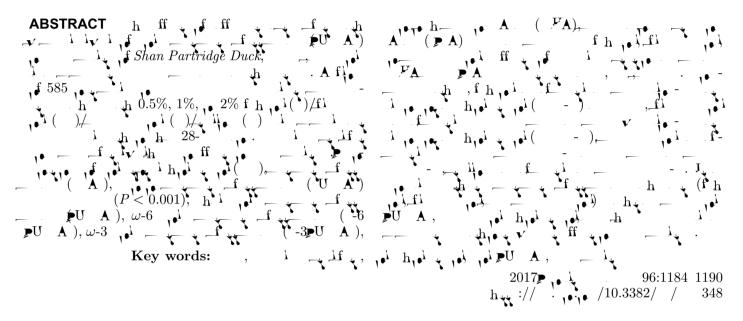
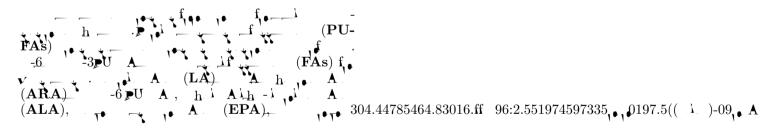
Effects of dietary fats on egg quality and lipid parameters in serum and yolks of *Shan Partridge Duck*

$$,^{*,\ddagger}$$
 $\underline{\mathbf{V}}$ \mathbf{h} $,^{\dagger}$ \mathbf{h} $,^{\ddagger}$ \mathbf{h} $,^{\ddagger}$ $,^{\ddagger}$ \mathbf{h} $,^{\ddagger}$

*College of Animal Sciences, Zhejiang University, Hangzhou 310058, P. R. China; [†]Zhejiang Animal Husbandry Techniques Extension Station, Hangzhou 310020, P. R. China; [‡]Institute of Animal Husbandry and Veterinary Science, Zhejiang Academy of Agricultural Sciences, Hangzhou 310021, P. R. China; [§]Department of Human Nutrition, Kansas State University, Manhattan, KS 66506, USA; [#]Zhejiang Zhuowang Agricultural Sci-Tech Co., Ltd, Huzhou 313014, P. R. China; and [¶]Department of Emergency Medicine, the First Affiliated Hospital of Wenzhou Medical University, Wenzhou 325000, P. R. China



INTRODUCTION



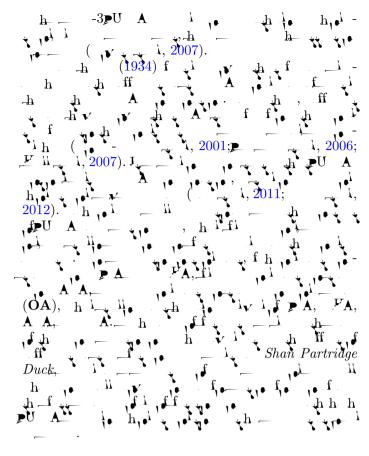


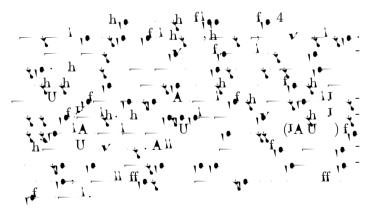
Table 1. $1 \in 1^{k}$ - - - - - - -

1	, , , , , , , , , , , , , , , , , , ,	y y	(%)
	400	L Le .	11.2
<u>h</u>	290	184	16.5
,• — ¹ — ¹	120	Te he he	0.70
h	90		3.35
10 reh hier hier hier hier hier hier hier	12	- 1.1 ·	0.79
	80	the have	0.40
	3	h - '	29.0
	5	b b b	

Table 2. $(\bullet, \bullet) \bullet (\bullet, \bullet) \bullet \bullet (\bullet, \bullet) \bullet (\bullet, \bullet) \bullet \bullet (\bullet, \bullet)$

