

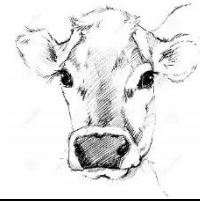
GRAZING PLAN - CALCULATIONS



1	Type of grazing livestock	Beef stocker cattle
2	Number of grazing livestock	70
3	Average body weight of grazing livestock	750
4	Estimated dry matter intake (DMI) as a % of body weight	3% or .03
5	Calculate daily DMI for a single animal (line 3) x (line 4)	22.5
6	Calculate DMI for the herd (line 2) x (line 5)	1,575
7	Occupancy period	1 day
8	Estimated available forage dry matter in pounds per acre	1200 (standard value based on 4" grazed material)
9	Calculate estimated paddock size [(line 6) / (line 8)] x (line 7)	1.3

		May	June	July	August	September	October
10	Estimated paddock recovery period	21	24	30	36	42	60
11	Calculate estimated number of paddocks needed [(line 10) / (line 7)] + 1	22	25	31	37	43	61
12	Calculate total acres needed for grazing (line 9) x (line 11)	28.5	32.5	40.5	48	56	79

GRAZING PLANNING CALCULATIONS



1	Type of grazing livestock	
2	Number of grazing livestock	
3	Average body weight of grazing livestock	
4	Estimated dry matter intake (DMI) as a % of body weight (3% for cattle, 4.5% sheep, 5.5% goats)	
5	Calculate daily DMI for a single animal (line 3) x (line 4)	
6	Calculate DMI for the herd (line 2) x (line 5)	
7	Occupancy period (12 hour is 0.5)	
8	Estimated available forage dry matter in pounds per acre	1200 (this would be measured, placeholder for now)
9	Calculate estimated paddock size [(line 6) / (line 8)] x (line 7)	

		May	June	July	August	September	October
10	Estimated paddock recovery period	21	24	30	36	42	60
11	Calculate estimated number of paddocks needed [(line 10) / (line 7)] + 1						
12	Calculate total acres needed for grazing (line 9) x (line 11)						

GRAZING PLAN – CALCULATE STOCK DENSITY

Body weight of grazing livestock x number of animals = live weight of herd/flock

Example: 750 lb stocker x 70 head = 52,500 #

$$\frac{\text{Body weight}}{\text{number}} \times \text{number} = \text{live weight of herd/flock}$$

To calculate stock density, divide live weight by paddock size:

Example: 52,500 lbs / 1.3 acres = 40,384 lbs /acre when animals moved daily

If animals are moved 2x/day then: 52,500 lbs / 0.65 = 80,769 lbs / acre

$$\frac{\text{Live weight of herd}}{\text{paddock size}} = \text{stock density}$$

Very low stock density: 10-15,000 lbs/ac

Low stock density: 15-40,000 lbs/ac

Medium stock density: 40-80,000 lbs/ac

High stock density: 80-150,000 lbs /ac

Ultra high stock density: above 150,000, generally 250-500,000 lbs/ac

Stock density is a land management tool and can be flexed to rapidly change soil health and forage species composition. Higher stock densities are an advanced tool and must be balanced with monitoring animal performance.