, anemia (pale pink or white), lack of oxygen (bluish) or jaundice (orange or yellow) your veterinarian may want to do a **blood count**. The normal hemoglobin content is 13 grams per milliliter of blood or 4.1 mg per 1,000 cells. The normal white cell count is 7,400 to 8,940 cells per milliliter. White blood cells are important in fighting disease. It's important that your veterinarian know these dairy goat normals because changes in any of these can help with diagnosis.

When you contact your veterinarian, be prepared with a complete report of all the signs you have noticed.

Practice recognizing common health characteristics on your dairy goat everyday.

If you'd like further information on animal health, join the 4-H Veterinary Science project. You may use your dairy goat as a project animal.

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