

MANAGEMENT INTENSIVE GRAZING PASTURE WORKSHEET

REFERENCES:

- “Pasture Management” by Sarah Flack
- “Introduction To Management Intensive Grazing” by Bill Murphy
- “Greener Pastures on Your Side of the Fence” by Bill Murphy
- “Pasture Condition Score Sheet” by Jim Cropper

Animal Type and Number: _____

Estimating Forage Dry Matter Intake (DMI):

- (1) Average body weight _____ *
- *See Table 2 for Average Animal Weights (lbs) by Animal Type
- (2) Estimated DMI (as % of body weight) _____ (3% - default)
- (3) Daily DMI required for single animal (line 1 X line 2) _____
- (4) Daily DMI required for herd (line 3 X number of animals) _____

Determine the Paddock Grazing Period:

- (5) Recommended Grazing Periods:
 - Lactating Dairy Cow – ½ to 2 days (fresh paddock after each milking is optimal)
 - Milking Sheep or Goats – 1 to 2 days
 - Growing Stock (Steers, Heifers, Lambs) – 3 to 4 days
 - Beef Cow/Calf, Ewe/Lamb – 3 to 4 days
 - Most Adult Non-Lactating Stock – 4 to 7 days

Calculating Paddock Size:

- (6) Paddock size (in acres/ day) = (Daily DM required (4) / Available DM*) X (5)
 - * See Table 1 “Estimating Pasture Mass (forage dry matter)” to calculate Available Dry Matter. For initial estimates until more accurate figures can be obtained, **1200 lbs may be used as a default.**

Note: One acre = 43,560 square feet, which equals a square with roughly 210 foot sides.

Calculating Paddock Numbers:

- (7) Paddock numbers = [Rest period required / Grazing period (5)] + 1
- Average Rest Periods for Vermont*:
- | | |
|-----------------------|---------------------|
| April – 12 to 15 days | May – 18 days |
| June – 24 days | July – 30 days |
| August – 36 days | September – 42 days |
- *These figures represent guidelines to begin planning a management intensive grazing system. Adjustments should be made based on experience, local conditions and pasture plant communities. For more information, refer to the above references.

Calculating Total Number of Acres Needed for the Grazing Plan:

- (8) Total Acres Required = Paddock Size (6) X Paddock Numbers (7)

To Calculate Carrying Capacity for Specific Farms or Pastures:

Animal Number = [Pasture Yield (1200 lbs) X Pasture Acreage] / [3% X Average Weight X Grazing Season (150-200 days)]

TABLE 1
Estimating Pasture Mass (forage dry matter – DM)

Height	Ave. Density* Pasture lbs DM/ac.	Low Density Pasture lbs DM/ac.	High Density Pasture lbs DM/ac.
8"	2600	2200	2800
6"	2400	2100	2600
4"	1800	1500	2100
2"	1200	1000	1400
1"	900	600	1000

* Pounds of dry matter per acre at each height varies widely with plant density and species

Calculating Available Dry Matter (DM):

Available Forage Dry Matter (DM) = Pre-Grazing Mass – Post Grazing Mass

Example: Pre-Grazing 6" 2400

 Post-Grazing 2" 1200

= 1200 lbs DM per acre

TABLE 2
Average Weights and Animal Unit (AU) Conversions

Animal Type	App. Average Weight (LBS)	No. of Animals/ 1000 lbs AU
Beef		
Feeder	875	1.1
Calf	250	4
Breeding Stock	1000	1
Dairy		
Mature Cow	1400	0.7
Heifer/ Heifer Calf	550	1.8
Calf (0-2 months old)	150	6.7
Bull/ Bull Calf	875	1.1
Poultry		
Broiler	2.2	455
Layer	4	250
Pullet (<3mo. Old)	2.2	455
Pullet (>3mo. Old)	4	250
Turkey On Feed	15	66.7
Turkey – Breeding Stock	20	50
Swine		
Nursery Pig	50	20
Growing Pig	110	9.1
Finishing Pig	185	5.4
Gestating Sow	275	3.6
Sow and Litter	375	2.7
Boar	350	2.9

Examples:

300 Milking Cows / 0.7 cows per au = 429 AU

50 Heifers / 1.8 Heifers per au = 28 AU

50 Calves / 6.7 Calves per au = 7 AU

40,000 Broilers / 455 Broilers per au = 88 AU

1000 lbs per au / 4lbs per rabbit = 250 rabbits per au,

Therefore, 500 rabbits / 250 rabbits per au = 2 AU