

STANDARD HERD AE AND DRY MATTER INTAKE TABLES

**Animal Equivalent (AE) Ratings represent energy demand relative to the standard AE animal
(450kg Bos taurus steer with zero liveweight gain)**

Standard Annual AE rating by age group based on long term average productivity, intake figures apply to cattle grazing in Northern and Rangelands Australia. Productivity zones are based on annual liveweight gains of steers Select column that applies to determine AE rating and intake by class, if unsure use moderate;

- High: Greater than 150kg/yr
- Moderate: 110 to 150kg/yr,
- Low: Less than 110kg/yr.

Productivity	Annual AE Rating		
	High	Moderate	Low
Females <1 [#]	0.77	0.68	0.57
Females 1-2	1.10*	0.91	0.72
Females 2-3	1.74*	1.12*	0.96*
Females 3-4	1.61*	1.49*	1.18*
Females 4+	1.53*	1.28*	1.08*
Steers <1 [#]	0.80	0.72	0.60
Steers 1-2	1.31	1.03	0.78
Steers 2-3	1.60	1.27	1.02
Steers 3-4		1.39	1.15
Grown Bulls	1.55	1.52	1.29

[#]Is from weaning to 12 months of age

Productivity	Intake (Kg DM/hd/day)		
	High	Moderate	Low
Females <1 [#]	5.8	5.4	4.8
Females 1-2	8.3*	7.3	6.1
Females 2-3	13.0*	8.9*	8.2*
Females 3-4	12.1*	11.9*	10.0*
Females 4+	11.5*	10.2*	9.2*
Steers <1 [#]	6.0	5.8	5.1
Steers 1-2	9.8	8.3	6.7
Steers 2-3	12.0	10.2	8.7
Steers 3-4		11.1	9.8
Bulls	11.6	12.2	11.0
Intake/AE	7.5	8.0	8.5

**includes pregnancy, lactation and calf to weaning and accounts for reproductive rate (i.e. is average of all females in age group)*

AE calculations derived using the Australian feeding standards (CSIRO, 2007) by applying the methodology outlined in Mclennan et al. (2020) and McLean and Blakeley (2014). Intake figures applied are from Mclennan et al. (2020). Animal performance data used to derive above ratings and groupings are from (Bray et al., 2015).

BRAY, S., WALSH, D., HOFFMANN, M., HENRY, B., EADY, S., COLLIER, C., NAVARRO, J., CORBET, D. & PETTIT, C. 2015. *Desktop research project to provide data on liveweight and liveweight gain in the beef cattle sector in Queensland and the Northern Territory : final report, 2015*, Queensland State of Queensland.

CSIRO 2007. *Nutrient Requirements of Domesticated Ruminants*, CSIRO Publishing.

MCLEAN, I. & BLAKELEY, S. 2014. Adult Equivalent Methodology; A methodology to accurately and consistently calculate cattle grazing loads in northern Australia. *B.NBP.0779*. Meat & Livestock Australia.

MCLENNAN, S., MCLEAN, I. A. & PATON, C. J. 2020. Re-defining the animal unit equivalence (AE) for grazing ruminants and its application for determining forage intake, with particular relevance to the northern Australian grazing industries. Meat & Livestock Australia.

BOS TAURUS CATTLE AE TABLES

Animal Equivalent (AE) Ratings represent energy demand relative to the standard AE animal (450kg Bos taurus steer with zero liveweight gain)

Growing Animals (any period)

Steers and Dry Empty Females

		Average Daily Gain (kg/hd/day)					
		0	0.2	0.4	0.6	0.8	1.0
Average Liveweight	150	0.46	0.57	0.68	0.80	0.92	1.04
	200	0.52	0.65	0.79	0.92	1.06	1.21
	250	0.62	0.78	0.93	1.09	1.25	1.42
	300	0.72	0.90	1.07	1.25	1.43	1.61
	350	0.82	1.01	1.20	1.40	1.59	1.79
	400	0.91	1.11	1.32	1.52	1.73	1.94
	450	1.00	1.21	1.43	1.64	1.85	2.07
	500	1.08	1.30	1.52	1.74	1.96	2.18
	550	1.17	1.39	1.61	1.83	2.05	2.28
	600	1.25	1.47	1.69	1.92	2.14	2.36
for bulls add		11%	7%	5%	3%	1%	0%

