

## LIVESTOCK WINTER & SUMMER RATIONS

Producers of organic ruminant livestock (cattle, sheep, goats, buffalo) are required to provide a full description of feed rations and calculations of how much of the ration is provided by pasture during the grazing season. According to NOS §205.340(b) a producer of ruminant livestock must provide a minimum of 30% dry matter (DM) from pasture on average over the course of the grazing season. If you test feed and have % of DM, you may use those numbers in the calculations. Have testing documentation available at your inspection if you have feed tests.

## **Directions:**

Below are reference tables for 1) dry matter content of common feeds, 2) dry matter demand of lactating cows based on size and milk production, and 3) dry matter demand for other ruminant groups as percentages of average body weight. Using information from the reference tables, complete the ration charts for winter rations, grazing season rations and the dry matter from pasture calculations from the grazing season rations. Complete a separate ration chart for each group (milking, dry, brood animals, etc.) of ruminants on your farm that is fed a separate ration. We provide you with 5 ration charts to fill out for the different feeding groups on your farm. Make copies of the charts if you have more than 5 separate groups. The Silo Capacity, Silage Bag Capacity, and Standard Weights tables on the back of this page may be helpful to reference when estimating feed intake. Any changes to your ration must be recorded throughout the year. We also provide the Grazing Season Ration Record Spreadsheet for calculating ration changes for one group of animals over the entire grazing season. This form is available on our website.

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1. PERCENTAGE DRY MATTER (%DM) OF COMMON FEEDS
Hay (dry, both legume and grass) = 85% DM
Haylage (any chopped forage except corn) = 35% DM
Green chop (any green chopped forage) = 20% DM
Baleage (any baled and wrapped forage) = 60% DM
Corn silage = 40% DM
High moisture corn = 76% DM
Grain (dry corn, beans, small grains) = 89% DM
Sprouted barley = 10-20% DM (dependent on the age of the sprout)

2. DAIRY COWS DRY MATTER DEMAND (DMD)									
AVERAGE MILK PER DAY	SMALL BREED <900-1200#+ DMD	LARGE BREED 1200- 1400#+ DMD							
10#	21#	27#							
15#	23#	28#							
20#	24#	30#							
25#	26#	31#							
30#	28#	33#							
35#	30#	34#							
40#	31#	36#							
45#	33#	37#							
50#	35#	39#							
55#	36#	40#							
60#	38#	42#							
65#	40#	43#							
70#	42#	45#							
75#	43#	46#							
80#	45#	48#							

3. RUMINANT GROUPS: DRY MATTER DEMAND AS A PERCENTAGE OF BODY WEIGHT								
Dry dairy cows	1.8%							
Bred dairy heifers (14-24 months of age)	2.5%							
Unbred dairy heifers (6-14 months of age)	2.5%							
Beef cattle (more than 1 year of age)	2.25%							
Beef cattle (weaned, less than 1 year of age)	2.75%							
Sheep (brood or milking animals)	3.65%							
Goats (brood or milking animals)	4%							
Sheep (weaned, slaughter or replacement stock)	3.3%							
Goats (weaned, slaughter or replacement stock)	2.25%							

SILO CAPACITY: TONS OF CORN OR GRASS SILAGE (65% MOISTURE) IN SETTLED SILOS													
	INSIDE DIAMETER OF SILO IN FT												
DEPTH OF SILAG E IN FT	12'	14'	16'	18'	20'	24'	26'	30'					
8	11	15	20	25	31	45	52	70					
12	19	25	33	42	52	75	88	117					
16	28	38	49	62	77	111	130	173					
20	38	51	67	85	105	151	177	236					
24	49	66	87	110	135	194	228	304					
28	61	83	108	137	169	243	286	380					
32	74	100	131	166	205	295	346	461					
36	87	118	155	196	242	348	409	545					
40	101	138	180	229	280	403	473	630					
44	117	159	207	261	320	461	541	720					
50	137	186	248	310	389	560	673	875					
55	-	212	319	365	444	639	750	999					
60	-	-	383	415	500	720	845	1125					
70	-	-	-	-	574	827	970	1290					
80	-	-	-	-	650	1100	1330	1880					
90	-	-	-	-	-	-	-	2470					

