

SAN LUIS OBISPO COUNTY DAIRY GOAT LEVEL TESTING
LEVEL 2

PASSING SCORE FOR LEVEL 2 IS 70%

This test will include identifying body parts, true/false questions, and multiple choice and fill in the blank. All questions will come from the 4-H Cooperative Curriculum System - "Stepping Out", the Dairy Goat project 2 activity book.

Please read the book, (you do not need to do any of the activities to be able to pass the test) spend a good amount of time on the glossary, there will be about 11 terms from there. There will be 14 diseases to identify - study is on page 9. The descriptions are not in the book. The pages to follow from Level 2 Meat Goat are very helpful on what will be on the exam. See below.

Good luck. See you at level testing day.

Major Diseases of Market Kids

Here is a list and short explanation of most of the major diseases of market goats. There are many other diseases of goats, but some (like ketosis, mastitis, milk fever, Johne's Disease, etc.) do not affect young animals such as market kids. Some diseases are more common in some areas than in others. Your vet can help you learn how to recognize and treat these diseases if they ever occur in your herd. Remember, prevention is the key!

Acidosis: low rumen and body *pH* usually caused by ingestion of high levels of carbohydrates such as grain, fruit, molasses, etc. Animals go off feed, stop chewing their cud, are depressed, can be bloated and have *diarrhea*. Severely ill animals may *founder* or die. Prevent by insuring adequate levels of fiber (hay or browse) in the diet, making ration changes gradually, using probiotics and sodium bicarbonate, and keeping grain safely locked away from goats.

Coccidiosis: very common disease caused by one of several protozoal parasites of the intestinal tract of goats. Very contagious and very hardy in the environment. Affected animals may have diarrhea, often have a rough coat, don't gain well, have a pot belly, and may die. Prevent by buying quality animals from a herd without coccidiosis and/or feeding specific feed additives (*coccidiostats*) to all growing animals. Practice good manure management and do not feed animals on the ground.

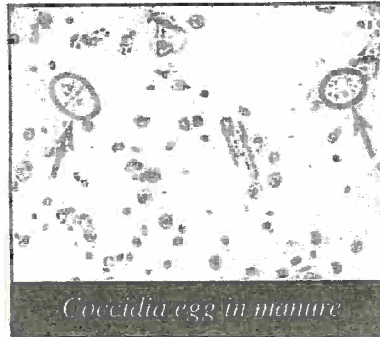


Photo courtesy Dr. William Foreyt.
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Parasites: there are internal and external parasites. Many types affect young goats, including *nematodes* ("stomach worms" or "round worms"), flukes ("flat worms"), tapeworms, protozoa, bots, lice, and more. The most serious and common are stomach worms; heavy infestations can kill young animals. Prevent by practicing good manure management, avoid feeding on the ground, and deworming young animals with a high-quality wormer every two months, starting at two months of age (or as determined by fecal examinations or recommended by your vet). External parasites include lice, keds, ticks, flies, bots and fleas.



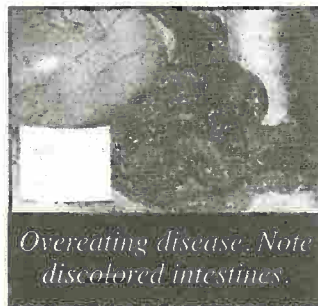
Photo courtesy Dr. William Foreyt.
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Urolithiasis (urinary stones or calculi): minerals in the urinary tract form into stones that block the tract, especially in males on high grain diets. Signs include pain when urinating, bloody urine, frequent attempts at urination, or no urine. The urethra can rupture ("water belly") and the animal may die. Prevent by adding ammonium chloride to the diet, providing at least two parts calcium to every one part of phosphorus in the ration, and feeding as little grain as possible for the desired rate of gain.



Photo courtesy Dr. Ahmed Tibary.
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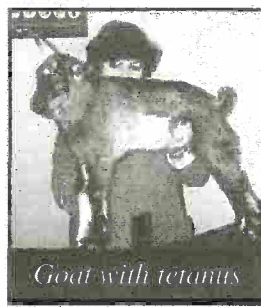
Overeating Disease: caused by toxins produced by the bacteria *Clostridium perfringens* types C and D. Most common in large, rapidly growing animals on high grain or milk diets. Signs include bloat, poor appetite, fever, diarrhea, or sudden death. Prevent by vaccinating does with CD&T during the last 2–3 weeks of pregnancy, making sure kids get colostrum within 12 hours of birth, and vaccinating kids with CD&T at 6, 9 and 12 weeks of age (or as recommended by your vet).



Overeating disease. Note discolored intestines.

Photo courtesy Dr. Clive Gay. Used with permission.

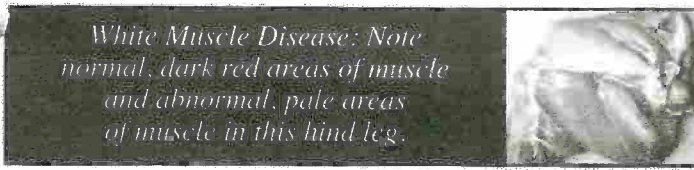
Tetanus: a fatal disease caused by toxins produced by *Clostridium tetani*. Signs include generalized rigid stiffness of muscles. Animals die from the inability to breathe. Prevent as above with vaccinations of CD&T.



