Organic Pasture Management

Are you getting the dry matter you think you are?

"Train the Trainer" Workshop September 24th, 2019

Dr. Greg Brickner

Organic Valley DVM

Pasture Evaluation Is Not One Measure or Picture

- Pasture audit form assessing: 1) number of days grazing, 2) stocking density, and 3) % of DMI from pasture. — NOP minimum standards
- Direct measurement of pasture intake — Current management
- NRCS pasture scoring — Long-term management
- Satellite imagery — Long-term management

Section 5 – Average Grazing Season Ration—Milking Cows:

Milking cows: Estimated average animal body weight: 1350 lbs.

Estimated milk production: 61 lbs/per cow/day

Total estimated average animal body weight 1350 x 4% = 54 TOTAL DRY MATTER INTAKE

Less	19 lbs.	Concentrate (grain) x 85% =	16.15	DRY MATTER
Less	15 lbs	Dry Hay x 85%=	12.75	DRY MATTER
Less	0 lbs	Grass Haylage x 45%=		DRY MATTER
Less	0 lbs	Corn Silage x 35%=		DRY MATTER

Equals **Daily Grazing Intake of** 25.1 lbs. **DRY MATTER**

PASTURE AUDIT

SECTION I: FARM BACKGROUND

Historical data of Pasture Plan (Derived from Pasture Plan Tab in OVIS)

Account Name		Farm ID Number		Date Reported	
Farm Address		Total Certified Acres (Rented/Own)		Pasture Acres *(100% dedicated for grazing)*	

Residual Acres *(used for harvesting & grazing – same season)*		Length of previous grazing season	From:	To:	Total # of days:
Farm Map Attached *(Google Earth)*	Yes / No	Seasonal Calving	Yes	No	

Historical Classes of Livestock Summary (Derived from Pasture Plan Tab in OVIS)

# Milk Cows	Grazing Acres	% Irrigated	DMI % from grazing
# Dry Cows	**Grazing Acres**	**% Irrigated**	**DMI % from grazing**

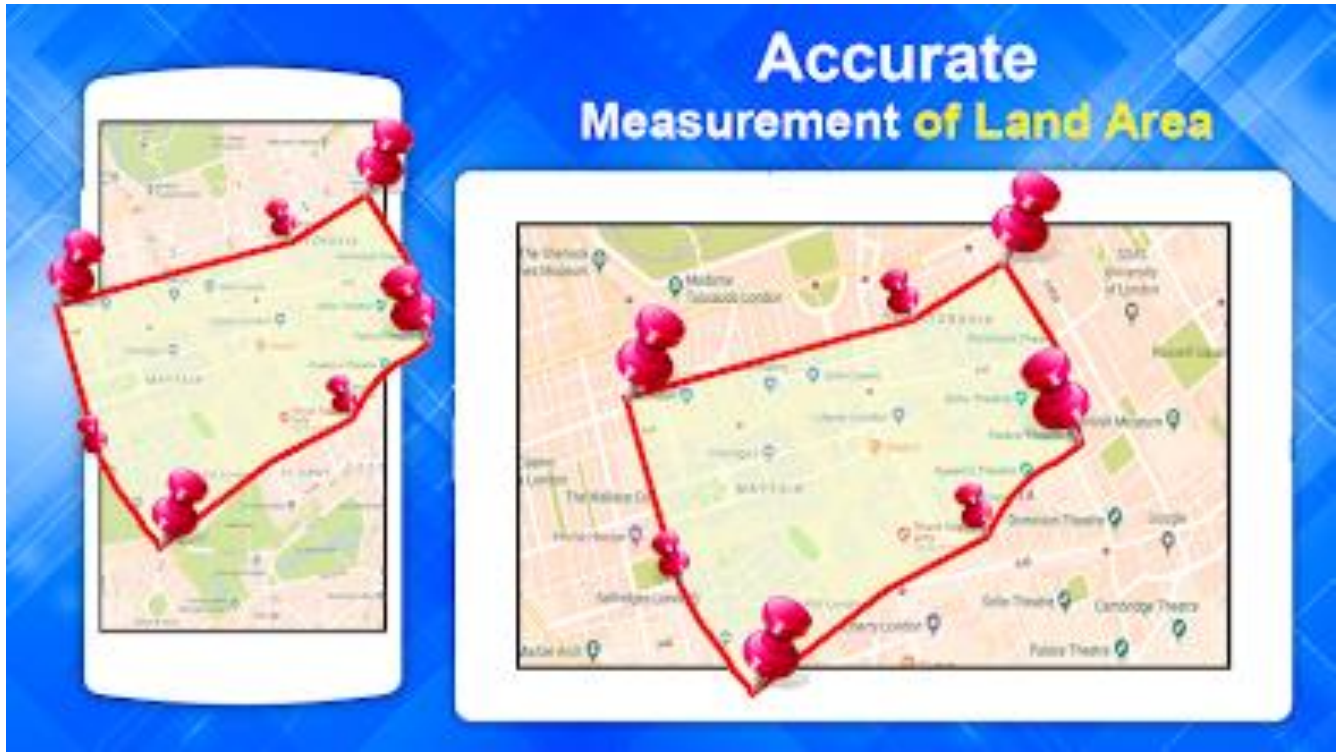
Cow | Basic | Energy | Fiber | CHO | VFA | Proteins | Amino Acids | Fats | Vitamins | Minerals | Mycotoxins | Custom | Cost