CAPACITIES OF SILAGE BAGS AT 13 LBS DM PER CUBIC FT DENSITY (65% MOISTURE)											
	8 F	EET	9 FI	EET	10 F	EET	12 FEET				
BAG DEPTH IN FT	Silage Length Capacity wet		Silage Length Capacity wet		Silage Length	Capacity wet tons	Silage Length Capacity wet tons				
100	84	80	82	100	80	115	76	160			
150	134	125	132	150	130	190	126	265			
200	184	170	182	215	180	260	176	370			
250	234	220	232	270	230	335	226	475			
300	284	265	282	330	280	405	276	580			

STANDARD WEIGHTS OF FARM PRODUCTS PER BUSHEL (estimated at 89% DM)									
Barley -	48 Lb.								
Rye -	56 Lb.								
Corn (shelled) -	56 Lb.								
Corn (ear) -	70 Lb.								
Oats -	32 Lb.								
Soybeans -	60 Lb.								
Wheat -	60 Lb.								

1. RATIONS AND PASTURE CALCULATION FOR LACTATING DAIRY COWS													
A. DRY MATTE	R DE	MANI	D (DM	D)									
NUMBER OF COW THIS GROUP			AVERAGE MILK PER DAY PER COW IN LBS			DRY MATTER DEMAND FROM DAIRY COWS DRY MATTER DEMAND CHART ABOVE							
B. WINTER (NO	ON-GF	RAZIN	IG) R	ATION			C. SUMMER (C						
	M X AV	ERAGI	E LBS I	ED = DRY MA		FED		M X AV	ERAGE	LBS F	ED = DRY MAT		ED
LIST ALL FEED TYPES	% DI	% DM OF FEED AVERAGE FED PER C				DM FED	LIST ALL FEED TYPES	% DI	M OF FE	ED	AVERAGE L FED PER CO		DM FED
Example: Grain, corn	89%	(.89)	X	10#	=	8.9#	Example: Grain, corn	89%	(.89)	х	10#	=	8.9#
			Х		=					X		=	
			X		=					X		=	
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			Х		=					Х		=	
				Total DM	Fed						Total DM F	ed	
D. PASTURE C	CALC	JLATI	ON										
DMD (from A)	inus		DM Fee	<b>=</b>	sture D Fed	divided by	DMD (from A)	= _			_ X 100= _		ercent from easture

