



ภาคผนวก

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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ภาคผนวก ก (Appendix A)

การวิเคราะห์ตัวอย่างในห้องปฏิบัติการ

บดตัวอย่างกลัมน้ำออกด้วยเครื่องบดเพื่อวิเคราะห์หาคุณค่าทางโภชนาการ ได้แก่ เปรอร์เซ็นต์ โปรตีน ไขมัน เถ้า และความชื้น ด้วย Proximate Analysis (AOAC, 2000) ดังนี้

Appendix A 1. การวิเคราะห์ปริมาณโปรตีน (Protein analysis)

1. ชั่งตัวอย่างเนื้อที่บดแล้ว 0.5 ก. ใส่ในกระดวยชั่งตัวอย่างแล้วนำไปใส่ในหลอดแก้วที่ใช้กับเครื่องกลั่นโปรตีน
2. เติมสารเร่งปฏิกิริยา selenium mixture จำนวน 2 ก. จากนั้นเติม conc. Sulfuric acid 15 มล.
3. นำหลอดแก้วเข้าเครื่องย่อยที่อุณหภูมิ 420 องศาเซลเซียส เป็นเวลา 2 ชั่วโมง จนกระทั่งได้สารละลายสีเขียวใส แล้วปล่อยให้เย็น จากนั้นเติมน้ำกลั่น 50 มล. เพื่อชะกรดที่อยู่ข้างหลอดลงไปด้วย
4. ตวงสารละลาย 4% boric acid 25 มล. ใส่ใน Erlenmeyer flask ขนาด 250 มล. แล้วเติม screen methylred indicator
5. เติมสารละลาย tashiro ลงในหลอดแก้วที่ผ่านการย่อยแล้ว นำปลาย condenser ของเครื่องกลั่นจุ่มลงใน Erlenmeyer flask ที่ได้จากข้อ 4 จากนั้นนำหลอดแก้วเข้าเครื่องกลั่น Gerhardt VAP 10 เติม 30% sodium hydroxide (จากข้อ 3) จำนวน 50 มล. ลงในหลอดแก้ว จากนั้นทำการกลั่นประมาณ 5 นาที หรือดูปริมาณสารละลายใน Erlenmeyer flask มีปริมาณเพิ่มขึ้นเป็น 150 มล. นำขวด Erlenmeyer flask ที่มีแอมโมเนียในสารละลาย 4% boric acid มาไทเทรตกับสารละลายมาตรฐาน 0.1 N HCl โดยไทเทรตจนถึงของสารละลายเปลี่ยนสีจากสีเขียวเป็นสีชมพูอมม่วง

การคำนวณหาเปอร์เซ็นต์โปรตีน

%N ในวัตถุแห้งหาได้จาก

$$1.401 \times \text{ปริมาณ HCl ที่ใช้ไทเทรต (มล.)} \times \text{ความเข้มข้นของกรด (นอลมอล)}$$

น้ำหนักวัตถุแห้ง

$$\% \text{ crude protein} = \%N \times 6.25$$

Appendix A 2. การวิเคราะห์หาปริมาณความชื้น (Moisture analysis)

1. นำถ้วยสำหรับใส่ตัวอย่างวิเคราะห์ความชื้น (weighting bottle) ที่ล้างสะอาดและเช็ดให้แห้ง อบในตู้อบที่อุณหภูมิ 100 องศาเซลเซียส นาน 1 ชั่วโมงและนำออกมาใส่ในโถดูดความชื้น (desiccators) ปล่อยให้เย็นและชั่งน้ำหนัก
2. ชั่งตัวอย่างเนื้อที่บดละเอียดแล้วจำนวน 2 กรัม ใส่ใน weighting bottle บันทึกน้ำหนักรวมทั้งหมดและอบที่อุณหภูมิ 100 องศาเซลเซียส นาน 4 ชั่วโมง จนได้น้ำหนักคงที่
3. นำถ้วยที่มีตัวอย่างออกจากตู้อบแห้ง ใส่ในโถดูดความชื้น ปล่อยให้เย็นจึงชั่งน้ำหนัก น้ำหนักที่หายไปคือ ปริมาณความชื้น และสารที่ระเหยได้ทั้งหมด

การคำนวณหาเปอร์เซ็นต์ความชื้น

$$\text{Moisture percentage} = \frac{(A-B) \times 100}{C}$$

$$A = \text{น้ำหนักถ้วย} + \text{น้ำหนักตัวอย่างก่อนอบ}$$

$$B = \text{น้ำหนักถ้วย} + \text{น้ำหนักตัวอย่างหลังอบ}$$

$$C = \text{น้ำหนักตัวอย่าง}$$

Appendix A 3. การวิเคราะห์หาปริมาณไขมัน (Fat analysis)

1. ชั่งน้ำหนักเนื้อที่บดแล้ว 2 ก. อบที่อุณหภูมิ 70 องศาเซลเซียส นาน 24 ชั่วโมง
2. นำขวดสกัดไขมันที่ผ่านการล้างสะอาด เช็ดให้แห้งแล้วอบที่อุณหภูมิ 100 องศาเซลเซียส นาน 1 ชั่วโมง และใส่ในโถดูดความชื้นปล่อยให้เย็น ทำการชั่งน้ำหนักได้
3. นำตัวอย่างที่ผ่านการหาความชื้นแล้วใส่ใน thimble ablundum ที่สะอาดและแห้ง
4. ใส่ thimble ablundum ลงใน sample Containers แล้วต่อเข้ากับ holding clips ของเครื่องสกัดไขมันแบบ Soxhlet extraction
5. ใส่ dichloromethane ลงในบีกเกอร์ขนาด 30 มล. แล้วนำต่อเข้ากับเครื่องสกัดไขมันให้สนิท
6. เปิดน้ำเย็นให้ไหลผ่าน Condenser ตลอดเวลา
7. เปิดสวิทซ์ไฟเครื่องสกัดไขมัน โดยใช้ความร้อนสกัดนาน 16 ชั่วโมง ด้วยอัตราการกลั่น 2-3 หยดต่อวินาที

8. นำ sample Containers ออก แล้วนำ reclaiming tube ใส่แทนที่ให้ความร้อน dichloromethane จะถูกกลั่นและถูกเก็บใน reclaiming tube ส่วนไขมันที่ได้จะอยู่ในบีกเกอร์
9. นำบีกเกอร์ที่มีไขมันไปอบที่อุณหภูมิ 100 องศาเซลเซียส นาน 30 นาที แล้วนำออกใส่ในโถดูดความชื้นปล่อยให้เย็น ซึ่งน้ำหนักที่เพิ่มขึ้นภายหลังการสกัด คือ น้ำหนักของไขมัน

การคำนวณเปอร์เซ็นต์ไขมัน

$$\text{Fat percentage} = \frac{(A-B) \times 100}{C}$$

- A = น้ำหนักบีกเกอร์ + น้ำหนักไขมันที่อบแล้ว
 B = น้ำหนักบีกเกอร์
 C = น้ำหนักตัวอย่าง

ภาคผนวก ข (Appendix B)

ข้อมูลผลการศึกษาโดยละเอียด

Table appendix B1 Chemical composition (% air dry basis)¹ and gross energy of feed ingredients.

	Replication	Corn	SBM	FM	RB
DM	1	93.77	94.81	96.11	92.69
	2	93.47	94.58	93.06	92.67
	Avg.	93.62±0.22	94.69±0.16	94.58±2.16	92.68±0.01
CP	1	8.04	49.04	63.65	12.58
	2	7.61	48.89	58.85	12.41
	Avg.	7.82±0.31	48.96±0.11	61.25±3.40	12.49±0.12
Fat	1	4.27	5.57	6.84	20.68
	2	4.49	5.79	6.40	20.60
	Avg.	4.38±0.16	5.68±0.15	6.62±0.31	20.64±0.05
CF	1	2.03	8.12	1.32	7.94
	2	2.00	7.69	1.21	7.66
	Avg.	2.02±0.02	7.91±0.31	1.26±0.08	7.80±0.20
Ash	1	1.32	6.37	20.50	11.97
	2	1.36	6.26	20.26	9.29
	Avg.	1.34±0.02	6.32±0.08	20.38±0.17	10.63±1.90
OM	1	92.45	88.43	75.61	80.72
	2	92.11	88.32	72.80	83.38
	Avg.	92.28±0.24	88.38±0.08	74.20±1.99	82.05±1.88

^{1/} Analyzed at Department of Animal and Aquatic Science Laboratory, CMU

Table appendix B2 Pheasant body weight of all experimental periods.

Treatment	Rep	Age (wk)																				
		Period I					Period II					Period III										
		0	1	2	3	4	5	adjust	6	7	8	9	10	adjust	11	12	13	14	15	16	17	18
1	1	16.20	28.20	44.75	69.88	123.16	178.73	97.64	137.47	205.38	282.20	347.20	402.45	512.45	573.33	693.33	786.88	856.78	928.33	982.00	1013.33	1048.57
	2	17.80	26.36	45.43	70.80	123.90	172.84	228.73	264.32	345.11	414.40	476.60	538.60	258.60	348.88	483.88	582.00	658.52	741.00	797.50	822.29	860.00
	3	17.50	29.20	49.25	71.57	139.08	191.50	98.63	133.43	208.78	274.89	355.40	426.46	328.90	425.75	545.00	627.50	700.66	785.00	840.60	875.00	910.00
	Avg.	17.17	27.92	46.48	70.75	128.71	181.02	141.67	178.41	253.09	323.83	393.07	455.84	366.65	449.32	574.07	665.46	738.65	818.11	873.37	903.54	939.52
2	1	17.30	29.30	50.47	71.14	127.14	178.29	141.50	178.29	238.18	306.29	342.67	388.80	478.80	550.60	628.40	693.33	793.33	896.67	954.00	1010.00	1080.00
	2	18.20	27.30	52.00	76.55	128.50	190.25	170.25	199.00	242.00	289.11	334.36	378.90	302.58	370.18	453.33	530.76	636.67	756.67	806.70	862.22	946.66
	3	18.60	29.22	49.90	70.60	116.00	179.80	118.71	148.17	208.92	257.20	292.00	330.76	296.58	354.44	428.48	496.67	600.56	730.00	796.70	856.67	935.56
	Avg.	18.03	28.61	50.79	72.76	123.88	182.78	143.49	175.15	229.70	284.20	323.01	366.15	359.32	425.07	503.40	573.59	676.85	794.45	852.47	909.63	987.41
3	1	16.10	29.25	46.00	70.86	108.86	140.84	170.84	234.80	305.00	346.86	385.29	430.26	430.26	482.86	580.78	706.70	806.67	848.33	888.33	911.67	968.33
	2	17.20	28.15	46.50	68.00	92.17	132.95	152.95	213.89	287.05	321.17	356.00	408.20	260.56	328.89	423.75	587.50	702.78	752.50	782.50	815.00	862.50
	3	18.40	27.14	45.80	72.80	110.67	159.71	109.71	175.82	217.33	263.71	313.43	360.40	380.70	443.64	537.50	666.24	774.00	814.00	850.00	882.50	940.00
	Avg.	17.23	28.18	46.10	70.55	103.90	144.50	144.50	208.17	269.79	310.58	351.57	399.62	357.17	418.46	514.01	653.48	761.15	804.94	840.28	869.72	923.61
4	1	16.70	32.00	50.56	73.33	106.00	142.78	132.78	173.56	209.93	255.29	295.70	340.70	360.40	401.67	508.18	600.20	730.00	808.89	883.33	922.67	1002.22
	2	17.50	31.43	50.43	70.71	100.70	132.30	152.30	202.11	223.29	267.40	298.80	352.58	408.20	465.15	552.56	633.75	746.25	830.00	908.75	947.50	1015.50
	3	17.80	29.56	45.00	64.14	98.50	128.71	143.50	179.56	203.45	242.00	277.43	330.56	300.76	353.33	448.98	538.18	680.46	786.67	876.00	910.25	1000.00
	Avg.	17.33	30.99	48.66	69.40	101.73	134.60	142.86	185.07	212.22	254.90	290.64	341.28	356.45	406.72	503.24	590.71	718.90	808.52	889.36	926.81	1005.91
5	1	16.20	27.53	44.59	55.95	74.27	113.50	75.71	115.20	147.33	178.18	199.05	222.62	302.62	365.71	447.67	556.67	659.00	720.00	761.67	808.33	870.00
	2	16.70	29.53	49.06	60.82	80.59	121.71	123.40	156.25	185.56	218.22	234.40	268.60	306.60	368.65	475.00	590.30	720.00	817.78	856.67	897.14	965.56
	3	18.30	29.43	46.62	60.54	80.00	122.64	228.29	265.70	295.53	318.50	338.60	375.75	468.60	537.27	678.44	780.00	910.00	982.42	1018.80	1060.92	1140.00
	Avg.	17.07	28.83	46.75	59.10	78.28	119.28	142.47	179.05	209.47	238.30	257.35	288.99	359.27	423.88	533.70	642.32	763.00	840.07	879.04	922.13	991.85
6	1	17.60	27.65	40.53	57.40	72.53	98.63	116.74	152.67	180.20	203.40	236.00	262.58	426.46	485.40	536.75	615.00	705.00	820.50	918.33	958.33	993.33
	2	16.80	25.56	41.15	58.50	80.69	103.40	149.80	180.40	228.20	254.44	287.55	326.60	382.58	440.33	505.40	587.00	685.00	790.00	884.00	945.00	977.00
	3	17.67	27.17	41.67	57.83	73.50	95.71	172.84	226.10	259.50	282.60	316.58	343.60	268.60	313.35	388.55	482.64	600.00	702.00	803.33	850.00	896.67
	Avg.	17.36	26.79	41.12	57.91	75.58	99.25	146.46	186.39	222.63	246.81	280.04	310.93	359.21	413.03	476.90	561.55	663.33	770.83	868.56	917.78	955.67

Table appendix B3 Pheasant average weight gain of all experimental periods (g/d/wk).

Treatment	Rep	Age (wk)																	
		Period I					Period II					Period III							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
T1	1	12.00	16.55	25.13	53.28	55.57	39.83	67.91	76.82	65.00	55.25	60.88	120.00	93.55	69.90	71.55	53.67	31.33	35.24
	2	8.56	19.06	25.37	53.10	48.94	35.59	80.79	69.29	62.20	62.00	90.28	135.00	98.12	76.52	82.48	56.50	24.79	37.71
	3	11.70	20.05	22.32	67.51	52.42	34.80	75.35	66.11	80.51	71.06	96.85	119.25	82.50	73.16	84.34	55.60	34.40	35.00
	Avg.	10.75	18.55	24.28	57.96	52.31	36.74	74.68	70.74	69.24	62.77	82.67	124.75	91.39	73.19	79.46	55.26	30.17	35.98
T2	1	12.00	21.17	20.67	56.00	51.14	36.79	59.89	68.11	36.38	46.13	71.80	77.80	64.93	100.00	103.34	57.33	56.00	70.00
	2	9.10	24.70	24.55	51.95	61.75	28.75	43.00	47.11	45.25	44.54	67.60	83.15	77.43	105.91	120.00	50.03	55.52	84.44
	3	10.62	20.68	20.70	45.40	63.80	29.46	60.75	48.28	34.80	38.76	57.86	74.04	68.19	103.89	129.44	66.70	59.97	78.89
	Avg.	10.57	22.18	21.97	51.12	58.90	31.67	54.55	54.50	38.81	43.14	65.75	78.33	70.18	103.27	117.59	58.02	57.16	77.78
T3	1	13.15	16.75	24.86	38.00	31.98	63.96	70.20	41.86	38.43	44.97	52.60	97.92	125.92	99.97	41.66	40.00	23.34	56.66
	2	10.95	18.35	21.50	24.17	40.78	60.95	73.16	34.11	34.83	52.20	68.33	94.86	163.75	115.28	49.72	30.00	32.50	47.50
	3	8.74	18.66	27.00	37.87	49.05	66.11	41.51	46.38	49.72	46.97	62.94	93.86	128.74	107.76	40.00	36.00	32.50	57.50
	Avg.	10.95	17.92	24.45	33.34	40.60	63.67	61.62	40.79	40.99	48.05	61.29	95.55	139.47	107.67	43.79	35.33	29.45	53.89
T4	1	15.30	18.56	22.77	32.67	36.78	40.78	36.37	45.36	40.41	45.00	41.27	106.51	92.02	129.80	78.89	74.44	39.34	79.55
	2	13.93	19.00	20.29	29.99	31.60	49.81	21.19	44.11	31.40	53.78	56.95	87.41	81.19	112.50	83.75	78.75	38.75	68.00
	3	11.76	15.44	19.14	34.36	30.21	36.06	23.89	38.55	35.43	53.13	52.57	95.65	89.20	142.28	106.21	89.33	34.25	89.75
	Avg.	13.66	17.67	20.73	32.34	32.86	42.21	27.15	42.67	35.75	50.64	50.26	96.52	87.47	128.19	89.62	80.84	37.45	79.10
T5	1	11.33	17.06	11.36	18.32	39.23	39.49	32.13	30.85	20.87	23.57	63.09	81.96	109.00	102.33	61.00	41.67	46.67	61.67
	2	12.83	19.53	11.76	19.76	41.12	32.85	29.31	32.66	16.18	34.20	62.05	106.35	115.30	129.70	97.78	38.89	40.48	68.41
	3	11.13	17.19	13.92	19.46	42.64	37.41	29.83	22.97	20.10	37.15	68.67	141.17	101.56	130.00	72.42	36.38	42.12	79.08
	Avg.	11.76	17.93	12.35	19.18	41.00	36.58	30.42	28.83	19.05	31.64	64.60	109.83	108.62	120.68	77.07	38.98	43.09	69.72
T6	1	10.05	12.89	16.87	15.13	26.10	35.93	27.53	23.20	32.60	26.58	58.94	51.35	78.25	90.00	115.50	97.83	40.00	35.00
	2	8.76	15.60	17.35	22.19	22.71	30.60	47.80	26.24	33.11	39.05	57.75	65.07	81.60	98.00	105.00	94.00	61.00	32.00
	3	9.50	14.50	16.17	15.67	22.21	53.26	33.40	23.10	33.98	27.02	44.75	75.20	94.09	117.36	102.00	101.33	46.67	46.67
	Avg.	9.43	14.33	16.79	17.66	23.67	39.93	36.24	24.18	33.23	30.88	53.81	63.87	84.65	101.79	107.50	97.72	49.22	37.89

Table appendix B4 Pheasant average daily gain of all experimental periods (g/b/d).

