



Supplement of

Investigation of the reproductive behavior of Tarim pigeons

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Table S1. Comparison of the frequency of ingestion, drinking water, eating grit, and nurturing behavior among parent pigeons at different stages of the breeding period

Period	IP			W10D				A10D			
	Ingestion	Drinking water	Eating grit	Ingestion	Drinking water	Eating grit	Nurturing	Ingestion	Drinking water	Eating grit	Nurturing
8:22-10:00	2.20±0.53 ^{bc}	0.40±0.16 ^d	2.70±0.76	11.44±2.60 ^a	1.78±0.40 ^b	13.11±2.26 ^a	0.78±0.15 ^{bc}	10.00±2.18 ^{bc}	1.67±0.53 ^{def}	14.44±2.56 ^a	0.33±0.17 ^{cd}
10:00-11:00	1.70±0.54 ^c	0.30±0.15 ^d	3.30±1.45	8.56±2.08 ^{abc}	1.78±0.60 ^b	10.22±2.85 ^{ab}	0.67±0.29 ^{bc}	7.78±2.89 ^{bcd}	1.11±0.39 ^{ef}	13.89±3.20 ^a	0.89±0.39 ^{bcd}
11:00-12:00	1.70±0.75 ^c	0.50±0.17 ^{cd}	2.80±0.63	3.22±0.93 ^c	2.00±0.58 ^b	6.00±1.38 ^b	0.78±0.28 ^{bc}	3.00±0.93 ^{cd}	0.89±0.26 ^f	5.89±1.11 ^{bc}	0.11±0.11 ^d
12:00-13:00	4.10±1.92 ^{abc}	1.30±0.40 ^{bcd}	3.70±1.09	7.67±1.79 ^{abc}	4.78±1.66 ^a	4.22±1.01 ^b	1.44±0.48 ^b	1.56±0.50 ^d	4.22±1.01 ^{bcdef}	5.67±1.70 ^{bc}	1.00±0.24 ^{bcd}
13:00-14:00	9.00±2.22 ^a	3.50±0.89 ^a	4.50±1.29	10.00±1.89 ^{ab}	4.44±0.78 ^{ab}	6.78±1.76 ^b	3.00±0.62 ^a	20.67±3.62 ^a	9.56±1.35 ^a	12.56±2.48 ^a	3.00±0.53 ^a
14:00-15:00	9.10±2.42 ^a	2.30±0.50 ^{ab}	5.60±1.02	6.33±0.75 ^{abc}	1.89±0.51 ^b	5.00±2.30 ^b	1.33±0.41 ^{bc}	9.33±3.03 ^{bcd}	6.22±1.34 ^{abc}	11.22±3.46 ^{ab}	1.56±0.65 ^{bc}
15:00-16:00	5.60±1.38 ^{abc}	1.90±0.43 ^{bc}	3.30±1.14	8.11±1.38 ^{abc}	2.22±0.60 ^{ab}	7.78±3.06 ^{ab}	0.78±0.22 ^{bc}	7.78±3.04 ^{bcd}	3.67±0.97 ^{bcdef}	5.67±1.40 ^{bc}	1.00±0.37 ^{bcd}
16:00-17:00	6.60±1.75 ^{abc}	2.40±0.58 ^{ab}	3.80±1.08	6.67±1.94 ^{abc}	2.00±0.73 ^b	5.89±1.95 ^b	0.89±0.26 ^{bc}	4.44±1.87 ^{bcd}	3.44±0.44 ^{bcdef}	3.67±0.97 ^c	0.67±0.24 ^{bcd}
17:00-18:00	3.90±0.53 ^{bc}	1.40±0.27 ^{bcd}	4.70±1.80	5.78±1.38 ^{bc}	2.33±0.50 ^{ab}	5.56±1.17 ^b	1.00±0.44 ^{bc}	5.00±1.63 ^{bcd}	4.78±1.82 ^{bcde}	6.33±1.23 ^{bc}	0.44±0.24 ^{bcd}
18:00-19:00	5.10±1.38 ^{abc}	2.10±0.61 ^{ab}	3.80±0.99	7.44±1.57 ^{abc}	3.22±0.88 ^{ab}	5.22±0.94 ^b	0.67±0.24 ^{bc}	8.00±2.40 ^{bcd}	3.89±0.94 ^{bcdef}	6.22±1.06 ^{bc}	1.33±0.76 ^{bcd}
19:00-20:00	7.00±1.81 ^{ab}	1.50±0.40 ^{bcd}	2.70±0.79	11.22±1.65 ^{ab}	2.11±0.42 ^{ab}	6.22±1.83 ^b	1.11±0.35 ^{bc}	7.78±2.48 ^{bcd}	2.78±0.76 ^{cdef}	6.67±1.73 ^{bc}	0.67±0.37 ^{bcd}
20:00-21:00	5.10±1.36 ^{abc}	2.00±0.42 ^b	3.90±0.92	10.44±1.80 ^{ab}	4.44±1.30 ^{ab}	8.00±2.70 ^{ab}	0.22±0.22 ^c	11.78±3.54 ^b	6.56±1.38 ^{ab}	5.67±1.92 ^{bc}	1.78±0.52 ^b
21:00-22:00	4.30±1.63 ^{abc}	1.30±0.50 ^{bcd}	2.00±0.67	6.11±1.07 ^{abc}	4.11±0.86 ^{ab}	4.00±1.20 ^b	0.78±0.22 ^{bc}	6.89±2.30 ^{bcd}	5.00±1.99 ^{bcd}	2.33±0.69 ^c	0.33±0.24 ^{cd}
<i>P- value</i>	0.005	<0.001	0.671	0.027	0.033	0.099	<0.001	<0.001	<0.001	<0.001	<0.001

