



Supplementary Material

Analysis of the Trend of Age-Related Laying Performance of Quail (*Coturnix coturnix*)

Jun Yan Bai*, Zhi Hao Dong, Yu Chen, Jing Yun Li, Ying Lei, You Bing Yang, Kun Peng Shi and Xue Yan Fu

College of Animal Science and Technology, Henan University of Science and Technology, Luoyang 471023, China

Table I.- Regression equation of laying performance to week age.

Traits	Population	Regression model	Model summary					Parameter estimate			
			R ²	F	df ₁	df ₂	P	b ₀	b ₁	b ₂	b ₃
Number eggs	Beijing white quail	Logerithmic	0.906	57.687	1	6	0.000	-11.644	6.323		
		Quadratic	0.989	234.843	2	5	0.000	-16.654	3.087	-0.110	
		Cubic	0.991	262.666	2	5	0.000	-12.153	1.850	0.000	-0.003
		S	0.884	45.612	1	6	0.001	3.513	-25.578		
		Logistic	0.751	18.052	1	6	0.005	2.852	0.823		
	Korean quail	Logerithmic	0.643	10.820	1	6	0.017	-4.632	3.875		
		Quadratic	0.881	18.523	2	5	0.005	-14.367	3.110	-0.121	
		Cubic	0.881	18.523	2	5	0.005	-14.367	3.110	-0.121	0.000
		S	0.656	11.454	1	6	0.015	2.588	-11.697		
		Logistic	0.506	6.155	1	6	0.048	0.577	0.919		
	China yellow quail	Logerithmic	0.574	8.087	1	6	0.029	-2.335	3.407		
		Quadratic	0.833	12.498	2	5	0.011	-12.096	2.954	-0.116	
Cubic		0.833	12.498	2	5	0.011	-12.096	2.954	-0.116	0.000	
S		0.631	10.256	1	6	0.019	2.455	-7.637			
Logistic		0.482	5.593	1	6	0.056	0.324	0.946			
Total egg weight	Beijing white quail	Logerithmic	0.905	57.199	1	6	0.000	-136.113	72.871		
		Quadratic	0.990	239.813	2	5	0.000	-194.474	35.688	-1.277	
		Cubic	0.991	281.727	2	5	0.000	-142.558	21.406	0.000	-0.037
		S	0.879	43.527	1	6	0.001	6.072	-27.508		
		Logistic	0.744	17.414	1	6	0.006	0.310	0.811		
	Korean quail	Logerithmic	0.614	9.528	1	6	0.021	-54.245	44.497		
		Quadratic	0.888	19.754	2	5	0.004	-180.768	38.405	-1.508	
		Cubic	0.888	19.754	2	5	0.004	-180.768	38.405	-1.508	0.000
		S	0.637	10.529	1	6	0.018	5.049	-12.168		
		Logistic	0.484	5.617	1	6	0.056	0.053	0.916		
	China yellow quail	Logerithmic	0.625	9.980	1	6	0.020	-37.973	41.526		
		Quadratic	0.882	18.725	2	5	0.005	-150.305	34.794	-1.362	
Cubic		0.882	18.725	2	5	0.005	-150.305	34.794	-1.362	0.000	
S		0.661	11.685	1	6	0.014	4.939	-9.060			
Logistic		0.507	6.163	1	6	0.048	0.035	0.936			

* Corresponding author: junyanbai@163.com
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Traits	Population	Regression model	Model summary					Parameter estimate			
			R ²	F	df ₁	df ₂	P	b ₀	b ₁	b ₂	b ₃
Laying rate	Beijing white quail	Logerithmic	0.910	60.810	1	6	0.000	-159.928	87.800		
		Quadratic	0.987	183.723	2	5	0.000	-222.124	41.514	-1.473	
		Cubic	0.988	214.592	2	5	0.000	-162.468	25.068	0.000	-0.043
		S	0.903	56.124	1	6	0.000	6.025	-23.736		
		Logistic	0.777	20.955	1	6	0.004	0.169	0.834		
	Korean quail	Logerithmic	0.671	12.245	1	6	0.013	-52.106	49.830		
		Quadratic	0.901	22.641	2	5	0.003	-170.629	38.775	-1.503	
		Cubic	0.901	22.641	2	5	0.003	-170.629	38.775	-1.503	0.000
		S	0.692	13.512	1	6	0.010	5.100	-9.855		
		Logistic	0.542	7.111	1	6	0.037	0.034	0.930		
	China yellow quail	Logerithmic	0.593	8.760	1	6	0.025	-10.127	39.521		
		Quadratic	0.835	12.640	2	5	0.011	-115.539	32.834	-1.283	
		Cubic	0.835	12.640	2	5	0.011	-115.539	32.834	-1.283	0.000
		S	0.662	11.735	1	6	0.014	4.965	-5.774		
		Logistic	0.517	6.435	1	6	0.044	0.019	0.959		
Feed egg ratio	Beijing white quail	Logerithmic	0.796	23.357	1	6	0.003	23.430	-7.784		
		Quadratic	0.929	32.783	2	5	0.001	34.482	-4.695	0.175	
		Cubic	0.929	32.783	2	5	0.001	34.482	-4.695	0.175	0.000
		S	0.925	74.467	1	6	0.000	-0.069	16.862		
		Logistic	0.828	28.900	1	6	0.002	0.051	1.141		
	Korean quail	Logerithmic	0.534	6.872	1	6	0.040	15.876	-4.968		
		Quadratic	0.734	6.896	2	5	0.037	28.605	-4.035	0.157	
		Cubic	0.734	6.896	2	5	0.037	28.605	-4.035	0.157	0.000
		S	0.655	11.381	1	6	0.015	0.218	11.939		
		Logistic	0.524	6.596	1	6	0.042	0.099	1.092		
	China yellow quail	Logerithmic	0.610	9.393	1	6	0.022	9.574	-2.678		
		Quadratic	0.728	6.708	2	5	0.038	13.928	-1.717	0.065	
		Cubic	0.728	6.708	2	5	0.038	13.928	-1.717	0.065	0.000
		S	0.714	15.013	1	6	0.008	0.322	8.654		
		Logistic	0.610	9.367	1	6	0.022	0.155	1.068		