Treatment	Rep	Age (wk)																	
		Period I					Period II					Period III							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
T1	1	1.71	2.36	3.59	7.61	7.94	5.69	9.70	10.97	9.29	7.89	8.70	17.14	13.36	9.99	10.22	7.67	4.48	5.03
	2	1.22	2.72	3.62	7.59	6.99	5.08	11.54	9.90	8.89	8.86	12.90	19.29	14.02	10.93	11.78	8.07	3.54	5.39
	3	1.67	2.86	3.19	9.64	7.49	4.97	10.76	9.44	11.50	10.15	13.84	17.04	11.79	10.45	12.05	7.94	4.91	5.00
	Avg.	1.54	2.65	3.47	8.28	7.47	5.25	10.67	10.11	9.89	8.97	11.81	17.82	13.06	10.46	11.35	7.89	4.31	5.14
T2	1	1.71	3.02	2.95	8.00	7.31	5.26	8.56	9.73	5.20	6.59	10.26	11.11	9.28	14.29	14.76	8.19	8.00	10.00
	2	1.30	3.53	3.51	7.42	8.82	4.11	6.14	6.73	6.46	6.36	9.66	11.88	11.06	15.13	17.14	7.15	7.93	12.06
	3	1.52	2.95	2.96	6.49	9.11	4.21	8.68	6.90	4.97	5.54	8.27	10.58	9.74	14.84	18.49	9.53	8.57	11.27
	Avg.	1.51	3.17	3.14	7.30	8.41	4.52	7.79	7.79	5.54	6.16	9.39	11.19	10.03	14.75	16.80	8.29	8.17	11.11
T3	1	1.88	2.39	3.55	5.43	4.57	9.14	10.03	5.98	5.49	6.42	7.51	13.99	17.99	14.28	5.95	5.71	3.33	8.09
	2	1.56	2.62	3.07	3.45	5.83	8.71	10.45	4.87	4.98	7.46	9.76	13.55	23.39	16.47	7.10	4.29	4.64	6.79
	3	1.25	2.67	3.86	5.41	7.01	9.44	5.93	6.63	7.10	6.71	8.99	13.41	18.39	15.39	5.71	5.14	4.64	8.21
	Avg.	1.56	2.56	3.49	4.76	5.80	9.10	8.80	5.83	5.86	6.86	8.76	13.65	19.92	15.38	6.26	5.05	4.21	7.70
T4	1	2.19	2.65	3.25	4.67	5.25	5.83	5.20	6.48	5.77	6.43	5.90	15.22	13.15	18.54	11.27	10.63	5.62	11.36
	2	1.99	2.71	2.90	4.28	4.51	7.12	3.03	6.30	4.49	7.68	8.14	12.49	11.60	16.07	11.96	11.25	5.54	9.71
	3	1.68	2.21	2.73	4.91	4.32	5.15	3.41	5.51	5.06	7.59	7.51	13.66	12.74	20.33	15.17	12.76	4.89	12.82
	Avg.	1.95	2.52	2.96	4.62	4.69	6.03	3.88	6.10	5.11	7.23	7.18	13.79	12.50	18.31	12.80	11.55	5.35	11.30
T5	1	1.62	2.44	1.62	2.62	5.60	5.64	4.59	4.41	2.98	3.37	9.01	11.71	15.57	14.62	8.71	5.95	6.67	8.81
	2	1.83	2.79	1.68	2.82	5.87	4.69	4.19	4.67	2.31	4.89	8.86	15.19	16.47	18.53	13.97	5.56	5.78	9.77
	3	1.59	2.46	1.99	2.78	6.09	5.34	4.26	3.28	2.87	5.31	9.81	20.17	14.51	18.57	10.35	5.20	6.02	11.30
	Avg.	1.68	2.56	1.76	2.74	5.86	5.23	4.35	4.12	2.72	4.52	9.23	15.69	15.52	17.24	11.01	5.57	6.16	9.96
T6	1	1.44	1.84	2.41	2.16	3.73	5.13	3.93	3.31	4.66	3.80	8.42	7.34	11.18	12.86	16.50	13.98	5.71	5.00
	2	1.25	2.23	2.48	3.17	3.24	4.37	6.83	3.75	4.73	5.58	8.25	9.30	11.66	14.00	15.00	13.43	8.71	4.57
	3	1.36	2.07	2.31	2.24	3.17	7.61	4.77	3.30	4.85	3.86	6.39	10.74	13.44	16.77	14.57	14.48	6.67	6.67
	Avg.	1.35	2.05	2.40	2.52	3.38	5.70	5.18	3.45	4.75	4.41	7.69	9.12	12.09	14.54	15.36	13.96	7.03	5.41

Table appendix B5 Pheasant feed intake of all experimental periods (g).

Treatment	Rep	Age (wk)																	
		Period I					Period II					Period III							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
T1	1	16.22	40.08	61.57	134.25	136.14	103.56	168.42	178.99	156.00	135.36	164.38	333.60	264.75	192.23	190.32	150.28	79.89	97.97
	2	16.22	31.53	58.35	134.87	116.48	94.32	188.24	169.76	148.04	145.70	249.17	371.25	276.70	223.44	232.59	152.55	69.41	104.08
	3	16.73	42.51	50.22	165.39	131.06	92.22	189.88	148.09	189.20	159.89	237.28	298.13	217.80	186.56	220.97	144.56	93.57	88.90
	Avg.	16.39	38.04	56.72	144.84	127.89	96.70	182.18	165.61	164.41	146.98	216.94	334.33	253.08	200.74	214.63	149.13	80.96	96.98
T2	1	15.36	45.52	52.71	137.20	135.02	101.17	154.52	173.68	83.67	111.64	186.68	221.73	179.21	255.00	273.85	153.64	151.20	192.50
	2	15.93	48.91	57.93	132.48	151.29	67.56	98.90	114.95	113.13	115.79	185.90	212.03	205.19	294.43	328.80	138.08	151.01	236.43
	3	12.96	38.25	51.34	118.95	151.84	72.17	142.77	107.18	82.82	84.50	140.02	185.10	178.66	282.58	355.96	178.76	161.92	201.17
	Avg.	14.75	44.23	53.99	129.54	146.05	80.30	132.06	131.94	93.21	103.98	170.87	206.29	187.68	277.34	319.54	156.83	154.71	210.03
T3	1	26.43	37.19	63.63	98.80	82.84	169.49	179.01	102.55	96.08	111.53	133.60	253.61	333.69	273.92	119.98	110.40	63.48	145.06
	2	20.26	44.96	56.76	60.90	106.03	154.81	177.04	85.29	78.38	122.67	183.81	259.92	438.85	311.26	133.25	77.40	84.50	129.20
	3	20.11	47.39	77.76	99.97	120.17	163.95	98.79	105.76	118.32	107.09	169.31	249.67	332.15	285.56	108.00	99.00	90.35	161.00
	Avg.	22.27	43.18	66.05	86.56	103.01	162.75	151.62	97.86	97.59	113.76	162.24	254.40	368.23	290.25	120.41	95.60	79.44	145.09
T4	1	29.07	43.62	62.62	91.47	95.62	108.06	90.93	107.96	94.96	102.60	109.78	285.45	252.13	356.95	220.89	215.89	112.11	221.15
	2	25.91	46.55	51.73	80.36	86.27	120.03	49.58	101.44	70.65	123.69	145.22	236.01	219.21	301.50	226.13	200.81	96.88	179.52
	3	25.63	40.93	53.60	91.39	77.05	87.99	58.53	87.89	78.65	121.14	134.05	241.04	231.92	377.04	288.89	236.72	92.48	240.53
	Avg.	26.87	43.70	55.98	87.74	86.31	105.36	66.35	99.10	81.42	115.81	129.68	254.16	234.42	345.16	245.30	217.81	100.49	213.73
T5	1	31.16	43.50	30.44	50.38	110.64	108.20	85.47	81.76	56.35	64.81	244.79	176.57	294.30	278.34	167.75	117.50	128.80	169.58
	2	26.30	51.75	33.53	55.34	103.62	84.10	72.69	82.30	40.77	83.79	170.64	281.83	309.00	345.00	262.05	105.77	113.33	186.08
	3	22.37	49.33	40.38	53.52	119.38	107.74	82.93	61.56	50.25	91.02	130.30	424.33	270.15	343.20	195.53	96.77	113.30	205.61
	Avg.	26.61	48.19	34.78	53.08	111.21	100.01	80.36	75.21	49.12	79.87	181.91	294.24	291.15	322.18	208.44	106.68	118.48	187.09
T6	1	26.12	35.44	44.70	40.25	70.99	102.40	73.78	60.32	79.87	66.45	153.24	130.94	197.19	229.50	306.08	264.15	106.40	94.50
	2	20.40	38.68	49.26	65.47	60.86	86.29	131.93	70.32	83.44	100.75	144.38	172.44	217.06	264.60	285.60	258.50	167.75	85.12
	3	20.71	41.47	46.56	43.08	54.43	130.49	89.51	55.90	84.95	70.79	115.46	197.02	249.34	315.70	273.36	263.47	122.27	123.67
	Avg.	22.41	38.53	46.84	49.60	62.09	106.39	98.41	62.18	82.75	79.33	137.69	166.80	221.19	269.93	288.35	262.04	132.14	101.10

Table appendix B6 Pheasant daily feed intake of all experimental periods (g/b/d).

Treatment	Rep	Age (wk)																	
		Period I					Period II					Period III							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
T1	1	2.32	5.73	8.80	19.18	19.45	14.79	24.06	25.57	22.29	19.34	23.48	47.66	37.82	27.46	27.19	21.47	11.41	14.00
	2	2.32	4.50	8.34	19.27	16.64	13.47	26.89	24.25	21.15	20.81	35.60	53.04	39.53	31.92	33.23	21.79	9.92	14.87
	3	2.39	6.07	7.17	23.63	18.72	13.17	27.13	21.16	27.03	22.84	33.90	42.59	31.11	26.65	31.57	20.65	13.37	12.70
	Avg.	2.34	5.43	8.10	20.69	18.27	13.81	26.03	23.66	23.49	21.00	30.99	47.76	36.15	28.68	30.66	21.30	11.57	13.85
T2	1	2.19	6.50	7.53	19.60	19.29	14.45	22.07	24.81	11.95	15.95	26.67	31.68	25.60	36.43	39.12	21.95	21.60	27.50
	2	2.28	6.99	8.28	18.93	21.61	9.65	14.13	16.42	16.16	16.54	26.56	30.29	29.31	42.06	46.97	19.73	21.57	33.78
	3	1.85	5.46	7.33	16.99	21.69	10.31	20.40	15.31	11.83	12.07	20.00	26.44	25.52	40.37	50.85	25.54	23.13	28.74
	Avg.	2.11	6.32	7.71	18.51	20.86	11.47	18.87	18.85	13.32	14.85	24.41	29.47	26.81	39.62	45.65	22.40	22.10	30.00
T3	1	3.78	5.31	9.09	14.11	11.83	24.21	25.57	14.65	13.73	15.93	19.09	36.23	47.67	39.13	17.14	15.77	9.07	20.72
	2	2.89	6.42	8.11	8.70	15.15	22.12	25.29	12.18	11.20	17.52	26.26	37.13	62.69	44.47	19.04	11.06	12.07	18.46
	3	2.87	6.77	11.11	14.28	17.17	23.42	14.11	15.11	16.90	15.30	24.19	35.67	47.45	40.79	15.43	14.14	12.91	23.00
	Avg.	3.18	6.17	9.44	12.37	14.72	23.25	21.66	13.98	13.94	16.25	23.18	36.34	52.60	41.46	17.20	13.66	11.35	20.73
T4	1	4.15	6.23	8.95	13.07	13.66	15.44	12.99	15.42	13.57	14.66	15.68	40.78	36.02	50.99	31.56	30.84	16.02	31.59
	2	3.70	6.65	7.39	11.48	12.32	17.15	7.08	14.49	10.09	17.67	20.75	33.72	31.32	43.07	32.30	28.69	13.84	25.65
	3	3.66	5.85	7.66	13.06	11.01	12.57	8.36	12.56	11.24	17.31	19.15	34.43	33.13	53.86	41.27	33.82	13.21	34.36
	Avg.	3.84	6.24	8.00	12.53	12.33	15.05	9.48	14.16	11.63	16.54	18.53	36.31	33.49	49.31	35.04	31.12	14.36	30.53
T5	1	4.45	6.21	4.35	7.20	15.81	15.46	12.21	11.68	8.05	9.26	34.97	25.22	42.04	39.76	23.96	16.79	18.40	24.23
	2	3.76	7.39	4.79	7.91	14.80	12.01	10.38	11.76	5.82	11.97	24.38	40.26	44.14	49.29	37.44	15.11	16.19	26.58
	3	3.20	7.05	5.77	7.65	17.05	15.39	11.85	8.79	7.18	13.00	18.61	60.62	38.59	49.03	27.93	13.82	16.19	29.37
	Avg.	3.80	6.88	4.97	7.58	15.89	14.29	11.48	10.74	7.02	11.41	25.99	42.03	41.59	46.03	29.78	15.24	16.93	26.73
T6	1	3.73	5.06	6.39	5.75	10.14	14.63	10.54	8.62	11.41	9.49	21.89	18.71	28.17	32.79	43.73	37.74	15.20	13.50
	2	2.91	5.53	7.04	9.35	8.69	12.33	18.85	10.05	11.92	14.39	20.63	24.63	31.01	37.80	40.80	36.93	23.96	12.16
	3	2.96	5.92	6.65	6.15	7.77	18.64	12.79	7.99	12.14	10.11	16.49	28.15	35.62	45.10	39.05	37.64	17.47	17.67
	Avg.	3.20	5.50	6.69	7.09	8.87	15.20	14.06	8.88	11.82	11.33	19.67	23.83	31.60	38.56	41.19	37.43	18.88	14.44

Table appendix B7 Pheasant feed conversion ratio of all experimental periods.

Treatment	Rep	Age (wk)																	
		Period I					Period II					Period III							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
T1	1	1.35	2.42	2.45	2.52	2.45	2.60	2.48	2.33	2.40	2.45	2.70	2.78	2.83	2.75	2.66	2.80	2.55	2.78
	2	1.89	1.65	2.30	2.54	2.38	2.65	2.33	2.45	2.38	2.35	2.76	2.75	2.82	2.92	2.82	2.70	2.80	2.76
	3	1.43	2.12	2.25	2.45	2.50	2.65	2.52	2.24	2.35	2.25	2.45	2.50	2.64	2.55	2.62	2.60	2.72	2.54
	Avg.	1.56	2.07	2.33	2.50	2.44	2.63	2.44	2.34	2.38	2.35	2.64	2.68	2.76	2.74	2.70	2.70	2.69	2.69
T2	1	1.28	2.15	2.55	2.45	2.64	2.75	2.58	2.55	2.30	2.42	2.60	2.85	2.76	2.55	2.65	2.68	2.70	2.75
	2	1.75	1.98	2.36	2.55	2.45	2.35	2.30	2.44	2.50	2.60	2.75	2.55	2.65	2.78	2.74	2.76	2.72	2.80
	3	1.22	1.85	2.48	2.62	2.38	2.45	2.35	2.22	2.38	2.18	2.42	2.50	2.62	2.72	2.75	2.68	2.70	2.55
	Avg.	1.42	1.99	2.46	2.54	2.49	2.52	2.41	2.40	2.39	2.40	2.59	2.63	2.68	2.68	2.71	2.71	2.71	2.70
T3	1	2.01	2.22	2.56	2.60	2.59	2.65	2.55	2.45	2.50	2.48	2.54	2.59	2.65	2.74	2.88	2.76	2.72	2.56
	2	1.85	2.45	2.64	2.52	2.60	2.54	2.42	2.50	2.25	2.35	2.69	2.74	2.68	2.70	2.68	2.58	2.60	2.72
	3	2.30	2.54	2.88	2.64	2.45	2.48	2.38	2.28	2.38	2.28	2.69	2.66	2.58	2.65	2.70	2.75	2.78	2.80
	Avg.	2.05	2.40	2.69	2.59	2.55	2.56	2.45	2.41	2.38	2.37	2.64	2.66	2.64	2.70	2.75	2.70	2.70	2.69
T4	1	1.90	2.35	2.75	2.80	2.60	2.65	2.50	2.38	2.35	2.28	2.66	2.68	2.74	2.75	2.80	2.90	2.85	2.78
	2	1.86	2.45	2.55	2.68	2.73	2.41	2.34	2.30	2.25	2.30	2.55	2.70	2.70	2.68	2.70	2.55	2.50	2.64
	3	2.18	2.65	2.80	2.66	2.55	2.44	2.45	2.28	2.22	2.28	2.55	2.52	2.60	2.65	2.72	2.65	2.70	2.68
	Avg.	1.98	2.48	2.70	2.71	2.63	2.50	2.43	2.32	2.27	2.29	2.59	2.63	2.68	2.69	2.74	2.70	2.68	2.70
T5	1	2.75	2.55	2.68	2.75	2.82	2.74	2.66	2.65	2.70	2.75	3.88	2.15	2.70	2.72	2.75	2.82	2.76	2.75
	2	2.05	2.65	2.85	2.80	2.52	2.56	2.48	2.52	2.52	2.45	2.75	2.65	2.68	2.66	2.68	2.72	2.80	2.72
	3	2.01	2.87	2.90	2.75	2.80	2.88	2.78	2.68	2.50	2.45	1.90	3.01	2.66	2.64	2.70	2.66	2.69	2.60
	Avg.	2.27	2.69	2.81	2.77	2.71	2.73	2.64	2.62	2.57	2.55	2.84	2.60	2.68	2.67	2.71	2.73	2.75	2.69
T6	1	2.60	2.75	2.65	2.66	2.72	2.85	2.68	2.60	2.45	2.50	2.60	2.55	2.52	2.55	2.65	2.70	2.66	2.70
	2	2.33	2.48	2.84	2.95	2.68	2.82	2.76	2.68	2.52	2.58	2.50	2.65	2.66	2.70	2.72	2.75	2.75	2.66
	3	2.18	2.86	2.88	2.75	2.45	2.45	2.68	2.42	2.50	2.62	2.58	2.62	2.65	2.69	2.68	2.60	2.62	2.65
	Avg.	2.37	2.70	2.79	2.79	2.62	2.71	2.71	2.57	2.49	2.57	2.56	2.61	2.61	2.65	2.68	2.68	2.68	2.67

Table appendix B8 Productive performance of Ring-necked pheasant fed diets containing various levels of CP and ME during 1-5 weeks of age.

	CP (%): A			Energy (kcal/g): B		Probability		
	28	25	22	3.2	2.9	A	B	A x B
1st week								
Initial weight (g)	17.60	17.28	17.21	17.16	17.57	NS	NS	NS
Final weight (g)	28.26 ^{ab}	29.58 ^a	27.81 ^b	28.31	28.79	NS	NS	*
WG (g)	10.66	12.30	10.60	11.15	1.22	NS	NS	NS
ADG (g)	1.52	1.76	1.52	1.59	1.60	NS	NS	NS
FI (g)	15.57 ^b	24.56 ^a	24.51 ^a	21.75	21.34	**	NS	NS
DFI (g/d)	2.24 ^b	3.51 ^a	3.50 ^a	3.11	3.05	*	NS	NS
FCR	1.48 ^b	2.02 ^a	2.32 ^a	1.96	1.92	*	NS	NS
2nd week								
Initial weight (g)	28.26 ^{ab}	29.58 ^a	27.81 ^b	28.31	28.79	NS	NS	*
Final weight (g)	48.63 ^a	47.36 ^a	43.94 ^b	46.44	46.85	**	NS	**
WG (g)	20.37 ^a	17.79 ^b	16.13 ^b	18.13	18.08	**	NS	**
ADG (g)	2.91 ^a	2.54 ^b	2.30 ^b	2.59	2.58	**	NS	**
FI (g)	41.13	43.44	43.36	43.14	41.15	NS	NS	*
DFI (g/d)	5.88	6.21	6.19	6.12	6.02	NS	NS	*
FCR	2.02 ^b	2.44 ^a	2.69 ^a	2.39	2.39	*	NS	NS
3rd week								
Initial weight (g)	48.63 ^a	45.86 ^a	43.94 ^b	46.44	46.85	**	NS	**
Final weight (g)	71.76 ^a	69.97 ^a	58.51 ^b	66.80	66.69	**	NS	NS
WG (g)	23.12 ^a	22.59 ^a	14.57 ^b	20.36	19.83	**	NS	**
ADG (g)	3.30 ^a	3.23 ^a	2.08 ^b	2.91	2.83	**	NS	**
FI (g)	55.35 ^a	61.02 ^a	40.81 ^b	52.16	52.27	**	NS	*
DFI (g/d)	7.91 ^a	8.72 ^a	5.83 ^b	7.89	8.21	**	NS	*
FCR	2.40 ^b	2.70 ^a	2.80 ^a	2.61	2.65	**	NS	NS

^{abc} Means within a row with no common superscripts differ significantly ($P < 0.05$).

NS = No significant, **= $P < 0.01$, *= $P < 0.05$

Table appendix B8 (Cont.) Productive performances of Ring-necked pheasant fed diets containing various levels of CP and ME during 1-5 weeks of age.

	CP (%): A			Energy (kcal/g): B		Probability		
	28	25	22	3.2	2.9	A	B	A x B
4th week								
Initial weight (g)	71.76 ^a	69.97 ^a	58.51 ^b	66.80	66.69	**	NS	**
Final weight (g)	126.30 ^a	102.82 ^b	76.93 ^c	103.63	100.39	**	NS	NS
WG (g)	54.54 ^a	32.84 ^b	18.42 ^c	36.83	33.70	**	NS	NS
ADG (g)	7.79 ^a	4.69 ^b	2.63 ^c	5.26	4.82	**	NS	NS
FI (g)	137.19 ^a	87.15 ^b	51.34 ^c	94.82	88.96	**	NS	NS
DFI (g/d)	19.60 ^a	12.45 ^b	7.33 ^c	13.55	12.71	**	NS	NS
FCR	2.52 ^c	2.65 ^b	2.78 ^a	2.62	2.68	**	NS	NS
5th week								
Initial weight (g)	126.30 ^a	102.82 ^b	76.93 ^c	103.63	100.40	*	NS	NS
Final weight (g)	185.90 ^a	139.55 ^b	109.26 ^b	148.27 ^A	138.87 ^B	**	*	NS
WG (g)	55.60 ^a	36.73 ^b	32.34 ^b	44.64 ^A	38.48 ^B	**	*	NS
ADG (g)	7.94 ^a	5.25 ^b	4.62 ^b	6.38 ^A	5.50 ^B	**	*	NS
FI (g)	136.97 ^a	94.66 ^b	86.65 ^b	114.40 ^A	98.15 ^B	**	*	NS
DFI (g/d)	19.57 ^a	13.52 ^b	12.38 ^b	16.29 ^A	14.02 ^B	**	*	NS
FCR	2.47 ^b	2.59 ^{ab}	2.67 ^a	2.57	2.58	*	NS	NS
Average								
Initial weight (g)	17.60	17.28	17.21	17.16	17.57	NS	NS	NS
Final weight (g)	181.90 ^a	139.55 ^b	109.26 ^c	148.27 ^A	138.87 ^B	**	*	NS
WG (g)	164.30 ^a	122.27 ^b	92.05 ^c	131.11 ^A	121.30 ^B	**	*	NS
ADG (g)	4.81 ^a	3.49 ^b	2.63 ^c	3.75 ^A	3.47 ^B	**	*	NS
FI (g)	386.22 ^a	310.81 ^b	246.67 ^c	326.27 ^A	302.88 ^B	**	*	NS
DFI (g/d)	11.03 ^a	8.89 ^{ab}	7.04 ^b	9.32 ^A	8.65 ^B	**	*	NS
FCR	2.35 ^c	2.54 ^b	2.68 ^a	2.49	2.49	**	NS	NS

^{abc} Means within a row with no common superscripts differ significantly ($P < 0.05$).