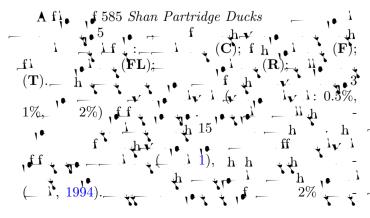
(/100	¥							
<u>v</u> <u>i</u> <u>v</u> <u>v</u> <u>i</u> <u>v</u>	10 4 102	2%	2%	2%	2%			
A	32.61	30.36	25.50	26.22	41.94			
14:0	5.32	5.80	3.88	3.44	5.52			
15:0	0.29	0.19	0.18	0.19	0.47			
16:0	21.23	18.57	15.81	16.07	24.11			
18:0	5.12	4.87	5.16	4.91	11.19			
20:0	0.65	0.94	0.46	1.13	0.48			
22:0	0	0	0	0.35	0.06			
24:0	0	0	0	0.12	0.10			
U A	37.75	34.65	33.03	48.50	36.90			
16:1	5.23	6.06	3.50	3.53	4.01			
18:1	31.2	25.42	28.53	42.39	32.04			
20:1	1.32	1.23	0.96	2.50	0.84			
22:1	0	1.57	0.05	0.07	0			
24:1	0	0.37	0	0	0			
₽U A	29.84	35.12	41.59	25.40	20.25			
18:2(=6)	18.77	12.73	18.67	17.42	12.93			
20:2	0.11	0.78	0.07	0.12	0.07			
20:3	2.32	1.48	1.51	1.49	1.48			
22:3(=6)	0	1.08	0	0	0			
20:4	0.46	0.69	0.38	0.29	0.25			
22:4	0	1.08	0	0	0			
18:4	0	0.84	0	0	0			
18:3(=3)	6.22	4.42	19.69	4.83	4.21			
20.5(=3)	0.98	6.14	0.64	0.63	0.60			
22:5	0.65	0.86	0.42	0.44	0.35			
22:6(=3)	0.33	5.01	0.21	0.20	0.18			

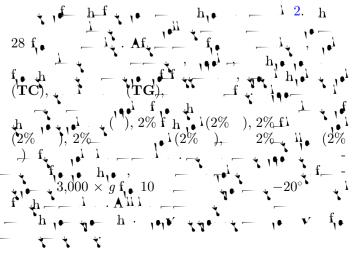
Animals



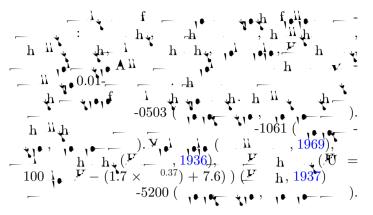
MATERIALS AND METHODS

Experiment Design

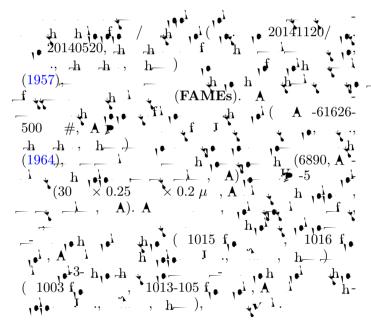




Egg Quality Measurement



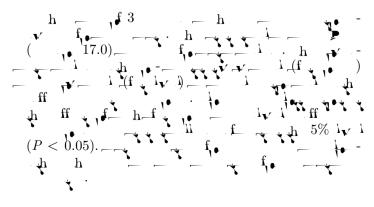
Oil and Yolk Lipid Analysis



Serum Lipid Parameter Analysis

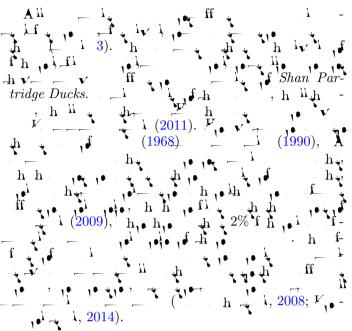


Statistical Analysis



RESULTS AND DISCUSSION

Egg Quality Measurement





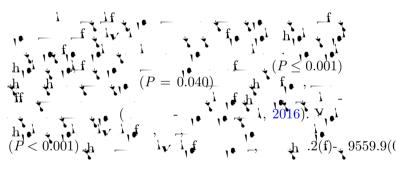
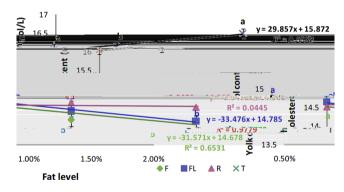