2. RATIONS	S AND P	AST	JRE CAI	CU	LATION						
Which Group			71			Number of a	nimals in	this g	roup:		
•	ER DEMAND			DMD	as a percentage				•	nove t	the decimal to
_	E WEIGHT PER			DMI	D AS % OF BODY WE GROUPS CH		ANT		DRY MATTER	R DEM	IAND
			х				=				
B. WINTER (N						C. SUMMER (	GRAZING)	RATIO	N (Do not li	st pa	sture)
LIST ALL FEED	% DM OF FE		AVERAGE L	LBS	DM FED	LIST ALL FEED	% DM OF		AVERAGE L	.BS	DM FED
TYPES Example:	89% (.89)	X	FED PER F	HD =	8.9#	TYPES Example:	89% (.89)		FED PER H 10#	ID =	8.9#
Grain, corn		x	-	=		Grain, corn		x	-	=	-
	<u> </u>	x	   	=			<u> </u>	x		=	
		х	 	=				х		=	
		х	<u> </u>	=				х		=	
	<u> </u>	X	<del> </del>	=			<u> </u>	X		=	
		X	<del> </del>	=			<u> </u>	X		=	
		Х	Total DM I	= Fed				Х	Total DM F	= Fed	
D. PASTURE (	CALCULATI	ON							7 0		
DMD (from A)		DM Fea om C)		sture DI Fed		DMD (from A)					percent from pasture
2 DATIONS	2 AND D	\ CTI	IDE CAI	CIII	ATION						
3. RATIONS Which group		AST	URE CAL	_CU	LATION	Number of a	nimals in	this q	roup:		
Which group  A. DRY MATTI	? ER DEMAND	D (DM	<b>ID)</b> Find the		LATION as a percentage	Number of a				nove t	the decimal to
Which group  A. DRY MATTI  the left two digit	? ER DEMAND	<b>D (DM</b> tter De	<b>ID)</b> Find the emand	DMD	as a percentage	of average body	weight. Ave				
Which group  A. DRY MATTI  the left two digit	o? ER DEMANE ts) = Dry Mat	<b>D (DM</b> tter De	ID) Find the emand	DMD	as a percentage	of average body	weight. Ave		veight x % (m		
Which group  A. DRY MATTI the left two digit  AVERAG	o? ER DEMAND ts) = Dry Mat SE WEIGHT PER	D (DM tter De	ID) Find the emand	DMD	as a percentage	of average body WEIGHT FROM CHAR	weight. Ave	erage w	Veight x % (m	R DEM	AND
Which group  A. DRY MATTI the left two digit  AVERAG  B. WINTER (No. 1975)	o? ER DEMAND ts) = Dry Mat SE WEIGHT PER	D (DM tter De R ANIMA	ID) Find the emand  AL  ATION FED = DRY MA	DMD DI	as a percentage MD AS % OF BODY V ABO	of average body NEIGHT FROM CHAR DVE  C. SUMMER (6	weight. Ave	erage w	DRY MATTEF  ON (Do not life)	R DEM ist pa	AND esture)
Which group  A. DRY MATTI the left two digit  AVERAG  B. WINTER (No. 1872)  LIST ALL FEED TYPES	P?  ER DEMAND  Its) = Dry Mat  EE WEIGHT PER  ION-GRAZIN	D (DM tter De R ANIMA NG) RA E LBS F	ID) Find the emand  AL  ATION	DMD DI	as a percentage MD AS % OF BODY V ABO	of average body NEIGHT FROM CHAR DVE  C. SUMMER (C % E LIST ALL FEED TYPES	weight. Ave	RATIO	DRY MATTER	R DEM	AND
Which group  A. DRY MATTI the left two digit  AVERAG  B. WINTER (N  % E  LIST ALL FEED	P?  ER DEMANE  Its) = Dry Mat  EE WEIGHT PER  ON-GRAZIN  DM X AVERAGE	D (DM tter De R ANIMA NG) RA E LBS F	ID) Find the emand  AL  ATION FED = DRY MA  AVERAGE L	DMD DI	as a percentage MD AS % OF BODY V ABO	of average body NEIGHT FROM CHAR DVE  C. SUMMER (6 % E LIST ALL FEED	weight. Ave	RATIO GE LBS I	DRY MATTER  DN (Do not life  FED = DRY MAT  AVERAGE L	R DEM	AND esture) FED
