

VIRGINIA COOPERATIVE EXTENSION SERVICE

EXTENSION DIVISION - VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY - BLACKSBURG, VIRGINIA 24061

VIRGINIA-MARYLAND
REGIONAL COLLEGE
OF
VETERINARY MEDICINE

VIRGINIA VETERINARY NOTES



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WHAT'S INSIDE!

VM Library

EFFICACY AND TOXICITY OF ESTROGENS COMMONLY USED TO
TERMINATE CANINE PREGNANCY Page 2

HYPOTHYROIDISM AND EYE DISEASE Page 2

AN UPDATE ON DILATED CARDIOMYOPATHY IN DOBERMAN PINSCHER DOGS Page 3

THOUGHT FOR THE MONTH Page 3

THE WILDLIFE CENTER OF VIRGINIA Page 4

REPTILIAN PRACTICE PROBLEMS
VITAMIN-MINERAL DEFICIENCY Page 4

BLOOD CHOLESTEROL LEVELS: WHAT'S NORMAL? Page 4

POTOMAC FEVER TESTING Page 5

FELINE HYPERESTHESIA SYNDROME Page 5

CHEMOTHERAPY FOR BRUCELLOSIS Page 6

CONTINUING EDUCATION OPPORTUNITIES Page 7

VET CLINICS SELLING ILLEGAL DRUGS Page 8

VIDEO TELECONFERENCE FOR VETERINARIANS Page 9

A MESSAGE TO REFERRING VETERINARIANS Page 9

VIRGINIA-MARYLAND REGIONAL COLLEGE OF VETERINARY MEDICINE
TEACHING HOSPITAL CLINICAL FACULTY Page 10

MAILING LIST UPDATE Page 11

SORGHUM OR SUDAN GRASSES NOT FOR HORSES Page 12

& SU LIBRARY

Kent Roberts
Kent C. Roberts, DVM
Extension Veterinarian

EFFICACY AND TOXICITY OF ESTROGENS COMMONLY USED TO TERMINATE CANINE PREGNANCY

For years, veterinarians have used estrogens to terminate canine pregnancies. However, experimental support for the efficacy of such treatment is lacking, and clinical experience and a number of investigations have suggested that severe side effects can develop after treatment. Estrogens appear to increase the prevalence of pyometra and have been incriminated in the development of aplastic anemia. Additionally, the appropriate dosage and time of administration is not clear, with several suggested regimens having been reported. To add to this confusion, estradiol cypionate is still marketed to terminate canine pregnancies at dosages that may be toxic. Several investigators have suggested that the dose of estradiol cypionate should never exceed 1 mg, cautioning that doses in excess of 1 mg may lead to fatal aplastic anemias. Although diethylstilbestrol, when administered orally, appears less likely than estradiol cypionate to result in suppression of hematopoiesis, efficacy in terminating canine pregnancies has not been established.

This study supports the hypothesis that estrogen treatment for preventing or terminating canine pregnancies can have severe limitations with regard to efficacy and safety. In view of the demonstrated poor efficacy of currently utilized estrogen treatments, the high risk of pyometra, and the potential for inducing aplastic anemia, it may be best to advise against using estrogens for pregnancy termination in the bitch.--**JAVMA, Vol. 186:783-788, as reported in Veterinary Newsletter, Utah State University Cooperative Extension Service, May 1985. Veterinary Medicine Newsletter, University of Florida, July 1985.**

HYPOTHYROIDISM AND EYE DISEASE

Recent reports indicate that canine keratoconjunctivitis sicca can be associated with hypothyroidism in addition to other immunologic disorders. At Illinois we have observed a high incidence of hypothyroidism in dogs with the "boxer" corneal erosion syndrome.

In addition to treating the ocular disease, we supplement a hypothyroid animal with appropriate thyroid replacement therapy. Supplementation of hypothyroid dogs that have dry eye does not increase tearing but may improve the health of the epithelium (including the cornea). It is also our clinical impression that the hypothyroid chronic cornea erosion cases tend to recur less frequently while on supplementation. Recent work indicates T_3 - T_4 values may be inaccurate in 50% of animals tested, and TSH stimulation should be considered.