Breeding Females (annualised mob average)

Includes calf to weaning, assumes 12mth calving interval and zero LWG

		Weaning %						
		60%	65%	70%	75%	80%	85%	90%
Average Liveweight	350	1.22	1.26	1.30	1.33	1.37	1.41	1.44
	375	1.27	1.31	1.34	1.38	1.42	1.46	1.49
	400	1.32	1.36	1.39	1.43	1.47	1.50	1.54
	425	1.37	1.40	1.44	1.48	1.51	1.55	1.59
	450	1.41	1.45	1.49	1.52	1.56	1.60	1.64
	475	1.46	1.50	1.54	1.57	1.61	1.65	1.68
	500	1.51	1.55	1.58	1.62	1.66	1.69	1.73
	525	1.56	1.59	1.63	1.67	1.70	1.74	1.78
	550	1.61	1.64	1.68	1.72	1.75	1.79	1.83
	575	1.65	1.69	1.73	1.76	1.80	1.84	1.87
600	1.70	1.74	1.78	1.81	1.85	1.89	1.92	

Breeding Females (monthly individual average)

Includes calf to weaning, assumes 12mth calving interval and zero LWG

		Months from birth											Annual Average	
		-5	-4	-3	-2	-1	+1	+2	+3	+4	+5	+6		+7
Average Liveweight	350	0.81	0.85	0.91	1.02	1.21	2.02	2.13	2.17	2.16	2.12	2.04	0.79	1.51
	375	0.86	0.89	0.95	1.06	1.26	2.07	2.18	2.21	2.21	2.16	2.08	0.84	1.56
	400	0.91	0.94	1.00	1.11	1.31	2.12	2.23	2.26	2.26	2.21	2.13	0.89	1.60
	425	0.95	0.99	1.05	1.16	1.36	2.16	2.27	2.31	2.30	2.26	2.18	0.93	1.65
	450	1.00	1.04	1.10	1.21	1.40	2.21	2.32	2.36	2.35	2.31	2.23	0.98	1.70
	475	1.05	1.08	1.14	1.25	1.45	2.26	2.37	2.40	2.40	2.35	2.27	1.03	1.75
	500	1.10	1.13	1.19	1.30	1.50	2.31	2.42	2.45	2.45	2.40	2.32	1.08	1.79
	525	1.15	1.18	1.24	1.35	1.55	2.35	2.46	2.50	2.49	2.45	2.37	1.13	1.84
	550	1.19	1.23	1.29	1.40	1.60	2.40	2.51	2.55	2.54	2.50	2.42	1.17	1.89
	575	1.24	1.28	1.34	1.45	1.64	2.45	2.56	2.60	2.59	2.55	2.47	1.22	1.94
600	1.29	1.32	1.38	1.49	1.69	2.50	2.61	2.64	2.64	2.59	2.51	1.27	1.99	
		2nd trimester		3rd trimester			Lactating				1st trimester		2nd trim	

CROSSBRED CATTLE AE TABLES

Animal Equivalent (AE) Ratings represent energy demand relative to the standard AE animal (450kg Bos taurus steer with zero liveweight gain)

Growing Animals (any period)