Type/Breed: Lactating/Holstein Lactation No: 2 Body Weight: 1349 Body Score: 2.75 Milk Prod: 55.00 Days In Milk: 60 Milk Fat: 3.90 Milk Protein: 3.40

	Feed	Type	AsFed (lb)	DM (lb)	DM (%)	NEl (mcal/lb)	MP (g)	CP (% DM)	RDP (% CP)	RUP (% CP)	ADF (% DM)	NDF (% DM)	NFC (% DM)	Fat (% DM)	(%
2	Alfalfa hay, 23% CP	Forage	4.0000	3.6000	90.00	0.57		23.00	72.00	28.00	28.00	38.00	24.80	4.00	0
4	Corn sil, 40% [illegible], prod, normal	Forage	28.0000	[illegible]	35.00	0.69		8.50	70.00	30.00	23.00	44.00	39.50	3.00	0
6	Grass pasture, early growth	Forage	88.8889	24.0000	27.00	0.56		19.50	70.00	30.00	30.00	55.00	11.50	4.00	0
7	Corn and [illegible] silage (Snaplage)	ByProduct	12.0000	4.2000	[illegible]	0.87		10.60	70.00	30.00	8.00	19.50	64.00	3.90	0
8	Ca 23%:P 18%	Vitamin/Mineral	0.2887	0.2800	97.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
9	Manganese oxide	Vitamin/Mineral	0.0707	0.0700	99.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
10	Salt-white	Vitamin/Mineral	0.1414	0.1400	99.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
11	Sodium bicarbonate	Vitamin/Mineral	0.0000	0.0000	99.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
12	Trace mineral mix (example)	Vitamin/Mineral	0.0707	0.0700	99.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0


House Well 3
17
16
12
ACA 2
B151 Well
ACA 1
ACA 3
Stream 3
11
Driveway
18
Barn Well 2
10
8
7
6
5
14
Stream 2
Little Pond
9
4
3
2
1
Big Pond
Route 99
19
21
Stream 1
20
Grant Hollow Road
22

Phone app that I use: Field Area Measure



Dairy Pasture Dry Matter Intake Owner: [redacted] 7-22-19

DRY MATTER DEMAND

A) Number of lactating cows	130
B) Average body weight of cows	1350 lbs
C) Daily Dry Matter Demand (DMD) per cow. Use 3.5% of body weight	47.25 lbs
D) Total DMD of lactating cows = (A x C)	6,143 lbs
E) Number of dry cows running with lactating cows	—
F) Daily DMD per dry cow	lbs
NRC table based on weight	
G) Total DMD of dry cows = (E x F)	lbs
H) Number of bred heifers running with cows	—
I) Daily DMD per bred heifers.	lbs
NRC table based on mature weight, months pregnant	
J) Total DMD of bred heifers = (H x I)	lbs
K) Number of calves running with cows	—
L) Daily DMD per calf	lbs
M) Total D NRC table based on current body weight	lbs
N) Total DMD of lactating cow group = (D + F + J + M)	lbs

