

Nutrient requirements of breeding cattle

Liveweight (kg)	Daily gain (kg)	Daily requirements			
		ME (MJ)	Protein (g)	Calcium (g)	Phosphorus (g)
Pregnant heifers – last third of pregnancy					
350	0.4	62	616	20	15
400	0.4	67	664	22	16
450	0.4	72	710	23	18
Dry pregnant mature cow – last third of pregnancy					
350	0.0	50	478	12	12
350	0.4	61	609	20	15
400	0.0	59	525	13	13
400	0.4	67	657	22	16
450	0.0	60	570	15	15
450	0.4	72	703	23	18
500	0.0	65	614	17	17
500	0.4	77	746	25	20
550	0.0	70	657	18	18
550	0.4	82	790	26	21
Lactating heifers — first 3–4 months post-calving					
350	0.2	76	866	27	19
400	0.2	82	916	28	20
450	0.2	88	963	29	22
Lactating mature cows — first 3–4 months post-calving					
350	0.0	69	814	23	18
400	0.0	75	864	25	19
450	0.0	80	911	26	21
500	0.0	85	957	28	22
550	0.0	90	1001	29	24
Bulls					
500	0.4	41	779	23	19
600	0.4	47	857	25	22
700	0.4	108	942	26	25
800	0.0	95	882	27	27

Source: 'Nutrient requirements of beef cattle', Sixth revised edition, 1984.

The Nutrition EDGE workshop manual also includes tables showing:

- **Metabolisable energy requirements (MJ/day) of cattle for maintenance and growth.** For example if the pasture has a metabolisable energy value of 7MJ/kg of dry matter, then for cattle weighing 300kg and a growth rate of 0.5kg/day is desired, the requirement for energy is 61MJ/day.
- **Rumen degraded protein (RDP) and undegraded protein (UDP) requirements (g/day) of cattle for maintenance and growth.** For example if the pasture has a metabolisable energy value of 7MJ/kg of dry matter, then for cattle weighing 300kg and a growth rate of 0.5kg/day is

desired, the requirement for rumen degraded protein (RDP) is 470g/day. Note for younger animals there may also be a requirement for UDP (undegraded dietary protein or protein not degraded in the rumen).