Steers and Dry Empty Females

		Average Daily Gain (kg/hd/day)					
		0	0.2	0.4	0.6	0.8	1.0
Average Liveweight	150	0.43	0.53	0.64	0.75	0.86	0.98
	200	0.49	0.61	0.74	0.86	1.00	1.13
	250	0.59	0.73	0.87	1.02	1.17	1.32
	300	0.68	0.84	1.00	1.17	1.34	1.51
	350	0.76	0.95	1.13	1.31	1.50	1.69
	400	0.85	1.05	1.24	1.44	1.64	1.84
	450	0.94	1.14	1.35	1.56	1.76	1.97
	500	1.01	1.23	1.44	1.66	1.87	2.09
	550	1.09	1.31	1.53	1.75	1.96	2.18
	600	1.17	1.39	1.61	1.83	2.05	2.27
for bulls add		11%	7%	5%	3%	1%	0%

Breeding Females (annualised mob average)

Includes calf to weaning, assumes 12mth calving interval and zero LWG

		Weaning %						
		60%	65%	70%	75%	80%	85%	90%
Average Liveweight	350	1.11	1.14	1.17	1.20	1.23	1.26	1.29
	375	1.16	1.19	1.22	1.25	1.28	1.31	1.34
	400	1.20	1.23	1.26	1.29	1.32	1.35	1.38
	425	1.25	1.28	1.31	1.34	1.37	1.40	1.43
	450	1.29	1.32	1.35	1.38	1.41	1.44	1.47
	475	1.34	1.37	1.40	1.43	1.46	1.49	1.52
	500	1.38	1.41	1.44	1.47	1.50	1.54	1.57
	525	1.43	1.46	1.49	1.52	1.55	1.58	1.61
	550	1.47	1.51	1.54	1.57	1.60	1.63	1.66
	575	1.52	1.55	1.58	1.61	1.64	1.67	1.70
600	1.57	1.60	1.63	1.66	1.69	1.72	1.75	

Breeding Females (monthly individual average)

Includes calf to weaning, assumes 12mth calving interval and zero LWG

		Months from birth											Annual Average	
		-5	-4	-3	-2	-1	+1	+2	+3	+4	+5	+6		+7
Average Liveweight	350	0.77	0.80	0.86	0.97	1.17	1.78	1.85	1.86	1.84	1.79	1.72	0.75	1.34
	375	0.82	0.85	0.91	1.02	1.22	1.82	1.89	1.91	1.89	1.84	1.76	0.79	1.38
	400	0.86	0.89	0.95	1.06	1.26	1.87	1.94	1.95	1.93	1.88	1.81	0.84	1.43
	425	0.91	0.94	1.00	1.11	1.31	1.91	1.98	2.00	1.98	1.93	1.85	0.89	1.47
	450	0.95	0.99	1.05	1.16	1.35	1.96	2.03	2.04	2.02	1.97	1.90	0.93	1.52
	475	1.00	1.03	1.09	1.20	1.40	2.00	2.08	2.09	2.07	2.02	1.94	0.98	1.57
	500	1.04	1.08	1.14	1.25	1.44	2.05	2.12	2.13	2.11	2.06	1.99	1.02	1.61
	525	1.09	1.12	1.18	1.29	1.49	2.09	2.17	2.18	2.16	2.11	2.03	1.07	1.66
	550	1.13	1.17	1.23	1.34	1.54	2.14	2.21	2.22	2.20	2.15	2.08	1.11	1.70
	575	1.18	1.21	1.27	1.38	1.58	2.19	2.26	2.27	2.25	2.20	2.13	1.16	1.75
600	1.23	1.26	1.32	1.43	1.63	2.23	2.31	2.32	2.30	2.25	2.17	1.21	1.80	
		2nd trimester		3rd trimester			Lactating				1st trimester		2nd trim	

BOS INDICUS CATTLE AE TABLES

Animal Equivalent (AE) Ratings represent energy demand relative to the standard AE animal (450kg Bos taurus steer with zero liveweight gain)

Growing Animals (any period)