NS = No significant, **= $P < 0.01$, *= $P < 0.05$

Table appendix B9 Productive performance of Ring-necked pheasant during 1-5 weeks of age after fed different levels of CP and ME.

Age (wk)	Treatment	CP (%)	Energy (kcal/g)	BW (g)	WG (g)	ADG (g)	FI (g)	DFI (g/d)	FCR
1	1	28	3.2	27.92 ^b	10.75 ^{ab}	1.53 ^{ab}	16.39 ^b	2.34 ^b	1.56 ^{bc}
	2	28	2.9	28.60 ^b	10.57 ^b	1.51 ^b	14.75 ^b	2.11 ^b	1.42 ^c
	3	25	3.2	28.18 ^b	10.95 ^{ab}	1.56 ^{ab}	22.26 ^a	3.18 ^a	2.05 ^{ab}
	4	25	2.9	31.00 ^a	13.66 ^a	1.95 ^a	26.87 ^a	3.84 ^a	1.98 ^{ab}
	5	22	3.2	28.83 ^b	11.76 ^{ab}	1.68 ^{ab}	26.61 ^a	3.80 ^a	2.27 ^a
	6	22	2.9	26.79 ^b	9.44 ^b	1.35 ^b	22.41 ^a	3.20 ^a	2.37 ^a
2	1	28	3.2	46.48 ^b	18.55 ^b	2.65 ^b	38.04 ^b	5.43 ^b	2.07 ^b
	2	28	2.9	50.79 ^a	22.18 ^a	3.17 ^a	44.23 ^{ab}	6.31 ^{ab}	1.99 ^{bc}
	3	25	3.2	46.10 ^b	17.92 ^b	2.56 ^b	43.18 ^a	6.16 ^{ab}	2.40 ^{ab}
	4	25	2.9	48.66 ^{ab}	17.67 ^b	2.52 ^b	43.70 ^a	6.24 ^{ab}	2.48 ^a
	5	22	3.2	46.76 ^b	17.93 ^b	2.56 ^b	48.19 ^a	6.88 ^a	2.69 ^a
	6	22	2.9	41.12 ^c	14.33 ^c	2.05 ^c	38.53 ^b	5.50 ^b	2.70 ^a
3	1	28	3.2	70.75 ^a	24.27 ^a	3.47 ^a	56.71 ^{ab}	8.10 ^{ab}	2.33 ^b
	2	28	2.9	72.76 ^a	21.97 ^{ab}	3.14 ^{ab}	53.99 ^b	7.71 ^b	2.46 ^b
	3	25	3.2	70.55 ^a	24.45 ^a	3.49 ^a	66.05 ^a	9.44 ^a	2.69 ^a
	4	25	2.9	69.39 ^a	20.73 ^b	2.96 ^b	55.98 ^{ab}	7.99 ^{ab}	2.70 ^a
	5	22	3.2	59.10 ^b	12.35 ^d	1.76 ^d	34.78 ^c	4.97 ^c	2.81 ^a
	6	22	2.9	57.91 ^b	16.79 ^c	2.78 ^c	46.84 ^b	6.69 ^b	2.79 ^a
4	1	28	3.2	128.71 ^a	57.96 ^a	8.28 ^a	144.83 ^a	20.69 ^a	2.50 ^c
	2	28	2.9	123.88 ^a	51.12 ^a	7.30 ^a	129.54 ^a	18.50 ^a	2.54 ^c
	3	25	3.2	103.90 ^b	33.35 ^b	4.76 ^b	86.56 ^b	12.37 ^b	2.59 ^b
	4	25	2.9	101.73 ^b	32.34 ^b	4.62 ^b	87.74 ^b	12.54 ^b	2.71 ^{ab}
	5	22	3.2	78.29 ^c	19.18 ^c	2.74 ^c	53.08 ^c	7.58 ^c	2.77 ^a
	6	22	2.9	75.57 ^c	17.66 ^c	2.52 ^c	49.60 ^c	7.08 ^c	2.79 ^a

^{abc/} Means within a column with no common superscripts differ significantly (P<0.05).

Table appendix B9 (Cont.) Productive performance of Ring-necked during 1-5weeks of age after fed different levels of CP and ME.

Age (wk)	Treatment	CP (%)	Energy (kcal/g)	BW (g)	WG (g)	ADG (g)	FI (g)	DFI (g/d)	FCR
5	1	28	3.2	189.08 ^a	52.31 ^a	7.47 ^a	127.89 ^{ab}	18.27 ^{ab}	2.44 ^b
	2	28	2.9	182.78 ^a	58.90 ^a	8.41 ^a	146.05 ^a	20.86 ^a	2.49 ^{ab}
	3	25	3.2	144.50 ^b	40.60 ^b	5.80 ^b	103.01 ^c	14.71 ^c	2.55 ^{ab}
	4	25	2.9	134.60 ^b	32.86 ^b	4.69 ^b	86.31 ^{cd}	12.33 ^{cd}	2.63 ^{ab}
	5	22	3.2	119.28 ^c	40.99 ^b	5.85 ^b	111.21 ^b	15.89 ^b	2.71 ^a
	6	22	2.9	99.25 ^d	23.67 ^c	3.38 ^c	62.09 ^d	8.87 ^d	2.62 ^{ab}
Average	1	28	3.2	93.19	32.77	4.68 ^a	383.88 ^a	10.99 ^a	2.17 ^b
	2	28	2.9	91.32	32.95	4.71 ^a	388.56 ^a	11.17 ^a	2.18 ^b
	3	25	3.2	77.98	25.45	3.64 ^{ab}	321.06 ^b	9.14 ^b	2.46 ^a
	4	25	2.9	76.49	23.45	3.35 ^{ab}	300.60 ^{bc}	8.65 ^{bc}	2.50 ^a
	5	22	3.2	65.78	20.44	2.92 ^{ab}	273.87 ^c	7.86 ^c	2.65 ^a
	6	22	2.9	60.47	16.38	2.34 ^b	219.47 ^d	6.33 ^d	2.65 ^a

^{abc/} Means within a column with no common superscripts differ significantly (P<0.05).

Table appendix B10 Productive performance of Ring-necked pheasant fed diets containing various levels of CP and ME during 6-10 weeks of age.

	CP (%): A			Energy (kcal/g): B		Probability		
	25	22	19	3.2	2.9	A	B	A x B
6th week								
Initial weight (g)	142.58	142.68	144.46	142.88	144.30	NS	NS	NS
Final weight (g)	176.78	182.72	196.62	188.54	182.20	NS	NS	NS
WG (g)	34.20 ^b	40.04 ^b	52.16 ^a	45.66 ^A	37.94 ^B	**	*	*
ADG (g)	4.88 ^b	5.72 ^b	7.45 ^a	6.52 ^A	5.42 ^B	**	*	*
FI (g)	88.50 ^b	103.20 ^b	134.05 ^a	119.82 ^A	97.35 ^B	**	**	**
DFI (g/d)	12.64 ^b	14.74 ^b	19.15 ^a	17.11 ^A	13.91 ^B	**	**	**
FCR	2.58	2.57	2.72	2.64	2.57	NS	NS	NS
7th week								
Initial weight (g)	176.78	182.72	196.62	188.54	182.20	NS	NS	NS
Final weight (g)	241.40	227.11	229.95	244.12	221.52	NS	NS	NS
WG (g)	64.61 ^a	44.39 ^b	33.33 ^b	55.58 ^A	39.31 ^B	**	**	*
ADG (g)	9.23 ^a	6.34 ^b	4.76 ^b	7.94 ^A	5.62 ^B	**	**	*
FI (g)	157.12 ^a	108.98 ^b	89.39 ^b	138.05 ^A	98.94 ^B	**	*	*
DFI (g/d)	22.45 ^a	15.57 ^b	12.77 ^b	19.72 ^A	14.13 ^B	**	*	*
FCR	2.43 ^b	2.44 ^b	2.67 ^a	2.51	2.52	**	NS	NS
8th week								
Initial weight (g)	241.40	227.11	229.95	244.12	221.52	NS	NS	NS
Final weight (g)	304.02	268.84	256.45	290.90	261.97	NS	NS	NS
WG (g)	62.62 ^a	41.73 ^b	26.50 ^c	46.78	40.45	**	NS	NS
ADG (g)	8.95 ^a	5.96 ^b	3.79 ^c	6.68	5.78	**	NS	NS
FI (g)	148.78 ^a	98.48 ^b	68.69 ^c	112.89	97.74	**	NS	NS
DFI (g/d)	21.25 ^a	14.07 ^b	9.81 ^c	16.13	13.96	**	NS	NS
FCR	2.37 ^b	2.37 ^b	2.59 ^a	2.46	2.43	**	NS	NS

^{abc} Means within a row with no common superscripts differ significantly ($P < 0.05$).

NS = No significant, **= $P < 0.01$, *= $P < 0.05$

Table appendix B10 (Cont.) Productive performance of Ring-necked pheasant fed diets containing various levels of CP and ME during 6-10 weeks of age.

	CP (%): A			Energy (kcal/g): B		Probability		
	25	22	19	3.2	2.9	A	B	A x B
9th week								
Initial weight (g)	304.02	268.84	256.45	290.90	261.97	NS	NS	NS
Final weight (g)	358.04 ^a	307.21 ^{ab}	282.59 ^b	333.99	297.90	*	NS	NS
WG (g)	54.02 ^a	38.37 ^b	26.14 ^c	43.09 ^A	35.93 ^B	**	*	**
ADG (g)	7.72 ^a	5.48 ^b	3.73 ^c	6.16 ^A	5.13 ^B	**	*	**
FI (g)	128.81 ^a	89.51 ^b	65.94 ^c	103.71 ^A	85.79 ^B	**	*	**
DFI (g/d)	18.40 ^a	12.79 ^b	9.42 ^c	14.82 ^A	12.26 ^B	**	*	**
FCR	2.39 ^b	2.33 ^b	2.53 ^a	2.44	2.39	**	NS	NS
10th week								
Initial weight (g)	358.04 ^a	307.21 ^{ab}	282.59 ^b	333.99	297.90	*	NS	NS
Final weight (g)	410.99 ^a	356.55 ^a	313.85 ^b	381.48	339.45	**	NS	NS
WG (g)	52.96 ^a	49.34 ^a	31.26 ^b	47.48	41.55	**	NS	*
ADG (g)	7.56 ^a	7.04 ^a	4.46 ^b	6.78	5.93	**	NS	*
FI (g)	125.48 ^a	114.79 ^a	79.60 ^b	113.54	99.71	**	NS	*
DFI (g/d)	17.92 ^a	16.39 ^a	11.37 ^b	16.22	14.24	**	NS	*
FCR	2.38 ^a	2.33 ^a	2.56 ^b	2.42	2.42	*	NS	NS
Average								
Initial weight (g)	142.58	143.68	144.46	142.88	144.27	NS	NS	NS
Final weight (g)	410.99 ^a	370.45 ^a	299.96 ^b	381.48 ^A	339.45 ^B	**	**	NS
WG (g)	268.42 ^a	226.77 ^b	155.50 ^c	238.60 ^A	195.18 ^B	**	**	**
ADG (g)	7.67 ^a	6.48 ^b	4.44 ^c	6.82 ^A	5.58 ^B	**	**	**
FI (g)	648.69 ^a	545.81 ^b	406.82 ^c	588.02 ^A	479.53 ^B	**	**	**
DFI (g/d)	18.53 ^a	15.60 ^b	11.62 ^c	16.80 ^A	13.70 ^B	**	**	**
FCR	2.42 ^b	2.41 ^b	2.62 ^a	2.46	2.46	**	NS	NS

^{abc} Means within a row with no common superscripts differ significantly ($P < 0.05$).

NS = No significant, **= $P < 0.01$, *= $P < 0.05$

Table appendix B11 Productive performance of Ring-necked during 6-10 weeks of age after fed different levels of CP and ME.

Age (wk)	Treatment	CP (%)	Energy (kcal/g)	BW (g)	WG (g)	ADG (g)	FI (g)	DFI (g/d)	FCR
6	1	25	3.2	178.41	36.74 ^b	5.25 ^b	96.70 ^b	13.81 ^b	2.63
	2	25	2.9	175.15	31.67 ^b	4.53 ^b	80.30 ^b	11.47 ^b	2.52
	3	22	3.2	208.17	63.67 ^a	9.10 ^a	162.75 ^a	23.25 ^a	2.56
	4	22	2.9	185.08	42.21 ^b	6.03 ^b	105.36 ^b	15.05 ^b	2.50
	5	19	3.2	179.05	36.58 ^b	5.22 ^b	100.01 ^b	14.29 ^b	2.73
	6	19	2.9	186.39	39.93 ^b	5.70 ^b	106.39 ^b	15.19 ^b	2.71
7	1	25	3.2	253.09	74.68 ^a	10.66 ^a	182.18 ^a	26.02 ^a	2.44 ^{bc}
	2	25	2.9	229.70	54.55 ^b	7.79 ^b	132.06 ^{ab}	18.87 ^b	2.41 ^c
	3	22	3.2	269.79	61.62 ^{ab}	8.80 ^{ab}	151.61 ^a	21.66 ^a	2.45 ^b
	4	22	2.9	212.22	27.15 ^c	3.88 ^c	66.35 ^c	9.47 ^c	2.43 ^c
	5	19	3.2	209.47	30.42 ^c	4.35 ^c	80.36 ^c	11.48 ^c	2.64 ^{ab}
	6	19	2.9	222.63	36.24 ^c	5.18 ^c	98.41 ^b	14.03 ^b	2.71 ^a
8	1	25	3.2	323.83	70.74 ^a	10.10 ^a	165.61 ^a	23.66 ^a	2.34 ^b
	2	25	2.9	284.20	54.50 ^b	7.79 ^b	131.94 ^b	18.85 ^b	2.40 ^{ab}
	3	22	3.2	310.58	40.78 ^c	5.83 ^c	97.87 ^c	13.98 ^c	2.41 ^{ab}
	4	22	2.9	254.90	42.67 ^c	6.10 ^c	99.10 ^c	14.15 ^c	2.32 ^b
	5	19	3.2	238.30	28.83 ^d	4.12 ^d	75.21 ^c	10.74 ^c	2.62 ^a
	6	19	2.9	246.81	24.18 ^d	3.45 ^d	62.18 ^d	8.88 ^d	2.57 ^a
9	1	25	3.2	393.07 ^a	69.24 ^a	9.89 ^a	164.41 ^a	23.48 ^a	2.38 ^b
	2	25	2.9	323.01 ^{ab}	38.81 ^b	5.54 ^b	93.21 ^b	13.32 ^b	2.39 ^b
	3	22	3.2	351.57 ^{ab}	40.99 ^b	5.86 ^b	97.59 ^b	13.94 ^b	2.38 ^b
	4	22	2.9	290.64 ^b	35.75 ^b	5.10 ^b	81.42 ^b	11.63 ^b	2.27 ^c
	5	19	3.2	257.35 ^b	19.05 ^c	2.72 ^c	49.12 ^c	7.02 ^c	2.57 ^a
	6	19	2.9	280.04 ^b	33.23 ^b	4.74 ^b	82.75 ^b	11.82 ^b	2.49 ^{ab}

^{abc/} Means within a row with no common superscripts differ significantly (P<0.05).

Table Appendix B11 (Cont.) Productive performance of Ring-necked during 6-10 weeks of age after fed by different levels of CP and ME.

Age (wk)	Treatment	CP (%)	Energy (kcal/g)	BW (g)	WG (g)	ADG (g)	FI (g)	DFI (g/d)	FCR
10	1	25	3.2	455.84 ^a	62.77 ^a	8.97 ^a	146.98 ^a	20.99 ^a	2.35 ^{ab}
	2	25	2.9	366.15 ^{ab}	43.14 ^b	6.16 ^b	103.98 ^{bc}	14.85 ^{bc}	2.40 ^{ab}
	3	22	3.2	399.62 ^{ab}	48.05 ^b	6.86 ^b	113.76 ^b	16.25 ^b	2.37 ^{ab}
	4	22	2.9	341.28 ^b	50.64 ^b	7.23 ^b	115.81 ^b	16.54 ^b	2.29 ^b
	5	19	3.2	288.99 ^c	31.64 ^c	4.52 ^c	79.87 ^c	11.41 ^c	2.55 ^a
	6	19	2.9	310.93 ^b	30.88 ^c	4.41 ^c	79.33 ^c	11.33 ^c	2.57 ^a
Average	1	25	3.2	455.84 ^a	314.17 ^a	8.98 ^a	755.89 ^a	21.59 ^a	2.42 ^b
	2	25	2.9	366.15 ^{ab}	222.67 ^c	6.36 ^c	541.49 ^c	15.47 ^c	2.42 ^b
	3	22	3.2	399.62 ^{ab}	255.12 ^b	7.29 ^b	623.59 ^b	17.82 ^b	2.43 ^b
	4	22	2.9	341.28 ^b	198.42 ^d	5.67 ^d	468.04 ^{cd}	13.37 ^{cd}	2.36 ^b
	5	19	3.2	288.90 ^c	146.52 ^e	4.19 ^e	384.58 ^e	10.99 ^e	2.62 ^a
	6	19	2.9	310.93 ^b	164.47 ^e	4.70 ^e	429.06 ^d	12.26 ^d	2.61 ^a

^{abc/} Means within a column with no common superscripts differ significantly (P<0.05).

Table appendix B12 Productive performance of Ring-necked pheasant fed diets containing various levels of CP and ME during 11-18 weeks of age.

	CP (%): A			Energy (kcal/g): B		Probability		
	22	19	16	3.2	2.9	A	B	A x B
11th week								
Initial weight (g)	362.99	356.81	359.24	361.03	358.33	NS	NS	NS
Final weight (g)	437.20	412.59	418.45	430.55	414.94	NS	NS	NS
WG (g)	74.21 ^a	55.78 ^b	59.20 ^b	69.52 ^A	56.61 ^B	*	*	NS
ADG (g)	10.60 ^a	7.97 ^b	8.57 ^b	9.93 ^A	8.09 ^B	*	*	NS
FI (g)	193.90 ^a	159.80 ^{ab}	145.96 ^b	187.03 ^A	146.08 ^B	*	*	NS
DFI (g/d)	27.70 ^a	22.83 ^{ab}	20.85 ^b	26.72 ^A	20.87 ^B	*	*	NS
FCR	2.61	2.61	2.70	2.70	2.58	NS	NS	NS
12th week								
Initial weight (g)	437.20	412.59	418.45	430.55	414.94	NS	NS	NS
Final weight (g)	538.74	508.63	505.30	540.59	494.51	NS	NS	NS
WG (g)	101.54	96.04	86.85	110.04 ^A	79.58 ^B	NS	**	*
ADG (g)	14.51	13.72	12.41	15.72 ^A	11.37 ^B	NS	**	*
FI (g)	270.31	254.28	230.52	294.32 ^A	209.08 ^B	NS	**	NS
DFI (g/d)	38.62	36.33	32.93	42.05 ^A	29.87 ^B	NS	**	NS
FCR	2.66	2.65	2.61	2.65	2.62	NS	NS	NS
13th week								
Initial weight (g)	538.74	508.63	505.30	540.59	494.51	NS	NS	NS
Final weight (g)	619.52	622.09	601.93	653.75	575.28	NS	NS	NS
WG (g)	80.79 ^c	113.47 ^a	96.63 ^b	113.16 ^A	80.77 ^B	**	**	NS
ADG (g)	11.54 ^b	16.21 ^a	13.80 ^b	16.16 ^A	11.54 ^B	**	**	NS
FI (g)	220.39 ^b	301.33 ^a	256.17 ^b	304.15 ^A	214.43 ^B	**	**	NS
DFI (g/d)	31.48 ^b	43.05 ^a	36.59 ^b	43.45 ^A	30.63 ^B	**	**	NS
FCR	2.72	2.66	2.65	2.69	2.66	NS	NS	NS

^{abc} Means within a row with no common superscripts differ significantly ($P < 0.05$).

