

## INDIANA GRAZING MANAGEMENT STICK INSTRUCTIONS

The following should provide guidance on how to use the grazing management stick. Please use the information as an example on how to utilize your own data to solve the “Animal Number” or “Days” equations found on the grazing management stick.

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1. Determine the average canopy height of the forage in inches by placing the stick vertically into the forage in several locations.  
For our example, use 8 inches.
2. Determine the amount of available forage in inches for grazing by livestock. **This is not equal to the average canopy height.** It is recommended to leave three to four inches of residual growth. For the example, assume four inches of residual growth. Therefore, the amount of available forage for grazing in the example is four inches (8 inches canopy height – 4 inches residual height = 4 inches available).
3. Go to the side of the stick that has STOP GRAZING, START GRAZING, FORAGE, the Indiana Forage Council logo and several other headers, too.  
Specifically, find “FORAGE Estimated Dry Matter Yield Per Acre-Inch For Various Forages” header and make the decision as to whether the forage is providing soil coverage of:  
<75 % Cover, 75 % - 90 % Cover, or > 90 % Cover.  
For the example, assume 75-90% cover.
4. At “FORAGE”, rotate the stick one- or two-quarter turn(s) clockwise and find the forage type that best describes the pasture. For the example, assume “Tall Fescue + Legume.” In number three above, it was determined that the forage was providing 75% - 90 % Cover. Therefore, the amount of dry matter yield per acre-inch is 200-300. The unit is pounds of dry matter per acre-inch.
5. Determine the amount of dry matter yield available for grazing by multiplying available forage and pounds of dry matter per acre-inch.  
For the example, the answer is:  
4 inches available forage x 250 pounds dry matter per acre inch = 1000 pounds dry matter per acre.
6. Rotate the stick and find in the middle portion the headers “Harvest Efficiency” and “Daily Forage Intake, % of Body Weight.”  
For the example, assume the pasture has 8 paddocks with a Harvest Efficiency of 50 % and that dry cows are utilizing the forage with a 2.5 % Daily Forage Intake (dry matter).
7. Find the algebraic equations used to determine “Animal Number” or “Days” at the bottom of the stick.  
For the Animal Number example, assume the acreage in the paddock being grazed is 4 acres, weight of a cow is 1200 pounds and the paddock ideally will last 4 days.  
For the Days example, assume the acreage in the paddock being grazed is 4 acres, weight of a cow is 1200 pounds and cow herd size is 20.  
With other assumptions above, the following answers are calculated.

$$\begin{aligned} \text{Animal Number} &= \frac{(\text{Total Dry Matter/Acre}) \times (\text{Acres}) \times (\% \text{Harvest Efficiency})}{(\text{Animal Weight}) \times (\text{Intake Rate in \% Body Wt.}) \times (\text{Days})} \\ &= \frac{1000 \times 4 \times .50}{1200 \times .025 \times 4} = \frac{2000}{120} = \text{rounded up to 17 cows} \end{aligned}$$

$$\begin{aligned} \text{Days} &= \frac{(\text{Total Dry Matter/Acre}) \times (\text{Acres}) \times (\% \text{Harvest Efficiency})}{(\text{Animal Weight}) \times (\text{Intake Rate in \% Body Wt.}) \times (\text{Animal Number})} \\ &= \frac{1000 \times 4 \times .50}{1200 \times .025 \times 20} = \frac{2000}{600} = 3 \frac{1}{3} \text{ days} \end{aligned}$$