Practice Tip: Run T_3 - T_4 values on all dry eye and corneal erosion cases!--**Alan Brightman, DVM, DACVO, Associate Professor and head of the Ophthalmology Department at the University of Illinois, College of Veterinary Medicine, as reported in Veterinary Professional Topics, University of Illinois Cooperative Extension Service, Vol. 10, No. 1. Veterinary Medicine Newsletter, University of Florida, July 1985.**

AN UPDATE ON DILATED CARDIOMYOPATHY IN DOBERMAN PINSCHER DOGS

Dilated or congestive cardiomyopathy is a devastating and rapidly progressive, fatal heart disease in Doberman Pinscher dogs. Death often occurs within 1-2 months of the onset of initial clinical signs. Many times the dogs are initially presented with the complaint of rapidly developing exercise intolerance. Physical exam findings often include an absolutely irregular weak and rapid femoral pulse, an S3 gallop rhythm (indicating dilation of the ventricular chambers), and increased lung sounds indicative of pulmonary edema. Typical radiographic findings usually include an alveolar pulmonary pattern substantiating pulmonary edema, and gross cardiomegaly involving primarily the left ventricle. Electrocardiology will generally reveal atrial fibrillation, a rapid ventricular rate, and occasional ectopic ventricular activity.

Despite aggressive therapy with Lasix, digitalis, and vasodilators, the disease continues to progress until death results or the owner requests euthanasia.

Recently, we have been carefully studying this disease in the Doberman breed and have discovered several interesting facts. It now appears that this disease may be far more common in the breed than had been first suspected. We have documented several sudden deaths in apparently healthy young dogs. Upon histological examination of the myocardium in these dogs, the typical lesions associated with dilated cardiomyopathy were seen.

We have also been conducting collaborative studies on dilated cardiomyopathy with the cardiology unit at the University of Virginia. During these studies, another interesting fact has emerged. In an effort to gather information about the disease, normal Dobermans have been studied. From these studies it has become fairly clear that these "normal" dogs may not be normal. In fact, the evidence indicates that although they are not showing clinical signs of heart failure, they may be in an early compensated state of heart failure. Thus, a large percentage for the breed population may have subclinical heart disease. For these reasons we are interested in screening a significant number of Dobermans in an effort to more exactly determine the incidence of this subclinical disease.

We hope to conduct screening clinics throughout the state, utilizing physical exams and ultrasonic imaging to detect early stages of cardiomyopathy. We hope to elicit the cooperation of private practitioners in this endeavor. Interested practitioners whose caseload includes a large number of Dobermans should contact either Dr. Kent Roberts or me here at the College of Veterinary Medicine. If Dobermans are presented to your clinic with cardiomyopathy and the owners elect euthanasia rather than therapy, we are very interested in having those dogs donated to Virginia Tech for inclusion in our study. Through these studies we hope to learn how to better deal with this disease in the dog and in humans as well.—James C. Keith, Jr., D.V.M., Ph.D., VA-MD Regional College of Veterinary Medicine, Blacksburg, Virginia, 24061.

THOUGHT FOR THE MONTH

Attitudes are more important than abilities, motives more important than methods, character more important than cleverness, and the heart takes precedence over the head.—Dr. Denis P. Burkitt, retired British surgeon.

THE WILDLIFE CENTER OF VIRGINIA

Virginia's only hospital for native wildlife has moved into a new permanent facility in Weyers Cave. The Wildlife Center of Virginia (formerly the Shenandoah Valley Wildlife Treatment and Rehabilitation Center) began operating out of the 1200 square foot modular building in late May. Over 250 patients have been seen in the first six months of 1985. The educational division has added a program on Virginia's eagles which has increased speaking demands. Over 20,000 Virginians are expected to hear these educational programs this year.

Anyone who finds an injured or orphaned wild animal may call for assistance or referral. The new phone number is (703) 234-WILD. Dr. Stuart Porter, director of veterinary services, may also be reached at (703) 234-9261. Veterinarians interested in helping injured wildlife are encouraged to contact the center so that animals found in other parts of the state can be referred locally for immediate evaluation and treatment.