NS = No significant, **= $P < 0.01$, * $P < 0.05$

Table appendix B12 (Cont.) Productive performance of Ring-necked pheasant fed diets containing various levels of CP and ME during 11-18 weeks of age.

	CP (%): A			Energy (kcal/g): B		Probability		
	22	19	16	3.2	2.9	A	B	A x B
14th week								
Initial weight (g)	619.52	622.09	601.93	653.75	575.28	NS	NS	NS
Final weight (g)	707.75	740.03	713.17	754.27	686.36	NS	NS	NS
WG (g)	88.23 ^b	117.93 ^a	111.23 ^a	100.51	111.08	**	NS	**
ADG (g)	12.61 ^b	16.85 ^a	15.89 ^a	14.36	15.87	**	NS	**
FI (g)	239.04 ^b	317.71 ^a	296.06 ^a	271.06	297.48	**	NS	**
DFI (g/d)	34.15 ^b	45.39 ^a	42.30 ^a	38.42	42.50	**	NS	**
FCR	2.71	2.70	2.66	2.70	2.67	NS	NS	NS
15th week								
Initial weight (g)	707.75	740.03	713.17	754.27	686.36	NS	NS	NS
Final weight (g)	806.28	806.73	805.45	821.04	791.27	NS	NS	NS
WG (g)	98.53 ^a	66.71 ^b	92.28 ^a	66.77 ^B	104.90 ^A	**	**	NS
ADG (g)	14.07 ^a	9.53 ^b	13.18 ^a	9.54 ^B	14.98 ^A	**	**	NS
FI (g)	267.08 ^a	182.86 ^b	248.40 ^a	181.16 ^B	284.40 ^A	**	**	NS
DFI (g/d)	38.15 ^a	26.12 ^b	35.48 ^a	25.88 ^B	40.63 ^A	**	**	NS
FCR	2.71	2.75	2.70	2.72	2.71	NS	NS	NS
16th week								
Initial weight (g)	806.28	806.73	805.45	821.04	791.27	NS	NS	NS
Final weight (g)	862.92	864.82	873.80	864.23	870.13	NS	NS	NS
WG (g)	56.64 ^b	58.09 ^b	68.35 ^a	43.19 ^B	78.86 ^A	**	**	**
ADG (g)	8.09 ^b	8.30 ^b	9.77 ^a	6.17 ^B	11.27 ^A	**	**	**
FI (g)	152.98 ^b	156.70 ^b	184.36 ^a	117.14 ^B	212.22 ^A	**	**	**
DFI (g/d)	21.85 ^b	22.39 ^b	26.34 ^a	16.73 ^B	30.32 ^A	**	**	**
FCR	2.70	2.70	2.71	2.71	2.70	NS	NS	NS

^{abc} Means within a row with no common superscripts differ significantly ($P < 0.05$).

NS = No significant, **= $P < 0.01$, *= $P < 0.05$

Table appendix B12 (Cont.) Productive performance of Ring-necked pheasant fed diets containing various levels of CP and ME during 11-18 weeks of age.

	CP (%): A			Energy (kcal/g): B		Probability		
	22	19	16	3.2	2.9	A	B	A x B
17th week								
Initial weight (g)	862.92	864.82	873.80	864.23	870.13	NS	NS	NS
Final weight (g)	906.59	88.26	919.53	898.46	918.07	NS	NS	NS
WG (g)	43.67 ^a	33.45 ^b	46.16 ^a	34.24 ^B	47.94 ^A	**	**	*
ADG (g)	6.24 ^a	4.78 ^b	6.59 ^a	4.89 ^B	6.84 ^A	**	**	*
FI (g)	117.83 ^a	89.97 ^b	125.31 ^a	92.96 ^B	129.11 ^A	**	**	*
DFI (g/d)	16.83 ^a	12.85 ^b	17.90 ^a	13.287 ^B	18.45 ^A	**	**	*
FCR	2.69	2.68	2.67	2.70	2.67	NS	NS	NS
18th week								
Initial weight (g)	906.59	88.26	919.53	898.46	918.07	NS	NS	NS
Final weight (g)	963.47	964.76	973.76	951.66	982.99	NS	NS	NS
WG (g)	56.88 ^b	66.49 ^a	53.80 ^b	53.20 ^B	64.92 ^A	*	**	**
ADG (g)	8.12 ^b	9.50 ^a	7.68 ^b	7.59 ^B	9.27 ^A	*	**	**
FI (g)	153.51 ^{ab}	179.41 ^a	144.09 ^b	143.05 ^B	174.95 ^A	*	**	**
DFI (g/d)	21.93 ^{ab}	25.63 ^a	20.58 ^b	20.44 ^B	24.99 ^A	*	**	**
FCR	2.70	2.70	2.68	2.69	2.69	NS	NS	NS
Average								
Initial weight (g)	362.99	356.81	359.24	361.03	358.33	NS	NS	NS
Final weight (g)	963.47	964.76	973.76	951.66	982.99	NS	NS	NS
WG (g)	600.48	607.95	614.52	590.63	624.66	NS	NS	NS
ADG (g)	10.72	10.86	10.97	10.55	11.15	NS	NS	NS
FI (g)	1615.04	1628.21	1644.71	1590.87	1667.76	NS	NS	*
DFI (g/d)	28.84	29.08	29.37	28.41	29.78	NS	NS	*
FCR	2.69	2.68	2.68	2.69	2.67	NS	NS	NS

^{abc} Means within a row with no common superscripts differ significantly ($P < 0.05$).

NS = No significant, ** $P < 0.01$, * $P < 0.05$

Table appendix B13 Productive performance of Ring-necked during 11-18 weeks of age after fed different levels of CP and ME.

Age (wk)	Treatment	CP (%)	Energy (kcal/g)	BW (g)	WG (g)	ADG (g)	FI (g)	DFI (g/d)	FCR
11	1	22	3.2	366.65	82.67 ^a	11.81 ^a	216.94 ^a	30.99 ^a	2.64
	2	22	2.9	359.17	65.75 ^{ab}	9.40 ^{ab}	170.87 ^{ab}	24.41 ^{ab}	2.59
	3	19	3.2	357.17	61.29 ^b	8.75 ^b	162.24 ^{ab}	23.18 ^{ab}	2.64
	4	19	2.9	356.45	50.26 ^b	7.18 ^b	129.68 ^b	18.53 ^b	2.59
	5	16	3.2	359.27	64.60 ^{ab}	9.23 ^{ab}	181.91 ^{ab}	25.99 ^{ab}	2.84
	6	16	2.9	359.21	53.81 ^b	7.69 ^b	137.69 ^b	19.67 ^b	2.56
12	1	22	3.2	574.07	124.75 ^a	17.82 ^a	334.33 ^a	47.76 ^a	2.68
	2	22	2.9	503.40	78.33 ^c	11.19 ^c	206.29 ^b	29.47 ^b	2.63
	3	19	3.2	514.01	95.55 ^b	13.65 ^{bc}	254.40 ^{ab}	36.34 ^{ab}	2.66
	4	19	2.9	503.24	96.52 ^b	13.79 ^b	254.17 ^{ab}	36.31 ^{ab}	2.63
	5	16	3.2	533.70	109.83 ^{ab}	15.69 ^{ab}	294.24 ^{ab}	42.03 ^a	2.60
	6	16	2.9	476.90	63.87 ^d	9.13 ^d	166.80 ^c	23.83 ^c	2.61
13	1	22	3.2	665.46	91.39 ^{bc}	13.06 ^{bc}	253.08 ^{bc}	36.15 ^c	2.76 ^a
	2	22	2.9	573.59	70.18 ^d	10.03 ^d	187.69 ^d	26.81 ^d	2.68 ^{ab}
	3	19	3.2	653.48	139.47 ^a	19.92 ^a	368.23 ^a	52.60 ^a	2.64 ^{ab}
	4	19	2.9	590.71	87.47 ^c	12.50 ^c	234.42 ^{bc}	33.49 ^{bc}	2.68 ^{ab}
	5	16	3.2	642.32	108.62 ^b	15.52 ^b	291.15 ^b	41.59 ^b	2.68 ^{ab}
	6	16	2.9	561.55	84.65 ^c	12.09 ^{cd}	221.20 ^c	31.60 ^c	2.61 ^b
14	1	22	3.2	738.65	73.19 ^c	10.46 ^c	200.74 ^c	28.68 ^c	2.74
	2	22	2.9	676.85	103.27 ^b	14.75 ^b	277.34 ^b	39.62 ^b	2.68
	3	19	3.2	761.15	107.67 ^{ab}	15.38 ^{ab}	290.25 ^{ab}	41.46 ^{ab}	2.70
	4	19	2.9	718.90	128.19 ^a	18.31 ^a	345.16 ^a	49.31 ^a	2.69
	5	16	3.2	763.00	120.68 ^{ab}	17.24 ^{ab}	322.18 ^{ab}	46.03 ^{ab}	2.67
	6	16	2.9	663.33	101.79 ^b	14.54 ^b	269.93 ^b	38.56 ^b	2.65

^{abc/} Means within a column with no common superscripts differ significantly (P<0.05)

Table Appendix B13 (Cont.) Productive performance of Ring-necked during 11-18 weeks of age after fed different levels of CP and ME.

Age (wk)	Treatment	CP (%)	Energy (kcal/g)	BW (g)	WG (g)	ADG (g)	FI (g)	DFI (g/d)	FCR
15	1	22	3.2	818.11	79.46 ^c	11.35 ^c	214.63 ^c	30.66 ^c	2.70
	2	22	2.9	794.45	117.59 ^a	16.80 ^a	319.54 ^a	45.65 ^a	2.71
	3	19	3.2	804.94	43.79 ^d	6.25 ^d	120.41 ^d	17.20 ^d	2.75
	4	19	2.9	808.52	89.62 ^b	12.80 ^b	245.30 ^b	35.04 ^b	2.74
	5	16	3.2	840.07	77.07 ^c	11.01 ^c	208.44 ^c	29.78 ^c	2.71
	6	16	2.9	770.83	107.50 ^{ab}	15.35 ^a	288.35 ^a	41.19 ^{ab}	2.68
16	1	22	3.2	873.37	55.26 ^c	7.89 ^c	149.13 ^c	21.30 ^c	2.70
	2	22	2.9	852.47	58.02 ^c	8.29 ^c	156.83 ^c	22.40 ^c	2.71
	3	19	3.2	840.28	35.33 ^d	5.05 ^d	95.60 ^d	13.66 ^d	2.70
	4	19	2.9	889.36	80.84 ^b	11.55 ^b	217.80 ^b	31.12 ^b	2.70
	5	16	3.2	879.05	38.98 ^d	5.57 ^d	106.68 ^d	15.24 ^d	2.73
	6	16	2.9	868.55	97.72 ^a	13.96 ^a	262.04 ^a	37.43 ^a	2.68
17	1	22	3.2	903.54	30.17 ^d	4.31 ^d	80.96 ^d	11.57 ^d	2.69
	2	22	2.9	909.63	57.16 ^a	8.16 ^a	154.71 ^a	22.10 ^a	2.71
	3	19	3.2	869.72	29.45 ^d	4.20 ^d	79.44 ^d	11.35 ^d	2.70
	4	19	2.9	926.81	37.45 ^c	5.35 ^c	100.49 ^c	14.36 ^c	2.68
	5	16	3.2	922.3	43.09 ^b	6.15 ^b	118.48 ^b	16.93 ^b	2.75
	6	16	2.9	917.78	49.22 ^{ab}	7.03 ^{ab}	132.40 ^{ab}	18.88 ^{ab}	2.68
18	1	22	3.2	939.52	35.98 ^c	5.14 ^c	96.98 ^c	13.85 ^c	2.69
	2	22	2.9	987.41	77.78 ^a	11.11 ^a	210.03 ^a	30.00 ^a	2.70
	3	19	3.2	923.61	53.89 ^b	7.70 ^b	145.09 ^b	20.73 ^b	2.69
	4	19	2.9	1005.91	79.10 ^a	11.30 ^a	213.73 ^a	30.53 ^a	2.70
	5	16	3.2	991.85	69.72 ^a	9.96 ^a	187.09 ^a	26.73 ^a	2.69
	6	16	2.9	955.67	37.89 ^c	5.41 ^c	101.10 ^c	14.44 ^c	2.67

^{abc/} Means within a column with no common superscripts differ significantly (P<0.05).

Table Appendix B13 (Cont.) Productive performance of Ring-necked during 11-18 weeks of age after fed different levels of CP and ME.

Age (wk)	Treatment	CP (%)	Energy (kcal/g)	BW (g)	WG (g)	ADG (g)	FI (g)	FI (g/d)	FCR
Average	1	22	3.2	939.52	572.87 ^b	10.23 ^b	1546.79 ^{ab}	27.62 ^{ab}	2.70
	2	22	2.9	987.41	628.09 ^{ab}	11.22 ^{ab}	1683.28 ^{ab}	30.06 ^{ab}	2.68
	3	19	3.2	923.61	566.44 ^b	10.12 ^b	1515.66 ^b	27.06 ^b	2.67
	4	19	2.9	1005.91	649.45 ^a	11.60 ^a	1740.77 ^a	31.08 ^a	2.68
	5	16	3.2	991.85	632.58 ^{ab}	11.30 ^{ab}	1710.18 ^{ab}	30.54 ^{ab}	2.70
	6	16	2.9	955.67	596.45 ^{ab}	10.65 ^{ab}	1579.24 ^{ab}	28.20 ^{ab}	2.64

^{abc/} Means within a column with no common superscripts differ significantly (P<0.05).

Table appendix B14 Effect of protein and ME levels on Ring-necked pheasant carcass characteristic of 18 wk-old.

	CP (%): A			Energy (kcal/g): B		Probability		
	H	M	L	H	L	A	B	A x B
Body weight (g)	990.13	948.01	973.76	951.66	989.60	NS	NS	NS
Carcass (g)	830.68	796.76	799.82	785.12	833.05	NS	NS	NS
Giblet (g)	92.92	86.01	85.69	86.13	90.28	NS	NS	NS
Abdominal fat (g)	20.32	19.10	20.15	21.11	18.61	NS	NS	NS
Breast (g)	130.46	119.98	117.63	119.07	126.31	NS	NS	NS
Thigh (g)	134.41	126.45	129.23	126.28	133.78	NS	NS	NS
Drumstick (g)	94.52	86.75	91.19	86.73	94.91	NS	NS	NS
Wing (g)	96.91	91.39	92.03	92.20	94.69	NS	NS	NS
Skeleton (g)	177.46	170.99	166.24	164.34	178.78	NS	NS	NS

^{abc/} Means within a row with no common superscripts differ significantly (P<0.05).

CP levels H= 22%, M=19% and L=16%

ME levels H= 3.2 kcal/g and L=2.9 kcal/g.

Table Appendix B15 Carcass percentage of Ring-necked Pheasant at 18 wk of ages at different protein and energy levels.

CP (%)	Energy (kcal/g)	BW (g)	Part of body (% Carcass)						
			Giblet	Abdominal Fat	Breast	Thigh	Drumstick	Wing	Skeleton
22	3.2	939.52	11.30	2.68 ^a	15.81	16.31	11.16 ^{ab}	11.97	21.22
22	2.9	1040.74	11.08	2.25 ^b	15.62	16.05	11.59 ^a	11.42	21.45
19	3.2	923.61	10.86	2.71 ^a	14.97	15.75	10.49 ^b	11.30	21.50
19	2.9	972.41	10.75	2.08 ^b	15.12	15.98	11.25 ^{ab}	11.64	21.42
16	3.2	991.85	10.76	2.68 ^a	14.74	16.15	11.48 ^{ab}	12.01	20.09
16	2.9	955.67	10.68	2.36 ^{ab}	14.73	16.12	11.29 ^{ab}	10.96	21.48

^{abc/} Means within a column with no common superscripts differ significantly (P<0.05).

Table appendix B16 Staved Ring-necked pheasant excrete and gross energy excreta.

.Bird No.	Fecal (g.)	DM (%)	DME (g. DM)	GE (cal/g.)	GEE (cal)
1	3.50	94.63	3.31	2,703.00	8,952.47
2	2.60	93.25	2.42	3,210.00	7,782.64
3	1.60	95.20	1.52	2,873.00	4,376.15
4	2.75	95.06	2.61	3,040.00	7,947.02
5	2.70	94.92	2.56	3,186.00	8,165.21
Avg.	2.63	94.61	2.49	3,002.40	7,444.70

Table appendix B17 Fecal chemical composition (% air dry basis)^{1/} of staved and force fed Ring-necked pheasant.

Feed ingredients	Bird No.	DM (%)	CP (%)	EE (%)	CF (%)	Ash (%)	OM (%)	GE (cal/g.)
Staved	1	94.63	15.38	2.38	8.22	11.06	83.57	2,703.00
	2	93.25	15.39	2.08	9.79	13.17	80.08	3,210.00
	3	95.02	14.68	3.16	6.43	11.28	83.75	2,873.00
	4	95.06	16.26	2.50	6.23	10.56	84.50	3,040.00
	5	94.92	10.14	2.13	7.35	9.94	84.99	3,186.00
	<i>Avg.</i>		94.61	14.37	2.45	7.60	11.20	83.38
FM	1	94.91	18.58	2.80	11.43	22.03	72.88	2,412.00
	2	95.00	20.19	2.89	11.94	20.74	74.26	2,399.00
	3	94.95	14.58	3.39	12.33	18.89	76.06	2,447.00
	4	93.77	16.74	4.40	11.00	22.44	71.33	2,437.50
	5	93.72	15.91	6.69	13.38	19.61	74.11	2,396.00
	<i>Avg.</i>		94.47	17.20	4.03	12.01	20.74	73.73
SBM	1	93.13	19.44	2.38	12.11	20.85	72.28	3,106.50
	2	93.04	15.96	3.19	13.41	21.16	71.88	3,455.00
	3	82.69	10.41	2.16	11.07	18.94	63.75	3,454.00
	4	92.67	16.31	2.62	10.38	16.69	75.99	3,462.50
	5	95.05	13.51	2.73	11.43	18.44	76.62	3,470.00
	<i>Avg.</i>		91.32	15.13	2.61	11.68	19.21	72.10
RB	1	94.73	11.09	5.30	15.42	32.06	62.67	3,456.50
	2	94.73	12.31	6.28	16.57	33.20	61.53	3,287.50
	3	94.61	11.56	4.96	14.79	30.45	64.16	2,881.50
	4	94.63	14.74	5.56	18.25	35.51	59.12	3,157.50
	5	94.70	13.67	4.10	15.68	31.72	62.98	3,153.00
	<i>Avg.</i>		94.68	12.67	5.24	16.14	32.59	62.09
Corn	1	95.27	10.49	3.52	9.01	26.71	68.57	3,316.50
	2	95.28	12.51	3.55	10.42	25.49	69.79	3,723.50
	3	95.14	11.57	3.71	10.99	28.04	67.10	3,560.00
	4	95.48	11.68	4.23	10.71	26.64	68.84	3,462.50
	5	95.48	12.39	5.54	11.98	25.66	69.83	3,608.00
	<i>Avg.</i>		95.33	11.73	4.11	10.62	26.51	68.83

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Table appendix B18 Calculation of appearance metabolized energy (AME) and true metabolized energy (TME) after fed by different feed ingredients.