Available pasture dry matter in next paddock

A) Sq ft in paddock (measured by walking or GPS) _____ sq ft

drawing of paddock

B) Acres in paddock = (A ÷ 43,560) GPS 0.9 acres

C) Total weight of 5 pasture samples (in grams) 232 g

D) Average weight of clippings (in grams) 46 g
(Total weight divided by number of pasture samples)

E) Measured dry matter of pasture sample (or default dry matter of 20%) 28 %
355 − 341 = 14 x 2 = 28%

F) Dry matter of clipping (in grams) = (D x E) 13 g

G) Lbs dry matter per acre = (F x conversion factor of 50) 650 lbs

H) Lbs dry matter offered in next paddock = (G x B) 585 lbs

I) Length of stay in paddock (in days) 1 days

J) Lbs of dry matter offered in next paddock per day = (H ÷ I) 585 lbs

Residual pasture dry matter in previous paddock

A) Weight of 5 clippings 109 g

B) Average weight of clippings 22 g

C) Dry matter of clipping = (B x measured DM % or default of 20%) 6 g

D) Residual dry matter per acre = (C x conversion factor of 50) 300 lbs/A

Comparison of pasture dry matter offered vs DMD of herd

A) Dry matter consumed per acre = 350 lbs/A
available DM/acre - residual DM/acre
650 - 300

B) Dry matter consumed per day = 315 lbs/A
(A x acres in paddock ÷ days in paddock)

C) Percentage of DMD supplied by pasture 5 %
(B ÷ DMD of herd x 100)

D) Lbs of dry matter offered per cow = _____ lbs
(total available pasture DM offered ÷ number of cows in group)
≥ 132 lbs/cow/day for maximum potential DMI by cows