Which group  A. DRY MATTI the left two digit  AVERAG  B. WINTER (NO % DE LIST ALL FEED TYPES Example:	ER DEMAND  ts) = Dry Mate  E WEIGHT PER  ON-GRAZIN  MM X AVERAGE  % DM OF FE	D (DM tter De R ANIMA NG) RA E LBS F	AL  ATION FED = DRY MA  AVERAGE L FED PER H	DMD DI	as a percentage  MD AS % OF BODY V  ABO  FED  DM FED	of average body NEIGHT FROM CHAR DVE  C. SUMMER (C % E LIST ALL FEED TYPES Example:	weight. Ave	RATIO GE LBS I	DRY MATTER  DN (Do not li  FED = DRY MAT  AVERAGE L  FED PER H	ist pa	esture) FED DM FED
Which group  A. DRY MATTI the left two digit  AVERAG  B. WINTER (NO % DE LIST ALL FEED TYPES Example:	ER DEMAND  ts) = Dry Mate  E WEIGHT PER  ON-GRAZIN  MM X AVERAGE  % DM OF FE	D (DM tter De R ANIMA NG) RA E LBS F EED X X	AL  ATION FED = DRY MA  AVERAGE L FED PER H	TTTER FLBS	as a percentage  MD AS % OF BODY V  ABO  FED  DM FED	of average body NEIGHT FROM CHAR DVE  C. SUMMER (C % E LIST ALL FEED TYPES Example:	weight. Ave	RATIO GE LBS FFEED	DRY MATTER  DN (Do not li  FED = DRY MAT  AVERAGE L  FED PER H	St pa	esture) FED DM FED
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Which group  A. DRY MATTI the left two digit  AVERAG  B. WINTER (NO % DE LIST ALL FEED TYPES Example:	ER DEMAND  ts) = Dry Mate  E WEIGHT PER  ON-GRAZIN  MM X AVERAGE  % DM OF FE	NG) RA ELBS F EED  X  X  X	AL  ATION FED = DRY MA  AVERAGE L FED PER H	TITER F	as a percentage  MD AS % OF BODY V  ABO  FED  DM FED	of average body NEIGHT FROM CHAR DVE  C. SUMMER (C % E LIST ALL FEED TYPES Example:	weight. Ave	RATIO GE LBS FFEED	DRY MATTER  DN (Do not li  FED = DRY MAT  AVERAGE L  FED PER H	St pa	esture) FED DM FED
Which group  A. DRY MATTI the left two digit  AVERAG  B. WINTER (NO % DE LIST ALL FEED TYPES Example:	ER DEMAND  ts) = Dry Mate  E WEIGHT PER  ON-GRAZIN  MM X AVERAGE  % DM OF FE	D (DM tter De R ANIMA  NG) RA  E LBS F  EED  X  X  X	AL  ATION FED = DRY MA  AVERAGE L FED PER H	TITER F	as a percentage  MD AS % OF BODY V  ABO  FED  DM FED	of average body NEIGHT FROM CHAR DVE  C. SUMMER (C % E LIST ALL FEED TYPES Example:	weight. Ave	RATIOGE LBS FFEED  x x x	DRY MATTER  DN (Do not li  FED = DRY MAT  AVERAGE L  FED PER H	ist pa	esture) FED DM FED
Which group  A. DRY MATTI the left two digit  AVERAG  B. WINTER (NO % DE LIST ALL FEED TYPES Example:	ER DEMAND  ts) = Dry Mate  E WEIGHT PER  ON-GRAZIN  MM X AVERAGE  % DM OF FE	NG) RA ELBS F EED  X X X X X	AL  ATION FED = DRY MA  AVERAGE L FED PER H	TTER FLBS HD = = = = = = = = = = = = = = = = = =	as a percentage  MD AS % OF BODY V  ABO  FED  DM FED	of average body NEIGHT FROM CHAR DVE  C. SUMMER (C % E LIST ALL FEED TYPES Example:	weight. Ave	RATIO GE LBS F FEED  x x x x x	DRY MATTER  DN (Do not li  FED = DRY MAT  AVERAGE L  FED PER H	St pa	esture) FED DM FED
Which group  A. DRY MATTI the left two digit  AVERAG  B. WINTER (NO % DE LIST ALL FEED TYPES Example:	ER DEMAND  ts) = Dry Mate  E WEIGHT PER  ON-GRAZIN  MM X AVERAGE  % DM OF FE	NG) RA ELBS F EED  X  X  X  X  X	AL  ATION FED = DRY MA  AVERAGE L FED PER H	TTTER F LBS HD  = = = = = = = = =	as a percentage  MD AS % OF BODY V  ABO  FED  DM FED	of average body NEIGHT FROM CHAR DVE  C. SUMMER (C % E LIST ALL FEED TYPES Example:	weight. Ave	RATIO SE LBS I FEED	DRY MATTER  DN (Do not li  FED = DRY MAT  AVERAGE L  FED PER H	St pa TTER F BS HD = = = = = = = = = = = = = = = = = = =	esture) FED DM FED
