



MEZINÁRODNÍ TESTOVÁNÍ DRŮBEŽE ÚSTRAŠICE

státní podnik

390 02 Tábor 2

Česká republika

XXXXX

Trial No. 03 53 26001 (No. 1250)

XXXXX

Test č. 03 53 26001 (VT č. 1250)

International Poultry Testing Station Ústrašice
Mezinárodní testování drůbeže Ústrašice

Czech Republic
Česká republika

Study Investigator:
Zpracovatel studie:

Ing. Jan Tyl

Associate Investigator:
Spoluzpracovatel studie:

Ing. Hana Horná
Ing. Markéta Krekulová

Study monitor:
Dohlížel:

XXXXX

Study sponsor :
Dohlížel:

XXXXX

September 2026
Září 2026

Aim of the Project

To investigate the impact of adjusting the entire amino acid profile along with replacing liquid xxxxx with xxxxx at a weight ratio of 100:65 on broiler performance.

Study location

The study was carried out on the test facility Mezinárodní testování drůbeže, s.p., (next MTD, s.p. only), Ústřašice, Czech Republic. Feed samples were sended for the contents of nutrients by xxxxx.

Trial period

Beginning of the trial:	27 July 2026
End of the trial:	31 August 2026

Study responsibility

Ing. Jan Tyl was the independent Study Director, responsible that the trial is conducted according to the protocol. Ing. Hana Horná was responsible for daily animal care at the test facility. Full details of study's responsibility are provided below.

Persons involved in the trial

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Material and methods

Birds

In total there were 8400 day old chicks of xxxxx. Day-old chicks were randomly distributed into 12 dietary treatments with 5 replicates per treatment and 140 chicken per replicate.

Origin 1-day old chicks:

breeder company – xxxxx

parent flock – xxxxx

age of the breeding flock – 51 weeks

Experimental treatments:

Tr. No.	Tr.	xxxxx source	xxxxx			Reps	Birds / Rep
			Starter	Grower	Finisher		
1	T1	xxxxx	xxxxx			5	140
2	T2	xxxxx	xxxxx			5	140
3	T3	xxxxx	25	25	25	5	140
4	T4	xxxxx	25	50	50	5	140
5	T5	xxxxx	25	50	75	5	140
6	T6	xxxxx	25	75	75	5	140
7	T7	xxxxx	50	25	25	5	140
8	T8	xxxxx	50	50	25	5	140
9	T9	xxxxx	50	50	50	5	140
10	T10	xxxxx	50	50	75	5	140
11	T11	xxxxx	50	75	75	5	140
12	T12	xxxxx	75	75	75	5	140

* of xxxxx adjustment according to xxxxx replacement in order to get to optimal xxxxx to xxxxx ratio, not only xxxxx but all xxxxx are adjusted except xxxxx

Housing system

Chickens were kept in the windowless chicken house with full climatic control, on deep litter. The heating program was conducted according to the Manual of xxxxx. Drinking water was supplied ad libitum by nipple drinkers. Each pen was equipped with manually filled tube feeders. Bedding material was wood shaving.

Light was provided as follows during the experimental period:

<u>Lighting programme:</u>	Day 1 - 7	23 hours of light + 1 hour of darkness
	Day 8 - 32	18 hours of light + 6 hours of darkness
	Day 33 - 35	23 hours of light + 1 hour of darkness

Stocking density: 17,2 broilers per square meter

The conduct of the trial was conformed to the national welfare legislation.

Veterinary precautions

The chicken house was disinfected with xxxxx before the chick placement.

On days 1 and 12 the chicken were vaccinated with xxxxx. On the first days old chickens was applied the water solution of permanganate.

Feeds and Diets

Chickens were fed ad libitum according to three phase feeding programme. The test phases were 0-10 days of age for the starter BR1, 11-24 days of age for the grower BR2 and 25-35 days of age for the finisher BR3.

Feed was produced by International Poultry Testing Station Ústřašice. The composition of diets is shown in following tables.