E) % of forage harvested = (A ÷ available DM/acre x 100) _____ %

Pasture Condition Score Sheet

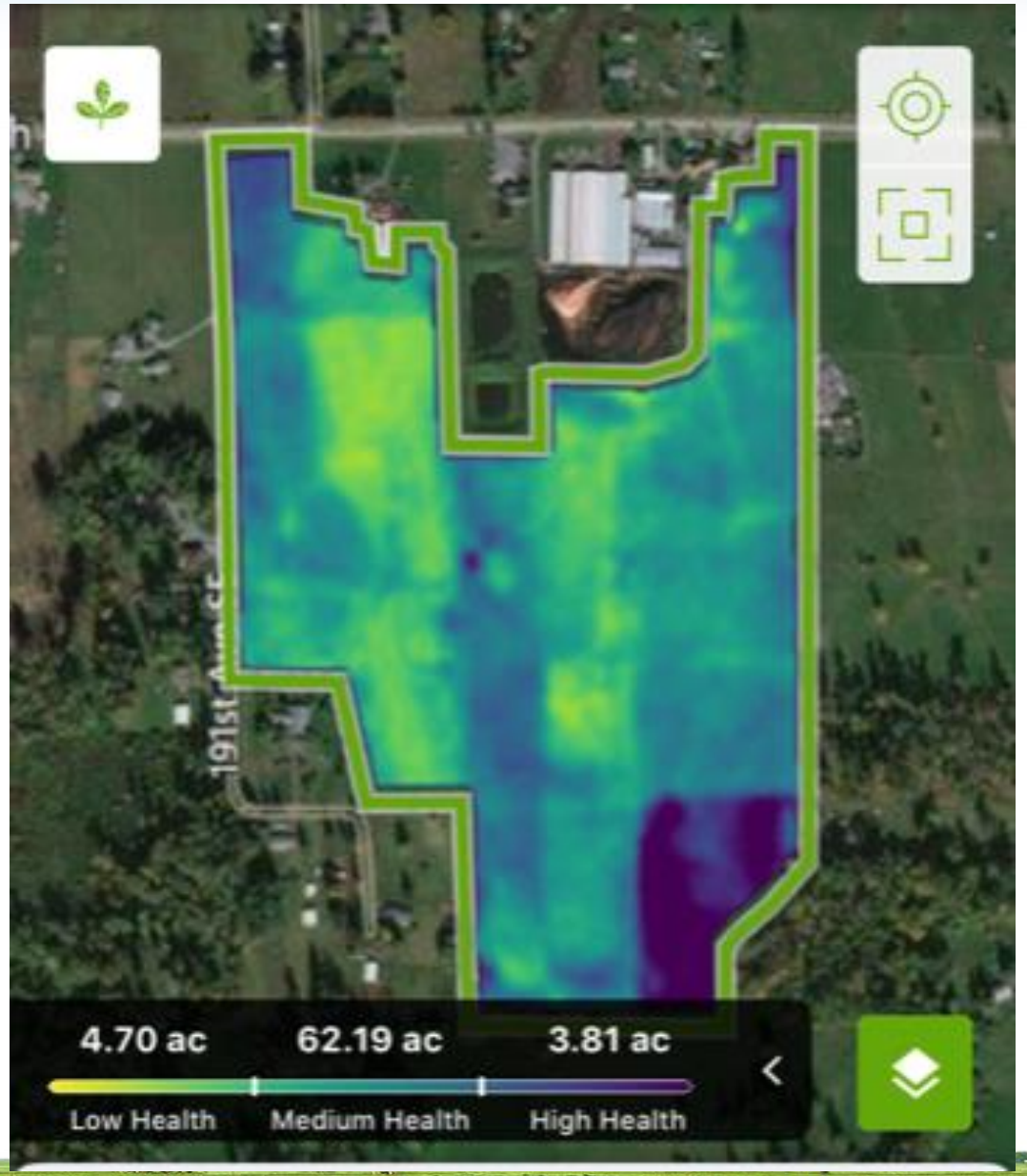
Farm or ranch site:_____ Date_____

	Pasture Unit Description									
Indicators										
Percent desirable plants[1/] Percent plant cover by weight that is desirable forage: 1 <20 · 2 20-40 · 3 40-60 · 4 60-80 · 5 >80										
Plant cover[1/ 2/] Percent live, leafy canopy cover of desirables and intermediates is: 1 <50 · 2 50-70 · 3 70-90 · 4 90-95 · 5 95-100 Percent live basal area cover of desirables and intermediates is: <15 · 15-25 · 25-35 · 35-50 · >50										
Plant diversity[1/] The diversity of well-represented forage species is: 1 · 2 · 3 · 4 · 5 (Read criteria and select appropriate number)										
Plant residue[1/] Ground cover, standing dead forage, or thatch is: 1 · 2 · 3 · 4 · 5 (Read criteria and select appropriate number)										
Plant vigor (Read criteria and select appropriate number) Degree of stress of plant community is: 1 · 2 · 3 · 4 · 5 (If less than 4, see Causative factors table. Rate those factors)										
Percent legume[1/ 3/] Percentage of legume present as total air dry weight: 1 <10, or >60 bloating legume · 2 10-19, or 40-60 spreading legume · 3 20-29 · 4 30-39 · 5 40-60 no grass loss										
Uniformity of use Degree of spot grazing is: 1 >50% ungrazed · 2 25-50% ungrazed · 3 10-25% ungrazed · 4 Minor species rejection · 5 Urine and dung spots ungrazed										
Livestock concentration areas Presence of livestock conc. areas and proximity to surface water: 1 · 2 · 3 · 4 · 5 (Read criteria and select appropriate number)										
Soil compaction Degree of soil compaction is: 1 · 2 · 3 · 4 · 5 (Read criteria and select appropriate number)										
Erosion (Always rate sheet and rill; others only if present) Sheet and rill, and gully, streambank, shoreline, or wind erosion is: 1 Very severe · 2 Severe · 3 Moderate · 4 Slight · 5 No visible										
Pasture condition score										

1/ Pastureland inventory worksheet helpful.
2/ Choose one proper, practical cover type estimation procedure to rate plant cover. The two procedures are not directly comparable.
3/ For warm season grass (C4)-legume stands, use the following criteria: 5, 30-40%; 4, 20-29%; 3, 10-19%; 2, 5-9%, and 1 <4%.


Map Layers
High
20%
Med
63%
Low
17%
Google


Map Layers
High 19%
Med 66%
Low 15%
Google


4.70 ac
62.19 ac
3.81 ac
Low Health
Medium Health
High Health


4.18 ac
61.26 ac
5.25 ac
Low Health
Medium Health
High Health