

	EW			IO			P value		
	< 11.76	> 11.76	SEM	Control	α -tocopherol	SEM	EW	IO	EW*IO
Chick development									
Chick weight (g)	7.27	8.38	0.15	8.00	8.65	0.15	<0.001	0.108	0.580
RYS (g)	0.38	0.65	0.05	0.54	0.49	0.05	0.001	0.545	0.350
RYS (%)	5.19	7.74	0.62	6.62	6.31	0.62	0.006	0.722	0.667
Liver (g)	0.22	0.25	0.01	0.26	0.22	0.01	0.002	0.006	0.884
Liver (%)	2.99	2.97	0.09	3.08	2.89	0.09	0.875	0.109	0.842
Heart (g)	0.08	0.09	0.02	0.10	0.07	0.02	0.121	0.002	0.800
Heart (%)	1.14	1.08	0.04	1.20	1.02	0.04	0.421	0.008	0.899
Gizzard plus proventriculus (g)	0.47	0.48	0.01	0.47	0.47	0.01	0.347	0.344	0.063
Gizzard plus proventriculus (%)	6.49	5.82	0.16	6.14	6.17	0.16	0.006	0.891	0.048
Brain (g)	0.25	0.27	0.01	0.27	0.26	0.01	0.159	0.347	0.708
Brain (%)	3.50	3.30	0.13	3.42	3.39	0.12	0.284	0.868	0.615
The lengths of bilateral morphological traits									
Chick length (cm)	11.67	11.85	0.13	11.56	11.96	0.12	0.332	0.028	0.667
Face length (mm)	8.22	8.23	0.20	8.31	8.14	0.20	0.982	0.570	0.589
Middle toe length (mm)	12.58	11.75	0.27	11.56	12.77	0.27	0.037	0.003	0.842
Shank length (mm)	10.3	9.8	0.28	10.84	9.26	0.28	0.217	0.001	0.016
RA*									
Face length	0.65	0.15	0.21	0.49	0.31	0.21	0.103	0.562	0.844
Middle toe length	0.53	0.46	0.19	0.67	0.32	0.20	0.816	0.199	0.068
Shank length	1.53	0.63	0.36	0.48	1.12	0.34	0.007	0.218	0.299
Mean RA	0.90	0.23	0.16	0.54	0.58	0.16	0.005	0.862	0.110

EW: egg weight. IO: in ovo administration. EM: standard error of the mean. RYS: residual yolk sac. * RA: relative asymmetry, calculated as $[(\text{left} - \text{right})/(\text{left} + \text{right})/2] \cdot 100$.