ESTIMATING CLOVER PERCENTAGE IN YOUR PASTURE

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You often hear Extension Agents and Extension Specialists talk about how important it is to add clover to your grass pastures. We talk about the advantage of free nitrogen, the added forage quality and yield, the benefit of diluting the toxic effects of tall fescue, and many other benefits. Usually after I give a presentation promoting all the benefits of clover the first question from the audience is, “How much clover do I need?” My standard answer is that 30 to 40% clover provides many of these benefits without compromising grass productivity. In fact, 30 to 40% clover in a pasture goes a long way in promoting grass growth. The next question from the audience is, “How do I know how much clover I have?” I usually say that you just visually estimate the amount of clover in your pasture in comparison to the amount of grass and weeds, but you and I both know that this is easier said than done. The presentation today is designed to teach you how to visually estimate the percentage of clover in your pastures.

Ed Rayburn (West Virginia University) and Jim Green (North Carolina State) have worked for a number of years on determining clover percentage in pastures based on visual estimation and then clipping the pasture and hand separating the percentage of clover, grass, and weeds in each sample. They have recently developed a decision aid to help producers learn how to estimate the percentage of clover in their pastures. This decision aid can be found on the UK Forage Website (www.uky.edu/Ag/Forage) by clicking on “Forage Decision Aids. Once you open the program you will move through a series of explanation slides and then a series of picture slides showing a range of clover/grass/weed percentages. Using these slides you can get a “feel” for how to estimate the clover percentage in your pasture. The percentage of species listed on each slide were based on clipping the area to approximately 2 inches in height and then carefully separating out clover, grass, and weed plants, drying them, and then weighing them. Also listed on each slide is total forage dry matter yield above the 2 inch clipping height. This can be helpful in determining the appropriate stocking rate for your pasture.

When applying what you have practiced from these slides in your pasture, it is important that your pasture is similar to the pastures used to make these slides. In other words, for these estimations to be valid for your pasture make sure:
• Your pasture height is about 6 to 10 inches tall.

• The clovers in your pasture are primarily the “large leaved” ladino white clovers and/or red clover.

• The grasses in your pasture are cool season types like tall fescue, orchardgrass, and Kentucky bluegrass.

If your pasture mainly contains the small leaved Dutch or Common white clovers then visual estimations tend to overestimate the actual amount of clover in your pasture on a dryweight basis. If your pasture is shorter than 6 inches tall, visual estimations also tend to overestimate clover percentage.

The following pictures are actual slides taken from the Decision Aid. Go to the website listed above to view the entire program. Next spring, take time to walk your pastures, estimate the clover percentage, and practice applying what you’ve learned.
1750 lb DM/acre
84% Grass
16% Legume
0% Weeds
Canopy ht. 6.5”

2000 lb DM/acre
68% Grass
30% Legumes
2% Weeds
Canopy ht. 9.5”
3550 lb DM/acre
66% Grass
34% Legume
0% Weeds
Canopy ht. 10.25”