Steers and Dry Empty Females

		Average Daily Gain (kg/hd/day)					
		0	0.2	0.4	0.6	0.8	1.0
Average Liveweight	150	0.40	0.50	0.60	0.71	0.83	0.95
	200	0.46	0.58	0.70	0.83	0.96	1.10
	250	0.55	0.69	0.83	0.98	1.13	1.29
	300	0.63	0.79	0.96	1.13	1.30	1.47
	350	0.71	0.90	1.08	1.26	1.45	1.64
	400	0.79	0.99	1.19	1.38	1.58	1.78
	450	0.87	1.08	1.29	1.49	1.70	1.91
	500	0.95	1.16	1.37	1.59	1.80	2.02
	550	1.02	1.23	1.45	1.67	1.89	2.11
	600	1.08	1.31	1.53	1.75	1.97	2.19
for bulls add		11%	7%	5%	3%	1%	0%

Breeding Females (annualised mob average)

Includes calf to weaning, assumes 12mth calving interval and zero LWG

		Weaning %						
		60%	65%	70%	75%	80%	85%	90%
Average Liveweight	350	1.04	1.07	1.09	1.12	1.15	1.18	1.21
	375	1.08	1.11	1.14	1.17	1.19	1.22	1.25
	400	1.13	1.15	1.18	1.21	1.24	1.26	1.29
	425	1.17	1.20	1.22	1.25	1.28	1.31	1.34
	450	1.21	1.24	1.27	1.30	1.32	1.35	1.38
	475	1.26	1.28	1.31	1.34	1.37	1.39	1.42
	500	1.30	1.33	1.35	1.38	1.41	1.44	1.47
	525	1.34	1.37	1.40	1.43	1.45	1.48	1.51
	550	1.39	1.41	1.44	1.47	1.50	1.53	1.55
	600	1.48	1.50	1.53	1.56	1.59	1.61	1.64

Breeding Females (monthly individual average)

Includes calf to weaning, assumes 12mth calving interval and zero LWG

		Months from birth											Annual Average	
		-5	-4	-3	-2	-1	+1	+2	+3	+4	+5	+6		+7
Average Liveweight	350	0.73	0.76	0.82	0.93	1.13	1.64	1.70	1.70	1.68	1.63	1.56	0.71	1.24
	375	0.77	0.80	0.86	0.97	1.17	1.68	1.74	1.74	1.72	1.67	1.60	0.75	1.28
	400	0.81	0.85	0.91	1.02	1.22	1.73	1.78	1.79	1.76	1.72	1.65	0.79	1.33
	425	0.86	0.89	0.95	1.06	1.26	1.77	1.83	1.83	1.81	1.76	1.69	0.84	1.37
	450	0.90	0.93	0.99	1.10	1.30	1.81	1.87	1.87	1.85	1.80	1.73	0.88	1.41
	475	0.94	0.98	1.04	1.15	1.35	1.86	1.91	1.92	1.89	1.85	1.78	0.92	1.46
	500	0.99	1.02	1.08	1.19	1.39	1.90	1.96	1.96	1.94	1.89	1.82	0.97	1.50
	525	1.03	1.06	1.13	1.23	1.43	1.94	2.00	2.00	1.98	1.93	1.86	1.01	1.54
	550	1.08	1.11	1.17	1.28	1.48	1.99	2.04	2.05	2.02	1.98	1.91	1.05	1.59
	575	1.12	1.15	1.21	1.32	1.52	2.03	2.09	2.09	2.07	2.02	1.95	1.10	1.63
600	1.16	1.20	1.26	1.37	1.57	2.07	2.13	2.14	2.11	2.06	2.00	1.14	1.68	
		2nd trimester		3rd trimester			Lactating			1st trimester		2nd trim		

SHEEP AE TABLES

AE Ratings represent energy requirements relative to the AE standard, which is a 450kg Bos taurus steer with zero liveweight gain