Goat with tetanus

Photo courtesy Dr. James Thompson, Somerset Animal Hospital. Used with permission.

White Muscle Disease: caused by lack of adequate Vitamin E and/or Selenium in the diet. Signs include weakness, stiff gait, frequent *recumbency* and/or death. Prevent by giving pregnant does an injection of Vitamin E/Selenium in the last month of pregnancy and injections to kids at birth, one month of age and even monthly in some areas of the country, on the recommendation of a veterinarian. Also include Selenium in free choice trace-mineralized salt.



White Muscle Disease: Note normal, dark red areas of muscle and abnormal, pale areas of muscle in this hind leg.

Photo courtesy Dr. Clive Gay. Used with permission.

Orf (sore mouth): ulcers of the mouth and muzzle caused by a very hardy and contagious virus. Affected animals go off feed due to pain. Most common in young animals; can spread to does' udder and cause mastitis. Often picked up at shows. If it appears in your herd, prevent by using a *modified live vaccine* in all kids in the future.



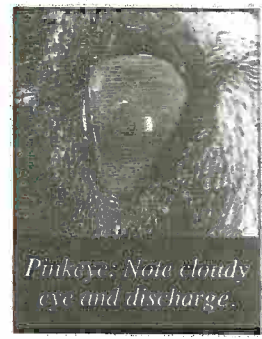
Sore Mouth: Note scabs and crusts on mouth.

Photo courtesy Keith Thompson, Massey University, New Zealand. Used with permission.

Caprine arthritis and encephalitis (C.A.E.): two different *syndromes* caused by the C.A.E. virus., which is most often spread from doe to kid through *colostrum* and milk. In kids less than six months old, the virus often causes fatal *inflammation* of the brain. Adults get arthritis and have swollen and painful joints, and/or hard udders and weight loss. No vaccine is available. Control by working with your vet to test animals and create a negative herd.

Caseous lymphadenitis (C.L. or abscesses): contagious disease of sheep and goats caused by bacteria called *Corynebacterium pseudotuberculosis*. Abscesses usually form around the head and neck; they break and drain and contaminate the environment for a long time. Rarely fatal but is a concern due to unsightliness of abscesses and contagious nature of the disease. The disease is very difficult to rid from a herd; avoid purchasing animals from herds with a history of abscesses.

Pinkeye (infectious keratoconjunctivitis): contagious disease of the eyes caused by several kinds of bacteria. Most common during summer months when flies are active. Some animals in a herd can be *carriers*. Affected animals tear, blink, avoid light, and may eat poorly; Surface of eye can turn bluish-white and surrounding tissues are often bright reddish pink. Without treatment, severely affected eyes can go blind. Ask your veterinarian about what medications can be legally used to treat this condition.

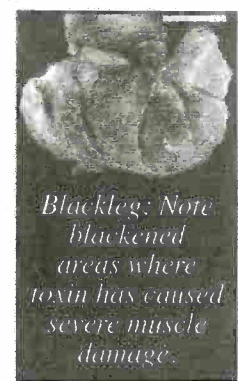


Pinkeye: Note cloudy eye and discharge.

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Polioencephalomalacia (pole-E-oh-en-seff-allo-mal-A-sha): softening of the brain caused by lack of Thiamin, also called Vitamin B-1. Normally, rumen micro-organisms make B-Vitamins in the rumen. If these micro-organisms are killed off or otherwise disturbed, as in a case of acidosis, ruminants can become *deficient* in Thiamin and develop polio. Affected animals may act blind, walk in circles, press their head against a wall, twist their heads backwards onto their spines, or display other signs of brain abnormality. Treatment involves restoring normal rumen micro-organisms and supplementing B-Vitamins.

Blackleg: disease of muscles caused by an *anaerobic* bacterium called *Clostridium chauvoei*, which is found in some parts of the country. Bacteria enter the muscles through a tiny wound and kill surrounding tissues with toxins they produce. Affected animals are very lame and often die. Prevent with an eight-way Clostridial vaccination.



Blackleg: Note blackened areas where toxin has caused severe muscle damage.

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Floppy Kid Disease: only affects kids that are about three to ten days old. Cause is unknown but could be bacterial toxins. Kids are not dehydrated, but they are weak and may not be able to stand. The belly may seem enlarged and they may drool and/or cough. The kid may feel cold and the temperature can be lowered or elevated. Without treatment, many kids die within two days. If you see these signs of illness in a young kid, call your vet at once. If Floppy Kid Disease is diagnosed, your vet may recommend that you give the kid a half-teaspoon of baking soda (dissolved in a small amount of water) by mouth to counteract lowered body pH; improvement should be noted within two hours.

Some other diseases of market kids include pneumonia, foot rot and ringworm.



Many of the organisms that cause goat diseases can live a long time in the environment, so it is best not to let them get introduced onto your property!

Colostrum is the first milk produced by a doe after she kids. It contains vitamins, fat for energy, and antibodies to protect the kid against diseases.