Feed ingredients	Bird No.	Fed					Fed Excreta					Metabolizable (cal/kg)	AME (cal/kg.)	TME (cal/kg.)
		FI (g.)	DM%	DMI	GE (cal)	GEI (cal/kg)	Fecal (g.)	DM%	DME	GE (cal)	GEE (cal/kg)			
Fish meal	1	30	94.58	28.37	4,347.00	123,341.78	7.50	94.91	7.12	2,412.00	17,169.22	8,216.75	3,539.09	3,837.50
	2	30	94.58	28.37	4,347.00	123,341.78	10.90	95.00	10.36	2,399.00	24,841.65	17,059.00	3,283.34	3,542.76
	3	30	94.58	28.37	4,347.00	123,341.78	10.60	94.95	10.06	2,447.00	24,628.32	20,252.17	3,290.45	3,436.32
	4	30	94.58	28.37	4,347.00	123,341.78	11.90	93.77	11.16	2,437.50	27,199.16	19,252.14	3,204.75	3,469.65
	5	30	94.58	28.37	4,347.00	123,341.78	10.10	93.22	9.42	2,396.00	22,558.87	14,393.66	3,359.43	3,631.60
	Avg.	30.00	94.58	28.37	4,347.00	123,341.78	10.20	94.37	9.62	2,418.30	23,279.44	15,834.74	3,335.41	3,583.57
Soybean meal	1	30	94.69	28.41	4,498.50	127,788.89	9.00	93.13	8.38	3,106.50	26,037.75	17,085.28	3,391.70	3,690.12
	2	30	94.69	28.41	4,498.50	127,788.89	9.50	93.04	8.84	3,455.00	30,538.05	22,755.41	3,241.69	3,501.12
	3	30	94.69	28.41	4,498.50	127,788.89	5.40	82.69	4.47	3,454.00	15,423.01	11,046.85	3,745.53	3,891.40
	4	30	94.69	28.41	4,498.50	127,788.89	7.30	92.67	6.76	3,462.50	23,423.50	15,476.48	3,478.85	3,743.75
	5	30	94.69	28.41	4,498.50	127,788.89	9.70	95.05	9.22	3,470.00	31,992.88	23,827.67	3,193.20	3,465.37
	Avg.	30.00	94.69	28.41	4,498.50	127,788.89	8.18	91.32	7.53	3,389.60	25,483.04	18,038.34	3,410.20	3,658.35
Rice bran	1	30	92.68	27.80	4,506.50	125,298.73	8.30	94.73	7.86	3,456.50	27,177.04	18,224.57	3,270.72	3,569.14
	2	30	92.68	27.80	4,506.50	125,298.73	7.60	94.73	7.20	3,287.50	23,668.29	15,885.65	3,387.68	3,647.10
	3	30	92.68	27.80	4,506.50	125,298.73	6.80	94.61	6.43	2,881.50	18,538.07	14,161.92	3,558.69	3,704.56
	4	30	92.68	27.80	4,506.50	125,298.73	5.70	94.63	5.39	3,157.50	17,031.27	9,084.25	3,608.92	3,873.82
	5	30	92.68	27.80	4,506.50	125,298.73	7.00	94.70	6.63	3,153.00	20,901.24	12,736.03	3,479.92	3,752.09
	Avg.	30.00	92.68	27.80	4,506.50	125,298.73	7.08	94.68	6.70	3,187.20	21,463.18	14,018.48	3,461.18	3,709.34
Corn	1	30	93.26	27.98	4,466.50	124,963.74	4.70	95.27	4.48	3,316.50	14,850.26	5,897.79	3,670.45	3,968.86
	2	30	93.26	27.98	4,466.50	124,963.74	5.70	94.28	5.37	3,723.50	20,009.94	12,227.30	3,498.46	3,757.88
	3	30	93.26	27.98	4,466.50	124,963.74	4.50	94.14	4.24	3,560.00	15,081.23	10,705.07	3,662.75	3,808.62
	4	30	93.26	27.98	4,466.50	124,963.74	4.70	93.48	4.39	3,462.50	15,212.70	7,265.69	3,658.37	3,923.27
	5	30	93.26	27.98	4,466.50	124,963.74	3.50	92.48	3.24	3,608.00	11,678.37	3,513.17	3,776.18	4,048.35
	Avg.	30	93.26	27.98	4,466.50	124,963.74	4.62	93.93	4.34	3,534.10	15,366.50	7,921.80	3,653.24	3,901.40

Table appendix B19 Digestion calculates of Ring-necked pheasant after fed by fishmeal.

Nutrient	Bird No.	FI			excreta			AD	TD
		AD (g)	DM (%)	DMI (g.DM)	Fecal (g)	DM%	DME (g.DM)		
DM	1	30.00	95.00	28.37	7.50	95.00	7.12	74.91	83.68
	2	30.00	95.00	28.37	10.90	95.00	10.36	63.51	72.27
	3	30.00	95.00	28.37	10.60	95.00	10.06	64.53	73.29
	4	30.00	95.00	28.37	11.90	94.00	11.16	60.67	69.44
	5	30.00	95.00	28.37	10.10	94.00	9.47	66.64	75.41
	<i>Avg.</i>	30.00	95.00	28.37	10.20	94.00	9.63	66.05	74.82
CP	1	28.37	61.00	17.38	7.50	18.58	1.39	91.98	94.10
	2	28.37	61.00	17.38	10.90	20.19	2.20	87.34	89.45
	3	28.37	61.00	17.38	10.60	14.58	1.55	91.11	93.22
	4	28.37	61.00	17.38	11.90	16.74	1.99	88.54	90.65
	5	28.37	61.00	17.38	10.10	15.91	1.61	90.75	92.87
	<i>Avg.</i>	28.37	61.00	17.38	10.20	17.20	1.75	89.94	92.06
EE	1	28.37	7.00	1.88	7.50	2.80	0.21	88.82	92.25
	2	28.37	7.00	1.88	10.90	2.89	0.32	83.23	86.66
	3	28.37	7.00	1.88	10.60	3.39	0.36	80.87	84.30
	4	28.37	7.00	1.88	11.90	4.40	0.52	72.12	75.55
	5	28.37	7.00	1.88	10.10	6.69	0.68	64.03	67.46
	<i>Avg.</i>	28.37	7.00	1.88	10.20	4.03	0.42	77.81	81.24
CF	1	28.37	1.00	0.35	7.50	1.43	0.11	69.76	126.12
	2	28.37	1.00	0.35	10.90	1.19	0.13	63.31	119.66
	3	28.37	1.00	0.35	10.60	1.23	0.13	63.15	119.51
	4	28.37	1.00	0.35	11.90	1.10	0.13	63.09	119.45
	5	28.37	1.00	0.35	10.10	1.34	0.14	61.90	118.25
	<i>Avg.</i>	28.37	1.00	0.35	10.20	1.26	0.13	64.24	120.60
OM	1	28.37	74.00	21.05	7.50	72.88	5.47	74.04	84.45
	2	28.37	74.00	21.05	10.90	74.26	8.09	61.55	71.97
	3	28.37	74.00	21.05	10.60	76.06	8.06	61.70	72.12
	4	28.37	74.00	21.05	11.90	71.33	8.49	59.68	70.10
	5	28.37	74.00	21.05	10.10	74.11	7.48	64.45	74.86
	<i>Avg.</i>	28.37	74.00	21.05	10.20	73.73	7.52	64.28	74.70

Table appendix B20 Digestion calculates of Ring-necked pheasant after fed by soybean meal.

Nutrient	Bird No.	FI			excreta			AD	TD
		AD (g)	DM (%)	DMI (g,DM)	Fecal (g)	DM%	DME (g,DM)		
DM	1	30.00	95.00	28.41	9.00	93.00	8.38	70.49	79.25
	2	30.00	95.00	28.41	9.50	93.00	8.84	68.89	77.64
	3	30.00	95.00	28.41	5.40	83.00	4.47	84.28	93.04
	4	30.00	95.00	28.41	7.30	93.00	6.76	76.19	84.94
	5	30.00	95.00	28.41	9.70	95.00	9.22	67.54	76.30
	<i>Avg.</i>	30.00	95.00	28.41	8.18	91.00	7.53	73.48	82.23
CP	1	28.41	49.00	13.91	9.00	19.44	1.75	87.42	90.06
	2	28.41	49.00	13.91	9.50	15.96	1.52	89.10	91.74
	3	28.41	49.00	13.91	5.40	10.41	0.56	95.96	98.60
	4	28.41	49.00	13.91	7.30	16.31	1.19	91.44	94.08
	5	28.41	49.00	13.91	9.70	13.51	1.31	90.58	93.22
	<i>Avg.</i>	28.41	49.00	13.91	8.18	15.13	1.27	90.90	93.54
EE	1	28.41	6.00	1.61	9.00	2.38	0.21	86.72	90.74
	2	28.41	6.00	1.61	9.50	3.19	0.30	81.22	85.23
	3	28.41	6.00	1.61	5.40	2.16	0.12	92.77	96.79
	4	28.41	6.00	1.61	7.30	2.62	0.19	88.15	92.16
	5	28.41	6.00	1.61	9.70	2.73	0.26	83.59	87.60
	<i>Avg.</i>	28.41	6.00	1.61	8.18	2.62	0.22	86.49	90.51
CF	1	28.41	8.00	2.25	9.00	12.11	1.09	51.50	60.40
	2	28.41	8.00	2.25	9.50	13.41	1.27	43.30	52.20
	3	28.41	8.00	2.25	5.40	11.07	0.60	73.40	82.30
	4	28.41	8.00	2.25	7.30	10.38	0.76	66.28	75.18
	5	28.41	8.00	2.25	9.70	11.43	1.11	50.66	59.56
	<i>Avg.</i>	28.41	8.00	2.25	8.18	11.68	0.97	57.03	65.93
OM	1	28.41	88.00	25.11	9.00	72.28	6.50	74.09	82.82
	2	28.41	88.00	25.11	9.50	71.88	6.83	72.80	81.53
	3	28.41	88.00	25.11	5.40	63.75	3.44	86.29	95.02
	4	28.41	88.00	25.11	7.30	75.99	5.55	77.91	86.64
	5	28.41	88.00	25.11	9.70	76.62	7.43	70.40	79.13
	<i>Avg.</i>	28.41	88.00	25.11	8.18	72.10	5.95	76.30	85.03

Table appendix B21 Digestion calculates of Ring-necked pheasant after fed by rice bran.

Nutrient	Bird No.	FI			excreta			AD	TD
		AD (g)	DM (%)	DMI (g,DM)	Fecal (g)	DM%	DME (g,DM)		
DM	1	30.00	93.00	27.80	8.30	95.00	7.86	71.72	80.67
	2	30.00	93.00	27.80	7.60	95.00	7.20	74.11	83.05
	3	30.00	93.00	27.80	6.80	95.00	6.43	76.86	85.81
	4	30.00	93.00	27.80	5.70	95.00	5.39	80.60	89.55
	5	30.00	93.00	27.80	7.00	95.00	6.63	76.16	85.10
	<i>Avg.</i>	30.00	93.00	27.80	7.08	95.00	6.70	75.89	84.84
CP	1	27.80	12.00	3.47	8.30	11.09	0.92	73.49	84.07
	2	27.80	12.00	3.47	7.60	12.31	0.94	73.06	83.64
	3	27.80	12.00	3.47	6.80	11.56	0.79	73.49	87.94
	4	27.80	12.00	3.47	5.70	14.74	0.84	75.81	86.39
	5	27.80	12.00	3.47	7.00	13.67	0.96	72.45	83.03
	<i>Avg.</i>	27.80	12.00	3.47	7.08	12.67	0.89	73.66	85.01
EE	1	27.80	15.00	4.16	8.30	5.30	0.44	89.42	90.97
	2	27.80	15.00	4.16	7.60	6.28	0.48	88.52	90.07
	3	27.80	15.00	4.16	6.80	4.96	0.34	91.89	93.44
	4	27.80	15.00	4.16	5.70	5.56	0.32	92.38	93.93
	5	27.80	15.00	4.16	7.00	4.10	0.29	93.10	94.65
	<i>Avg.</i>	27.80	15.00	4.16	7.08	5.24	0.37	91.06	92.61
CF	1	27.80	8.00	2.17	8.30	15.42	1.28	40.99	50.21
	2	27.80	8.00	2.17	7.60	16.57	1.26	41.93	51.15
	3	27.80	8.00	2.17	6.80	14.79	1.01	53.63	62.85
	4	27.80	8.00	2.17	5.70	18.25	1.04	52.03	61.26
	5	27.80	8.00	2.17	7.00	15.68	1.10	49.39	58.61
	<i>Avg.</i>	27.80	8.00	2.17	7.08	16.14	1.14	47.59	56.81
OM	1	27.80	82.00	22.80	8.30	62.67	5.20	77.18	86.80
	2	27.80	82.00	22.80	7.60	61.53	4.68	79.49	89.11
	3	27.80	82.00	22.80	6.80	64.16	4.36	80.87	90.48
	4	27.80	82.00	22.80	5.70	59.12	3.37	85.22	94.84
	5	27.80	82.00	22.80	7.00	62.98	4.41	80.66	90.28
	<i>Avg.</i>	27.80	82.00	22.80	7.08	62.09	4.40	80.68	90.30

Table appendix B22 Digestion calculates of Ring-necked pheasant after fed by corn.

Nutrient	Bird No.	FI			excreta			AD	TD
		AD (g)	DM (%)	DMI (g,DM)	Fecal (g)	DM%	DME (g,DM)		
DM	1	30.00	94.00	28.09	4.70	95.00	4.48	84.06	92.91
	2	30.00	94.00	28.09	5.70	94.00	5.37	79.71	89.72
	3	30.00	94.00	28.09	4.50	94.00	4.24	83.98	93.77
	4	30.00	94.00	28.09	4.70	93.00	4.39	83.27	93.21
	5	30.00	94.00	28.09	3.50	92.00	3.24	87.54	97.33
	<i>Avg.</i>	30.00	94.00	28.09	4.62	94.00	4.34	83.71	93.39
CP	1	28.09	8.00	2.35	4.70	10.49	0.49	79.00	94.65
	2	28.09	8.00	2.35	5.70	12.51	0.71	69.63	85.28
	3	28.09	8.00	2.35	4.50	11.57	0.52	77.83	93.47
	4	28.09	8.00	2.35	4.70	11.68	0.55	76.62	92.27
	5	28.09	8.00	2.35	3.50	12.39	0.43	81.53	97.18
	<i>Avg.</i>	28.09	8.00	2.35	4.62	11.73	0.54	76.92	92.57
EE	1	28.09	5.00	1.31	4.70	3.52	0.17	87.41	92.34
	2	28.09	5.00	1.31	5.70	3.55	0.20	84.61	89.54
	3	28.09	5.00	1.31	4.50	3.71	0.17	87.30	92.23
	4	28.09	5.00	1.31	4.70	4.23	0.20	84.87	89.80
	5	28.09	5.00	1.31	3.50	5.54	0.19	85.25	90.18
	<i>Avg.</i>	28.09	5.00	1.31	4.62	4.11	0.19	85.89	90.82
CF	1	28.09	2.00	0.61	4.70	9.01	0.42	30.20	63.16
	2	28.09	2.00	0.61	5.70	8.42	0.48	20.89	53.85
	3	28.09	2.00	0.61	4.50	10.99	0.49	18.48	51.44
	4	28.09	2.00	0.61	4.70	10.51	0.49	18.58	51.54
	5	28.09	2.00	0.61	3.50	11.98	0.42	30.88	63.85
	<i>Avg.</i>	28.09	2.00	0.61	4.62	10.18	0.46	23.80	56.77
OM	1	28.09	99.00	27.68	4.70	68.57	3.22	88.36	96.28
	2	28.09	99.00	27.68	5.70	69.79	3.98	85.63	93.55
	3	28.09	99.00	27.68	4.50	67.10	3.02	89.09	97.01
	4	28.09	99.00	27.68	4.70	68.84	3.24	88.31	96.23
	5	28.09	99.00	27.68	3.50	69.83	2.44	91.17	99.09
	<i>Avg.</i>	28.09	99.00	27.68	4.62	68.83	3.18	88.51	96.43

ภาคผนวก ค (Appendix C)

ข้อมูลวิเคราะห์ ANOVA

T1 = High CP (28%)

T2 = Medium CP (25%)

T3 = Low CP (22%)

Table Appendix C1 ANOVA: Ring-necked pheasant performance 1 week of age.

SOV	Df	SS	MS	F-value	Pr > F
BW					
CP	2	10.232	5.116	3.582 ^{NS}	0.060
ME	1	1.076	1.076	0.753 ^{NS}	0.403
CP × ME	2	17.754	8.877	6.216 [*]	0.014
Error	12	17.137	1.428		
Total	17	46.199			
WG					
CP	2	11.212	5.606	2.233 ^{NS}	0.150
ME	1	0.022	0.022	0.009 ^{NS}	0.927
CP × ME	2	19.217	9.609	3.827 ^{NS}	0.052
Error	12	30.141	2.511		
Total	17	60.582			
ADG					
CP	2	0.231	0.115	2.248 ^{NS}	0.148
ME	1	0.001	0.001	0.013 ^{NS}	0.911
CP × ME	2	0.392	0.196	3.820 ^{NS}	0.052
Error	12	0.615	0.051		
Total	17	1.238			

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Table Appendix C1 (Cont.) ANOVA: Ring-necked pheasant performance 1 week of age

SOV	df	SS	MS	F-value	Pr > F
FI					
CP	2	321.794	160.897	19.717**	0.000
ME	1	0.765	0.765	0.094 ^{NS}	0.765
CP × ME	2	61.516	30.758	3.769 ^{NS}	0.054
Error	12	97.923	8.160		
Total	17	481.997			
T2	T3	T1			
24.56	24.51	15.57			
a		b			
DFI					
CP	2	6.656	3.283	19.707**	0.000
ME	1	0.016	0.016	0.094 ^{NS}	0.764
CP × ME	2	1.255	0.627	3.767 ^{NS}	0.054
Error	12	1.999	0.167		
Total	17	9.835			
T2	T3	T1			
3.51	3.50	2.24			
a		b			

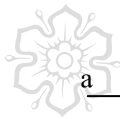
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Table Appendix C1 (Cont.) ANOVA: Ring-necked pheasant performance 1 week of age

SOV	Df	SS	MS	F-value	Pr > F
FCR					
CP	2	2.129	1.064	13.553**	0.001
ME	1	0.007	0.007	0.085 ^{NS}	0.776
CP × ME	2	0.047	0.023	0.297 ^{NS}	0.748
Error	12	0.942	0.079		
Total	17	3.125			

T3

2.32



a

T2

2.02

T1

1.48

b

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Table Appendix C2 ANOVA: Ring-necked pheasant performance 2 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	70.987	35.493	9.424**	0.003
ME	1	0.765	0.765	0.203 ^{NS}	0.660
CP × ME	2	84.713	42.357	11.246**	0.002
Error	12	45.195	3.766		
Total	17	201.659			
T1	T2	T3			
48.63	47.36	43.94			
a		b			
WG					
CP	2	54.761	27.380	9.853**	0.003
ME	1	0.024	0.024	0.009 ^{NS}	0.927
CP × ME	2	39.241	19.621	7.061**	0.009
Error	12	33.346	2.779		
Total	17	127.373			
T1	T2	T3			
20.37	17.79	16.13			
a		b			

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Table Appendix C2 (Cont.) ANOVA: Ring-necked pheasant performance 2 weeks of age.

SOV	Df	SS	MS	F-value	Pr > F
ADG					
CP	2	1.102	0.551	9.709**	0.003
ME	1	0.001	0.001	0.010 ^{NS}	0.923
CP × ME	2	0.807	0.404	7.111**	0.009
Error	12	0.681	0.057		
Total	17	2.592			
FI					
CP	2	20.585	10.292	0.489 ^{NS}	0.625
ME	1	4.371	4.371	0.208 ^{NS}	0.657
CP × ME	2	193.517	96.758	4.596*	0.033
Error	12	252.607	21.051		
Total	17	471.080			
DFI					
CP	2	0.420	0.210	0.489 ^{NS}	0.625
ME	1	0.089	0.089	0.207 ^{NS}	0.657
CP × ME	2	3.949	1.975	4.597 ^{NS}	0.033
Error	12	5.155	0.430		
Total	17	9.613			

Table Appendix C2 (Cont.) ANOVA: Ring-necked pheasant performance 2 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
FCR					
CP	2	1.350	0.675	14.061**	0.001
ME	1	0.000	0.000	0.002 ^{NS}	0.963
CP × ME	2	0.017	0.009	0.180 ^{NS}	0.873
Error	12	0.576	0.048		
Total	17	1.943			

T3

2.69

a

T2

2.44

T1

2.02

b

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Table Appendix C3 ANOVA: Ring-necked pheasant performance 3 weeks of age.