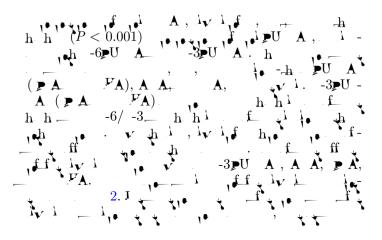
Table 3. J fl f f J $_$ L f \downarrow = $J_V J$ = J_V

1	λ_{V} $\lambda(\%)$	h.()	-h (%)	h ¹¹ , h (.f)	h."	Α\) h h h (]		– h	v 1 h ()	
	0	74.03	1.33	4.34	0.43	6.60	12.38	73.64	24.56	0.34
	0.5	71.65	1.35	3.97	0.40	5.88	12.46	73.06	22.95	0.32
	1	73.16	1.35	3.39	0.41	5.83	12.13	70.52	24.78	0.33
	2	72.24	1.35	4.11	0.43	6.18	11.39	73.48	23.43	0.33
	0.5	71.58	1.35	3.88	0.41	4.74	12.70	61.16	23.16	0.32
	1	71.70	1.37	4.46	0.43	5.23	12.51	64.83	22.54	0.32
	2	74.97	1.32	4.12	0.44	6.83	12.16	73.12	23.16	0.31
	0.5	74.59	1.35	3.98	0.40	6.74	12.39	75.91	24.11	0.32
	1	72.20	1.34	3.98	0.40	6.37	12.61	73.03	22.73	0.32
	2	70.58	1.31	3.77	0.41	6.16	12.66	72.89	22.79	0.33
	0.5	71.09	1.35	3.72	0.41	5.67	12.38	67.23	22.88	0.32
	1	71.70	1.38	4.22	0.41	5.20	12.29	63.37	23.87	0.33
	2	72.32	1.38	3.62	0.39	6.36	12.71	74.68	22.91	0.32
		0.411	0.005	0.075	0.004	0.143	0.577	1.090	0.181	0.002
۱.	_	74.03	1.33	4.34	0.43	6.60	12.38	73.64	24.56	0.34
1		72.35	1.35	3.83	0.41	5.96	13.11	72.35	23.72	0.020
		72.75	1.35	4.16	0.43	5.60	14.68	66.37	22.95	0.016
		72.46	1.33	3.91	0.40	6.42	12.55	73.94	223.21	0.016
		71.70	1.37	3.85	0.40	5.74	12.46	68.43	23.22	0.016
\mathbf{v}^{1}	·Ð	74.03	1.33	4.34	0.43	6.60	12.38	73.64	24.56	0.34
	0.5	72.23	1.35	3.89	0.41	5.66	14.98	69.34	23.28	0.32
	1	72.19	1.36	4.01	0.41	6.38	12.39	67.94	23.48	0.33
	2	72.53	1.34	3.90	0.42	6.60	12.23	76.54	23.07	0.32
						P-V-1				
۱• ,		0.12	0.053	0.64	0.075	0.35	0.51	0.81	0.43	0.22
V.A		0.77	0.61	0.94	0.17	0.079	0.060	0.12	0.66	0.49
۱.	$\times \Lambda_{V} \Lambda$	0.089	0.29	0.84	0.28	0.061	0.19	0.20	0.54	0.62

		1 2		
	le 4. J fl	, 1	~~~~ ¹ ~ ~ ~	- <u>'</u>
1.	hier i ley	1° ¹ ×	→ 1• ¹	-1 $(=3).$
		Yiel hiel & iel	Not yet it.	N, N
1	. A 🗸 . A	1.1	1v.1	' <i>L</i> .
	(%)	(,•\)	(\.	(,•¥)
1	0	16.16	753.7	30.52
1	0.5	14.65	746.7	31.39
	1	14.16	753.4	31.68
	2	14.11	751.4	31.90
1	0.5	14.64	747.5	31.49
	1	14.41	751.3	31.54
	2	14.13	753.1	31.91
1	0.5	14.50	754.6	31.43
	1	14.63	757.3	31.68
	2	14.50	760.7	31.90
1	0.5	16.05	764.3	31.31
	1	16.11	769.7	32.00
	2	16.40	772.7	32.28
		0.14	1.8	0.21
	1	16.16^{1}	753.7	30.52
1.	2	14.31^2	750.5	31.66
	2	14.39^2	750.6	31.65
	2	14.59 14.54^2	757.5	31.03 31.67
	2	14.04 16.22^{1}	768.9	31.86
\mathbf{V}	1 0 ¹	16.16	753.7	30.52
	0.5^{3}	14.96	753.3	31.41
	1^{3}	14.83	757.9	31.73
	2^{3}	14.80	759.5	32.00
			P-V	
1.		< 0.001	0.19	0.97
\mathbf{V}	7	0.11	0.10	0.30
1.	\times v λ	0.040	0.99	0.98
_	h.f	f .	ų . ф. ф. —	, If
1	P < P	0.05).		1
1	h-v 1	τų -		•
2	h-v h		19 <u>1</u>	•
0	h-¥		f 12 🔔	•
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(P < 0.05).



