## Grass Awn Migration Disease Mean Seeds: A Threat to Your Sporting Dog?

Whether you own a retriever, setter, a pointing or spaniel breed, a beagle or one of the coonhound breeds, they all have one thing in common: they are canine athletes bred to perform specific task in what can be a very harsh environment. Your sporting dog may be one that competes in field performance events or is used for hunting or both. You have invested many dollars in training, feeding and veterinary care for your dog, because he/she is worth it, he/ she is your hunting companion. He/she provides countless hours of dedicated service to you as you pursue your hunting passion. And nothing can ruin your day or hunting season like when your dog is injured or becomes sick.

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The AKC Canine Health Foundation has allocated more than \$450,000 over the last several years to investigate prevention, treatment and cures for injuries that occur in the field. More than ten grants have been funded to study anterior and cruciate ligament rupture and nearly twenty grants have been funded to study various infectious diseases that threaten our sporting dogs including ehrlichia, bartonella, brucellosis, leishmaniasis and leptospirosis, among others.

The most recent grant to benefit sporting dogs investigates "mean seeds" and the role they play in grass awn migration disease. In the sporting dog world, there is a perception among owners that there has been a dramatic escalation in the incidence of grass awn migration disease in the last 20 years.

Grasses occur in a single large plant family that contains approximately 11,000 species (Chapman 1996). Although the grasses share many important characteristics of their reproductive structures, only a portion of the species have awns and an even smaller group possess barbed awns of the type of concern to dogs. The awn is part of the sheath that encloses the grass "seed." The awns extend beyond the seed and those with barbs aid in dispersal of the seeds. One of the ways the seeds disperse is by attaching to things that come into contact with them. Animals and their fur are important ways grass seeds get transported to new locations. From an ecological standpoint, the attachment of grass seeds to sporting dogs is an important natural process. From the perspective of dogs and their owners, it is a dangerous threat. (AKC Canine Health Foundation Grant Application)

The barbed grass awns, or "mean seeds," attach to a dogs coat and pierce the skin or are ingested or inhaled. Once in a dog's body, these mean seeds tend to migrate, leaving a trail of infection behind. These infections cause illness that is difficult to diagnose, and can even be fatal.



It is suspected that the increase of grass awn migration disease is due to inclusion of problem grasses such as Canadian Wild Rye and Virginia Rye in the approved lists for Conservation Reserve Program (CRP) lands. The CRP was first described in the 1985 Farm Bill and it has been reauthorized in each subsequent Farm Bill. The first land was enrolled in 1986. The most important feature of CRP is to encourage farmers to convert their marginal cropland acreage to perennial vegetation that will protect the land from wind and water erosion (Farm Service Agency 2010). In addition to the protection against erosion, hunters and sportsman have seen the favorable response from wildlife to the CRP habitat improvements. In a large number of contracts the perennial vegetation planted consists of a mixture of grasses. Country wide there are more than 31 million acres in active CPR contracts in 2010 (Farm Service Agency 2010). (AKC Canine Health Foundation Grant Application)

David Hopkins, AKC Delegate for the English Springer Spaniel Field Trial Club of Illinois and Chair of the Delegate Field Trial and Hunting Test Committee was instrumental in bringing this con-





## **Grass Awn Migration Disease**

cern to the attention of the AKC Canine Health Foundation's grants committee. Mr. Hopkins worked with Dr. William Lauenroth of the University of Wyoming and principal investigator for the study to submit the application to the AKC Canine Health Foundation

The primary goal of the study is to determine the frequency with which these barbed seeds are planted, so that sporting dog owners and field trialers can begin discussions with the US Department of Agriculture to modify their recommended list of grasses to be planted on CRP lands.

Dr. Lauenroth stated, "If it can be determined that there has been a dramatic increase in both the incidence of the disease and the quantity of barbed seeds planted in CRP lands, such determination would surely factor significantly into improvements in veterinary diagnostic and treatment protocols, overall education for dog own-

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ers, and preventative or remedial measures for the U.S. Department of Agriculture's approach to CRP plantings."

This important research has been sponsored by the Golden Retriever Foundation, English Springer Spaniel Field Trial Association, English Springer Spaniel Field Trial Association Foundation, National Amateur Retriever Club, Labrador Retriever Club, Spinone Club of America, German Shorthaired Pointer Club of America Boykin Spaniel Society and the AKC Humane Fund.

This article is provided by the AKC Canine Health Foundation whose mission is to advance the health of all dogs and their owners by funding sound, scientific research and supporting the dissemination of health information to prevent, treat, and cure canine disease. For more information or to support their work visit www.akcchf.org.



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