Starter diets:

Ingredients (%)	T1	T2	T3, T4, T5, T6	T7, T8, T9, T10, T11	T12
Soyabean meal	32.29	32.26	30.17	29.13	28.08
Corn	31.68	31.85	34.25	35.45	36.65
Wheat	25.00	25.00	25.00	25.00	25.00
RSM	4.00	4.00	4.00	4.00	4.00
Soybean oil	2.41	2.41	2.04	1.86	1.68
Limestone	1.26	1.26	1.27	1.28	1.28
MCP	1.13	1.13	1.13	1.14	1.14
Sodium bicarbonate	0.29	0.29	0.30	0.30	0.30
Salt	0.18	0.18	0.18	0.17	0.17
xxxxx	1.27	1.13	1.16	1.18	1.20
AMV BR1 plus	0.50	0.50	0.50	0.50	0.50
Nutritional composition					
Crude protein (g/kg)	203.56	203.54	195.77	191.88	187.99
ME (MJ/kg)	11.84	11.86	11.84	11.83	11.82
Ca (g/kg)	8.90	8.90	8.89	8.89	8.89
P av. (g/kg)	4.93	4.93	4.93	4.93	4.93
Na (g/kg)	2.08	2.08	2.05	2.04	2.02

Grower diets:

Ingredients (%)	T1	T2	T3, T7	T4, T5, T8, T9, T10	T6, T11, T12
Soyabean meal	26.94	26.91	24.82	23.76	22.74
Corn	32.42	32.59	34.99	36.22	37.39
Wheat	30.00	30.00	30.00	30.00	30.00
RSM	4.00	4.00	4.00	4.00	4.00
Soybean oil	2.55	2.55	2.18	2.00	1.82
Limestone	1.03	1.03	1.04	1.05	1.06
MCP	0.67	0.67	0.68	0.68	0.69
Sodium bicarbonate	0.32	0.32	0.32	0.32	0.32
Salt	0.16	0.16	0.16	0.16	0.16
xxxxx	1.41	1.28	1.31	1.32	1.33
AMV BR2 plus	0.50	0.50	0.50	0.50	0.50
Nutritional composition					
Crude protein (g/kg)	184.95	184.93	177.17	173.20	169.41
ME (MJ/kg)	12.04	12.06	12.04	12.03	12.02
Ca (g/kg)	7.09	7.10	7.09	7.09	7.09
P av. (g/kg)	4.00	4.00	4.00	4.00	4.00
Na (g/kg)	2.00	2.00	1.97	1.96	1.94

Finisher diets:

Ingredients (%)	T1	T2	T3, T7, T8	T4, T9	T5, T6, T10, T11, T12
Soyabean meal	24.55	24.52	22.67	21.77	20.82
Corn	34.80	34.96	37.09	38.13	39.22
Wheat	30.00	30.00	30.00	30.00	30.00
RSM	4.00	4.00	4.00	4.00	4.00
Soybean oil	3.21	3.20	2.88	2.73	2.56
Limestone	0.87	0.87	0.88	0.89	0.90
MCP	0.42	0.42	0.43	0.43	0.44
Sodium bicarbonate	0.30	0.30	0.30	0.30	0.30
Salt	0.18	0.18	0.17	0.17	0.17
xxxxx	1.18	1.06	1.08	1.08	1.10
AMV BR3 plus	0.50	0.50	0.50	0.50	0.50
Nutritional composition					
Crude protein (g/kg)	175.79	175.77	168.91	165.57	162.05
ME (MJ/kg)	12.33	12.35	12.34	12.33	12.32
Ca (g/kg)	6.05	6.05	6.05	6.04	6.04
P av. (g/kg)	3.40	3.40	3.40	3.40	3.40
Na (g/kg)	1.97	1.97	1.94	1.92	1.91

Parameters recorded and methods applied

Live weight

Live weight was measured on day 1 and on day 10 (the birds in each pen were weighed altogether). On day 24 of age birds were weighed individually, without fasting. On day 35 birds were weighed individually, after 12 hours of fasting.

Weight gain

Weight gain per phase and average daily weight gains were calculated for the periods 1 – 10 days, 11 – 24 days, 25 – 35 days and for the overall experiment (1 – 35 days).

Feed consumption

Feed consumption was determined per pen for the feed – starter, grower and finisher.

Feed conversion ratio

Feed conversion ratio was calculated as feed consumption per 1 kg of live weight and per 1 kg of weight gain for the periods 1 – 10 days, 11 – 24 days, 25 – 35 days and for the overall experiment (1 – 35 days). The calculation was included weight of deaths.

Mortality

All pens were checked three times a day to see if there were any dead or ill birds. Dead chickens were registered by date, weight and reason of mortality on the day of death. Mortality was recorded for the periods 1 – 10 days, 11 – 24 days, 25 – 35 days and 1 – 35 days.

Foot pad lesions

At the end of the trial the animals were recorded according the scale.

Statistical analyses

Performance results of live weight (on days 1, 10, 24 and 35) and feed conversion ratio were statistically evaluated using the ANOVA single-factor model (Duncan test) or nonparametric method (Kruskal-Wallis test).

