

UZRAST	4-6	6-12	12-16	preko 16
Meseci	5	10	14	21
TM	150-200 (170)	250-300 (284)	350-400 (389)	(450-550) 500
OTK	5	5	5	5
UZRAST PRI TELJENJU	25	25	25	25
MI	13	13	13	13
PRIRAST	600-700	700-800	800-900	800-900
FINALNA TM	650	650	650	650
TM TELETA	43	43	43	43

Table O1. Summary			Type: Replacement heifer			Solution: 1:= Empirical		
SBW:	168 kg	Breed:	Breed: Holstein					
MBW:	650 kg	Sex:	Heifer	BCS:	5	Age:	5 mo	
Metabolizable Energy (ME)			Metabolizable Protein (MP)					
	Available	Required	Balance	Available	Required	Balance		
	Mcal/d	Mcal/d	Mcal/d	g/d	g/d	g/d		
Diet	10.1	10.1	0.0	360.45	363.75	-3.30		
Maintenance	10.1	6.8	3.4	360.45	177.32	183.13		
Pregnancy	3.4	0.0	3.4	183.13	0.00	183.13		
Lactation	3.4	0.0	3.4	183.13	0.00	183.13		
Growth	3.4	3.4	0.0	183.13	186.43	-3.30		
Reserves	0.0	0.0	0.0	0.00	3.30	-3.30		
ME allowable gain	0.616 kg/d			DMI actual	4.09 kg/d			
MP allowable gain	0.619 kg/d			DMI predicted	3.89 kg/d			
Target ADG	0.629 kg/d			Cost per day	0.00 \$/d			
				Cost per product	0.00 \$/kg			
Diet Characteristics						TDN	68.58 % DM	
Dry matter	52.45 %AF					ME	2.480 Mcal/kg	
Forage	57.48 %DM					NEma	1.580 Mcal/kg	
Crude protein	16.32 %DM					NEga	0.974 Mcal/kg	
Fat	3.03 %DM					1st limiting AA: HIS	-16.32 % of req.	
Ash	7.38 %DM					2nd limiting AA: MET	-15.98 % of req.	
Carbohydrate (CHO)	73.27 %DM					Protein	g/d	%CP %DM
Nonfiber CHO	38.43 %DM					RDP	413.01	61.86 10.10
Sugars	4.94 %DM					RUP	254.67	38.14 6.23
Starch	24.55 %DM					RDP:RUP	1.62	
NDF	34.83 %DM					Ruminal N balance	20.19 g N/d	
Lignin	4.48 %DM					Ruminal N balance	44.01 % of req.	
peNDF	18.80 %DM					TDN allowable MCP	0.29 kg/d	
Ruminal pH	6.17					RDP balance	0.13 kg/d	
Source of Metabolizable Protein						RDP allowable MCP	0.29 kg/d	
Bacteria	50.9%	183.56 g/d				Methane Production		
Feed	49.1%	176.90 g/d				6.854 % GE	1.19 Mcal/d	
Total		360.45 g/d				5.59 mol/d	21.87 g/kg DM	
			As-fed		Dry matter			
#	ID	Feed	kg/d	%	kg/d	%		
1		5 Alfalfa hay	1.0	12.8%	0.87	21.3%		
2		6 Alfalfa haylage	2.4	30.8%	0.985	24.1%		
3		50 Corn silage	3.0	38.5%	0.992	24.3%		
4		45 Corn grain	0.66	8.5%	0.576	14.1%		
5		10 Barley grain	0.42	5.4%	0.377	9.2%		
6		135 Soybean meal low CP	0.14	1.8%	0.128	3.1%		
7		150 Sunflower meal	0.18	2.3%	0.163	4.0%		
8		804 Calcium carbonate						
9		813 Dicalcium phosphate						
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Total			7.800	100.0%	4.091	100.0%		

