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Notes from the field – Spring & Summer 2010: Pasture Management  
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### **Spring – Summer 2010: Pasture Management**

The northern pastures that you can easily see from Sudley Road were renovated in early October 2009. This was much later than our intended target timeframe of mid-August to mid-September. As a reminder these pastures were sprayed with a non-selective herbicide, Roundup, and lightly disked. This approach was taken as a comparison to the southern pastures on which we did not use herbicides and used a no-till drill to seed without disking.

These pastures were seeded using [Southern States Select Fescue](#), an endophyte-free fescue variety. The endophyte found commonly in Kentucky 31 Tall Fescue can cause problems with broodmares including prolonged gestation, thickened placenta, and lack of milk production. Even though problems have not been documented in other types of horses, often horse owners want to plant a fescue that does not contain the problematic endophyte, so, we



Applying herbicide in fall 2009



[Yankey Farm Service](#) disking



So. States  
Select Fescue

decided to try Select Fescue to see how it performs. On these pastures, only Select Fescue was planted rather than a variety of forages (grasses and clover).

I crossed my fingers, hoping the late seeded pastures would survive the heavy snowfall of last winter. Remarkably they did survive and even thrived as the weather warmed. The pasture continued to rest (no grazing) and grow until the end of May—8 months in total. Edith Kennedy, owner of Oakwood Farm, understood that initial growth period was necessary to allow the grasses to develop a deep and strong root system. Grasses grazed too early are quickly killed when the horses pull out the young grasses, roots and all.

Though the grasses were growing well this spring, another problem became apparent. Buttercup seeds thrived in the newly limed and fertilized pasture and grew right alongside the fescue. Although we did spray the pastures the previous fall, before seeding, the herbicide we used is only effective on actively growing plants. The buttercup seeds, and other weed seeds, were disturbed and brought to the surface when we disked the soils. This is one reason that no-till drilling of seed into sod can be preferable.



Buttercups take over April 2010!

Our options to manage the new weeds were:

1. apply some nitrogen fertilizer to stimulate the grasses
2. mow the buttercups and other weeds to prevent them from making and spreading viable seeds
3. treat the pasture with another selective herbicide to slow/kill the broadleaf weeds with minimal stress to the fescue grass

We aggressively used all the above techniques, instead of just one or two. On May 13th the northern pasture was treated with 64 ounces of 2, 4-D and 16 ounces of Dicamba per acre. Within a short period of time the buttercups started to die back so, our approach was deemed effective.



Same pasture in May 2010 after spraying for weeds

The pastures continued to rest until late May when we encouraged Edith to “start using them.”

Now all the pastures have been renovated. They are rotationally grazed which means each field is allowed a growth period to reach at least 8 inches in height before being grazed. Grasses are grazed to a minimum of 4 inches in height—measuring the grasses in “lawns”, the favorite grazing areas, rather than in the “roughs” or restroom areas of the pasture. Please note that evidence of grazing near manure piles in a pasture indicates severe overgrazing. Horses will normally not eat in the areas they defecate in.

[Recap of Pasture Renovations and Mixed Forage v. Single Forage Pastures](#)

We renovated the pastures using two different methods (pasture mix v. single seed, w/ and w/o herbicide, disking v. no-till). We did this in part to show the different approaches available, the

immediate results, and eventually the long-term results. Sometimes the existing soil conditions affected our choices, too.

The southern, streamside pastures were renovated in spring 2009. We did not use an herbicide but instead decided to control weeds through encouraging the vigorous growth of desirable forages. A healthy sod is often touted as the best weed management tool. Healthy sod first needs a pH of 6.5 to 7.0. We applied lime to raise the pH and nitrogen, phosphorus, and potassium to the pasture, based on soil tests. We overseeded the pasture using a no-till drill that places seeds into direct contact with the soil through narrow slits. The seed mix we used was very typical of mixes available for horse pastures and included orchardgrass, bluegrass, clover, fescue, and both annual and perennial rye. Mowing weeds as needed through the growing season prevents them from producing seeds. This practice may be used as a successful long term weed control method.



Spot grazing mixture forage pasture

The northern, Sudley Road pastures were renovated in the fall of 2009. We used an herbicide to kill all the existing grasses and weeds before seeding, applied lime and fertilizer based on soil test results, and lightly disked the soils before planting a single seed type—Southern States Select Fescue. These pastures were too compacted to allow us to use the no-till drill.

Both pastures were allowed 4-6 months to rest and grow before grazing. Both pastures are also rotationally grazed and allowed adequate rest periods through use of the sacrifice areas.

Mixed species pasture management is more challenging than single species pasture. Given the choice, horses will eat the most palatable forages first-- often and frustratingly so, to the ground. In mixed forage pastures horses will typically select the forages in this order, clover, orchardgrass, bluegrass, and then fescue. What you will often see in these pastures is a lot of spot grazing mixed with non-restroom/rough areas of tall grass. The optimal pasture management for these fields is to keep a close watch on the favorite grazing areas and rotate horses to another pasture or the sacrifice area when these areas are grazed to 4



Using the sacrifice area paddock to allow pastures to rest and for rainy day turnout

inches. Immediately mow the pasture to a uniform height, 6 inches is great if your mower will allow it, to cut weeds before they produce seed and make all the grasses an equal height and as equally palatable as possible. Allowing overgrazing will often result first, in loss of your orchardgrass and second, in the development of bare patches where weeds

will often fill in. Management of mixed forage pastures must be more intense but many horse owners prefer that their horses be given a variety of choices to, intuitively or otherwise, selectively graze.

Single species pastures are often easier to manage than multiple species pastures. In single species pastures, such as our Select Fescue pasture, horses tend to graze the fields much more evenly. You will still notice the development of "lawns" and "roughs" but other intense spot grazing is less common. One drawback of single species pastures is that if a turf disease or pest threatens a pasture, the entire



Select Fescue pasture is looking good!

pasture could theoretically be affected or even killed. If you choose to feed your horses from a single species pasture, you can vary their diet through the use of mixed forage hay fed in the stalls and sacrifice area.

protect areas the horses have been spot grazing in the mixed forage pastures. Another trick I shared with her is to spread some seed and fresh manure on bare spots. The fresh manure deters the horses from grazing and *something* will grow in the bare spot so you might as well put some desirable seed there.

So far, Edith prefers the Select Fescue, single forage pasture.



A happy horse, in a healthy pasture  
Use your sacrifice area to restrict pasture turnout, as appropriate, to keep both your horses and pastures happy and healthy.

Our work with the renovation of the pastures is complete. It is now the responsibility of Edith Kennedy to maintain the pH and fertility levels, rotationally graze, and control weeds through mowing and/or the use of herbicides. One technique Edith has been experimenting with is the use of additional temporary electric fencing to



Use of additional temporary electric fencing to control spot grazing