The Wildlife Center is a private, non-profit, educational organization which exists solely by donations from concerned wildlife lovers. The Center does not charge for its veterinary services. The Center does not receive any state funding.—**Stuart L. Porter, V.M.D., P.O. Box 98, Weyers Cave, VA 24486.**

REPTILIAN PRACTICE PROBLEMS VITAMIN-MINERAL DEFICIENCY

Imbalances in dietary calcium and phosphorus are most commonly seen in turtles but are also reported in lizards and snakes. Feeding ground meat, without bone, or calcium poor vegetables (iceberg lettuce, for example) to reptiles is often the cause. The animal presents with soft bones and/or shells. If the condition is long standing there may even be a problem with mastication due to soft jaw bones or motility problems as a result of pathologic fractures. Radiographs can be helpful in diagnosing this condition.

Therapy consists of changing the diet to one containing more calcium and Vitamin D. Calcium and Vitamin D supplements can be given to affected individuals but recovery is prolonged and permanent deformities are common.

Hypovitaminosis A is clinically seen in turtles, especially those fed a commercial diet consisting mostly of dried ants. Blepharitis and hyperkeratinization of the mouth parts are seen. Permanent squamous metaplasia of the respiratory system may occur and this predisposes the animal to respiratory infections. Dietary change and Vitamin A supplementation are the basis of therapy.—**Donald K. Nichols, D.V.M., National Zoological Park, Washington, DC.**

BLOOD CHOLESTEROL LEVELS: WHAT'S NORMAL?

Some clinical laboratories use outdated "normal" standards of blood cholesterol, according to this survey of 31 hospital-based and privately operated facilities. The authors recommend 120 to 200 milligrams per deciliter (mg/dl) as the "ideal" cholesterol range for adult men and women of all ages. Values as high as 270 to 300 mg/dl were rated "normal" by some laboratories surveyed.—**B.M. McManus et al. in New England Journal of Medicine 312:51, Jan. 1985.**

POTOMAC FEVER TESTING

Beginning August 15, 1985, the Rickettsial Laboratory of the Virginia-Maryland Regional College of Veterinary Medicine is offering to veterinarians in Maryland and Virginia, serologic testing for the diagnosis of Potomac horse fever by an indirect immunofluorescent antibody test. Acute and convalescent serum samples (approximately 2 cc each) taken at 1-3 week intervals from suspect horses should be submitted together in separate tubes to the address listed below. If only an acute sample is submitted, it will be processed and charged as a paired sample. Initially, sera will be screened for the presence of specific antibody. The charge for this screening is \$20.00. If both samples are negative, testing will stop here. Titers will automatically be determined on all positive samples. The charge for screening and titration is \$55.00. Results will be reported out as negative or as positive at the highest detectable titer. Instructions for test result interpretation will be included with the final report. Billing and a final report will be forwarded to the veterinarian who submitted the samples.

Clearly identified samples, chilled by ice packs, should be submitted with clinical documentation (please include name and address of horse owner) to:

Laboratory Central Receiving
Veterinary Medical Teaching Hospital
VA-MD Regional College of Veterinary Medicine
Virginia Tech
Blacksburg, Virginia 24061

FELINE HYPERESTHESIA SYNDROME

The feline hyperesthesia syndrome (FHS) is a specific entity in cats that seems to be increasing in incidence. It has been referred to as neurodermatitis, rippling, rolling, or twitchy skin syndrome, neuritis and even hyperkinesia. It is a complex problem and is probably an external manifestation of a number of problems. It is doubtful if there is just one cause.

The signs can develop at any age but usually begin to be a problem between 1-4 years of age. Most of the signs are exhibited in moderation by many cats; but in FHS cats the signs are carried to extremes so that normal activities are curtailed. The cats may show all or any combination of the following; rippling the skin of their back; biting or licking at their tails, flanks, or pelvis; apparently hallucinating; going glassy-eyed with widely dilated pupils; meowing frantically; swishing their tails; stopping to lick violently when running or walking or eating; running crazily around the house; and attacking objects including the owner without provocation. The cats may even have generalized seizures and associated social problems such as urinating elsewhere than the litterbox. Signs may last a few seconds to a few minutes, may occur at specific times of the day, may vary in incidence from month to month, and may occur once every few days or almost constantly all day. Between episodes the cats seem peaceful but they may wake up suddenly at night and attack their owners. Both sexes, neutered or intact, are affected.