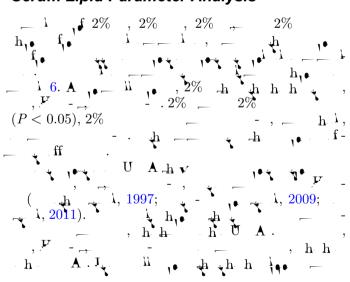
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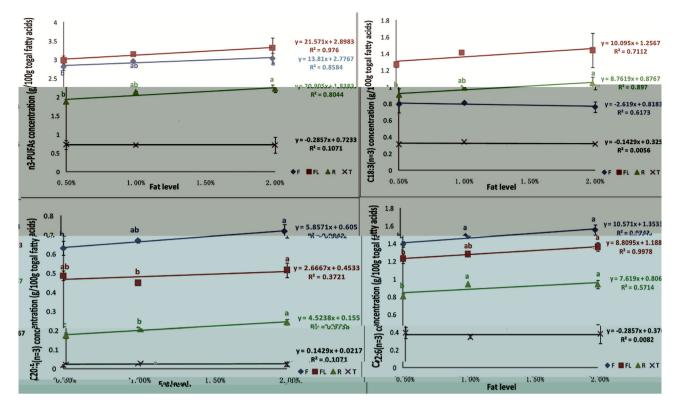
A					· · · ·	1	10.410-	<u> </u>	• (/100	- 47 EX 1 44).
	λ_{V}	U A	₽U A	-6 ₽ U A	$ 18:2 \\ (= 6) $	20:4 (= 6)	-3 ₽U A	18:3 (= 3)	20:5 (= 3)	22:6 (= 3)	-6/ -3
36.28	0	47.18	16.54	15.89	13.17	2.32	0.65	0.32	0.05	0.27	23.96
34.28	0.5	38.97	21.04	17.70	15.39	2.31	2.81	0.79	0.63	1.39	6.30
34.33	1	38.62	21.19	17.69	15.03	2.66	2.96	0.81	0.67	1.48	5.97
32.79	2	39.44	21.73	18.11	15.26	2.85	3.04	0.76	0.72	1.56	5.98
31.60	0.5	40.85	24.47	20.95	18.40	2.55	2.99	1.27	0.49	1.23	7.02
30.87	1	41.50	24.37	20.89	18.34	2.58	3.14	1.41	0.45	1.28	6.64
30.03	2	44.80	24.99	21.30	18.66	2.64	3.32	1.44	0.52	1.36	6.45
30.38	0.5	45.44	23.62	21.14	19.07	2.07	1.88	0.90	0.17	0.81	11.23
30.03	1	45.36	23.93	21.48	19.31	2.17	2.14	0.99	0.21	0.94	10.05
29.90	2	44.38	25.12	22.49	20.23	2.34	2.23	1.04	0.24	0.94	10.12
33.90	0.5	49.90	15.93	14.74	12.98	1.76	0.73	0.31	0.02	0.39	20.72
34.42	1	49.18	16.10	14.95	12.93	2.03	0.71	0.34	0.03	0.35	20.98
35.24	2	47.68	16.73	15.54	13.08	2.46	0.72	0.32	0.02	0.38	22.55
0.373		0.629	0.573	0.448	0.436	0.054	0.165	0.065	0.041	0.075	1.137
36.28	1	46.94 ,	16.54	15.49	13.17	2.32 ,	0.65	0.32	0.05	0.27	23.96
33.80	2	39.01	21.32	17.83	15.23	2.61	2.94	0.79	0.67	1.48	6.08
30.83	2	42.38	24.61	21.05	18.47	2.59	3.15	1.37	0.48	1.18	6.70
30.16	2	45.06	24.22	21.70	19.54	2.19,	2.08	0.99	0.21	0.89	10.47
34.52	2	48.92	16.26	15.08	13.00	2.08	0.72	0.32	0.02	0.37	21.42
36.28	0^{1}	46.94	16.54	15.49	13.17	2.32	0.65	0.32	0.05	0.27	23.96
33.52	0.5^{3}	48.05	18.40	16.59 ,	14.52 ,	2.08	1.01	0.47	0.06	0.48	18.87
30.59	1^{3}	43.02	24.47	21.45	19.07	2.41 ,	2.62	1.18	0.35	1.01	8.46
32.86	2^{3}	40.46	22.24	18.70	16.08	2.62	3.03	0.95	0.63	1.45	6.17
< 0.001		< 0.001	< 0.001	< 0.001	< 0.001	0.042	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
0.14		0.60	< 0.001	0.001	0.037	< 0.001	< 0.001	0.040	< 0.001	0.004	0.95
0.047	$ imes$ v λ	0.022	0.44	0.30	0.037	0.033	0.042	0.093	0.016	0.059	0.50
	0.5^{3} 1^{3} 2^{3}	33.52 30.59 32.86 <0.001 0.14	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