Which group  A. DRY MATTI the left two digit  AVERAG  B. WINTER (NO % DE LIST ALL FEED TYPES Example:	PREPARENT OF THE PROPERTY OF T	NG) RAELBS FEED  X  X  X  X  X  X  X	ATION FED = DRY MA AVERAGE L FED PER H 10#	TTTER F LBS HD  = = = = = = = = =	as a percentage  MD AS % OF BODY V  ABO  FED  DM FED	of average body NEIGHT FROM CHAR DVE  C. SUMMER (C % E LIST ALL FEED TYPES Example:	weight. Ave	RATIO SE LBS I FEED	DRY MATTER  ON (Do not lii  AVERAGE L FED PER H  10#	St pa TTER F BS HD = = = = = = = = = = = = = = = = = = =	esture) FED DM FED
Which group  A. DRY MATTI the left two digit  AVERAG  B. WINTER (No. 1885)  LIST ALL FEED TYPES  Example: Grain, corn	PREPARENT OF THE PROPERTY OF T	NG) RAELBS FEED  X  X  X  X  X  X  X	ATION FED = DRY MA AVERAGE L FED PER H 10#	TTTER F LBS HD  = = = = = = = = =	as a percentage  MD AS % OF BODY V  ABO  FED  DM FED	of average body NEIGHT FROM CHAR DVE  C. SUMMER (C % E LIST ALL FEED TYPES Example:	weight. Ave	RATIO SE LBS I FEED	DRY MATTER  ON (Do not lii  AVERAGE L FED PER H  10#	St pa TTER F BS HD = = = = = = = = = = = = = = = = = = =	esture) FED DM FED
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4. RATIONS	S AND P	<u>ASTU</u>	JRE CAI	CU	LATION								
Which group	?					Number of ar	nimals in t	his g	roup:				
A. DRY MATTE the left two digit				DMD	as a percentage	of average body	weight. Aver	rage и	/eight x % (m	nove	the decimal to		
	E WEIGHT PER			D	MD AS % OF BODY V ABC		₹T		DRY MATTER	R DEM	IAND		
			x		_		=	_	_	_			
B. WINTER (NO						C. SUMMER (GRAZING) RATION (Do not list pasture)  % DM X AVERAGE LBS FED = DRY MATTER FED							
% D	OM X AVERAGE		ED = DRY MAT AVERAGE L			% D							
TYPES Example:	% DM OF FE	EED	FED PER H		DM FED	TYPES Example:	% DM OF F	T	AVERAGE L FED PER H		DM FED		
Grain, corn	89% (.89)	х	10#	=	8.9#	Grain, corn	89% (.89)	х	10#	=	8.9#		
		х		=				x		=			
		Х		=				X		=			
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		Х		=				X		=			
D. PASTURE C			Total DM F	-ed					Total DM F	ed			
DMD (from A)     Total DM Fed (from C)     Pasture DM Fed     DMD (from A)     DMD (from A)     DMD (from A)     DMD (from A)     **Total DM Fed (from C)  **Total DM Fed (from C)													
5. RATIONS		ASTU	JRE CAL	<u>.Cu</u>	LATION	Ni walan ak ak	! ala in 4	U- i- a					
Which group		2 (DMI	C) Find the		t an a narcantage	Number of ar		_	•	-21/0	tha daoimal to		
the left two digit				טועוט	as a percentage	or average body i	weigin. Avei	rage w	/elgrit x 70 (iii	love	the decimal to		
_	E WEIGHT PER			D	MD AS % OF BODY W ABC		₹T		DRY MATTER	R DEM	IAND		
			x				=						
B. WINTER (NO						C. SUMMER (GRAZING) RATION (Do not list pasture)							
LIST ALL FEED	% DM OF FE		ED = DRY MAT AVERAGE L			% DM X AVERAGE LBS FED = DRY MATTER FED  LIST ALL FEED							
TYPES Example:	89% (.89)	X	FED PER H		DM FED 8.9#	TYPES Example:	89% (.89)	X	FED PER H		DM FED 8.9#		
Grain, corn	0970 (.03)	X	10π	=	0.9#	Grain, corn	09/0 (.00)	X	1011	=	υ. <del>3π</del>		
	+	X		_				x		=			
		х		=				X		=			
		х		=				х		=			
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				-			1	+					
		х		=		1		X	ļ	=			
		х	Total DM F					X	Total DM F				