

TRI-COUNTY GOAT NEWSLETTER TULARE-KINGS-FRESNO COUNTIES

SEPTEMBER 2003

FRESNO OFFICE

1720 S. Maple Avenue
Fresno, CA 93702
(559) 456-7285
FAX (559) 456-7575

KINGS OFFICE

680 Campus Drive
Hanford, CA 93230
(559) 582-3211, Ext. 2730
FAX (559) 582-5166

TULARE OFFICE

4437 S. Laspina Street
Tulare, CA 93274
(559) 685-3303
FAX (559) 685-3319



GOAT PUBLICATIONS

There are two publications that are available from UCCE that may be of benefit to goat owners. They are:

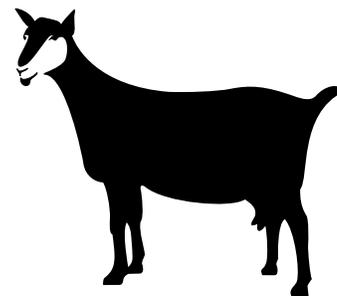
1. The Emergency Euthanasia of Sheep and Goats.

This publication is designed to aid owners, producers, auction market employees, livestock transporters, and law enforcement officers in making the appropriate decisions regarding the emergency euthanasia of sheep and goats.

2. Goat Care Practices.

This publication produced by the University of California Cooperative Extension explains why, when, and how specific practices are used in goat production systems in California. This publication may assist producers in evaluating husbandry practices and offer practices that are safe, ethical, and cost efficient.

These publications are available at your local UCCE offices.



The University of California prohibits discrimination against or harassment of any person employed by or seeking employment with the University on the basis of race, color, national origin, religion, sex, physical or mental disability, medical condition (cancer-related or genetic characteristics), ancestry, marital status, age, sexual orientation, citizenship, or status as a covered veteran (special disabled veteran, Vietnam-era veteran or any other veteran who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized).

University Policy is intended to be consistent with the provisions of applicable State and Federal laws.

Inquiries regarding the University's nondiscrimination policies may be directed to the Affirmative Action/Staff Personnel Services Director, University of California, Agriculture and Natural Resources, 1111 Franklin, 6th Floor, Oakland, CA 94607-5200 (510) 987-0096.

New Insecticide Products for Control of House Flies

Alec C. Gerry, Ph.D.¹

Extension Veterinary Entomologist
University of California at Riverside

Fly baits (or scatter baits) have been used by animal producers for many years to manage house flies as part of an integrated pest management program. At times of the year when house fly populations were high, these baits could be used to supplement the primary fly control techniques of sanitation and manure management. Fly baits were used by scattering the bait granules on the ground near animal pens and corrals or by placing them into bait stations.

Until recently, all fly baits registered for use in California were similar. All of the baits contained the fly killing chemical Methomyl and the fly pheromone attractant Muscalure to attract flies. Baits differed only in the size, shape, and color of the bait granules, and perhaps in the composition of feeding attractants added to the granular bait. Recent studies by University of California researchers have shown that house fly resistance to the Methomyl insecticide used in these products is very high in many house fly populations in California. This resistance may explain the failure of these Methomyl baits to kill house flies that has been noted by producers over the last 5-10 years.

Recognizing that the Methomyl baits were no longer performing as well as they had prior to the 1990's, it was clear that new chemical baits were needed. In response, two new fly bait products have become available in California. The two products are a fly bait strip called "QuickStrike" produced by Starbar and a granular fly bait called "QuickBayt" produced by Bayer Animal Health. Like other fly bait products, these new products contain the fly pheromone Muscalure as well as feeding attractants. What is new about these products is that they both use new chemical insecticides to kill houseflies. Both of these products can be purchased through local farm and feed stores.

QuickStrike is a bait strip with the fly bait material housed within a plastic strip frame. QuickStrike contains the fly killing chemical Nithiazine which offers a fast knockdown of flies that eat the bait. The bait strip can be placed near animal pens and corrals out of reach of the animals and is best placed low to the ground and near areas where flies already congregate.

QuickBayt is sold as a granular bait containing the fly killing chemical Imidacloprid (the same chemical used to control fleas on dogs). Imidacloprid also offers a fast knockdown of flies that eat the bait. QuickBayt can be scattered on the ground or placed into a bait station near animal pens and corrals. QuickBayt can also be mixed with water and painted onto surfaces to kill resting flies. Painted surfaces should be cleaned or repainted after 2-3 weeks to prevent flies from rapidly developing resistance to the Imidacloprid chemical. This granular bait is best used by scattering the bait on the ground in the vicinity of animal pens where flies tend to congregate.

Although these new products have not been tested by University of California researchers to ensure that they work, it is presumed that these new products will outperform the old Methomyl products as flies should not be resistant to the new chemicals. As with all chemical products, read the label prior to use and follow label instructions for use and storage. Also, please keep in mind that chemicals are the means of last resort for management of house fly. A proper sanitation and manure management program should ensure that house fly populations are kept low through most of the year.

¹Dr. Gerry is a newly hired extension veterinary entomologist at the University of California at Riverside. He specializes in the management of insect pests of confined livestock and in the control of insect and tick transmitted diseases of animals.