Table O1. Summary			Type: Replacement heifer			Solution: 1:= Empirical		
SBW:	264 kg	Breed:	Breed: Holstein					
MBW:	650 kg	Sex:	Heifer	BCS:	5	Age:	10 mo	
			Metabolizable Energy (ME)			Metabolizable Protein (MP)		
			Available Mcal/d	Required Mcal/d	Balance Mcal/d	Available g/d	Required g/d	Balance g/d
Diet	15.5	15.5	0.0	484.84	489.50	-4.66		
Maintenance	15.5	9.4	6.1	484.84	248.88	235.96		
Pregnancy	6.1	0.0	6.1	235.96	0.00	235.96		
Lactation	6.1	0.0	6.1	235.96	0.00	235.96		
Growth	6.1	6.1	0.0	235.96	240.62	-4.66		
Reserves	0.0	0.0	0.0	0.00	4.66	-4.66		
ME allowable gain	0.800 kg/d					DMI actual	6.18 kg/d	
MP allowable gain	0.805 kg/d					DMI predicted	6.09 kg/d	
Target ADG	0.627 kg/d					Cost per day	0.00 \$/d	
						Cost per product	0.00 \$/kg	
Diet Characteristics						TDN	69.45 % DM	
Dry matter	45.95 %AF					ME	2.511 Mcal/kg	
Forage	54.25 %DM					NEma	1.609 Mcal/kg	
Crude protein	13.26 %DM					NEga	1.001 Mcal/kg	
Fat	2.91 %DM					1st limiting AA: HIS	-19.44 % of req.	
Ash	6.33 %DM					2nd limiting AA: MET	-12.35 % of req.	
Carbohydrate (CHO)	77.50 %DM					Protein	g/d	%CP
Nonfiber CHO	42.05 %DM					RDP	507.40	61.95
Sugars	4.56 %DM					RUP	311.66	38.05
Starch	29.78 %DM					RDP:RUP	1.63	
NDF	35.45 %DM					Ruminal N balance	14.65 g N/d	
Lignin	3.91 %DM					Ruminal N balance	22.01 % of req.	
peNDF	21.51 %DM					TDN allowable MCP	0.42 kg/d	
Ruminal pH	6.28					RDP balance	0.09 kg/d	
Source of Metabolizable Protein						RDP allowable MCP	0.42 kg/d	
Bacteria	54.9%	266.15 g/d				Methane Production		
Feed	45.1%	218.69 g/d				6.311 % GE		1.65 Mcal/d
Total		484.84 g/d				7.76 mol/d		20.09 g/kg DM
			As-fed		Dry matter			
			kg/d	%	kg/d	%		
1	5	Alfalfa hay	1.0	7.4%	0.87	14.1%		
2	6	Alfalfa haylage	2.9	21.6%	1.19	19.3%		
3	50	Corn silage	7.8	58.0%	2.579	41.8%		
4	45	Corn grain	1.1	8.2%	0.959	15.5%		
5	10	Barley grain	0.5	3.7%	0.448	7.3%		
6	135	Soybean meal low CP	0.08	0.6%	0.073	1.2%		
7	150	Sunflower meal	0.06	0.4%	0.054	0.9%		
8	804	Calcium carbonate						
9	813	Dicalcium phosphate						
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Total			13.440	100.0%	6.175	100.0%		

Table O1. Summary			<i>Type: Replacement heifer</i>			<i>Solution: 1:= Empirical</i>		
SBW:	360 kg	Breed:	Breed: Holstein					
MBW:	650 kg	Sex:	Heifer	BCS:	5	Age:	14 mo	
Metabolizable Energy (ME)			Metabolizable Protein (MP)					
	Available	Required	Balance	Available	Required	Balance		
	Mcal/d	Mcal/d	Mcal/d	g/d	g/d	g/d		
Diet	19.7	19.7	0.0	574.33	570.62	3.71		
Maintenance	19.7	12.1	7.6	574.33	314.06	260.27		
Pregnancy	7.6	0.0	7.6	260.27	0.00	260.27		
Lactation	7.6	0.0	7.6	260.27	0.00	260.27		
Growth	7.6	7.6	0.0	260.27	256.56	3.71		
Reserves	0.0	0.0	0.0	3.71	0.00	3.71		
ME allowable gain	0.839 kg/d			DMI actual	8.14 kg/d			
MP allowable gain	0.836 kg/d			DMI predicted	8.39 kg/d			
Target ADG	0.265 kg/d			Cost per day	0.00 \$/d			
				Cost per product	0.00 \$/kg			
Diet Characteristics				TDN	67.04 % DM			
Dry matter	44.43 %AF			ME	2.424 Mcal/kg			
Forage	59.21 %DM			NEma	1.532 Mcal/kg			
Crude protein	11.75 %DM			NEga	0.932 Mcal/kg			
Fat	2.88 %DM			1st limiting AA: HIS	-17.59 % of req.			
Ash	6.20 %DM			2nd limiting AA: MET	-5.38 % of req.			
Carbohydrate (CHO)	79.18 %DM			Protein	g/d	%CP	%DM	
Nonfiber CHO	38.63 %DM			RDP	609.94	63.78	7.49	
Sugars	4.07 %DM			RUP	346.38	36.22	4.26	
Starch	26.97 %DM			RDP:RUP	1.76			
NDF	40.54 %DM			Ruminal N balance	14.79 g N/d			
Lignin	4.16 %DM			Ruminal N balance	17.86 % of req.			
peNDF	28.60 %DM			TDN allowable MCP	0.52 kg/d			
Ruminal pH	6.46			RDP balance	0.09 kg/d			
Source of Metabolizable Protein				RDP allowable MCP	0.52 kg/d			
Bacteria	57.7%	331.21 g/d		Methane Production				
Feed	42.3%	243.12 g/d		6.271 % GE	2.15 Mcal/d			
Total		574.33 g/d		10.11 mol/d	19.88 g/kg DM			
			As-fed		Dry matter			
#	ID	Feed	kg/d	%	kg/d	%		
1	5	Alfalfa hay	1.0	5.5%	0.87	10.7%		
2	6	Alfalfa haylage	3.0	16.4%	1.231	15.1%		
3	50	Corn silage	12.0	65.5%	3.969	48.8%		
4	45	Corn grain	1.2	6.6%	1.047	12.9%		
5	10	Barley grain	0.16	0.9%	0.144	1.8%		
6	135	Soybean meal low CP	0.1	0.5%	0.092	1.1%		
7	150	Sunflower meal	0.06	0.3%	0.054	0.7%		
8	804	Calcium carbonate						
9	813	Dicalcium phosphate						
10	168	Wheat straw	0.8	4.4%	0.734	9.0%		
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Total			18.320	100.0%	8.140	100.0%		

