

UK Horse Pasture Evaluation Program

Tom Keene and Ray Smith

Extension Hay Marketing Specialist and Extension Forage Specialist
University of Kentucky

Overview

The University of Kentucky is developing stronger ties with the state's horse industry in the areas of research, extension and teaching. Many horse farms in the bluegrass region are interested in UK's assistance with pasture evaluation. During the fall of 2005 a team from the UK Forage Extension Program (Ray Smith, Tom Keene, Jesse Morrison, Gabriel Roberts) conducted a pilot project to evaluate horse pastures on 14 central KY farms. One of the focuses of the pilot was the evaluation of pastures for percent tall fescue and the potential of fescue stands to cause fescue toxicity in pregnant broodmares. We have worked closely with Dr. Lowell Bush and his lab in conducting the endophyte infection and ergovaline analyses.

Evaluations from the fall program were very positive. Mike Owens, past-President of the Kentucky Thoroughbred Farm Managers Club (KTFMC) and program participant said, "UK's Pasture Evaluation project has proved to be a very useful tool in pasture management on the farm. The project identifies and gives the percentage of grasses and weeds in any given pasture, along with the ergovaline levels. Their identification and recommendations are presented in a professional package with a CD that makes for a quick reference tool." Another KTFMC past-President, Steve Johnson, states that the "equine industry sorely needs the monitoring and consultation being provided with this service." Steve goes on to add that "It's very gratifying to know that UK is addressing the issues that are important on horse farms in Central KY." Another participant said, "Interesting information and very thoroughly presented. The detailed analysis and specific findings lets me know just where I stand on pasture quality and requirements."

With the success of the pilot project we are pleased to offer this pasture evaluation service to 25 farms in the central bluegrass area in 2006. Farms will be enrolled on a first come, first serve basis. We plan to expand the number of farms in coming years.

Pasture Evaluation Program Timetable

The 2006 pasture evaluation program would start in April and end in October.

Farm Enrollment

Simply fill out the enclosed information sheet and FAX to 859-323-1952 or email the requested information to Mr. Tom Keene at tom.keene@uky.edu. If you have any questions on the program call Tom at 859-257-3144 or Dr. Ray Smith at 859-257-3358. We will make an initial visit to your farm to explain the complete details of the evaluation program. We will sample up to 5 paddocks per farm and the maximum acreage that can be enrolled per farm is 75 acres (for example, if all of your paddocks are 25 acres in size we could only sample 3 paddocks).

Evaluation Details

- ❖ Assessment of pasture species composition
 - Tall fescue
 - KY bluegrass
 - Orchardgrass
 - White clover
 - Weeds (species identified)
- ❖ Estimation of forage available at sampling date
 - Area per pasture in roughs and lawns
- ❖ Tall fescue plant percentage infected with fungal endophyte
- ❖ Tall fescue ergovaline concentration at date of sampling
- ❖ Estimate of ergovaline present in total available forage
- ❖ Other evaluations and analyses may be available if requested

Cost of the Program:

\$600

If you would like to repeated pasture sampling during the growing season contact us about cost.

Detailed Report Issued to Each Farm will Include:

- ❖ Satellite photo of farm with an acreage estimate of each field
- ❖ USDA Soil Maps with complete soil information including the soil type present on each area of the farm (in acres), major soil limitations, pasture production potential, and animal carrying capacity
- ❖ Detailed information on where specific samples were taken in each field
- ❖ Summary of pasture composition and tall fescue lab analysis
- ❖ Detailed pasture composition per field and per sample
- ❖ Photographs of individual pasture areas sampled
- ❖ "Pasture and Paddock Action Log" for each field
- ❖ Complete recommendations on management of pastures including general weed control, soil fertility, grazing management, renovation options,

reestablishment options, grass species and variety choices based on UK recommendations, general guidelines for tall fescue management in horse pastures, interpreting ergovaline levels, and options for removal of tall fescue from Central Kentucky pastures

- ❖ CD containing all data, photographs, analysis, and electronic version of “Pasture and Paddock Action Log” in Microsoft Excel for farm record keeping
- ❖ Complete set of University of Kentucky extension publications related to Horse Pastures and selected national and international. These publications will include but not be limited to the following:
 - Maintaining Healthy Horse Pastures
 - Fescue for Horses: Problem or Opportunity
 - Tall Fescue Endophyte Concepts
 - Understanding Forage Quality
 - Alfalfa: The High Quality Hay for Horse
 - Forage Identification and Use Guide
 - Weeds of the Southern United States
 - Plants and Weeds Toxic to Horses
 - Understanding Endophyte-Infected Tall Fescue and Its Effect on Broodmares UK Pub. ID-144
 - Sampling for the Tall Fescue Endophyte in Pasture or Hay Stands UK Pub. PPA-30
 - Establishing and Managing Horse Pastures UK Pub. ID-147
 - Weed Management in Grass Pastures, Hayfields, and Fencerows UK Pub. AGR-172
 - Influence of N Rate and Pasture Composition on Toxicity, Quality and Yield of Stockpiled Tall Fescue
 - The Economics of Replacing Endophyte Infected Fescue UK Pub. AEC 2005-001C
 - Forages for Horses UK Pub. ASC-120
 - Tall Fescue UK Pub. AGR-59
 - Endophyte Toxins in Grass Seed Fields and Straw: Effects on Livestock
 - Harvest and Storage Method Affects Ergot Alkaloid Concentration in Tall Fescue
 - Endophytes of Perennial Ryegrass and Tall Fescue

UK Horse Pasture Evaluation Program

Farm Name: _____

Farm Owner: _____

Farm Manager: _____

Contact Person: _____

Phone: _____

FAX: _____

Email: _____

Physical Address of the farm:

FAX this form to:
1-859-323-1952 (attn: Ray Smith)

Or mail to:
Ray Smith
N222-D Agriculture Science North
University of Kentucky
Lexington, KY 40546-0091

Overall Averages 2005-2006

Farm	Tall Fescue	Blue Grass	Orchard Grass	White Clover	Weeds	Bare Soil	Ergovaline ppb	Endophyte %
1	32	29	2	1	23	13	156	43
2	34	32	6	3	20	4	822	94
3	15	51	11	1	20	3	403	85
4	37	36	12	3	7	6	294	69
5	7	27	23	2	15	24	164	47
6	36	40	1	2	17	4	214	81
7	24	15	14	10	30	7	297	95
8	26	36	12	10	13	3	90	72
9	17	41	17	4	13	10	157	49
10	45	12	11	1	11	20	290	92
11	25	37	8	9	15	6	217	71
12	15	36	15	2	25	8	317	82
13	25	5	25	8	22	16	200	83
14	27	34	12	4	23	1	162	74
15	20	30	26	3	14	8		84
16	40	34	6	2	11	9	169	93
17	3	31	26	3	28	8	222	81
18	17	21	15	34	12	4	213	59
19	14	25	7	3	50	0	272	68
20	32	18	9	28	18	15	252	80
21	12	56	4	11	12	5	684	68
22	31	38	7	0	13	10	420	88
23	38	14	9	2	24	14	400	68
24	25	19	13	1	34	7	170	32
25	42	20	10	1	17	11	360	53
26	28	17	13	7	24	12	150	44
27	8	13	23	0	2	34	640	83
28	43	1	4	3	44	5	220	65
29	28	23	12	6	15	16	660	68
30	31	14	7	1	38	8	550	70
31	18	26	18	2	27	9	790	46
	28	22	11	3	23	12	459	62
TOTAL AVE	26	27	12	5	21	10	332	71
					AVE from 2005		459	62
					AVE from 2006		258	75