

# Nutrient Requirements of Beef Cattle — 1

This is the first of two pages adapted from *Nutrient Requirements of Beef Cattle, Sixth Revised Edition, National Research Council, 1984.*

## NUTRIENT REQUIREMENTS OF BREEDING CATTLE (Daily nutrients per animal)

Weight lbs	Daily gain lbs	Dry matter* lbs	Protein lbs	NE <sub>m</sub> Mcal	NE <sub>g</sub> Mcal	TDN lbs	Ca lbs	P lbs
<b>Pregnant yearling heifers — last third of pregnancy</b>								
700	0.9	15.3	1.3	7.95	—	8.5	.041	.031
	1.4	15.8	1.4	7.95	0.87	9.6	.052	.033
750	1.9	15.8	1.5	7.95	1.89	10.6	.052	.033
	0.9	16.1	1.3	8.25	—	8.9	.043	.030
800	1.4	16.6	1.5	8.25	0.92	10.0	.053	.035
	1.9	16.6	1.6	8.25	1.99	11.1	.061	.038
850	0.9	16.8	1.4	8.56	—	9.2	.047	.033
	1.4	17.4	1.5	8.56	0.96	10.4	.057	.036
900	1.9	17.5	1.6	8.56	2.09	11.6	.061	.037
	0.9	17.6	1.4	8.85	—	9.6	.046	.035
950	1.4	18.2	1.6	8.85	1.01	10.8	.055	.038
	1.9	18.3	1.7	8.85	2.19	12.1	.055	.038
1000	0.9	18.3	1.5	9.15	—	9.9	.047	.037
	1.4	19.0	1.6	9.15	1.05	11.3	.057	.040
1050	1.9	19.2	1.7	9.15	2.28	12.5	.061	.040
	0.9	19.0	1.5	9.44	—	10.3	.051	.038
1100	1.4	19.8	1.7	9.44	1.09	11.7	.057	.041
<b>Dry pregnant mature cows — middle third of pregnancy</b>								
800	0.0	15.3	1.1	6.41	—	7.5	.026	.026
1000	0.0	18.1	1.3	7.57	—	8.8	.032	.032
1200	0.0	20.8	1.4	8.68	—	10.1	.039	.039
1400	0.0	23.3	1.6	9.75	—	11.4	.047	.047
<b>Dry pregnant mature cows — last third of pregnancy</b>								
800	0.9	16.8	1.4	8.56	—	9.2	.044	.034
1000	0.9	19.6	1.6	9.72	—	10.5	.051	.039
1200	0.9	22.3	1.7	10.83	—	11.8	.058	.047
1400	0.9	24.9	1.9	11.90	—	13.1	.065	.052
<b>Two-year-old heifers nursing calves — first 3-4 months postpartum — 10 lb milk/day</b>								
700	0.5	15.9	1.8	9.20	0.87	10.3	.057	.038
800	0.5	17.6	1.9	9.81	0.96	11.2	.059	.042
900	0.5	19.2	2.0	10.40	1.05	12.0	.061	.044
1000	0.5	20.8	2.1	10.98	1.14	12.9	.064	.048
<b>Cows nursing calves — average milking ability — first 3-4 months postpartum — 10 lb milk/day</b>								
800	0.0	17.3	1.8	9.81	—	10.1	.052	.038
1000	0.0	20.2	2.0	10.98	—	11.5	.056	.044
1200	0.0	23.0	2.1	12.09	—	12.8	.062	.051
1400	0.0	25.6	2.3	13.15	—	14.0	.069	.056
<b>Cows nursing calves — superior milking ability — first 3-4 months postpartum — 20 lb milk/day</b>								
800	0.0	15.7	2.2	13.22	—	12.1	.075	.049
1000	0.0	20.6	2.5	14.38	—	13.8	.080	.056
1200	0.0	23.8	2.7	15.49	—	15.2	.086	.062
1400	0.0	26.7	2.9	16.56	—	16.5	.093	.069
<b>Bulls, maintenance and regaining body condition</b>								
1400	1.5	27.6	2.1	9.75	3.63	16.5	.063	.052
1400	2.0	27.7	2.2	9.75	4.98	17.8	.069	.055
1500	0.0	25.2	1.7	10.26	—	12.2	.050	.050
1500	1.0	28.3	2.1	10.26	2.45	15.8	.059	.054
1500	1.5	29.0	2.2	10.26	3.82	17.3	.064	.055
1600	0.0	26.5	1.8	10.77	—	12.8	.050	.053
1600	1.0	29.7	2.2	10.77	2.57	16.6	.065	.056
1600	1.5	30.4	2.3	10.77	4.01	18.2	.067	.061
1700	0.0	27.7	1.9	11.28	—	13.4	.058	.058
1700	0.5	29.6	2.1	11.28	1.26	15.4	.059	.056
1800	0.0	28.9	2.0	11.77	—	14.0	.061	.061
1800	0.5	30.9	2.2	11.77	1.31	16.1	.062	.062
1900	0.0	30.1	2.0	12.26	—	14.6	.063	.063
1900	0.5	32.2	2.2	12.26	1.37	16.8	.064	.064
2000	0.0	31.3	2.1	12.74	—	15.2	.066	.066
2200	0.0	33.6	2.3	13.68	—	16.3	.074	.074

\*Vitamin A requirements per pound of diet are 1,273 IU for pregnant heifers and cows and 1,773 IU for bulls and lactating cows.