^{a,b,c,d,f} Means within the same column differ substantially (p<0.05).

IP= incubation period; W10D= within the first 10 days of the nurturing period; A10D= above 10 days of age during the nursing period.

Table S2. Comparison of the frequency of stretching, preening, and resting behaviors of parent pigeons at different stages of the breeding period

Period	IP			W10D			A10D		
	Stretching	Preening	Resting	Stretching	Preening	Resting	Stretching	Preening	Resting
8:22-10:00	11.00±1.19	24.70±5.22	1.00±0.49	17.44±1.95 ^a	27.67±4.97	0.78±0.32 ^d	17.33±2.85 ^a	18.11±3.39 ^{ab}	2.11±0.87 ^d
10:00-11:00	10.10±2.37	25.90±4.33	2.00±0.75	15.56±2.43 ^{ab}	32.44±7.00	1.00±0.29 ^{cd}	14.78±1.88 ^{ab}	17.22±2.09 ^{ab}	3.22±0.78 ^{bcd}
11:00-12:00	9.10±2.06	24.30±3.96	1.60±0.50	9.56±1.73 ^{bc}	26.11±4.11	2.89±0.48 ^{bc}	12.44±1.87 ^{abc}	17.44±2.67 ^{ab}	5.22±1.35 ^{abcd}
12:00-13:00	9.90±1.77	24.80±2.04	1.50±0.48	14.78±3.32 ^{abc}	27.44±4.10	2.78±0.88 ^{bc}	11.67±1.78 ^{bcd}	18.56±3.41 ^{ab}	4.33±1.50 ^{abcd}
13:00-14:00	10.10±2.18	27.10±4.41	2.20±0.79	10.67±1.05 ^{abc}	26.44±4.71	4.89±1.09 ^a	5.89±0.81 ^d	14.33±2.72 ^{ab}	5.89±0.84 ^{abc}
14:00-15:00	10.40±2.27	27.40±4.41	2.00±0.89	9.11±3.04 ^{bc}	23.11±4.95	3.44±0.53 ^{ab}	7.78±1.62 ^{cd}	14.44±2.55 ^{ab}	6.67±1.17 ^a
15:00-16:00	9.10±1.51	21.30±3.75	1.60±0.48	14.00±2.52 ^{abc}	27.33±5.00	2.11±0.48 ^{bcd}	9.44±1.94 ^{bcd}	16.44±2.53 ^{ab}	5.78±0.97 ^{abc}
16:00-17:00	10.70±1.68	26.20±4.74	1.60±0.52	7.78±1.49 ^c	25.22±5.90	1.67±0.53 ^{bcd}	9.33±2.12 ^{bcd}	12.44±1.80 ^b	6.44±0.88 ^{ab}
17:00-18:00	10.20±1.53	25.90±5.66	1.70±0.52	10.56±2.12 ^{abc}	25.33±4.40	2.78±0.57 ^{bc}	10.67±1.34 ^{bcd}	18.33±1.83 ^{ab}	6.56±1.17 ^a
18:00-19:00	12.30±1.56	19.50±2.51	1.00±0.26	8.78±2.54 ^{bc}	27.78±5.43	1.56±0.29 ^{bcd}	8.89±1.18 ^{cd}	18.11±2.62 ^{ab}	5.56±0.85 ^{abc}
19:00-20:00	12.40±1.69	27.80±5.08	1.50±0.58	12.00±2.19 ^{abc}	30.67±7.62	2.89±0.63 ^{bc}	9.00±1.38 ^{bcd}	21.67±1.97 ^a	4.56±0.78 ^{abcd}
20:00-21:00	11.60±1.83	28.10±4.90	1.40±0.48	8.67±2.13 ^{bc}	31.33±8.03	1.22±0.32 ^{cd}	11.56±2.26 ^{bcd}	21.56±3.07 ^a	3.89±0.81 ^{abcd}
21:00-22:00	7.50±1.44	23.80±3.79	1.40±0.65	7.22±2.07 ^c	19.00±3.25	2.44±0.53 ^{bcd}	6.89±1.23 ^{cd}	15.89±2.70 ^{ab}	2.78±0.68 ^{cd}
<i>P-value</i>	0.875	0.980	0.974	0.027	0.957	<0.001	0.001	0.429	0.014

^{a,b,c,d} Means within the same column differ substantially ($P<0.05$).