Many cats, especially kittens, do some of these things so the FHS diagnosis is probably overused. Diagnosis is difficult and is based largely on the history

and ruling out other differential diagnoses. Many of these cats exhibit an excessive response (glassy-eyed, dilated pupils, biting themselves or the clinician, licking their flanks, or twitching their back) when scratched by one finger over the L₇S₃ area in the midline. Normal cats react similarly but to a lesser extent to this presumably sexual stimulation.

Occasionally these cats may run a fever (less than 106°) but exhibit no white blood cell changes. In a few severe cases, marked EEG changes are apparent which disappear if treatment is successful. In cats we have necropsied, no significant lesions have been found.

There are a few things that this disease is not; it is not caused by lesions of the tail, anal glands, flank, back, skin, gut, ovarian or uterine stump ligatures or clips. Topical local therapy is pointless. The most likely causes seem to involve an interaction of the cat's basic personality (affected cats are often nervous, loners, hyperexcitable), frustrations (not being allowed outside, boredom, being ignored) and environmental pressures (overcrowding, sexual competition, another cat has cystitis or is spraying). The signs seem to be external manifestations of mental problems. Rarely does any systemic disease seem to be the cause. However, some cats have obvious EEG abnormalities (slow waves, dysrhythmias, spike discharges) that disappear when treated. Some cats seem to respond to a simpler diet with fewer preservatives. Hence, it is likely that FHS can be seen from a combination or a variety of single causes. FHS apparently lies mainly in the area of the behaviorist but may also have or be exacerbated by organic causes (toxins, dietary preservatives, minimal brain damage). It is in an area between sleep, dreaming, behavior, hallucinating, and epilepsy.

Treatment involves test therapy with all of, a combination of, or one of the following: megestrol acetate 1 mg/kg/day, prednisolone 1-2 mg/kg/day, phenobarbital 4-10 mg/kg/day in divided doses, diazepam 2-5 mg/kg/day in divided doses. In addition, behavioral or environmental pressures should be reduced and a food with less preservatives used. In some cats, I have found that more attention when the cat is normal combined with a whack (or waterspray) on the rump whenever signs are seen helps to reduce the problem. Once a successful treatment is found, the dose or combination of the drug(s) should be reduced as far as possible. Megestrol acetate can usually be cut to 1 mg/kg given every 3-4 days and prednisolone to 1-2 mg/kg given every 2-3 days. The cats can often be taken off drugs for prolonged periods but signs usually recur at irregular intervals. One must explain the side effects of these drugs to the client; polyphagia, polydipsia, polyuria, obesity, diabetes.—by **Alan Parker, DVM, PhD, DACVIM, Professor of Veterinary Clinical Medicine at the University of Illinois College of Veterinary Medicine. Small Animal Professional Topics, V9 #4, 1984).**

CHEMOTHERAPY FOR BRUCELLOSIS

Dr. Paul Nicoletti at the University of Florida's College of Veterinary Medicine continues his efforts to find an alternative to slaughter of valuable cattle infected with Brucella abortus with utilization of chemotherapy. The most effective regimen for dogs infected with B. Canis is also being studied. Other areas of brucellosis research are the possible use of dermal antigens to detect incubative infection in cattle and the effect of low-level antibiotics in feed on postvaccinal titers in calves.—**Animal Health News and Feature Tips, Summer 1985, Vol 1, No. 1.**

CONTINUING EDUCATION OPPORTUNITIES

September 18-21, 1985	Small Animal Medicine Update Drs. John August and Mike Leib September 18, Holiday Inn - Hampton, VA September 19, Ramada Inn - Charlottesville, VA September 21, Marriott Inn - Charleston, WV
September 26-27, 1985	Bovine Practitioners Seminar Sheraton Inn - Frederick, MD
October 11, 1985	Equine Practitioners Workshop Ultrasonography - Dr. Norm Rantanen Equine Medical Center - Leesburg, VA
October 25-26, 1985	Surgery of the GI Tract Lecture/Wet Lab - Blacksburg, VA
October 31, 1985	Video Teleconference (See page 9) Selected locations in Virginia
November 15-16, 1985	Orthopedic Surgery of the Canine Hind Limb Lecture/Wet Lab - Blacksburg, VA
December 13-14, 1985	Reproduction in the Stallion and Mare Lecture/Wet Lab - Blacksburg, VA

For more information on these meetings, contact:

Kent Roberts, DVM
Director of Continuing Education
VA-MD Regional College of Veterinary Medicine
Blacksburg, VA 24061
(703) 961-7666

Note: Program brochures for each CE meeting are normally mailed out six weeks prior to that meeting. Your support of the College programs is appreciated and encouraged.