Results

Tab. No.	1 Hatchability
	2 Performance results:
	2a Body weight
	2b Weight gain
	2c Feed conversion ratio
	2d Feed consumption
	3 Mortality
	4 Carcass analysis
	5 Foot pad lesions
	6 Statistical analysis of body weight at the age of 35 days (average body weight, standard deviation, coefficient of variation)
	7 - 8 Statistical analyses of performance results
	9 Performance results per pen:
	9a Body weight
	9b Weight gain
	9c Feed conversion ratio
	9d Feed consumption
	9e Foot pad lesions

Results of incubation and hatching

Tab. No. 1

Treatment	Tr. No.	Fertility	Hatchability		Birds housed	Average weight	
			Set eggs	Fertile eggs		Hatching eggs	Day old chicks
		%	%	%		g	g
T1	1	95.50	84.33	88.30	700	66.00	45.34
T2	2				700		45.14
T3	3				700		45.14
T4	4				700		45.83
T5	5				700		44.51
T6	6				700		45.63
T7	7				700		44.31
T8	8				700		45.83
T9	9				700		45.43
T10	10				700		45.09
T11	11				700		43.69
T12	12				700		45.06

Body weight per phases

Tab. No. 2a

Treatment	Tr. No.	Day 1		Day 10		Day 24		Day 35	
		Birds	Average body weight	Birds	Average body weight	Birds	Average body weight	Birds	Average body weight
			g		g		g		g
T1	1	700	45.34	699	323.57	695	1330.75	683	2217.17
T2	2	700	45.14	698	328.24	693	1355.86	687	2234.72
T3	3	700	45.14	698	318.63	692	1342.59	682	2185.92
T4	4	700	45.83	700	324.43	691	1346.90	685	2166.31
T5	5	700	44.51	698	321.64	693	1328.98	685	2134.01
T6	6	700	45.63	700	325.43	694	1302.56	689	2117.71
T7	7	700	44.31	697	321.25	687	1277.22	677	2110.28
T8	8	700	45.83	697	317.10	687	1278.95	676	2162.41
T9	9	700	45.43	696	323.53	693	1318.89	681	2199.97
T10	10	700	45.09	696	323.57	691	1317.57	683	2183.25
T11	11	700	43.69	694	325.80	690	1302.54	683	2160.50
T12	12	700	45.06	700	323.14	696	1288.25	690	2160.29

Weight gain per phases

Tab. No. 2b

Treatment	Tr. No.	Day 1 - 10		Day 11 - 24		Day 25 - 35		Day 1 - 35	
		Weight gain per phase	Daily weight gain	Weight gain per phase	Daily weight gain	Weight gain per phase	Daily weight gain	Weight gain per phase	Daily weight gain
		g	g	g	g	g	g	g	g
T1	1	278.22	27.82	1007.18	71.94	886.43	80.58	2171.83	62.05
T2	2	283.09	28.31	1027.62	73.40	878.86	79.90	2189.57	62.56
T3	3	273.49	27.35	1023.95	73.14	843.34	76.67	2140.78	61.17
T4	4	278.60	27.86	1022.47	73.03	819.40	74.49	2120.48	60.59
T5	5	277.12	27.71	1007.34	71.95	805.04	73.19	2089.50	59.70
T6	6	279.80	27.98	977.14	69.80	815.14	74.10	2072.08	59.20
T7	7	276.93	27.69	955.97	68.28	833.06	75.73	2065.97	59.03
T8	8	271.27	27.13	961.86	68.70	883.46	80.31	2116.58	60.47
T9	9	278.11	27.81	995.36	71.10	881.08	80.10	2154.54	61.56
T10	10	278.49	27.85	994.00	71.00	865.68	78.70	2138.16	61.09
T11	11	282.11	28.21	976.74	69.77	857.96	78.00	2116.81	60.48
T12	12	278.09	27.81	965.10	68.94	872.04	79.28	2115.23	60.44

Feed conversion ratio**Tab. No. 2c**

Treatment	Tr. No.	Feed conversion ratio		
		Day 10	Day 24	Day 35
		g/kg LW	g/kg LW	g/kg LW
T1	1	941.35	1188.44	1439.82
T2	2	927.73	1161.29	1426.99
T3	3	954.00	1182.84	1455.03
T4	4	932.63	1181.06	1488.24
T5	5	940.06	1188.64	1499.02
T6	6	941.18	1177.64	1468.51
T7	7	937.68	1245.46	1515.81
T8	8	969.49	1231.96	1463.93
T9	9	943.26	1199.64	1461.25
T10	10	950.14	1202.73	1469.18
T11	11	947.89	1229.52	1495.20
T12	12	936.34	1226.49	1480.49

