

## Cool-season Forage Grasses: *Tall Fescue, Orchardgrass, Bluegrass and Timothy*

### Introduction

TALL FESCUE is a long-lived grass that can be used for livestock feed, lawns, turf and conservation purposes. One shortcoming as a livestock feed has been its inconsistent animal performance and relatively low palatability. These quality problems have been linked to a fungal endophyte infecting tall fescue plants. Endophyte-free and endophyte-friendly varieties are available.

ORCHARDGRASS is a cool season, perennial tall-growing bunch-type grass that can be used for pasture, hay, green chop, or silage. A high quality grass, it will provide excellent feed for most classes of livestock.

KENTUCKY BLUEGRASS is a versatile grass that can be used for pasture, seed, sod, turf and hay. It is a high quality and very palatable forage grass suitable for all classes of livestock. Legumes, especially the white clovers, improve feed quality and productivity of bluegrass.

TIMOTHY is a perennial bunch grass that is primarily used for hay. It also fits well in mixtures



KY BLUEGRASS



TALL FESCUE

with legumes such as alfalfa or red clover.

### Marketing and Market Outlook

Tall fescue, orchardgrass, bluegrass and timothy are the dominant forage grasses in Kentucky. They have potential for the cash hay market and for intensive grazing. Timothy hay, either alone or in mixtures with alfalfa, is much desired by horse owners. Historically,

timothy has been an important seed crop in Kentucky; however, only a small acreage of timothy is currently grown for seed.

### Production Considerations

#### *Site selection and planting*

The cool season forage grasses are generally adapted to a wide range of soil types; however, orchardgrass is more successful in the better well-drained soils in Kentucky. These grasses are best seeded in late summer or early fall. Although seeding in early spring can be successful, plants are more susceptible to summer drought and weed competition. Orchardgrass tends to be more tolerant of shade, drought and heat than either timothy or bluegrass. Cool season grasses can be seeded either directly into a conventionally tilled seedbed or seeded using no-till techniques.

#### *Pest management*

The most commonly occurring leaf diseases in Kentucky are



net blotch, leaf scald and rust. Following good management practices can help reduce the risk of disease problems. Insect damage resulting in defoliation is generally not a problem for these grasses. Weed control is best accomplished with good grazing management and mowing.

### *Harvest*

The optimum stage of maturity for harvesting cool season grasses for hay is boot to early head stage for the first cutting. Later cuttings can be made at 4 to 6 week intervals, as growth permits.

### *Labor requirements*

Total labor needs for hay production, cutting and baling is approximately 12 hours per acre.

## **Economic Considerations**

Initial investments include land preparation, purchase of seed, and equipment necessary for production. Total 2005 costs for producing a grass-clover mix in round bales is approximately \$155 per acre. Presuming a harvest of 3½ tons of hay sold at \$60 per ton, returns to land, capital and management are estimated at \$51 per acre. A break-even price of \$45 per ton would be needed to cover variable costs of a 3½ ton per acre harvest. Production costs could potentially be reduced through regular renovation with legumes.

Enterprise costs are greatly reduced when grasses are produced for grazing. Since a large percent of the cost of producing hay is the machinery and equipment, this cost can be eliminated, or certainly minimized, in a total grazing system.

## **More Information**

- Economics of Hay Production and Harvesting, AE-2005-10  
[http://www.uky.edu/Ag/AgEcon/pubs/ext\\_aec/ext2005-10.html](http://www.uky.edu/Ag/AgEcon/pubs/ext_aec/ext2005-10.html)

- Economics of Replacing Endophyte Infected Fescue, AE-2005-01c (University of Kentucky, 2005)  
[http://www.uky.edu/Ag/AgEcon/pubs/ext\\_aec/ext2005-01c.html](http://www.uky.edu/Ag/AgEcon/pubs/ext_aec/ext2005-01c.html)
- Establishing Forage Crops, AGR-64 (University of Kentucky, 2003)  
<http://www.ca.uky.edu/agc/pubs/agr/agr64/AGR64.htm>
- Field Crop and Forage Enterprise Budgets for Kentucky (University of Kentucky, 2004)  
[http://www.uky.edu/Agriculture/AgriculturalEconomics/pubs/software/budgets\\_fieldcrop.html](http://www.uky.edu/Agriculture/AgriculturalEconomics/pubs/software/budgets_fieldcrop.html)
- Kentucky Bluegrass as a Forage Crop, AGR-134 (University of Kentucky, 1988)  
<http://www.ca.uky.edu/agc/pubs/agr/agr134/agr134.htm>
- Orchardgrass, AGR-58 (University of Kentucky, 2003)  
<http://www.ca.uky.edu/agc/pubs/agr/agr58/agr58.htm>
- Plant and Soil Science Forage Web site (University of Kentucky)  
<http://www.uky.edu/Ag/Forage>
- Quality Hay Production, AGR-62 (University of Kentucky, 1996)  
<http://www.ca.uky.edu/agc/pubs/agr/agr62/agr62.htm>
- Tall Fescue, AGR-59 (University of Kentucky, 2003)  
<http://www.ca.uky.edu/agc/pubs/agr/agr59/agr59.htm>
- Timothy, AGR-84 (University of Kentucky, 2002)  
<http://www.ca.uky.edu/agc/pubs/agr/agr84/agr84.htm>
- Understanding Forage Quality (American Farm Bureau Federation, 2001)  
<http://www.agfoundation.org/projects/docs/UnderstandingForageQuality.pdf>