Table O1. Summary			<i>Type: Replacement heifer</i>			<i>Solution: 1:= Empirical</i>		
SBW:	480 kg	Breed:	Breed: Holstein					
MBW:	650 kg	Sex:	Heifer	BCS:	5	Age:	21 mo	
Metabolizable Energy (ME)			Metabolizable Protein (MP)					
	Available	Required	Balance	Available	Required	Balance		
	Mcal/d	Mcal/d	Mcal/d	g/d	g/d	g/d		
Diet	24.3	24.3	0.0	643.60	614.44	29.15		
Maintenance	24.3	15.6	8.8	643.60	389.69	253.91		
Pregnancy	8.8	0.0	8.8	253.91	0.00	253.91		
Lactation	8.8	0.0	8.8	253.91	0.00	253.91		
Growth	8.8	8.8	0.0	253.91	224.76	29.15		
Reserves	0.0	0.0	0.0	29.15	0.00	29.15		
ME allowable gain	0.797 kg/d			DMI actual	10.93 kg/d			
MP allowable gain	0.802 kg/d			DMI predicted	11.34 kg/d			
Target ADG	0.069 kg/d			Cost per day	0.00 \$/d			
				Cost per product	0.00 \$/kg			
Diet Characteristics				TDN	61.57 % DM			
Dry matter	51.11 %AF			ME	2.226 Mcal/kg			
Forage	75.53 %DM			NEma	1.354 Mcal/kg			
Crude protein	9.20 %DM			NEga	0.773 Mcal/kg			
Fat	2.39 %DM			1st limiting AA: HIS	-14.70 % of req.			
Ash	6.30 %DM			2nd limiting AA: MET	106.06 % of req.			
Carbohydrate (CHO)	82.11 %DM			Protein	g/d	%CP	%DM	
Nonfiber CHO	28.22 %DM			RDP	649.55	64.60	5.94	
Sugars	4.69 %DM			RUP	355.92	35.40	3.26	
Starch	16.91 %DM			RDP:RUP	1.82			
NDF	53.89 %DM			Ruminal N balance	3.43 g N/d			
Lignin	4.93 %DM			Ruminal N balance	3.42 % of req.			
peNDF	40.76 %DM			TDN allowable MCP	0.63 kg/d			
Ruminal pH	6.46			RDP balance	0.02 kg/d			
Source of Metabolizable Protein				RDP allowable MCP	0.63 kg/d			
Bacteria	62.5%	401.98 g/d		Methane Production				
Feed	37.5%	241.61 g/d		6.307 % GE		2.86 Mcal/d		
Total		643.60 g/d		13.45 mol/d		19.69 g/kg DM		
			As-fed		Dry matter			
#	ID	Feed	kg/d	%	kg/d	%		
1	92	Meadow hay	2.0	9.4%	1.775	16.2%		
2	168	Wheat straw	2.0	9.4%	1.835	16.8%		
3	6	Alfalfa haylage	3.0	14.0%	1.231	11.3%		
4	50	Corn silage	12.0	56.1%	3.969	36.3%		
5	36	Corn cobs	1.6	7.5%	1.428	13.1%		
6	37	Corn ear corn						
7	45	Corn grain	0.5	2.3%	0.436	4.0%		
8	135	Soybean meal low CP	0.1	0.5%	0.092	0.8%		
9	150	Sunflower meal	0.1	0.5%	0.09	0.8%		
10	804	Calcium carbonate						
11	813	Dicalcium phosphate						
12	10	Barley grain	0.08	0.4%	0.072	0.7%		
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14								
15								
16								
17								
18								
19								
20								
21								
22								
Total			21.380	100.0%	10.928	100.0%		