

VISUAL VELD CONDITION AND GRAZING CAPACITY ASSESSMENT

A MULTI-CRITERIA METHOD

for Grassland and Savanna

Farm name: _____ Site no: _____

Assessors: _____ Date: _____

Time: _____ Long term average rainfall (mm/year): _____

Waypoint no: _____ or Coordinates: S: _____ E: _____



WORKING ON GRASS

1. SITE DESCRIPTION

step 1

Complete the site description information below;

Terrain unit ?	Crest	Midslope	Footslope	Valley bottom	
Slope ?	Steep	Medium	Gentle	Flat or even	
Soil texture ?	Sandy	Sandy loam	Loam	Clay loam	Clay
Soil depth ?	Deep	Medium	Shallow	Gravelly / rocky	

Name the common grasses:

(from most to least common)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

Name the common trees/shrubs (optional):

(from most to least common)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Name the common forbs/herbs (optional):

(from most to least common)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Comments:

Step 2

2. EVALUATION

Apply scores to the following criteria (A – F):

A. How much grass biomass is present? (quantity grazing)						
1	Very low levels of grass biomass	0 – 3	Score A: ↓			
2	Low levels of grass biomass	4 – 7				
3	Moderate levels of grass biomass	8 – 11				
4	High levels of grass biomass	12 – 15				
5	Very high levels of grass biomass	16 – 20				
B. How many good grazing grasses are present? (quality grazing)						
1	Mainly poor grazing grasses present	0 – 3	Score B: ↓			
2	Moderate and poor grazing grasses mixed	4 – 7				
3	Mainly moderate grazing grasses present	8 – 11				
4	Good and moderate grazing grasses mixed	12 – 15				
5	Mainly good grazing grasses present	16 – 20				
C. How good is the ground cover?						
1	Very poor ground cover	1 – 2	Score C: ↓			
2	Poor ground cover	3 – 4				
3	Moderate levels of ground cover	5 – 6				
4	High levels ground cover	7 – 8				
5	Very high levels of ground cover	9 – 10				
D. How much encroachment by unwanted plants is present?						
1	Heavy encroachment is present	1	Score D: ↓			
2	Heavy to medium encroachment present	2 – 3				
3	Medium encroachment is present	4 – 5				
4	Medium to light encroachment is present	6 – 7				
5	Only light encroachment is present	8 – 9				
6	No encroachment present	10				
E. How is the soil surface condition? (erosion)						
1	Severe levels of topsoil loss	1 – 2	Score E: ↓			
2	High levels of topsoil loss	3 – 4				
3	Moderate levels of topsoil loss	5 – 6				
4	Slight levels of topsoil loss	7 – 8				
5	No topsoil loss	9 – 10				
F. What is the soil type? (agricultural potential)						
	Texture ↓	Soil depth →	Deep	Shallow	Gravelly	Score F: ↓
1	Sandy soil (< 10% clay)	2 – 4	-3	-5		
2	Sandy loam soil (10 – 15% clay)	5 – 6	-3	-5		
3	Loam soil (15 – 25% clay)	7 – 8	-3	-5		
4	Clay loam soil (25 – 40% clay)	9 – 10	-3	-5		
5	Clay soil (40 – 50% clay)	7 – 8	-3	-5		
6	Heavy clay soil (>50% clay)	5 - 6	-3	-5		

Step 3

Add below all the scores together to get the Veld Condition Score (VCS):

$$VCS = A + B + C + D + E + F = \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = VCS = \underline{\quad}$$

Step 4

Use now the Veld Condition Score (VCS), and long-term average rainfall, or average with previous season's rainfall, to get the estimated grazing capacity in ha/LSU/year from the table below:

