

Table S1. The composition of the basal diet for the one-day old to 4-weeks old quails, % (period 1)

	Groups					
	Group 1	Group 2	Group 3 9 g/kg	Group 4 9 g/kg	Group 5 3 g/10kg	Group 6 9 g/10kg
Soybean meal	42.54	42.42	42.91	43.06	42.40	42.46
Wheat	28.60	29.14	27.23	26.68	29.19	28.95
Corn	20.00	20.00	20.00	20.00	20.00	20.00
Sunflower oil	4.77	4.62	5.14	5.29	4.61	4.67
<i>Phytase O. proteus</i>	-	-	0.90	0.90	-	-
<i>Ladozym proxi</i>	-	-	-	-	0.03	0.09
Monocalcium phosphate	1.50	0.99	0.99	1.51	0.89	0.99
Limestone Ca	1.19	1.44	1.44	1.18	1.49	1.44
Premix	0.50	0.50	0.50	0.50	0.50	0.50
Salt	0.31	0.31	0.31	0.31	0.31	0.31
Methionine	0.27	0.26	0.27	0.27	0.26	0.27
Lysine	0.09	0.09	0.08	0.08	0.09	0.09
Treonine	0.08	0.08	0.08	0.08	0.08	0.08
Choline- chloride	0.08	0.08	0.08	0.07	0.08	0.08
Soda	0.06	0.06	0.06	0.06	0.06	0.06
FEKORD enzyme	0.01	0.01	0.01	0.01	0.01	0.01
Total	100	100	100	100	100	100
100 g of the feed contains, %						
Exchange energy, kcal	300	300	300	300	300	300
Raw protein	24.85	24.85	24.85	24.85	24.85	24.85
Raw fiber	4.28	4.28	4.27	4.26	4.28	4.28
Calcium	1.00	1.00	1.00	1.00	1.00	1.00
Total phosphorus	0.77	0.65	0.65	0.77	0.63	0.65
Phosphorus assimilated	0.45	0.35	0.35	0.45	0.45	0.35
Sodium	0.16	0.16	0.16	0.16	0.16	0.16
Chlorine	0.23	0.23	0.23	0.23	0.23	0.23
Lysine assimilated	1.23	1.23	1.23	1.23	1.23	1.23
Methionine assimilated	0.58	0.58	0.58	0.58	0.58	0.58
Treonine assimilated	0.85	0.85	0.85	0.85	0.85	0.85

Table S2. The composition of the basal diet for the 5 - 6-weeks old quails, % (2 period)

	Groups					
	Group 1	Group 2	Group 3 5 g/kg	Group 4 5g/kg	Group 5 3g/10 kg	Group 6 9g/10kg
Soybean meal	11.11	11.03	10.10	10.18	11.12	11.06
Wheat	54.79	55.14	54.64	54.30	54.75	55.02
Corn	15.00	15.00	15.00	15.00	15.00	15.00
Sunflower seed cake	13.39	13.37	13.82	13.84	13.39	13.37
Sunflower oil	1.00	1.00	1.00	1.00	1.00	1.00
<i>Phytase O. proteus</i>	-	-	0.50	0.50	-	-
<i>Ladozim proxy</i>	-	-	-	-	0.03	0.09
Monocalcium phosphate	1.56	1.05	1.06	1.57	1.56	1.05
Limestone Ca	1.87	2.13	2.13	1.87	1.87	2.13
Premix	0.50	0.50	0.50	0.50	0.50	0.50
Salt	0.36	0.36	0.36	0.36	0.36	0.36
Methionine	0.03	0.03	0.04	0.04	0.03	0.03
Lysine	0.30	0.30	0.37	0.36	0.30	0.30
Threonine	-	-	0.39	0.39	-	-
Choline Chloride	0.08	0.08	0.08	0.08	0.08	0.08
The FEKORD enzyme	0.01	0.01	0.01	0.01	0.01	0.01
Total	100	100	100	100	100	100
100 g of the feed contains, %						
Exchange energy, kcal	275	275	275	275	275	275
Raw protein	17.00	17.00	17.00	17.00	17.00	17.00
Raw fiber	5.00	5.00	5.00	5.00	5.00	5.00
Calcium	1.20	1.20	1.20	1.20	1.20	1.20
Total phosphorus	0.80	0.68	0.68	0.80	0.80	0.68
Phosphorus assimilated	0.45	0.35	0.35	0.45	0.45	0.35
Sodium	0.16	0.16	0.16	0.16	0.16	0.16
Chlorine	0.27	0.27	0.27	0.27	0.27	0.27
Lysine assimilated	0.76	0.76	0.76	0.76	0.76	0.76
Methionine assimilated	0.29	0.29	0.30	0.30	0.29	0.29

Table S3. The composition of the basal diet for the 6-weeks to 8-weeks old quails, % (period 3)

	Groups					
	Group1	Group 2	Group 3 5 g/kg	Group 4 5 g/kg	Group 5 3g/10 kg	Group 6 9g/10kg
Soybean meal	19.95	19.84	20.05	20.16	19.96	19.87
Wheat	31.92	32.49	31.39	30.84	31.86	32.29
Corn	15.00	15.00	15.00	15.00	15.00	15.00
Sunflower seed cake	8.57	8.53	8.60	8.64	8.57	8.54
Full-fat soy	12.00	12.00	12.00	12.00	12.00	12.00
Sunflower oil	3.78	3.63	3.93	4.08	3.80	3.69
<i>Phytase of O. proteus</i>	-	-	0.50	0.50	-	-
<i>Ladonym proxi</i>	-	-	-	-	0.03	0.09
Monocalcium phosphate	1.48	0.96	0.97	1.48	1.48	0.97
Limestone Ca	6.27	6.53	6.53	6.27	6.27	6.53
Premix	0.50	0.50	0.50	0.50	0.50	0.50
Salt	0.35	0.35	0.35	0.35	0.35	0.35
Methionine	0.09	0.08	0.09	0.09	0.09	0.08
Choline Chloride	0.08	0.08	0.08	0.08	0.08	0.08
FEKORD enzyme	0.01	0.01	0.01	0.01	0.01	0.01
Total	100	100	100	100	100	100
100 g of the feed contains, %						
Exchange energy, kcal	285	285	285	285	285	285
Raw protein	21.00	21.00	21.00	21.00	21.00	21.00
Raw fiber	5.00	5.00	5.00	5.00	5.00	5.00
Calcium	2.80	2.80	2.80	2.80	2.80	2.80
Phosphorus total	0.79	0.67	0.67	0.79	0.79	0.67
Phosphorus assimilated	0.45	0.35	0.35	0.45	0.45	0.35
Sodium	0.16	0.16	0.16	0.16	0.16	0.16
Chloride	0.26	0.26	0.26	0.26	0.26	0.26
Methionine assimilated	0.38	0.38	0.38	0.38	0.38	0.38