

# Fungus Infested Fescue Can Hurt Livestock Performance

BY JULIE GOCHENOUR  
Virginia Correspondent

STEELES TAVERN, Va. — Cold, wet weather didn't dampen the enthusiasm of farmers attending a field day at the VPI Shenandoah Valley Research Station recently. A part of Walnut Grove Farm where Cyrus McCormick invented the first mechanical reaper, the VPI facility specializes in sheep, beef cattle and forage research. One area of particular interest to sheep and cattle producers, as well as dairymen and horse breeders, is research on fungus-free fescue.

And no wonder. There are more than one million acres of fescue used for hay and pasture in Virginia, and strong producer opinions for and against the forage. Stands of the cool-season perennial grass are easy to establish and maintain, and work well in livestock operations. Farmers can count on the grass to begin growing early in the spring and produce strong yields of high quality forage and hay if managed properly. Fertilized with nitrogen and stockpiled, fescue makes excellent late fall and winter grazing. Many producers who use this practice, for example, do not begin feeding hay until late January.

But fescue also causes livestock producers quite a few headaches. Although as nutritious as orchardgrass fescue does not yield consistent animal performance. Animals grazing fescue in mid-summer tend to lag behind those on other grass pastures. Milk production in lactating animals on fescue is also reduced during this period, contributing to lower weaning weights in young stock coming off the pastures. Furthermore, other problems livestock experience on fescue are increasingly attributed to a fungus discovered in the plant 10 years ago.

Sampling in Virginia has shown that 75 percent of fields checked around the state had fungus in 50 percent or more of the plants with all fields showing some degree of infestation. This infestation has been clearly linked to poor animal performance and impaired reproduction. A fungus level of 40 percent or more can produce moderate to severe effects in livestock, although no level of the fungus in fescue can be considered completely safe, researchers believe.

Pregnant dairy heifers and dry cows grazing fescue in late summer and fall have been reported to produce less than anticipated amounts of milk after freshening. Yearling cattle have been reported to gain 0.1 pound per day less for each 10 percent increase in the level of fungus infestation in a given fescue pasture. There is also some evidence of reduced reproduction in sheep grazing

infested fescue during the breeding season.

In addition to generally poor performance, other problems are directly associated with the intake of infested tall fescue, including fescue foot. Fescue foot generally occurs in cold weather and symptoms include a rough hair coat, excess blood in the band at the top of the hoof and sourness in the hind legs that results in limping. Eventually the hooves can slough off from loss of blood circulation due to swelling if the problem is not taken care of.

However, the presence of the fungus in fescue has been most closely linked to the summer syndrome occurring in cattle during the hotter summer months when temperatures go above 80°. Symptoms include low pasture gains or reduced growth, lowered milk production and poor conception/reproductive performance. Severely affected animals also have a rough coat, higher body temperature and respiration rate, excessive salivation and seek out shady or wet spots in the pasture to stand.

It is generally believed that the fungus causes the fescue to produce certain unknown chemicals that are toxic to animals eating the plants. An endophyte, the fungus is found only between the cell walls, usually in the stem and seed stalk, of the fescue. As the seedhead develops, the fungus invades the developing seeds and spreads when these infected seeds germinate. The appearance of the plant is not affected by the fungus and the endophyte can only be detected through tissue analysis.

Researchers call the discovery of the fescue fungus "a significant breakthrough" in forage research, although they're quick to note the endophyte has always been present in fescue. Having pinpointed the cause of fescue toxicosis is more than half the battle they claim, and good management practices will go a long way in controlling the problem. By including legumes in existing fescue pastures, producers can greatly reduce the adverse effect that eating infected plants may have on cattle.

Another recommended management practice is controlling the spread of infested fescue into areas where it is not already present. This simply means clipping pastures before seeds mature, not allowing cattle grazing mature fescue or those that are fed rescue hay with viable seed in it to graze in other pastures so it cannot be spread through manure and, finally, not feeding fescue hay containing viable mature seed in areas where fescue is not wanted.

Grazing cattle on pastures containing limited amounts of fescue in mid-summer will reduce or eliminate the effects of the summer syndrome. If symptoms

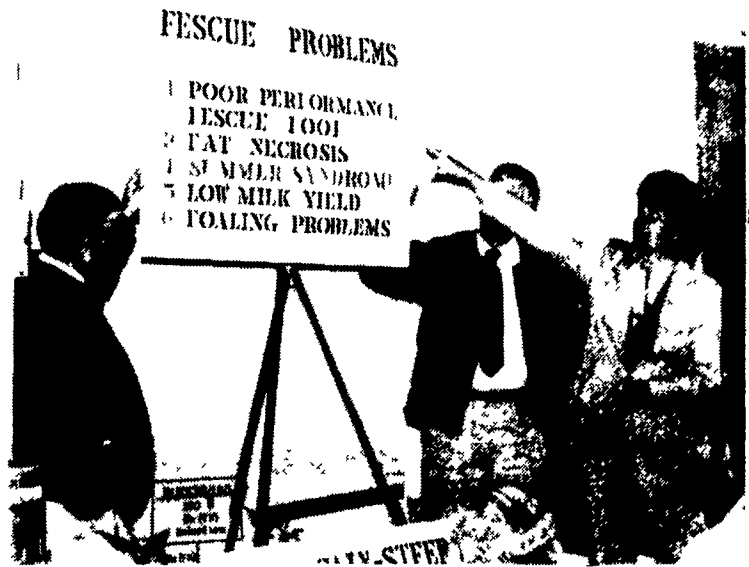
are observed in cattle they should be moved to another pasture with a lower concentration of fescue. If this isn't possible the fescue intake should be diluted by feeding another forage or grain to reduce the severity of the adverse effects, experts recommend. Do not graze sheep on fescue during breeding season if at all possible.