RAINFALL (mm/year) →		300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750
VCS ↓	Condition ↓	GRAZING CAPACITY (ha/LSU/year)																		
20 - 22	Very poor	50.3	45.2	40.2	35.2	32.7	30.2	27.6	26.4	25.1	23.9	22.6	21.4	20.1	18.8	17.6	16.3	15.1	13.8	12.6
23 - 24		45.3	40.7	36.2	31.7	29.4	27.2	24.9	23.8	22.6	21.5	20.4	19.3	18.1	17.0	15.9	14.7	13.6	12.5	11.4
25 - 27		40.2	36.2	32.2	28.1	26.1	24.1	22.1	21.1	20.1	19.1	18.1	17.1	16.1	15.1	14.1	13.1	12.1	11.1	10.1
28 - 29		37.2	33.5	29.8	26.0	24.2	22.3	20.5	19.5	18.6	17.7	16.8	15.8	14.9	14.0	13.1	12.1	11.2	10.3	9.3
30 - 32	Poor	34.2	30.8	27.3	23.9	22.2	20.5	18.8	17.9	17.1	16.2	15.4	14.5	13.7	12.8	12.0	11.1	10.3	9.4	8.5
33 - 34		31.6	28.5	25.3	22.1	20.6	19.0	17.4	16.6	15.8	15.0	14.3	13.4	12.7	11.9	11.1	10.3	9.5	8.7	7.9
35 - 37		29.0	26.1	23.2	20.3	18.9	17.4	16.0	15.3	14.5	13.8	13.1	12.3	11.6	10.9	10.2	9.4	8.7	8.0	7.3
38 - 39		26.9	24.2	21.5	18.8	17.5	16.1	14.8	14.2	13.4	12.8	12.1	11.4	10.8	10.1	9.4	8.7	8.1	7.4	6.8
40 - 42		24.7	22.2	19.8	17.3	16.0	14.8	13.6	13.0	12.3	11.7	11.1	10.5	9.9	9.3	8.6	8.0	7.4	6.8	6.2
43 - 44		23.5	21.1	18.8	16.5	15.2	14.1	12.9	12.4	11.7	11.2	10.6	10.0	9.4	8.8	8.2	7.6	7.1	6.5	5.9
45 - 47	Moderate	22.2	20.0	17.8	15.6	14.4	13.3	12.2	11.7	11.1	10.6	10.0	9.4	8.9	8.3	7.8	7.2	6.7	6.1	5.6
48 - 49		21.1	19.0	16.9	14.8	13.7	12.7	11.6	11.1	10.6	10.1	9.5	9.0	8.5	7.9	7.4	6.9	6.4	5.8	5.3
50 - 52		20.0	18.0	16.0	14.0	13.0	12.0	11.0	10.5	10.0	9.5	9.0	8.5	8.0	7.5	7.0	6.5	6.0	5.5	5.0
53 - 54		19.0	17.1	15.2	13.3	12.4	11.4	10.5	10.0	9.5	9.1	8.6	8.1	7.6	7.2	6.7	6.2	5.7	5.3	4.8
55 - 57	Good	18.0	16.2	14.4	12.6	11.7	10.8	9.9	9.5	9.0	8.6	8.1	7.7	7.2	6.8	6.3	5.9	5.4	5.0	4.5
58 - 59		17.2	15.5	13.8	12.1	11.2	10.3	9.5	9.1	8.6	8.2	7.8	7.4	6.9	6.5	6.0	5.6	5.2	4.8	4.3
60 - 62		16.4	14.7	13.1	11.5	10.6	9.8	9.0	8.6	8.2	7.8	7.4	7.0	6.6	6.1	5.7	5.3	4.9	4.5	4.1
63 - 64		15.7	14.1	12.5	11.0	10.2	9.4	8.6	8.2	7.9	7.5	7.1	6.7	6.3	5.9	5.5	5.1	4.7	4.3	3.9
65 - 67		14.9	13.4	11.9	10.4	9.7	8.9	8.2	7.8	7.5	7.1	6.7	6.3	6.0	5.6	5.2	4.8	4.5	4.1	3.7
68 - 69		14.3	12.8	11.4	10.0	9.3	8.5	7.9	7.5	7.2	6.8	6.4	6.1	5.7	5.4	5.0	4.6	4.3	3.9	3.6
70 - 72	Very good	13.6	12.2	10.9	9.5	8.8	8.1	7.5	7.1	6.8	6.4	6.1	5.8	5.4	5.1	4.7	4.4	4.1	3.7	3.4
73 - 74		13.0	11.7	10.4	9.1	8.4	7.8	7.2	6.8	6.5	6.2	5.9	5.5	5.2	4.9	4.5	4.2	3.9	3.6	3.3
75 - 77		12.3	11.1	9.9	8.6	8.0	7.4	6.8	6.5	6.2	5.9	5.6	5.2	4.9	4.6	4.3	4.0	3.7	3.4	3.1
78 - 79		11.8	10.6	9.5	8.3	7.7	7.1	6.5	6.2	5.9	5.6	5.4	5.0	4.7	4.4	4.1	3.9	3.6	3.3	3.0
80		11.2	10.1	9.0	7.9	7.3	6.7	6.2	5.9	5.6	5.3	5.1	4.8	4.5	4.2	3.9	3.7	3.4	3.1	2.8

NB: Please note that the grazing capacity is an estimate and that rainfall fluctuations and grazing system/management also have an influence on the grazing capacity.

Compiled by Frits van Oudtshoorn as adapted from Erika A van Zyl (1989) published in HOËVELDFOKUS Nr 1/89.