Notice: Continuing Education for Animal Technicians
Blue Ridge Community College
Weyers Cave, VA
(Exit 60 - I81 between Staunton and Harrisonburg)
Sunday, October 20, 1985
Program: In-Office Diagnostic Tests
Starts at 9:30 a.m.
Lunch will be served

Our motto: Don't be so busy chopping wood that you forget to sharpen the ax.

VET CLINICS SELLING ILLEGAL DRUGS

As part of a nationwide effort to halt illegal and improper animal drug use, Food & Drug Administration officials have been conducting surveys in various parts of the U.S.

Federal inspectors found a surprising number of veterinary clinics in eastern Iowa willing to sell prescription drugs without proper orders from a veterinarian, according to FDA officials. Because of the illegal prescription drug sales, the Center for Veterinary Medicine (CVM) sent an unusually higher number of regulatory letters to Iowa veterinarians earlier this year.

After receiving several reports of unauthorized sales in Iowa, the Kansas City district FDA office prompted the agency's St. Louis office to investigate dispensing practices in eastern Iowa, said James Adamson, director of the Kansas City office.

During the investigation, FDA inspectors found that the relative number of veterinary clinics illegally selling prescription drugs was significantly greater than the unauthorized sales made by retail outlets, Adamson said. Further, these clinics appeared to be different from other establishments in that they had converted part of their office space to a retail drug sales area.

Often at these clinics, federal inspectors could "merely walk in and select prescription veterinary drugs from a display counter and pay a clerk or employee without any questions asked," Adamson said.

During the investigation, FDA inspectors visited 37 veterinary clinics and 17 dealers in eastern Iowa. Of the clinics visited, 33 sold prescription drugs to inspectors without a veterinarian's prescription; four refused. Eight of the dealers sold the prescription drugs to the inspectors while the other nine refused to make the sale without proper orders from a veterinarian.

As a result of the investigation, Adamson's office requested that CVM mail regulatory letters this February. A regulatory letter requires the recipient to explain, to FDA officials, the actions taken to resolve the violations cited in the letter. Failure to respond forces the FDA to take other actions, product seizure among them.

In the Iowa letters, CVM cited misbranding violations. Misbranding is the sale of prescription drugs to a layman who either doesn't have an order from a veterinarian or has an order signed by a veterinarian who hasn't taken on the responsibility of caring for the animals being treated.

Iowa is not the only state where veterinary clinics and dealers are violating federal regulations, according to Adamson. During the last 18 months, federal inspectors have recommended action in 427 cases nationwide involving misbranding, the use of unapproved drugs, discovery of violative residues in meat and improper use of drugs in feed.

During that time, New York had the highest number of violations with 98. Iowa was second with 52, followed by Minnesota with 39, Illinois with 33, Oklahoma with 27 and California with 26.—**Feedlot Management, June 1985, Vol. 27, No. 6. Veterinary Medicine Newsletter, University of Florida, August 1985.**

VIDEO TELECONFERENCE FOR VETERINARIANS

On October 31, 1985 the College of Veterinary Medicine will televise a two and one half hour continuing education program to six locations across Virginia. Designed for small animal, equine and food animal practitioners, the program features veterinary college faculty members John August, Larry Booth and Allen Rousel. Each will do a segment of the program which will be beamed to PBS stations in Fairfax, Richmond, Norfolk, Harrisonburg and Roanoke. The program will also be shown in Blacksburg at the Donaldson Brown Center.

This is the first such broadcast for veterinarians using the Virginia microwave network. Present plans call for expansion of the network and more programs for veterinarians in the future. The technology is excellent and only audience acceptance and telecast production remain as possible obstacles. This program is being produced as a joint effort of the College of Veterinary Medicine, the Learning Resources Center and the Continuing Education Center at Virginia Tech.

A telephone conference hookup between the Blacksburg studio and the various PBS locations will allow members of the audience to question speakers at the end of each presentation. A registration fee will be charged the audience at each participating PBS station to defray program costs. A program brochure will be mailed out in September. The program, which starts at 1:00 pm on Halloween, covers the following topics:

Evaluation of the Pruritic Dog	-	John August
Equine Lameness Examination	-	Larry Booth
Bovine Fluid Therapy	-	Allen Rousel

Be a part of this historic happening!