Growing Sheep

		Liveweight gain (kg/hd/day)						
		0.00	0.05	0.10	0.15	0.20	0.25	0.30
Liveweight (kg)	20	0.07	0.10	0.13	0.16	0.20	0.23	0.27
	25	0.08	0.11	0.15	0.19	0.23	0.27	0.31
	30	0.09	0.13	0.17	0.21	0.26	0.30	0.35
	35	0.10	0.14	0.19	0.24	0.28	0.33	0.38
	40	0.11	0.16	0.21	0.26	0.31	0.36	0.41
	45	0.12	0.17	0.22	0.28	0.33	0.38	0.43
	50	0.13	0.18	0.24	0.29	0.34	0.40	0.45
	55	0.14	0.19	0.25	0.30	0.36	0.41	0.47
	60	0.15	0.21	0.26	0.32	0.37	0.43	0.48
	65	0.16	0.22	0.27	0.33	0.38	0.44	0.49
70	0.17	0.23	0.28	0.34	0.39	0.45	0.50	
75	0.18	0.24	0.29	0.35	0.40	0.46	0.51	

Wool production (additional AE rating)

GFW (kg)	4.0	4.5	5.0	5.5	6.0	6.5	7.0
AE rating	0.01	0.01	0.01	0.01	0.02	0.02	0.02

Pregnancy

		Days pregnant					
		0	30	60	90	120	150
Liveweight (kg)	35	0.09	0.09	0.10	0.11	0.12	0.14
	40	0.10	0.10	0.11	0.12	0.13	0.15
	45	0.11	0.11	0.12	0.13	0.14	0.16
	50	0.12	0.12	0.13	0.13	0.15	0.17
	55	0.13	0.13	0.14	0.14	0.16	0.18
	60	0.14	0.14	0.15	0.15	0.17	0.19
	65	0.15	0.15	0.16	0.16	0.18	0.20
	70	0.16	0.16	0.16	0.17	0.19	0.21
75	0.17	0.17	0.17	0.18	0.19	0.22	
80	0.18	0.18	0.18	0.19	0.20	0.23	
plus twin	0.00	0.00	0.01	0.02	0.03	0.05	

Annualised breeding ewe

		Weaning rate						
		50%	60%	70%	80%	90%	100%	110%
Liveweight (kg)	35	0.12	0.13	0.14	0.14	0.15	0.16	0.16
	40	0.13	0.14	0.15	0.15	0.16	0.17	0.17
	45	0.14	0.15	0.16	0.16	0.17	0.18	0.18
	50	0.15	0.16	0.17	0.17	0.18	0.19	0.19
	55	0.16	0.17	0.18	0.18	0.19	0.20	0.20
	60	0.17	0.18	0.18	0.19	0.20	0.20	0.21
	65	0.18	0.19	0.19	0.20	0.21	0.21	0.22
	70	0.19	0.20	0.20	0.21	0.22	0.22	0.23
	75	0.20	0.20	0.21	0.22	0.22	0.23	0.24
	80	0.21	0.21	0.22	0.23	0.23	0.24	0.25

Rams

		Liveweight					
		50	60	70	80	90	100
AE Rating		0.15	0.17	0.19	0.22	0.24	0.26

Lactation

		Days in milk				
		1	30	60	90	120
Liveweight (kg)	35	0.25	0.28	0.28	0.25	0.21
	40	0.26	0.29	0.29	0.26	0.22
	45	0.27	0.30	0.29	0.27	0.23
	50	0.28	0.31	0.30	0.28	0.24
	55	0.29	0.32	0.31	0.29	0.25
	60	0.30	0.33	0.32	0.30	0.26
	65	0.31	0.34	0.33	0.31	0.27
	70	0.32	0.35	0.34	0.32	0.28
	75	0.33	0.36	0.35	0.33	0.29
	80	0.34	0.37	0.36	0.34	0.30
plus twin lactation provision	0.15	0.18	0.17	0.15	0.11	
plus forage for 1 lamb	0.00	0.01	0.03	0.06	0.10	
plus forage for 2 lambs	0.00	0.01	0.06	0.12	0.20	