There are currently several fungus-free varieties of fescue seed on the market that are well adapted to the climate of the Mid-Atlantic region, but establishing a new stand of fungus-free fescue can be expensive to impossible on rolling pastureland. Overseeding fescue stands with clover has become a popular practice with some producers as it reduces both the effects of fungus infested fescue and nitrogen costs for fertilizing the forage and improves their summer forage.

Before overseeding fescue with clover, soil samples should be taken and the fields fertilized accordingly. The fescue must also be grazed down close enough to pass the shoe sole test before seeding, and early fescue growth should be grazed or clipped in the spring to reduce competition for the emerging clover.

If the fescue is to be used for both hay and pasture, Virginia agronomists recommend overseeding with four pounds of red and one pound of ladino seed per acre and five pounds of red clover if the field will be hayed only. In either case, however, they note, producers can still expect to have to overseed every three to four years to maintain 25 percent levels of legumes in the fescue stands—even under ideal situations. Any lower percentage will not reduce the adverse effects of infested fescue.

Researchers agree that it will be many years, if ever, before fungus-free stands are common. In the meantime, they emphasize, fescue toxicosis is not a reason for panic. Proper management of fields and pastures, and an awareness of symptoms, are all most producers need to stay on top of the situation.



Dr. Vivien Allen (right) discussed fescue toxicity at Virginia Polytechnic Institute's Shenandoah Valley Research Station field day.

## Testing Your Pastures For Fungus

To determine the infestation level of a pasture, it is necessary to obtain a good plant tissue sample for analysis. The fungus is concentrated in tillers, stems that bear the seed head, and, later in the season, in the seed itself. A minimum of 30 tillers is required for each sample taken from the lowest four inches of the plant, and tillers should not have bolted or include roots or soil. Mature stands of fescue will consist of crowns from which only a single tiller should be taken.

Samples should be collected at random points throughout the field, taking care to avoid fencerows, ditches and other areas not typical of the pasture as a whole. More than one sample is suggested for pastures larger than 30 acres. Producers should also be careful not to collect ryegrass,

orchardgrass or other grasses that could possibly be confused with fescue when immature.

The ideal packaging method is to place the samples in a slightly damp (not wet) paper towel, seal in a plastic bag and mail to the laboratory in a padded envelope. Farmers interested in determining the level of fungus infection in existing pastures can send samples, clearly marked, to:

Fescue Toxicity Diagnostic Center  
Plant Disease Laboratory  
Auburn University, AL 36849

A \$25 fee is charged for each plant sample, \$30 for each seed sample. Samples should be mailed first class or priority mail on Monday morning to keep mailing time at a minimum. Checks can be made out to the Fescue Toxicity Diagnostic Center.

## Judging Tender Capons Is Tough Job For Poultry Specialist

BY GINGER SECRIST MYERS  
Adams Co. Correspondent

CHAMBERSBURG — Wayne Myers, Chambersburg, got an early Christmas present at the 16th Annual Franklin County 4-H Capon Club Round-up and Sale held Tuesday, Nov. 18 at Wilson College. Myers' 10-pound capon bested the competition from among 29 project birds displayed by the county's 11 Capon Club members to be designated grand champion of the show. The show and the sale that followed were sponsored by the Kiwanis Club of Chambersburg.

A second-year capon club member, Myers said that he was surprised at his winning score of 95 out of a possible 100 points. Agway of Chambersburg purchased the Champion bird for \$8 per pound. Farm Credit of Chambersburg presented Myers with a plaque for displaying the champion bird. Wayne plans to use the proceeds from his capon's sale to buy Christmas gifts for his family.

Reserve grand champion honors went to an 11½-pound bird displayed by Lee Golden, Greencastle. Auctioneer John Kohler sold this bird for a final bid of \$7 a pound from Francis Upperman, representing Surge Dairy Farm Equipment, Chambersburg.

All the remaining project birds were sold in the \$2.25 to \$3.75 per pound range.

Serving as judge for the show was Herb Jordan, poultry specialist from Penn State. Jordan noted that, "This show is a little better than the average county

show. I gave out more blue ribbons than reds or whites. These birds are a little bigger than average. In fact, I had to really look for things to judge down on."

Directing his comments to the 4-Hers in the audience, Jordan explained that when judging capons he checks if the birds have been chilled properly, checks if the breast is tender or rigid, and whether it will make a 10-pound dressed carcass. He noted that he judges for pinkness in the skin due to retained blood, pin feathers and over-scalding of the birds. He stressed to the youth that, "Pennsylvania is always one, two or

three in the nation for 4-H capon projects."

County Capon Club leader Doris Meyers explained to the Kiwanis Club members, "We may not be a major club in the county, but when it comes to profits, we can really crow."

Past leaders Sam Barkedoll, the founder of the county club, and Ed Brake, a leader for 14 years, echoed Meyers, commenting that the Capon Club got its start in the county as a project where the kids could make a profit. They agreed that even outside the round-up sale, Capon Club members can command at least \$1.50 per pound for their birds.



Pictured are winners and buyers at Franklin County's Capon Roundup. Francis Upperman (left) of Surge Dairy Farm Equipment, bought Lee Golden's reserve champion. Wayne Myers sold his grand champion to Phillip Lobaugh of Agway.

## Lincoln Capon Capers



Grand champion honors in Lincoln Community 4-H Club's Capon Roundup this month went to Jessica Hertzog (right), daughter of Ken and Arlene Hertzog, Brownstown. Jonathan Davis, son of Jerry and Sandy Davis, Lititz, had reserve champion. Champion sold to Zinn's Super Thrift, Ephrata, for \$135. Hosting the roundup was the Denver Lions Club.