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 \mathbf{h} -3**₽**U l, 1996; (2014)h. **A**, 18 **1**, 2004). -6/ -3 ћ ћ f (2004). A h h —

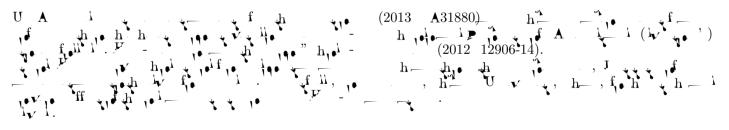
Serum Lipid Parameter Analysis





P		2%	2%	2%	2%		P. A
(, ,)	1.51 ± 0.04 ,	1.48 ± 0.08	1.31 ± 0.07	1.35 ± 0.05	1.66 ± 0.16	0.15	< 0.001
	$5.74~\pm~0.31$,	$5.59~\pm~0.06$	5.61 ± 0.13	5.52 ± 0.20	5.92 ± 0.16	0.04	0.011
F = (V)	$1.06~\pm~0.11$,	$1.11~\pm~0.08$	$0.99~\pm~0.07$	$1.11~\pm~0.04$	$1.09~\pm~0.07$	0.02	0.058
- ()	$2.12~\pm~0.05$	2.11 ± 0.04	2.07 ± 0.03	1.85 ± 0.06	2.24 ± 0.07	0.03	< 0.001
- (, ,))	$1.05~\pm~0.03$	$1.11~\pm~0.06$	$1.17~\pm~0.05$	$1.42~\pm~0.07$	$1.11~\pm~0.05$,	0.03	< 0.001

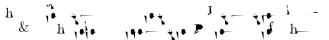
 $- \cdot \mathbf{h} \cdot \mathbf{f} \cdot \mathbf{f} \cdot \mathbf{h} \cdot \mathbf{h} - \mathbf{h} \cdot \mathbf{h$



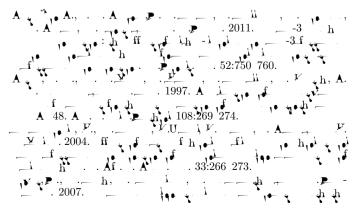
CONCLUSIONS

h₽U -,•¹ () \mathbf{h} h 1. • · ¹ 1 , f A f Shan Partridge Duck h ff 1.1 h h • لا * h h**>**U te - h,el f A 1.47 1. 1. f,∙ h h – ** h_

ACKNOWLEDGMENTS



REFERENCES



h , ., ., ., ., 28:965 977. (1) 994. (1) 994. (1) 994. (1) 996.85 94. (1) 96:85 94

 $\begin{array}{c} \mathbf{A} \\ \mathbf{$ **v** 2006. ff 97 106.