SOV	Df	SS	MS	F-value	Pr > F
BW					
CP	2	620.454	310.227	39.127**	0.000
ME	1	0.058	0.058	0.007 ^{NS}	0.933
CP × ME	2	10.177	5.088	0.642 ^{NS}	0.544
Error	12	95.144	7.929		
Total	17	725.833			
T1	T2	T3			
71.76	69.97	58.51			
a		b			
WG					
CP	2	275.518	137.759	38.929**	0.000
ME	1	1.232	1.232	0.348 ^{NS}	0.566
CP × ME	2	57.164	28.582	8.077**	0.006
Error	12	42.465	3.539		
Total	17	376.379			
ADG					
CP	2	5.619	2.809	38.679**	0.000
ME	1	0.025	0.025	0.343 ^{NS}	0.569
CP × ME	2	1.170	0.585	8.053**	0.006
Error	12	0.872	0.073		
Total	17	7.685			
T1	T2	T3			
3.30	3.23	2.08			
a		b			

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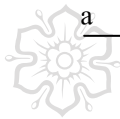
Table Appendix C3 (Cont.) ANOVA: Ring-necked pheasant performance 3 weeks of age

SOV	df	SS	MS	F-value	Pr > F
FI					
CP	2	1303.551	651.775	17.304**	0.000
ME	1	0.266	0.266	0.007 ^{NS}	0.934
CP × ME	2	380.883	190.441	5.056*	0.026
Error	12	451.987	37.666		
Total	17	2136.687			
	T2	T1	T3		
	61.02	55.35	40.81		
	a		b		
DFI					
CP	2	26.606	13.303	17.307**	0.000
ME	1	0.006	0.006	0.007 ^{NS}	0.934
CP × ME	2	7.775	3.888	5.058*	0.026
Error	12	9.224	0.769		
Total	17	43.611			
	T2	T1	T3		
	8.72	7.91	5.83		
	a		b		

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Table Appendix C3 (Cont.) ANOVA: Ring-necked pheasant performance 3 weeks of age

SOV	Df	SS	MS	F-value	Pr > F
FCR					
CP	2	0.522	0.261	16.714**	0.000
ME	1	0.007	0.007	0.436 ^{NS}	0.522
CP × ME	2	0.019	0.010	0.615 ^{NS}	0.557
Error	12	0.187	0.016		
Total	17	0.735			
T3	T2	T1			
2.80	2.70	2.40			



b

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Table Appendix C4 ANOVA: Ring-necked pheasant performance 4 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	7316.995	3658.498	78.760 ^{**}	0.000
ME	1	47.174	47.174	1.016 ^{NS}	0.333
CP × ME	2	5.952	2.976	0.064 ^{NS}	0.938
Error	12	557.411	46.451		
Total	17	7927.533			
T1	T2	T3			
126.30	102.82	76.93			
a	b	c			
WG					
CP	2	3966.528	1983.264	65.740 ^{**}	0.000
ME	1	43.896	43.898	1.455 ^{NS}	0.251
CP × ME	2	31.387	15.694	0.520 ^{NS}	0.607
Error	12	362.019	30.168		
Total	17	4403.832			
T1	T2	T3			
54.54	32.84	18.42			
a	b	c			

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Table Appendix C4 (Cont.) ANOVA: Ring-necked pheasant performance 4 weeks of age.

SOV	Df	SS	MS	F-value	Pr > F
ADG					
CP	2	80.958	40.479	65.841**	0.000
ME	1	0.893	0.893	1.453 ^{NS}	0.251
CP × ME	2	0.639	0.319	0.519 ^{NS}	0.608
Error	12	7.378	0.615		
Total	17	89.868			
T1	T2	T3			
7.79	4.69	2.63			
a	B	c			
FI					
CP	2	22313.255	11156.628	58.784**	0.000
ME	1	154.704	154.704	0.815 ^{NS}	0.384
CP × ME	2	216.391	108.196	0.570 ^{NS}	0.580
Error	12	2277.481	189.790		
Total	17	24961.831			
T1	T2	T3			
137.19	87.15	51.34			
a	B	c			

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Table Appendix C4 (Cont.) ANOVA: Ring-necked pheasant performance 4 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
DFI					
CP	2	455.383	227.692	58.798**	0.000
ME	1	3.157	3.157	0.815 ^{NS}	0.384
CP × ME	2	4.417	2.209	0.570 ^{NS}	0.580
Error	12	46.470	3.872		
Total	17	509.428			
T1	T2	T3			
19.60	12.45	7.33			
a	b	c			
FCR					
CP	2	0.195	0.098	13.979**	0.001
ME	1	0.017	0.017	2.408 ^{NS}	0.147
CP × ME	2	0.010	0.005	0.708 ^{NS}	0.512
Error	12	0.084	0.007		
Total	17	0.306			
T3	T2	T1			
2.78	2.65	2.52			
a	b	c			

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Table Appendix C5 (Cont.) ANOVA: Ring-necked pheasant performance 5 weeks of age.

SOV	Df	SS	MS	F-value	Pr > F
BW					
CP	2	15973.941	7986.970	115.113**	0.000
ME	1	397.150	397.150	5.724*	0.034
CP × ME	2	356.795	178.397	2.571 ^{NS}	0.118
Error	12	832.606	69.384		
Total	17	17560.492			
T1	T2	T3			
185.90	139.55	109.26			
a	b				
WG					
CP	2	1833.675	916.838	36.814**	0.000
ME	1	170.694	170.694	6.854*	0.022
CP × ME	2	434.391	217.195	8.721**	0.005
Error	12	298.857	24.905		
Total	17	2737.617			
T1	T2	T3			
55.60	36.73	32.34			
a	b				

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Table Appendix C5 (Cont.) ANOVA: Ring-necked pheasant performance 5 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
ADG					
CP	2	37.457	18.729	36.921**	0.000
ME	1	3.494	3.494	6.887*	0.022
CP × ME	2	8.856	4.428	8.729**	0.005
Error	12	6.087	0.507		
Total	17	55.894			
<hr/>					
T1	T2	T3			
7.94	5.25	4.62			
a	b				
<hr/>					
FI					
CP	2	8772.180	4386.090	34.225**	0.000
ME	1	1135.897	1135.897	8.863*	0.012
CP × ME	2	3396.097	1698.048	13.250**	0.001
Error	12	1537.863	128.155		
Total	17	14842.036			
<hr/>					
T1	T2	T3			
196.97	94.66	86.65			
a	b				

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Table Appendix C5 (Cont.) ANOVA: Ring-necked pheasant performance 5 weeks of age.

SOV	Df	SS	MS	F-value	Pr > F
DFI					
CP	2	179.043	89.522	34.225**	0.000
ME	1	23.186	23.186	8.864*	0.012
CP × ME	2	69.309	34.654	13.249**	0.001
Error	12	31.388	2.616		
Total	17	248.926			
T1	T2	T3			
19.57	13.52	12.38			
a	B				
FCR					
CP	2	0.120	0.060	4.140*	0.043
ME	1	0.000	0.000	0.031 ^{NS}	0.863
CP × ME	2	0.026	0.013	0.914 ^{NS}	0.427
Error	12	0.174	0.014		
Total	17	0.321			
T3	T2	T1			
2.67	2.59	2.47			
a	b				

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Table Appendix C6 ANOVA: Ring-necked pheasant performance during 1-5 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	15973.941	7986.970	115.113**	0.000
ME	1	397.150	397.150	5.724*	0.034
CP × ME	2	356.795	178.397	2.571 ^{NS}	0.118
Error	12	832.606	69.384		
Total	17	17560.492			
T1	T2	T3			
181.90	139.55	109.26			
a	b	c			
WG					
CP	2	15798.613	7899.306	118.941**	0.000
ME	1	433.259	433.259	6.524*	0.025
CP × ME	2	337.586	168.793	2.542 ^{NS}	0.120
Error	12	796.964	66.414		
Total	17	17366.422			
T1	T2	T3			
164.30	122.27	92.05			
a	b	c			

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Table Appendix C6 (Cont.) ANOVA: Ring-necked pheasant performance during 1-5 weeks of age.

SOV	Df	SS	MS	F-value	Pr > F
ADG					
CP	2	12.907	6.454	119.425**	0.000
ME	1	0.350	0.350	6.477*	0.026
CP × ME	2	0.279	0.140	2.583 ^{NS}	0.117
Error	12	0.648	0.054		
Total	17	14.184			
T1	T2	T3			
4.81 a	3.49 b	2.63 c			
FI					
CP	2	58547.362	29273.681	56.371**	0.000
ME	1	2462.616	2462.616	4.742*	0.050
CP × ME	2	2636.943	1318.472	2.539 ^{NS}	0.120
Error	12	6231.687	519.307		
Total	17	69878.609			

T1

T2

T3

386.22
a310.81
b246.67
c

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Table Appendix C6 (Cont.) ANOVA: Ring-necked pheasant performance during 1-5 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
DFI					
CP	2	47.861	23.930	56.356**	0.000
ME	1	2.007	2.007	4.726*	0.050
CP × ME	2	2.167	1.083	2.551 ^{NS}	0.119
Error	12	5.096	0.425		
Total	17	57.130			
	T1	T2	T3		
	11.03	8.89	7.04		
	a	b	c		
FCR					
CP	2	0.323	0.162	57.970**	0.000
ME	1	0.001	0.001	0.510 ^{NS}	0.489
CP × ME	2	0.001	0.001	0.253 ^{NS}	0.781
Error	12	0.033	0.003		
Total	17	0.359			

T3 T2 T1

2.68

a

2.54

b

2.35

c

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T1 = High CP (25%)

T2 = Medium CP (22%)

T3 = Low CP (19%)

Table Appendix C7 ANOVA: Ring-necked pheasant performance 6 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	1244.688	622.344	0.253 ^{NS}	0.780
ME	1	180.627	180.627	0.074 ^{NS}	0.791
CP × ME	2	716.016	358.008	0.146 ^{NS}	0.866
Error	12	29482.702	2456.892		
Total	17	31624.033			
WG					
CP	2	1166.853	583.427	14.924 ^{**}	0.001
ME	1	268.733	268.733	6.874 [*]	0.022
CP × ME	2	477.258	238.629	6.104 [*]	0.015
Error	12	469.130	39.094		
Total	17	2381.975			
T3	T2	T1			
52.16	40.04	34.20			

a

b

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Table Appendix C7 (Cont.) ANOVA: Ring-necked pheasant performance 6 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
ADG					
CP	2	23.846	11.923	14.907**	0.001
ME	1	5.456	5.456	6.822*	0.023
CP × ME	2	9.734	4.872	6.091*	0.015
Error	12	9.598	0.800		
Total	17	48.643			
T3	T2	T1			
7.45	5.72	4.88			
a	b				
FI					
CP	2	6486.543	3243.271	14.144**	0.001
ME	1	2272.054	2272.054	9.909**	0.008
CP × ME	2	3132.861	1566.430	6.831**	0.010
Error	12	2751.580	229.298		
Total	17	14643.037			
T3	T2	T1			
134.05	103.02	88.50			
a	b				

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Table Appendix C8 ANOVA: Ring-necked pheasant performance 7 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
DFI					
CP	2	132.372	66.186	14.143**	0.001
ME	1	46.366	46.366	9.908**	0.008
CP × ME	2	63.936	31.968	6.831**	0.010
Error	12	56.158	4.680		
Total	17	298.832			
<hr/>					
T3	T2	T1			
19.15	14.74	12.64			
a	b				
<hr/>					
FCR					
CP	2	0.115	0.058	2.404 ^{NS}	0.132
ME	1	0.019	0.019	0.778 ^{NS}	0.395
CP × ME	2	0.007	0.004	0.149 ^{NS}	0.863
Error	12	0.288	0.024		
Total	17	0.429			
<hr/>					
BW					
CP	2	2530.203	1265.102	0.462 ^{NS}	0.641
ME	1	2298.420	2298.420	0.839 ^{NS}	0.378
CP × ME	2	3753.454	1876.727	0.685 ^{NS}	0.523
Error	12	32886.832	2740.569		
Total	17	41468.909			

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Table Appendix C8 ANOVA: Ring-necked pheasant performance 7 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
WG					
CP	2	3019.809	1509.904	14.514**	0.001
ME	1	1190.232	1180.232	11.441**	0.005
CP × ME	2	1251.421	625.710	6.015*	0.016
Error	12	1248.397	104.033		
Total	17	6709.858			
T1	T2	T3			
64.61	44.39	33.33			
a	b				
ADG					
CP	2	61.610	30.805	14.487**	0.001
ME	1	24.267	24.267	11.413**	0.005
CP × ME	2	25.509	12.755	5.998*	0.016
Error	12	25.516	2.126		
Total	17	136.902			
T1	T2	T3			
9.23	6.34	4.76			
a	b				

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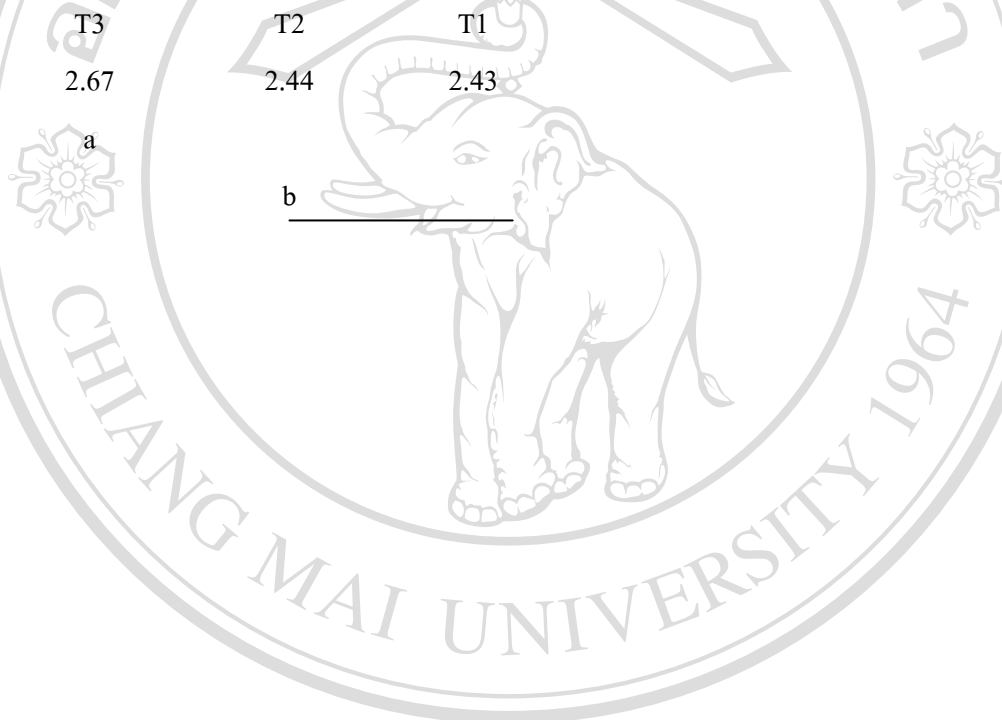
Table Appendix C8 (Cont.) ANOVA: Ring-necked pheasant performance 7 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
FI					
CP	2	14579.680	7289.840	9.678**	0.003
ME	1	6884.338	6884.338	9.139*	0.011
CP × ME	2	8277.132	4138.566	5.494*	0.020
Error	12	9039.035	753.253		
Total	17	38780.185			
T1	T2	T3			
157.12	108.98	89.39			
a	b				
DFI					
CP	2	297.543	148.772	9.678**	0.003
ME	1	140.493	140.493	9.140*	0.011
CP × ME	2	168.932	84.466	5.495*	0.020
Error	12	184.460	15.372		
Total	17	791.429			
T1	T2	T3			
22.45	15.57	12.77			
a	b				

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Table Appendix C8 (Cont.) ANOVA: Ring-necked pheasant performance 7 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
FCR					
CP	2	0.231	0.115	9.640**	0.003
ME	1	0.000	0.000	0.007 ^{NS}	0.933
CP × ME	2	0.009	0.004	0.368 ^{NS}	0.699
Error	12	0.144	0.012		
Total	17	0.384			



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Table Appendix C9 ANOVA: Ring-necked pheasant performance 8 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	1168.779	5844.390	2.248 ^{NS}	0.148
ME	1	3767.120	3767.120	1.449 ^{NS}	0.252
CP × ME	2	3348.351	1674.176	0.644 ^{NS}	0.542
Error	12	31193.407	2599.451		
Total	17	49997.657			
WG					
CP	2	3945.352	1972.676	47.175 ^{**}	0.000
ME	1	180.437	180.437	4.315 ^{NS}	0.060
CP × ME	2	252.915	126.458	3.024 ^{NS}	0.086
Error	12	501.797	41.816		
Total	17	4880.501			
T1	T2	T3			
62.62	41.73	26.50			
a	b	c			
ADG					
CP	2	80.479	40.239	47.098 ^{**}	0.000
ME	1	3.681	3.681	4.309 ^{NS}	0.060
CP × ME	2	5.145	2.573	3.011 ^{NS}	0.087
Error	12	10.253	0.854		
Total	17	99.558			
T1	T2	T3			
8.95	5.96	3.79			
a	b	c			

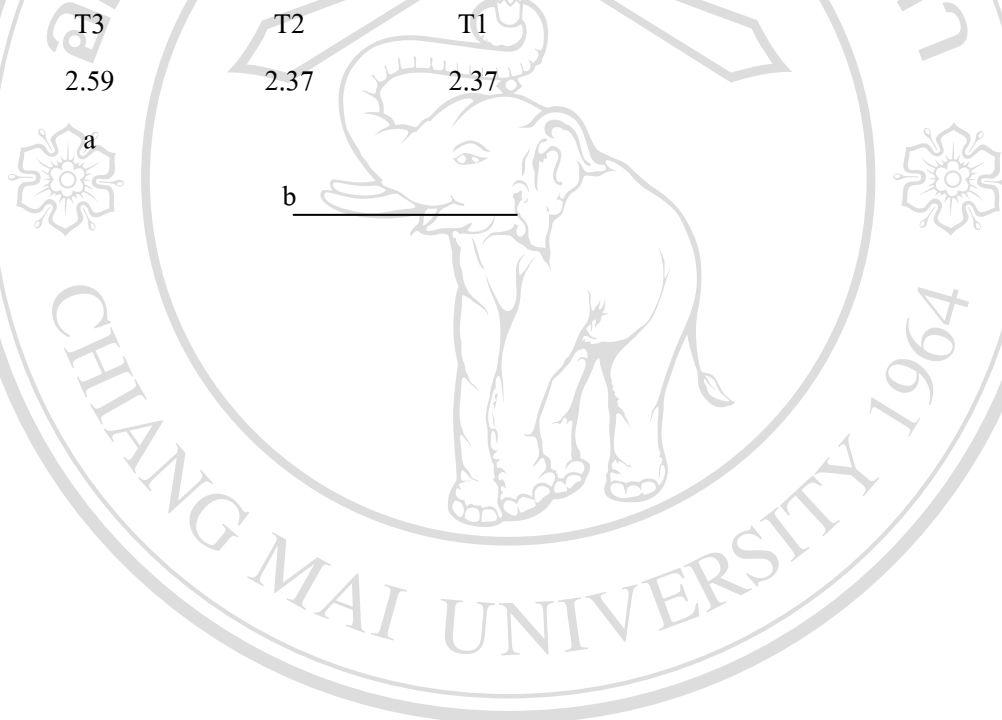
Table Appendix C9 (Cont.) ANOVA: Ring-necked pheasant performance 8 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
FI					
CP	2	19659.675	9829.838	29.579**	0.000
ME	1	1033.912	1033.912	3.111 ^{NS}	0.103
CP × ME	2	924.075	462.036	1.390 ^{NS}	0.286
Error	12	3987.843	332.320		
Total	17	25605.505			
T1	T2	T3			
148.78	98.48	68.69			
a	b	c			
DFI					
CP	2	401.207	200.603	29.577**	0.000
ME	1	21.093	21.093	3.110 ^{NS}	0.103
CP × ME	2	18.863	9.432	1.391 ^{NS}	0.286
Error	12	81.389	6.782		
Total	17	522.552			
T1	T2	T3			
21.25	14.07	9.81			
a	b	c			

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Table Appendix C9 (Cont.) ANOVA: Ring-necked pheasant performance 8 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
FCR					
CP	2	0.200	0.100	7.449**	0.008
ME	1	0.003	0.003	0.219 ^{NS}	0.648
CP × ME	2	0.019	0.009	0.708 ^{NS}	0.512
Error	12	0.161	0.013		
Total	17	0.383			



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Table Appendix C10 ANOVA: Ring-necked pheasant performance 9 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	24185.482	12092.741	5.054*	0.026
ME	1	5863.723	5863.723	2.451 ^{NS}	0.143
CP × ME	2	7839.360	3919.680	1.638 ^{NS}	0.235
Error	12	28713.569	2392.797		
Total	17	66602.134			
T1	T2	T3			
358.04	307.21	282.59			
a	b				
WG					
CP	2	2344.160	1172.080	31.476**	0.000
ME	1	230.982	230.982	6.400*	0.026
CP × ME	2	1500.591	750.296	20.789**	0.000
Error	12	433.089	36.091		
Total	17	4508.822			
T1	T2	T3			
54.02	38.37	26.14			
a	b	c			

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Table Appendix C10 (Cont.) ANOVA: Ring-necked pheasant performance 9 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
ADG					
CP	2	47.879	23.940	32.693**	0.000
ME	1	4.723	4.723	6.450*	0.026
CP × ME	2	30.666	15.333	20.940**	0.000
Error	12	8.878	0.732		
Total	17	92.146			
T1	T2	T3			
7.72	5.48	3.73			
a	b	c			
FI					
CP	2	12106.130	6053.065	25.998**	0.000
ME	1	1444.531	1444.531	6.204*	0.028
CP × ME	2	8249.883	4124.942	17.717**	0.000
Error	12	2793.936	232.828		
Total	17	24594.48			
T1	T2	T3			
128.81	89.51	65.94			
a	b	c			