A MESSAGE TO REFERRING VETERINARIANS

I am pleased to include the current list of our hospital faculty, denoting their clinical specialties where appropriate. Appointments with the various hospital services may be made by calling (703) 961-7666 or (703) 961-4621 and asking for the appointments secretary. Cases are received by the service clinicians on hospital duty at that time who, as necessary, consult the other specialists in their service. Consultation calls are automatically handled in a similar fashion.

We look forward to providing the veterinarians of this region with the highest quality referral service in an increasing number of specialty disciplines.—**John R. August, B.Vet.Med., M.S., M.R.C.V.S., Diplomate A.C.V.I.M.**
Acting Hospital Director, VA-MD Regional College of Veterinary Medicine, Blacksburg, VA 24061.

**VIRGINIA-MARYLAND REGIONAL COLLEGE OF VETERINARY MEDICINE
TEACHING HOSPITAL CLINICAL FACULTY**

Small Animal Medicine

John R. August, B.Vet.Med., MS, MRCVS, Diplomate ACVIM	Dermatology/Feline Medicine
Deborah Davenport, DVM, MS	Gastroenterology
Michael S. Leib, DVM, MS, Diplomate ACVIM	Gastroenterology
W. Edward Monroe, DVM, MS	Internal Medicine
Kay L. Schwink, DVM	Ophthalmology
Linda G. Shell, DVM, Diplomate ACVIM	Neurology
Jeff R. Wilcke, DVM, MS	Clinical Pharmacology
Jerry A. Woodfield, DVM	Cardiology

Small Animal Surgery

Mark J. Dallman, DVM, PhD
Robert A. Martin, DVM, Diplomate ABVP
Claire J.A. Spackman, DVM, MS

Large Animal Medicine

Karen H. Baum, DVM
Allen J. Rousset, DVM, MS, Diplomate ACVIM
W. Kent Scarratt, DVM, Diplomate ACVIM

Large Animal Surgery

Larry C. Booth, DVM, Diplomate ACVS
Paula D. Modransky, DVM, MS
Frank "Bimbo" Welker, DVM, MS

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R. Eddie Clutton, BVSc, MRCVS
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Jorgen W. Hansen, DVM, PhD	Parasitology

Radiology

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Ambulatory Health Service/Production Management Medicine

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MAILING LIST UPDATE

We need your help in our continuing efforts to update our mailing list of veterinarians in Maryland and Virginia. This list provides the labels for mailing Virginia Veterinary Notes and our continuing education program brochures.

Please assist us by making any of the following additions or corrections:

- _____ 1. New addition-not receiving mailings at present
- _____ 2. Change of address
- _____ 3. Delete from mailing list

New Address

Old Address

Questions/Comments on newsletter or CE programs

Please mail to:

Virginia Veterinary Notes
 VA-MD Regional College of Veterinary Medicine
 Blacksburg, VA 24061

Thank you,


 Kent C. Roberts, D.V.M.

SORGHUM OR SUDAN GRASSES NOT FOR HORSES

Sorghums and sorghum hybrids should not be used for horse pasture. Sudan grass, Milo, Sudex and Johnson grass are all capable of producing a glycoside which converts to free cyanide in the horse.

In some instances acute toxicity with death can occur. This resembles "chokecherry" poisoning and is a cyanide-related toxicity.

Equine sorghum cystitis ataxia is a posterior ataxia that appears to be unique to equidae. The posterior weakness is almost apparent when horses are stopped, turned, or asked to back. A cystitis results, and horses may dribble urine, causing urine scald. Large amounts of sediment in the urine cause it to be very thick and a dark yellow to brown color. Death results from kidney failure. Mares that are pregnant may abort or give birth to deformed foals.

There is no effective treatment for the chronic poisoning causing ataxia or cystitis. Horse owners should therefore be advised not to use any of the sorghum type forages for feeding horses, ponies, mules or related equidae.—**R.D. Scoggins, DVM, Equine Extension Veterinarian at the University of Illinois College of Veterinary Medicine. Veterinary Professional Topics 1985, Vol 11-#2.**

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