Copper Deficiency in Goats

*Carol Collar – Farm Advisor, UC Cooperative Extension
Dr. Robert Moeller – Veterinary Pathologist, CAHFS Laboratory*

Every year the California Animal Health and Food Safety laboratory (CAHFS) diagnoses copper deficiency in goats from our tri-county area and throughout California. The goats submitted to the lab are usually newborn or young kids. Animals are usually presented alert, yet weak with difficulty moving their hind legs. The clinical term for this condition is enzootic ataxia, but it is sometimes called “swayback”.

Copper is an essential mineral for goats, sheep and cattle. Forages and other feeds contain varying levels of the mineral. The amount of copper needed is difficult to generalize because certain other minerals, especially molybdenum, sulfur and selenium can affect the requirement. Another challenge in providing this important mineral is that the margin between copper deficiency, adequacy and toxicity is narrow. Sheep are especially sensitive to copper toxicity, much more so than goats or cattle.

Deficiency – A deficiency can be caused by too little copper in the diet, or from the influence of another substance that interferes with copper uptake. Molybdenum is the usual culprit, although there are several others. Excessive levels of molybdenum and/or sulfate in the feed or water can interfere with copper utilization by the goats and a deficiency will result. Other interfering substances include soil ingestion from overgrazing, and excess selenium, cadmium, zinc, iron, or calcium. Infestations of internal parasites can also reduce copper uptake and cause a deficiency by changing conditions in the gut (abomasum and intestines) to make the copper less soluble.

There are various signs of copper deficiency, which can include diarrhea, poor weight gain, light hair coats, anemia and a general unthrifty appearance. The most common symptoms for goats submitted to the CAHFS are weak kids usually 1 to 2 months of age that are uncoordinated, especially in their hind legs. They can still kick their hind legs so they aren't really paralyzed even though they look like they are. Sometimes they drag about in a sitting position. Their appetite often remains unaffected, but since they have trouble standing to nurse or eat, they get progressively weaker. Although the disease most often affects kids and lambs 1 to 2 months of age, it can be seen in some animals at birth or in animals as old as 3 to 4 months of age.

The deficiency usually starts in a doe or ewe that is deficient in liver copper and is unable to give the fetus enough copper to prevent the disease. Although copper can be transferred in the milk (milk is a poor transporter of copper), deficient dams fail to transfer adequate copper to the young growing animal.

Diagnosis - Copper deficiency is diagnosed by measuring copper levels in blood and organ tissues. Liver gives the best indication, but serum copper can also be measured. (Serum is the straw colored fluid from blood after the red cells are removed). Following are normal values for goats and sheep:

Normal copper level values

	Goats	Sheep
Serum	0.8 – 1.2 ppm	0.7 – 2.0 ppm
Liver	25 – 150 ppm	25 – 100 ppm

Prevention - The best way to prevent copper deficiency in goats is to provide a trace mineral salt block containing copper. Usually the highest level available in commercial mixes is 0.04% copper, which equals about 400 parts per million (ppm). If a trace mineral salt block containing copper does not control copper deficiency, there are other alternatives for supplementation, but since copper can be very toxic, a deficiency must be confirmed before any copper supplementation takes place. It is possible to test feed, soil and water for all the various minerals, but it is more practical to test the goats to determine their copper status and make any necessary changes based on those findings. Your veterinarian can submit blood or tissue samples to the CAHFS lab to determine if a deficiency exists. Some of the other alternative preventative measures for copper deficiency that have been reported include custom-made trace mineral salt blocks, oral copper sulfate solution drenches, injectable copper glycinate, and administration of boluses that contain copper.

(continued on Page 4)

Toxicity - Remember that a little copper may be good, but too much can be extremely toxic, **so consult your veterinarian before attempting a copper supplementation program.** Once supplementation is started, take care not to inadvertently provide additional copper through changes in feed –feed for horses, pigs, chickens, or cattle, as well as dog food can contain significant amounts of copper. Excess copper accumulates in the liver and although there are no outward signs, the stored copper can cause death at any time, particularly if the animals are stressed. With your veterinarian you can monitor the copper supplementation program by periodically submitting blood or tissue samples to the lab for analysis to check the copper status of your goats. Don't forget that there are differences among the species with regards to sensitivity to excess copper. Copper supplements intended for cattle may kill sheep and goats. And sheep, being the most sensitive, may be harmed by supplementation intended for goats.

In summary, copper nutrition is complicated by a number of factors, but with the help of your veterinarian and analytical tools available through the CAHFS, management to prevent copper deficiency in goats can be relatively straightforward.

About the California Animal Health and Food Safety Laboratory: The CAHFS is a statewide laboratory system with a central reference lab located in Davis, and four branch labs located in Turlock, Fresno, Tulare and San Bernardino. Diagnostic services for goats, sheep and cattle in the southern San Joaquin Valley are provided by the Tulare branch which is located at 18830 Road 112, just east of Highway 99 approximately 4 miles south of Tulare. The CAHFS-Tulare phone number is 559-688-7543. From their website at <http://cvdls.ucdavis.edu/> you can access useful information about submitting samples and getting results as well as disease factsheets and other general information.

Jim Sullins
County Director
Tulare County

Carol Collar
Dairy Farm Advisor
Kings County

Gerald Higginbotham
Dairy Farm Advisor
Fresno/Madera Counties