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Table Appendix C10 (Cont.) ANOVA: Ring-necked pheasant performance 9 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
DFI					
CP	2	247.059	123.529	25.992**	0.000
ME	1	29.478	29.478	6.202*	0.028
CP × ME	2	168.346	84.173	17.711**	0.000
Error	12	57.031	4.753		
Total	17	501.914			
T1	T2	T3			
18.40	12.79	9.42			
a	b	c			
FCR					
CP	2	0.136	0.068	9.151**	0.004
ME	1	0.014	0.014	1.950 ^{NS}	0.188
CP × ME	2	0.012	0.006	0.837 ^{NS}	0.457
Error	12	0.089	0.007		
Total	17	0.251			
T3	T1	T2			
2.53	2.39	2.33			
a	b				

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Table Appendix C11 ANOVA: Ring-necked pheasant performance 10 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	37884.227	18942.113	7.266 ^{**}	0.009
ME	1	7948.924	7848.924	3.049 ^{NS}	0.106
CP × ME	2	9942.886	4971.443	1.907 ^{NS}	0.191
Error	12	31283.137	2606.928		
Total	17	37059.174			
T1	T2	T3			
410.99	356.55	313.85			
a		b			
WG					
CP	2	1621.255	810.628	22.420 ^{**}	0.000
ME	1	158.301	158.301	4.378 ^{NS}	0.058
CP × ME	2	430.429	215.214	5.952 [*]	0.016
Error	12	433.873	36.156		
Total	17	2643.858			
T1	T2	T3			
52.96	49.34	31.26			
a		b			

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Table Appendix C11 (Cont.) ANOVA: Ring-necked pheasant performance 10 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
ADG					
CP	2	33.025	16.513	22.377**	0.000
ME	1	3.234	3.234	4.383*	0.058
CP × ME	2	8.777	4.389	5.947*	0.016
Error	12	8.855	0.738		
Total	17	53.982			
T1	T2	T3			
7.56	7.04	4.46			
a		b			
FI					
CP	2	6914.306	3457.153	17.737**	0.000
ME	1	861.263	861.263	4.419 ^{NS}	0.057
CP × ME	2	1919.823	959.911	4.925*	0.027
Error	12	2338.945	194.912		
Total	17	12034.337			
T1	T2	T3			
125.48	114.79	79.60			
a		b			

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Table Appendix C11 (Cont.) ANOVA: Ring-necked pheasant performance 10 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
DFI					
CP	2	141.111	70.555	17.737**	0.000
ME	1	17.572	17.572	4.418 ^{NS}	0.057
CP × ME	2	39.179	19.590	4.925*	0.027
Error	12	47.733	3.978		
Total	17	245.595			
T1	T2	T3			
17.92	16.39	11.37			
a		b			
FCR					
CP	2	0.177	0.089	5.399*	0.021
ME	1	0.000	0.000	0.008 ^{NS}	0.928
CP × ME	2	0.014	0.007	0.440 ^{NS}	0.654
Error	12	0.197	0.016		
Total	17	0.389			
T3	T1	T2			
2.56	2.38	2.33			
a		b			

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Table Appendix C12 ANOVA: Ring-necked pheasant performance during 6-10 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	37884.227	18942.113	7.266**	0.009
ME	1	7948.924	7948.924	3.049 ^{NS}	0.106
CP × ME	2	9942.886	4971.443	1.907 ^{NS}	0.191
Error	12	31283.137	2606.928		
Total	17	87059.174			
T1	T2	T3			
410.99	370.45	299.96			
a		b			
WG					
CP	2	39132.777	19566.389	116.755**	0.000
ME	1	8483.834	8483.834	50.624**	0.000
CP × ME	2	9380.736	4690.368	27.988**	0.000
Error	12	2011.016	167.585		
Total	17	59008.363			
T1	T2	T3			
268.42	226.77	155.50			
a		b			
		c			

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Table Appendix C12 (Cont.) ANOVA: Ring-necked pheasant performance during 6-10 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
ADG					
CP	2	31.940	15.970	116.191**	0.000
ME	1	6.919	6.919	50.342**	0.000
CP × ME	2	7.657	3.828	27.855**	0.000
Error	12	1.649	0.137		
Total	17	48.165			
T1	T2	T3			
7.67 a	6.48 b	4.44 c			
FI					
CP	2	176800.569	88400.284	51.090**	0.000
ME	1	52963.191	52963.191	30.610**	0.000
CP × ME	2	55248.148	27624.074	15.965**	0.000
Error	12	20763.350	1730.279		
Total	17	305775.257			

T1	T2	T3
648.69 a	545.81 b	406.82 c

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Table Appendix C12 (Cont.) ANOVA: Ring-necked pheasant performance during 6-10 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
DFI					
CP	2	144.312	72.156	51.094**	0.000
ME	1	43.214	43.214	30.600**	0.000
CP × ME	2	45.137	22.568	15.981**	0.000
Error	12	16.947	1.412		
Total	17	249.610			
T1	T2	T3			
18.53 a	15.60 b	11.62 c			
FCR					
CP	2	0.169	0.085	12.199**	0.001
ME	1	0.003	0.003	0.500 ^{NS}	0.493
CP × ME	2	0.009	0.004	0.635 ^{NS}	0.547
Error	12	0.083	0.007		
Total	17	0.265			

T3 T1 T2

2.62 2.42 2.41

a

b

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T1 = High CP (22%)

T2 = Medium CP (19%)

T3 = Low CP (16%)

Table Appendix C13 ANOVA: Ring-necked pheasant performance 11 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	1982.444	991.222	0.114 ^{NS}	0.893
ME	1	1097.149	1097.149	0.126 ^{NS}	0.728
CP × ME	2	168.262	84.131	0.010 ^{NS}	0.990
Error	12	104085.948	8673.829		
Total	17	107333.804			
WG					
CP	2	1153.451	576.726	5.563 [*]	0.020
ME	1	750.136	750.136	7.236 [*]	0.020
CP × ME	2	36.142	18.071	0.174 ^{NS}	0.842
Error	12	1244.050	103.671		
Total	17	3183.779			
T1	T3	T2			
74.21	59.20	55.78			

a

b

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Table Appendix C13 (Cont.) ANOVA: Ring-necked pheasant performance 11 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
ADG					
CP	2	23.612	11.806	5.576*	0.019
ME	1	15.272	15.272	7.213*	0.020
CP × ME	2	0.743	0.372	0.175 ^{NS}	0.841
Error	12	25.407	2.117		
Total	17	65.034			
T1	T3	T2			
10.60	8.57	7.97			
a	b				
FI					
CP	2	7306.292	3653.146	2.892 ^{NS}	0.094
ME	1	7546.061	7546.061	5.973*	0.031
CP × ME	2	161.103	80.551	0.064 ^{NS}	0.939
Error	12	15159.950	1263.329		
Total	17	30173.406			
T1	T2	T3			
193.90	159.80	145.96			
a	b				

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Table Appendix C14 ANOVA: Ring-necked pheasant performance 12 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
DFI					
CP	2	149.099	74.550	2.889 ^{NS}	0.095
ME	1	154.060	154.060	5.971 [*]	0.031
CP × ME	2	3.281	1.641	0.064 ^{NS}	0.939
Error	12	309.628	25.802		
Total	17	616.068			
T1	T2	T3			
27.70	22.83	20.85			
a	b				
FCR					
CP	2	0.031	0.016	0.089 ^{NS}	0.916
ME	1	0.073	0.073	0.418 ^{NS}	0.530
CP × ME	2	0.054	0.027	0.155 ^{NS}	0.858
Error	12	2.111	0.176		
Total	17	2.270			
BW					
CP	2	4071.312	2035.656	0.223 ^{NS}	0.803
ME	1	9555.149	9555.149	1.047 ^{NS}	0.326
CP × ME	2	2949.435	1474.718	0.162 ^{NS}	0.853
Error	12	109501.668	9125.139		
Total	17	126077.565			

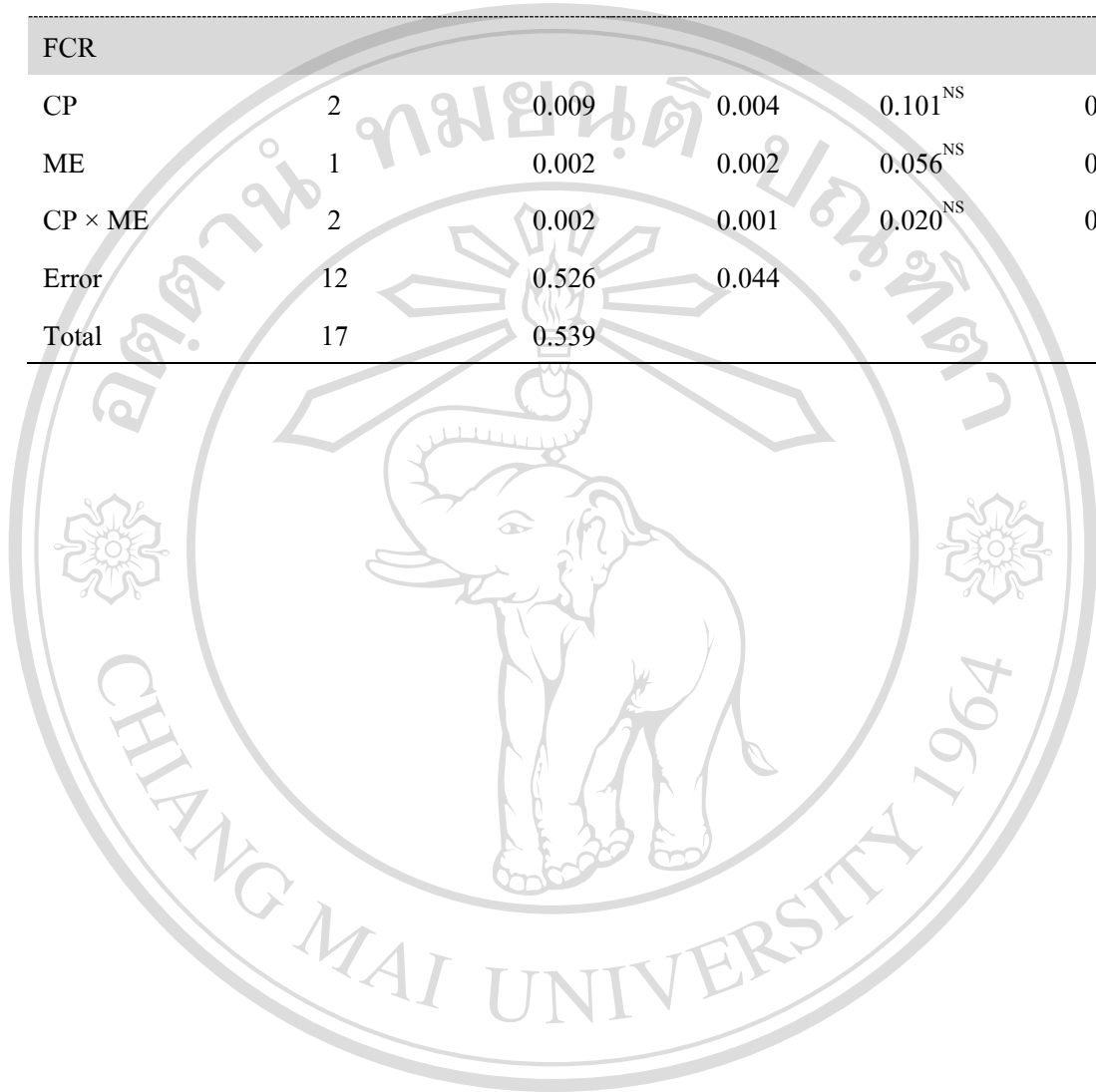
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Table Appendix C14 (Cont.) ANOVA: Ring-necked pheasant performance 12 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
WG					
CP	2	660.931	330.465	1.619 ^{NS}	0.239
ME	1	4176.675	4176.675	20.458 ^{**}	0.001
CP × ME	2	2224.543	1112.272	5.448 [*]	0.021
Error	12	2449.893	204.158		
Total	17	9512.042			
ADG					
CP	2	13.485	6.742	1.618 ^{NS}	0.239
ME	1	85.238	85.238	20.454 ^{**}	0.001
CP × ME	2	45.409	22.704	5.448 [*]	0.021
Error	12	50.007	4.167		
Total	17	194.139			
FI					
CP	2	4808.420	1140387.258	0.758 ^{NS}	0.490
ME	1	32695.507	2404.210	10.302 ^{**}	0.007
CP × ME	2	16258.642	32695.507	2.568 ^{NS}	0.118
Error	12	38083.147	8129.321		
Total	17	91845.716			
DFI					
CP	2	98.179	49.089	0.758 ^{NS}	0.490
ME	1	667.220	667.220	10.298 ^{**}	0.008
CP × ME	2	331.792	165.896	2.561 ^{NS}	0.119
Error	12	777.477	64.790		
Total	17	1874.668			

Table Appendix C14 (Cont.) ANOVA: Ring-necked pheasant performance 12 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
FCR					
CP	2	0.009	0.004	0.101 ^{NS}	0.905
ME	1	0.002	0.002	0.056 ^{NS}	0.817
CP × ME	2	0.002	0.001	0.020 ^{NS}	0.981
Error	12	0.526	0.044		
Total	17	0.539			



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Table Appendix C15 ANOVA: Ring-necked pheasant performance 13 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	1444.777	722.389	0.090 ^{NS}	0.914
ME	1	27711.288	27711.288	3.463 ^{NS}	0.087
CP × ME	2	647.190	323.595	0.040 ^{NS}	0.960
Error	12	96017.740	8001.478		
Total	17	125820.995			
WG					
CP	2	3205.581	1602.790	13.753 ^{**}	0.001
ME	1	4721.976	4721.976	40.519 ^{**}	0.000
CP × ME	2	870.689	435.344	3.736 ^{NS}	0.055
Error	12	1398.450	116.537		
Total	17	10196.969			
T2	T3	T1			
113.47	96.63	80.79			
a	b	c			
ADG					
CP	2	65.400	32.700	13.774 ^{**}	0.001
ME	1	96.327	96.327	40.574 ^{**}	0.000
CP × ME	2	17.756	8.878	3.740 ^{NS}	0.055
Error	12	28.489	2.374		
Total	17	207.972			
T2	T3	T1			
16.21	13.80	11.54			
a	b	c			

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Table Appendix C15 (Cont.) ANOVA: Ring-necked pheasant performance 13 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
FI					
CP	2	18741.523	9870.761	9.411**	0.003
ME	1	36223.553	36223.553	34.535**	0.000
CP × ME	2	4389.411	2194.705	2.092 ^{NS}	0.166
Error	12	12586.698	1048.891		
Total	17	72941.184			
T2	T3	T1			
301.33	256.17	220.39			
a	b				
DFI					
CP	2	403.039	201.519	9.415**	0.003
ME	1	739.073	739.073	34.530**	0.000
CP × ME	2	89.553	44.777	2.092 ^{NS}	0.166
Error	12	256.846	21.404		
Total	17	1488.551			
T2	T3	T1			
43.05	36.59	31.48			
a	b				
FCR					
CP	2	0.019	0.010	1.847 ^{NS}	0.200
ME	1	0.006	0.006	1.235 ^{NS}	0.288
CP × ME	2	0.015	0.008	1.443 ^{NS}	0.274
Error	12	0.062	0.005		
Total	17	0.103			

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Table Appendix C16 ANOVA: Ring-necked pheasant performance 14 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	3584.664	1792.332	0.236 ^{NS}	0.794
ME	1	20749.561	20749.561	2.727 ^{NS}	0.125
CP × ME	2	2556.637	1278.318	0.168 ^{NS}	0.847
Error	12	91304.723	7608.727		
Total	17	118195.585			
WG					
CP	2	2912.311	1456.156	11.609 ^{**}	0.002
ME	1	502.656	502.656	4.007 ^{NS}	0.068
CP × ME	2	2012.011	1010.505	8.056 ^{**}	0.006
Error	12	1505.206	125.434		
Total	17	6941.184			
T2	T3	T1			
117.93	111.23	88.23			
a		b			
ADG					
CP	2	59.412	29.706	11.597 ^{**}	0.002
ME	1	10.276	10.276	4.011 ^{NS}	0.068
CP × ME	2	41.231	20.616	8.048 ^{**}	0.006
Error	12	30.739	2.562		
Total	17	141.658			
T2	T3	T1			
16.85	15.89	12.61			
a		b			

Table Appendix C16 (Cont.) ANOVA: Ring-necked pheasant performance 14 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
FI					
CP	2	19815.466	9907.733	9.874**	0.003
ME	1	3141.338	3141.338	3.131 ^{NS}	0.102
CP × ME	2	14276.802	7138.401	7.114**	0.009
Error	12	12041.428	10033.452		
Total	17	49275.033			
T2	T3	T1			
317.71	296.06	239.04			
a		b			
DFI					
CP	2	404.358	202.179	9.871**	0.003
ME	1	64.109	64.109	3.130 ^{NS}	0.102
CP × ME	2	291.355	145.677	7.113**	0.009
Error	12	245.782	20.482		
Total	17	1005.604			
T2	T3	T1			
45.39	42.30	34.15			
a		b			
FCR					
CP	2	0.008	0.004	0.404 ^{NS}	0.676
ME	1	0.004	0.004	0.364 ^{NS}	0.558
CP × ME	2	0.002	0.001	0.104 ^{NS}	0.902
Error	12	0.124	0.010		
Total	17	0.138			

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Table Appendix C17 ANOVA: Ring-necked pheasant performance 15 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	5.069	2.534	0.000 ^{NS}	1.000
ME	1	3989.031	3989.031	0.572 ^{NS}	0.464
CP × ME	2	4059.969	2029.985	0.291 ^{NS}	0.752
Error	12	83623.749	6968.646		
Total	17	91677.818			
WG					
CP	2	3411.444	1705.722	11.811 ^{**}	0.001
ME	1	6542.917	6542.917	45.307 ^{**}	0.000
CP × ME	2	177.639	88.820	0.615 ^{NS}	0.557
Error	12	1732.951	144.413		
Total	17	11864.951			
T1	T3	T2			
98.56	92.28	66.71			
a		b			
ADG					
CP	2	69.671	34.835	11.811 ^{**}	0.001
ME	1	133.498	133.498	45.262 ^{**}	0.000
CP × ME	2	3.630	1.815	0.615 ^{NS}	0.557
Error	12	35.393	2.948		
Total	17	242.192			
T1	T3	T2			
14.07	13.18	9.53			
a		b			

Table Appendix C17 (Cont.) ANOVA: Ring-necked pheasant performance 15 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
FI					
CP	2	23476.631	11738.315	10.937**	0.002
ME	1	47959.110	47959.110	44.686**	0.000
CP × ME	2	1524.384	762.192	0.710 ^{NS}	0.511
Error	12	12878.949	1073.246		
Total	17	85839.073			
T1	T3	T2			
267.08	248.40	182.86			
a		b			
DFI					
CP	2	479.129	239.565	10.938**	0.002
ME	1	978.719	978.719	44.685**	0.000
CP × ME	2	31.113	15.557	0.710 ^{NS}	0.511
Error	12	262.833	21.903		
Total	17	1751.759			
T1	T3	T2			
38.15	35.48	26.12			
a		b			
FCR					
CP	2	0.008	0.004	0.795 ^{NS}	0.474
ME	1	0.000	0.000	0.067 ^{NS}	0.800
CP × ME	2	0.001	0.001	0.118 ^{NS}	0.890
Error	12	0.063	0.005		
Total	17	0.073			

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Table Appendix C18 ANOVA: Ring-necked pheasant performance 16 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	405.467	202.734	0.030 ^{NS}	0.971
ME	1	156.468	156.468	0.023 ^{NS}	0.882
CP × ME	2	4277.672	2138.836	0.316 ^{NS}	0.735
Error	12	81256.156	6771.346		
Total	17	86095.764			
WG					
CP	2	489.194	244.597	8.320 ^{**}	0.005
ME	1	5725.570	5725.570	194.746 ^{**}	0.000
CP × ME	2	2567.750	1283.875	43.669 ^{**}	0.000
Error	12	352.802	29.400		
Total	17	9135.316			
T3	T2	T1			
68.35	58.09	56.64			
a		b			
ADG					
CP	2	10.017	5.009	8.365 ^{**}	0.005
ME	1	116.892	116.892	195.220 ^{**}	0.000
CP × ME	2	52.391	26.196	43.749 ^{**}	0.000
Error	12	7.185	0.599		
Total	17	186.485			
T3	T2	T1			
9.77	8.30	8.09			
a		b			

