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APPENDIX

APPENDIX A

AGROCLIMATOLOGICAL DATA

Appendix A Table 1 Agroclimatological data of Experiment II, from January – May 2006 (Thaphra Agromet Station, 2006)[1/].

Month	Temperature (°C)			Relative Humidity (%)			THI[2/]
	Mean	Min.	Max.	Mean	Min.	Max.	Mean
January	24.4	16.1	32.7	69.9	45.5	94.2	73.0
February	26.4	19.4	33.2	66.3	45.0	87.6	75.5
March	29.1	22.7	35.4	62.9	43.8	81.9	79.0
April	30.0	24.0	35.9	66.4	44.4	88.4	80.8
May	29.0	23.7	34.2	68.9	48.0	89.8	79.7
Average	27.8	21.2	34.3	66.9	45.3	88.4	77.6
SD	2.1			2.4			2.9

[1/] Min, minimum; Max, maximum; SD, standard deviation, TC, temperature; RH, relative humidity
[2/] THI, Temperature-Humidity Index (Ravagonolo et al, 2000); THI = [(1.8*TC) + 32] - [0.55 - (0.55*RH/100)] * [(1.8*TC) - 26]

APPENDIX B

EXTENTION DATA APPLYING TO RECOMMEND METABOLIZABLE ENERGY (ME) REQUIREMENTS FOR MAINTENANCE AND GROWTH OF SOME BEEF TYPES

Appendix B Table 1 Metabolizable energy (ME) requirements for *Bos indicus* cattle raised in Thailand (including of Thai native cattle, Brahman and Brahman crossbred)

Weight range	**100-500 kg**								
ADG range	**0.00-1.75 kg**								
Breed Code	**Thai *Bos indicus***								
Body Weight, kg	100	150	200	250	300	350	400	450	500
Dry Matter Intake (kg/d) [1]	2.31	3.75	5.2	6.64	8.08	9.53	10.97	12.41	13.86
Maintenance and Growth Requirements [2]									
ADG (kg/d)	**ME required for gain (MJ/d)**								
0.00	17.24	23.36	28.99	34.27	39.29	44.10	48.75	53.25	57.63
0.25	23.72	29.84	35.47	40.75	45.77	50.58	55.23	59.73	64.11
0.50	30.20	36.32	41.95	47.23	52.25	57.06	61.71	66.21	70.59
0.75	36.68	42.80	48.43	53.71	58.73	63.54	68.19	72.69	77.07
1.00	43.16	49.28	54.91	60.19	65.21	70.02	74.67	79.17	83.55
1.25	49.64	55.76	61.39	66.67	71.69	76.50	81.15	85.65	90.03
1.50	56.12	62.24	67.87	73.15	78.17	82.98	87.63	92.13	96.51
1.75	62.60	68.72	74.35	79.63	84.65	89.46	94.11	98.61	102.99

[1] Calculated dry matter intake follows equation of WTSR (2008); DMI = 0.0288BW – 0.5778
[2] Calculated ME requirements using equation 3 in Chapter 5 and method of WTSR (2008)

Appendix B Table 2 Metabolizable energy (ME) requirements for Thai native cattle in Thailand

Weight range	**100-300 kg**				
ADG range	**0.00-1.00 kg**				
Breed Code	**Thai native**				
Body Weight, kg	100	150	200	250	300
Dry Matter Intake (kg/d)	2.31	3.75	5.2	6.64	8.08
Maintenance and Growth Requirements					
ADG (kg/d)	**ME required for gain (MJ/d)**				
0.00	15.14	20.52	25.46	30.10	34.51
0.25	22.97	28.35	33.29	37.93	42.34
0.50	30.79	36.17	41.11	45.75	50.16
0.75	38.62	44.00	48.94	53.58	57.99
1.00	46.44	51.82	56.76	61.40	65.81

[1] Calculated dry matter intake follows equation of WTSR (2008); DMI = 0.0288BW – 0.5778
[2] Calculated ME requirements using equation 4 in Chapter 5 and method of WTSR (2008)

Appendix B Table 3 Metabolizable energy (ME) requirements for Brahman cattle in Thailand

Weight range	**100-400 kg**						
ADG range	**0.00-1.75 kg**						
Breed Code	**Brahman**						
Body Weight, kg	100	150	200	250	300	350	400
Dry Matter Intake (kg/d)	2.31	3.75	5.2	6.64	8.08	9.53	10.97
Maintenance and Growth Requirements							
ADG (kg/d)	**ME required for gain (MJ/d)**						
0.00	17.37	23.55	29.22	34.54	39.60	44.46	49.14
0.25	22.72	28.90	34.57	39.89	44.95	49.80	54.49
0.50	28.07	34.24	39.91	45.24	50.30	55.15	59.83
0.75	33.42	39.59	45.26	50.58	55.64	60.50	65.18
1.00	38.76	44.94	50.61	55.93	60.99	65.85	70.53
1.25	44.11	50.29	55.96	61.28	66.34	71.19	75.88
1.50	49.46	55.63	61.30	66.63	71.69	76.54	81.22
1.75	54.81	60.98	66.65	71.97	77.03	81.89	86.57

[1] Calculated dry matter intake follows equation of WTSR (2008); DMI = 0.0288BW – 0.5778
[2] Calculated ME requirements using equation 5 in Chapter 5 and method of WTSR (2008)

Appendix B Table 4 Metabolizable energy (ME) requirements for Brahman crossbreed cattle in Thailand

Weight range	**100-500 kg**								
ADG range	**0.00-1.75 kg**								
Breed Code	**Brahman crossbreed**								
Body Weight, kg	100	150	200	250	300	350	400	450	500
Dry Matter Intake (kg/d)	2.31	3.75	5.2	6.64	8.08	9.53	10.97	12.41	13.86
Maintenance and Growth Requirements									
ADG (kg/d)	**ME required for gain (MJ/d)**								
0.00	17.27	23.41	29.04	34.33	39.36	44.19	48.84	53.35	57.74
0.25	24.91	31.04	36.68	41.97	47.00	51.83	56.48	60.99	65.38
0.50	32.54	38.68	44.32	49.61	54.64	59.46	64.12	68.63	73.02
0.75	40.18	46.32	51.95	57.25	62.28	67.10	71.76	76.27	80.65
1.00	47.82	53.96	59.59	64.88	69.91	74.74	79.39	83.90	88.29
1.25	17.27	23.41	29.04	34.33	39.36	44.19	48.84	53.35	57.74
1.50	19.50	28.32	37.49	47.09	57.16	67.75	78.82	90.40	102.51
1.75	17.27	23.41	29.04	34.33	39.36	44.19	48.84	53.35	57.74

[1] Calculated dry matter intake follows equation of WTSR (2008); DMI = 0.0288BW – 0.5778
[2] Calculated ME requirements using equation 6 in Chapter 5 and method of WTSR (2008)

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