

PASTURE MATH: CALCULATING FORAGE AVAILABILITY

Cornell Cooperative Extension

Southwest NY Dairy, Livestock and Field Crops Program

WHY measure how much forage a pasture can supply?

Designing a system: how many acres of pasture do I need overall? Rotational grazing stocking rate capacity; **Managing a system:** How much pasture I have available for animals to graze? How often should I move my animals?



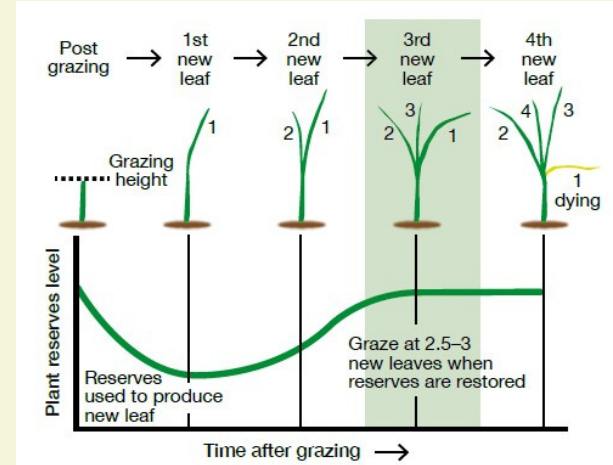
UNDERESTIMATING = WASTED FEED
OVERESTIMATING = LOWER ANIMAL PERFORMANCE/ OVERGRAZING

Important concepts:

Dry matter: the part of the pasture that remains when all water content is removed. calculations made in DM.

Total Dry Matter = The entire amount of plant material in a pasture

Available Dry Matter = Grazable part, which is the average height of the pasture subtracted by 3 inches (residual for regrowth)



HOW TO MEASURE?

Hand Clipping



Grazing Stick



Plate Meter



PaddockTrack



USING THE GRAZING STICK TO CALCULATE FORAGE AVAILABLE

1.) Pasture height: Use the ruler on the stick. The number of inches of height used in this calculation will be the total height minus 3 inches (for the residue).

2.) Measure the density: Slide the stick through the plants so that its flat on the ground. Count the number of dots you can see. Look at the information printed on the stick and see how many pounds of dry matter there is per inch of height (This depends on your pasture composition, noted in the key on the stick.).

3.) Multiply the number of inches from step one (total height minus 3 inches) by the pounds of dry matter per acre inch. Now you have an estimate of how many pounds per acre the livestock can harvest.



DAILY ACREAGE REQUIREMENT - 50 COW (1000 LB BW)

1.) Find required DM per day for the herd.
(50 x (3.5% BW (0.035) x 1000 lb)

2.) Divide by available DM/acre (use stick to calculate)