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Table Appendix C18 (Cont.) ANOVA: Ring-necked pheasant performance 16 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
FI					
CP	2	3527.152	1763.576	9.107**	0.004
ME	1	40687.585	40687.585	210.107**	0.000
CP × ME	2	18008.072	9004.036	46.496**	0.000
Error	12	2323.819	193.652		
Total	17	64546.627			
T3	T2	T1			
184.36	156.70	152.98			
a	b				
DFI					
CP	2	71.982	35.991	9.108**	0.004
ME	1	830.367	830.367	210.131**	0.000
CP × ME	2	367.493	183.747	46.499**	0.000
Error	12	47.420	3.952		
Total	17	1317.261			
T3	T2	T1			
26.34	22.39	21.85			
a	b				
FCR					
CP	2	0.000	0.000	0.013 ^{NS}	0.987
ME	1	0.001	0.001	0.071 ^{NS}	0.794
CP × ME	2	0.003	0.002	0.135 ^{NS}	0.875
Error	12	0.134	0.011		
Total	17	0.138			

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Table Appendix C19 ANOVA: Ring-necked pheasant performance 17 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	1436.637	718.319	0.108 ^{NS}	0.899
ME	1	1729.896	1729.896	0.259 ^{NS}	0.620
CP × ME	2	3241.924	1620.962	0.243 ^{NS}	0.788
Error	12	80050.367	6670.864		
Total	17	86458.824			
WG					
CP	2	544.437	272.218	8.542 ^{**}	0.005
ME	1	845.564	845.564	26.534 ^{**}	0.000
CP × ME	2	399.553	199.776	6.269 [*]	0.014
Error	12	382.402	31.867		
Total	17	2171.956			
T3	T1	T2			
46.16	43.67	33.46			
a		b			
ADG					
CP	2	11.126	5.563	8.546 ^{**}	0.005
ME	1	17.268	17.268	26.257 ^{**}	0.000
CP × ME	2	8.160	4.080	6.267 [*]	0.014
Error	12	7.811	0.651		
Total	17	44.364			
T3	T1	T2			
6.59	6.24	4.78			
a		b			

Table Appendix C19 (Cont.) ANOVA: Ring-necked pheasant performance 17 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
FI					
CP	2	4162.920	2081.460	7.877**	0.007
ME	1	5882.147	5882.147	22.260**	0.000
CP × ME	2	3221.657	1610.829	6.096*	0.015
Error	12	3171.017	264.251		
Total	17	16437.742			
T3	T1	T2			
125.31	117.83	89.97			
a	b				
DFI					
CP	2	84.965	42.483	7.878**	0.007
ME	1	120.027	120.027	22.258**	0.000
CP × ME	2	65.759	32.879	6.097*	0.015
Error	12	64.711	5.393		
Total	17	335.462			
T3	T1	T2			
17.90	16.83	12.85			
a	b				
FCR					
CP	2	0.001	0.001	0.070 ^{NS}	0.933
ME	1	0.003	0.003	0.255 ^{NS}	0.623
CP × ME	2	0.006	0.003	0.295 ^{NS}	0.750
Error	12	0.126	0.011		
Total	17	0.136			

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Table Appendix C20 ANOVA: Ring-necked pheasant performance 18 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	377.379	188.690	0.028 ^{NS}	0.972
ME	1	4417.373	4417.373	0.654 ^{NS}	0.434
CP × ME	2	11145.171	5572.586	0.826 ^{NS}	0.461
Error	12	80993.365	6749.447		
Total	17	89633.289			
WG					
CP	2	525.731	262.866	4.617 [*]	0.033
ME	1	616.699	618.699	10.866 ^{**}	0.006
CP × ME	2	4474.617	2237.308	39.294 ^{**}	0.000
Error	12	683.250	56.937		
Total	17	6302.297			
T2	T1	T3			
66.49	56.88	53.80			
a					
	b				
ADG					
CP	2	10.699	5.350	4.601 [*]	0.033
ME	1	12.617	12.617	10.852 ^{**}	0.006
CP × ME	2	91.293	45.646	39.259 ^{**}	0.000
Error	12	13.952	1.163		
Total	17	128.561			
T2	T1	T3			
9.50	8.12	7.68			
a					
	b				

Table Appendix C20 (Cont.) ANOVA: Ring-necked pheasant performance 18 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
FI					
CP	2	4013.611	2006.806	4.715*	0.031
ME	1	4579.564	4579.564	10.759**	0.007
CP × ME	2	32751.717	16374.859	38.474**	0.000
Error	12	5107.614	425.635		
Total	17	46452.506			
T2	T1	T3			
179.41	153.51	144.09			
a	b				
DFI					
CP	2	81.908	40.954	4.715*	0.031
ME	1	93.459	93.459	10.760**	0.007
CP × ME	2	668.428	334.214	38.477**	0.000
Error	12	104.232	8.686		
Total	17	948.028			
T2	T1	T3			
25.63	21.93	20.58			
a	b				
FCR					
CP	2	0.001	0.001	0.053 ^{NS}	0.948
ME	1	0.000	0.000	0.002 ^{NS}	0.964
CP × ME	2	0.001	0.000	0.034 ^{NS}	0.966
Error	12	0.125	0.010		
Total	17	0.127			

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Table Appendix C21 ANOVA: Ring-necked pheasant performance during 11-18 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
BW					
CP	2	377.379	188.690	0.028 ^{NS}	0.972
ME	1	4417.373	4417.373	0.654 ^{NS}	0.434
CP × ME	2	11145.171	5572.586	0.826 ^{NS}	0.461
Error	12	80993.365	6749.447		
Total	17	96933.289			
WG					
CP	2	591.882	295.941	0.196 ^{NS}	0.824
ME	1	5212.545	5212.545	3.457 ^{NS}	0.088
CP × ME	2	11655.577	5827.789	3.865 ^{NS}	0.051
Error	12	18092.429	1507.702		
Total	17	35552.434			
ADG					
CP	2	0.188	0.094	0.194 ^{NS}	0.826
ME	1	1.656	1.656	3.427 ^{NS}	0.089
CP × ME	2	3.717	1.858	3.845 ^{NS}	0.051
Error	12	5.799	0.483		
Total	17	11.360			
FI					
CP	2	2652.543	1326.271	0.126 ^{NS}	0.883
ME	1	26604.324	26604.324	2.532 ^{NS}	0.138
CP × ME	2	103071.070	51535.535	4.904 ^{NS}	0.028
Error	12	126098.773	10508.231		
Total	17	258426.710			

Table Appendix C21 (Cont.) ANOVA: Ring-necked pheasant performance during 11-18 weeks of age.

SOV	df	SS	MS	F-value	Pr > F
DFI					
CP	2	0.841	0.420	0.125 ^{NS}	0.883
ME	1	8.450	8.460	2.525 ^{NS}	0.138
CP × ME	2	32.812	16.406	4.896 ^{NS}	0.028
Error	12	40.210	3.351		
Total	17	82.323			
FCR					
CP	2	0.001	0.000	0.089 ^{NS}	0.916
ME	1	0.003	0.003	0.644 ^{NS}	0.438
CP × ME	2	0.004	0.002	0.410 ^{NS}	0.673
Error	12	0.055	0.005		
Total	17	0.062			

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Table Appendix C22 ANOVA: Carcass percentage of Ring-necked pheasant.

SOV	df	SS	MS	F-value	Pr > F
Carcass					
CP	2	13.513	6.756	0.229 ^{NS}	0.799
ME	1	10.382	10.382	0.352 ^{NS}	0.564
CP × ME	2	48.200	24.100	0.818 ^{NS}	0.465
Error	12	353.589	29.466		
Total	17	425.682			
Giblet					
CP	2	0.753	0.376	3.114*	0.018
ME	1	0.083	0.083	0.684 ^{NS}	0.424
CP × ME	2	0.016	0.008	0.065 ^{NS}	0.937
Error	12	1.450	0.121		
Total	17	2.301			
T1	T2	T3			
11.19	10.81	10.72			
a	b				
Abdominal fat					
CP	2	0.051	0.025	0.619 ^{NS}	0.555
ME	1	0.952	0.952	23.155**	0.000
CP × ME	2	0.075	0.038	0.915 ^{NS}	0.427
Error	12	0.493	0.041		
Total	17	1.571			

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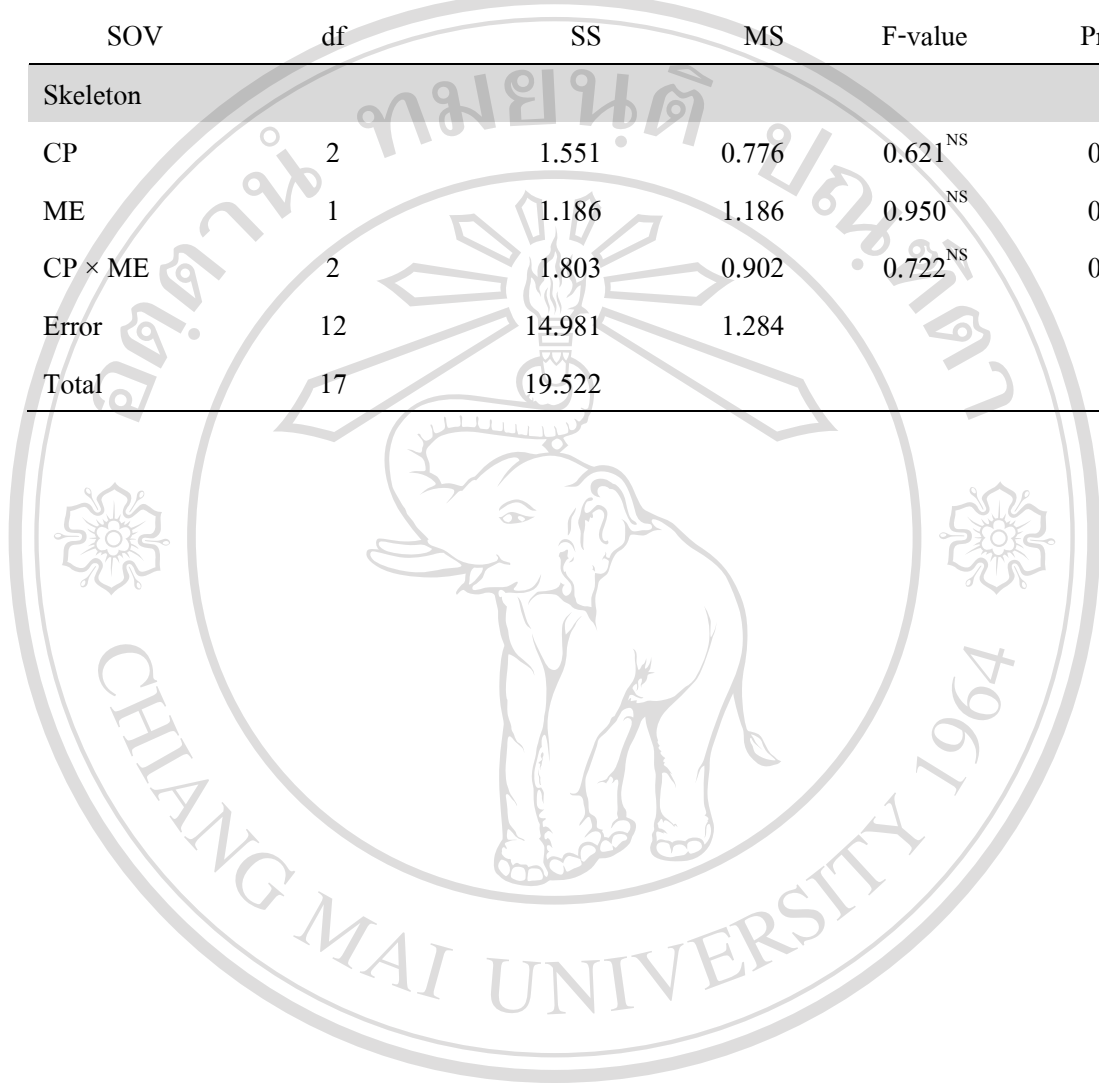
Table Appendix C21 (Cont) ANOVA: Carcass percentage of Ring-necked pheasant.

SOV	df	SS	MS	F-value	Pr > F
Breast					
CP	2	2.989	1.494	4.611 [*]	0.033
ME	1	0.001	0.001	0.002 ^{NS}	0.964
CP × ME	2	0.090	0.045	0.139 ^{NS}	0.871
Error	12	3.889	0.324		
Total	17	6.969			
T1	T2	T3			
15.71	15.05	14.74			
a	b				
Thigh					
CP	2	0.345	0.173	1.180 ^{NS}	0.340
ME	1	0.002	0.002	0.014 ^{NS}	0.909
CP × ME	2	0.185	0.093	0.634 ^{NS}	0.548
Error	12	1.755	0.146		
Total	17	2.288			
Drumstick					
CP	2	1.026	0.513	1.919 ^{NS}	0.189
ME	1	0.506	0.506	1.892 ^{NS}	0.194
CP × ME	2	0.700	0.350	1.310 ^{NS}	0.306
Error	12	3.207	0.267		
Total	17	5.438			
Wing					
CP	2	0.188	0.094	0.323 ^{NS}	0.730
ME	1	0.769	0.769	2.637 ^{NS}	0.130
CP × ME	2	1.490	0.745	2.556 ^{NS}	0.119
Error	12	3.499	0.292		

Total 17 5.946

Table Appendix C21 (Cont) ANOVA: Carcass percentage of Ring-necked pheasant.

SOV	df	SS	MS	F-value	Pr > F
Skeleton					
CP	2	1.551	0.776	0.621 ^{NS}	0.554
ME	1	1.186	1.186	0.950 ^{NS}	0.349
CP × ME	2	1.803	0.902	0.722 ^{NS}	0.506
Error	12	14.981	1.284		
Total	17	19.522			



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Feed ingredients digestible.

T1 = Fish meal

T2 = Soybean meal

T3 = Rice bran

T4 = Corn

Table Appendix C23 ANOVA: Apparent digestibility of dry matter.

SOV	df	SS	MS	F-value	Pr > F	CV. (%)	S.E.M.
Treatment	3	794.429	264.810	10.276**	0.001	10.510	1.758
Period	4	71.416	17.854	0.693 ^{NS}	0.611		
Error	12	309.227	25.769				
Total	19	1175.072					
T4	T3	T2	T1				
83.712	75.890	73.478	66.052				
a	b		c				

Table Appendix C24 ANOVA: Apparent digestibility of crude protein.

SOV	df	SS	MS	F-value	Pr > F	CV. (%)	S.E.M.
Treatment	3	1104.688	368.229	53.492**	0.000	9.797	1.819
Period	4	70.460	17.615	2.559 ^{NS}	0.093		
Error	12	82.605	6.884				
Total	19	1257.753					
T2	T1	T4	T3				
90.900	89.944	76.922	74.434				
a							
	b						

Table Appendix C25 ANOVA: Apparent digestibility of crude fiber.

SOV	df	SS	MS	F-value	Pr > F	CV. (%)	S.E.M.
Treatment	3	4653.548	1551.183	25.487 ^{**}	0.000	35.629	3.838
Period	4	212.322	53.080	0.872 ^{NS}	0.509		
Error	12	730.345	60.862				
Total	19	5596.215					
T1	T2	T3	T4				
64.240	57.028	47.594	23.806				
a							
	b						
		c					

Table Appendix C26 ANOVA: Apparent digestibility of ether extract.

SOV	df	SS	MS	F-value	Pr > F	CV. (%)	S.E.M.
Treatment	3	455.010	151.670	5.140 [*]	0.016	8.239	1.572
Period	4	129.653	32.413	1.098 ^{NS}	0.401		
Error	12	354.123	29.510				
Total	19	938.786					
T3	T2	T4	T1				
91.062	86.490	85.888	77.814				
a							
			b				

Table Appendix C27 ANOVA: Apparent digestibility of organic matter.

SOV	df	SS	MS	F-value	Pr > F	CV. (%)	S.E.M.
Treatment	3	1537.486	512.495	21.573 ^{**}	0.000	12.818	2.220
Period	4	49.896	12.474	0.525 ^{NS}	0.720		
Error	12	285.079	23.757				
Total	19						
T4	T3	T2	T1				
88.512	80.684	76.298	64.284				
a							
	b						
		c					

Table Appendix C28 ANOVA: True digestibility of dry matter.

SOV	df	SS	MS	F-value	Pr > F	CV. (%)	S.E.M.
Treatment	3	880.651	293.550	11.377 ^{**}	0.001	9.715	1.821
Period	4	69.507	17.377	0.637 ^{NS}	0.623		
Error	12	309.627	25.802				
Total	19	1259.785					
T4	T3	T2	T1				
93.388	84.836	82.234	74.818				
a							
	b						
		c					

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Table Appendix C29 ANOVA: True digestibility of crude protein.

SOV	df	SS	MS	F-value	Pr > F	CV. (%)	S.E.M.
Treatment	3	228.504	76.168	11.055 ^{**}	0.001	5.299	1.002
Period	4	70.424	17.606	2.555 ^{NS}	0.093		
Error	12	82.680	6.890				
Total	19	381.608					
T2	T4	T1	T3				
93.540	92.570	92.058	85.014				
a		b					

Table Appendix C30 ANOVA: True digestibility of crude fiber.

SOV	df	SS	MS	F-value	Pr > F	CV. (%)	S.E.M.
Treatment	3	331.620	110.540	1.816 ^{NS}	0.198	13.906	1.831
Period	4	212.396	53.099	0.872 ^{NS}	0.508		
Error	12	730.479	60.873				
Total	19	1274.495					

Table Appendix C31 ANOVA: True digestibility of ether extract.

SOV	df	SS	MS	F-value	Pr > F	CV. (%)	S.E.M.
Treatment	3	393.001	131.000	4.439 [*]	0.026	7.651	1.519
Period	4	129.766	32.442	1.099 ^{NS}	0.401		
Error	12	354.139	29.512				
Total	19	876.906					
T3	T4	T2	T1				
92.612	90.818	90.504	81.244				
a		b					

b

Table Appendix C32 ANOVA: True digestibility of organic matter.

SOV	df	SS	MS	F-value	Pr > F	CV. (%)	S.E.M.
Treatment	3	1272.266	424.089	17.861 ^{**}	0.000	10.618	2.057
Period	4	49.851	12.463	0.525 ^{NS}	0.720		
Error	12	284.922	23.744				
Total	19	1607.039					

T4	T3	T2	T1
96.432	90.302	85.028	74.700

a

b

c

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Metabolizable energy.

T1 = Fish meal

T2 = Soybean meal

T3 = Rice bran

T4 = Corn

Table Appendix C33 ANOVA: Apparent metabolizable energy of feed ingredients.

SOV	df	SS	MS	F-value	Pr > F	CV, (%)	S.E.M.
Treatment	3	276231.721	92077.240	3.988*	0.035	5.321	41.230
Period	4	92605.917	23151.479	1.003 ^{NS}	0.444		
Error	12	277094.999	23151.479				
Total	19	645932.637					
	T1	T2	T3	T4			
	3335.412	3410.194	3461.1860	3653.242			
	a			b			

Table Appendix C34 ANOVA: True metabolizable energy of feed ingredients.

SOV	df	SS	MS	F-value	Pr > F	CV, (%)	S.E.M.
Treatment	3	276229.452	92076.484	3.988*	0.035	4.834	40.139
Period	4	58864.393	14716.098	0.637 ^{NS}	0.646		
Error	15	277089.575	23090.798				
Total	19	612183.643					
	T1	T2	T3	T4			
	3583.566	3658.352	3709.342	3901.3960			
	a			b			

ภาคผนวก ง (Appendix D). ภาพกิจกรรม



โรงเรือนทดลอง



ลูกไก้ฟ้าคอแหวนอายุ 1 วัน



คอกกกลูกไก้ฟ้า



ไก้ฟ้าคอแหวนอายุ 5 สัปดาห์



ไก้ฟ้าคอแหวนอายุ 10 สัปดาห์



ไก้ฟ้าคอแหวนอายุ 16 สัปดาห์



การขังไก่ฟ้า



ไก่ฟ้าหลังการเชือดและถอนขน



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ประวัติผู้เขียน

ชื่อ-สกุล	นายยุทธนา สุนันตา
วัน เดือน ปีเกิด	30 มกราคม 2525
ประวัติการศึกษา	สำเร็จการศึกษาระดับมัธยมศึกษาตอนต้น โรงเรียนคอยเต่าวิทยาคม ปีการศึกษา 2540 สำเร็จการศึกษาระดับมัธยมศึกษาตอนปลาย โรงเรียนคอยเต่า วิทยาคม ปีการศึกษา 2543 สำเร็จการศึกษาระดับปริญญาตรี วิทยาศาสตร์บัณฑิต (วท.บ.) สาขาวิชาสัตวศาสตร์ (สัตว์ปีก) คณะผลิตกรรมการเกษตร มหาวิทยาลัยแม่โจ้ ปีการศึกษา 2548

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