IP= incubation period; W10D= within the first 10 days of the nurturing period; A10D= above 10 days of age during the nursing period.

Table S3. Comparison of the frequency of fighting, intimacy, and mating behavior among pigeons at different stages of the breeding period

Period	IP		W10D			A10D		
	Fighting	Intimacy	Fighting	Intimacy	Mating	Fighting	Intimacy	Mating
8:22-10:00	1.10±0.28 ^{cd}	0.60±0.31 ^b	4.33±1.18	4.44±1.86 ^b	0.00±0.00 ^b	2.22±0.80 ^{ab}	3.78±2.04	0.00±0.00 ^b
10:00-11:00	2.30±0.60 ^{bcd}	1.20±0.73 ^{ab}	3.67±1.00	3.33±1.60 ^b	0.00±0.00 ^b	2.33±0.58 ^{ab}	4.44±2.62	0.00±0.00 ^b
11:00-12:00	2.20±0.57 ^{bcd}	0.10±0.10 ^b	2.78±1.04	5.11±2.40 ^b	0.00±0.00 ^b	3.11±0.75 ^{ab}	5.22±3.11	0.00±0.00 ^b
12:00-13:00	3.20±1.07 ^{abc}	2.00±1.37 ^{ab}	5.33±1.51	2.33±0.97 ^b	0.11±0.11 ^{ab}	1.89±0.51 ^{ab}	4.56±1.87	0.11±0.11 ^b
13:00-14:00	2.40±0.81 ^{bcd}	2.90±1.72 ^{ab}	4.67±1.60	6.89±2.07 ^b	0.00±0.00 ^b	3.00±1.03 ^{ab}	8.00±2.19	0.00±0.00 ^b
14:00-15:00	2.30±1.09 ^{bcd}	5.00±2.15 ^a	3.11±1.25	2.67±2.19 ^b	0.00±0.00 ^b	1.78±0.55 ^{ab}	6.11±3.16	0.00±0.00 ^b
15:00-16:00	0.80±0.36 ^{cd}	2.30±1.56 ^{ab}	4.78±2.25	3.67±1.75 ^b	0.00±0.00 ^b	1.33±0.47 ^b	5.11±1.97	0.11±0.11 ^b
16:00-17:00	0.40±0.31 ^d	2.50±1.97 ^{ab}	3.89±1.41	5.56±1.90 ^b	0.00±0.00 ^b	1.67±0.44 ^{ab}	4.67±2.89	0.00±0.00 ^b
17:00-18:00	1.00±0.47 ^{cd}	1.00±0.70 ^{ab}	4.56±1.69	6.33±2.16 ^b	0.11±0.11 ^{ab}	1.89±0.70 ^{ab}	8.67±2.57	0.11±0.11 ^b
18:00-19:00	0.50±0.34 ^d	2.00±1.37 ^{ab}	5.22±2.56	2.67±0.96 ^b	0.11±0.11 ^{ab}	2.22±0.66 ^{ab}	10.67±1.61	0.44±0.24 ^{ab}
19:00-20:00	1.20±0.55 ^{cd}	1.10±0.53 ^{ab}	6.33±2.21	3.44±1.43 ^b	0.33±0.33 ^{ab}	2.56±0.85 ^{ab}	12.56±3.13	0.56±0.24 ^a
20:00-21:00	4.30±1.34 ^{ab}	3.10±1.07 ^{ab}	6.78±2.16	14.11±4.42 ^a	0.44±0.18 ^a	2.78±1.06 ^{ab}	12.22±3.99	0.44±0.24 ^{ab}
21:00-22:00	5.20±1.05 ^a	1.80±1.05 ^{ab}	7.22±1.13	4.33±1.78 ^b	0.22±0.15 ^{ab}	4.44±1.79 ^a	11.33±3.84	0.22±0.15 ^{ab}
P- value	<0.001	0.468	0.804	0.022	0.180	0.557	0.195	0.015

^{a,b,c,d} Means within the same column differ substantially ($P<0.05$).

IP= incubation period; W10D= within the first 10 days of the nurturing period; A10D= above 10 days of age during the nursing period.