Feed consumption per phases

Tab. No. 2d

Treatment	Tr. No.	Feed consumption			
		Starter (1-10 days)	Grower (11-24 days)	Finisher (25-35 days)	Total
		kg	kg	kg	kg
T1	1	213.10	889.80	1111.90	2214.80
T2	2	212.90	882.00	1115.70	2210.60
T3	3	212.30	890.20	1097.00	2199.50
T4	4	211.80	897.00	1126.40	2235.20
T5	5	211.30	887.60	1120.10	2219.00
T6	6	214.40	852.70	1090.20	2157.30
T7	7	210.50	891.80	1102.80	2205.10
T8	8	214.60	875.20	1088.40	2178.20
T9	9	213.50	885.90	1123.20	2222.60
T10	10	214.80	885.50	1115.70	2216.00
T11	11	215.20	894.90	1118.30	2228.40
T12	12	211.80	891.20	1121.60	2224.60

Mortality

Tab. No. 3

Treatment	Tr. No.	Mortality in the period									Mortality according causes														
		Day 1 - 10		Day 11 - 24		Day 25 - 35		Day 1 - 35			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		birds	g	birds	g	birds	g	birds	g	%															
T1	1	1	206	4	2944	7	12007	12	15157	1.71											11			1	5
T2	2	2	386	5	2837	2	3120	9	6343	1.29											7			2	4
T3	3	2	137	6	2872	5	8460	13	11469	1.86									1	11			1	5	
T4	4	0	0	9	8104	3	5300	12	13404	1.71										11			1	3	
T5	5	2	273	5	3252	3	5451	10	8976	1.43										7			3	5	
T6	6	0	0	6	2155	3	3854	9	6009	1.29										6			3	2	
T7	7	3	591	10	7013	2	3410	15	11014	2.14										14			1	8	
T8	8	3	354	10	5615	7	12420	20	18389	2.86										15			5	4	
T9	9	4	1142	3	1311	3	4300	10	6753	1.43									1	8			1	9	
T10	10	4	871	5	3523	4	6092	13	10486	1.86										13				4	
T11	11	6	931	4	3194	4	5808	14	9933	2.00										10			4	3	
T12	12	0	0	4	2691	3	4301	7	6992	1.00										6			1	3	

Causes: 1 – Viral diseases
2 – Bacterial diseases
3 – Moulds diseases
4 – Parasitary diseases
5 – Tumors

6 – Wounds
7 – Digestive track diseases
8 – Respiratory tract diseases
9 – Reproduction tract diseases
10 – Locomotion apparatus diseases

11 – Sudden death syndrome
12 – Cannibalism
13 – Yolk sac. infam.
14 – Other causes
15 – Culling (excluded of calculation)

Results of carcass analysis

Tab. No. 4 (page 1)

Treatment	Tr. No.	Sex	Weight				Ratio of abd. fat to live weight	Breast muscles without skin			Thigh muscles with skin			Total muscles			Carcass	
			Total	Body	Gibl.	Abd. fat		Weight	Percentage		Weight	Percentage		Weight	Percentage		Value	Yield
									Total weight	Body carcass		Total weight	Body carcass		Total weight	Body carcass		
			g	g	g	g	%	g	%	%	g	%	%	g	%	%	%	%
T1	1	♂	2423	1753	140	29	1.20	584	24.10	33.30	531	21.93	30.30	1115	46.03	63.61	72.36	78.14
		♀	2170	1563	124	33	1.54	505	23.27	32.30	474	21.85	30.32	979	45.12	62.63	72.05	77.77
		Ø	2296	1658	132	31	1.36	544	23.71	32.83	503	21.89	30.31	1047	45.60	63.15	72.21	77.97
T2	2	♂	2487	1785	139	27	1.08	603	24.23	33.75	545	21.91	30.53	1148	46.14	64.29	71.77	77.34
		♀	2090	1514	120	33	1.58	513	24.56	33.89	460	21.99	30.34	973	46.55	64.23	72.47	78.18
		Ø	2288	1650	129	30	1.31	558	24.38	33.82	502	21.95	30.45	1060	46.33	64.26	72.09	77.73
T3	3	♂	2437	1744	143	34	1.40	576	23.62	33.01	529	21.69	30.31	1104	45.32	63.32	71.57	77.44
		♀	2067	1483	123	29	1.42	487	23.58	32.85	456	22.07	30.74	943	45.64	63.59	71.77	77.71
		Ø	2252	1614	133	32	1.41	531	23.60	32.93	492	21.87	30.51	1024	45.47	63.44	71.67	77.56
T4	4	♂	2399	1716	138	33	1.36	552	23.02	32.17	526	21.92	30.63	1078	44.94	62.80	71.56	77.33
		♀	2044	1454	124	30	1.49	471	23.02	32.37	440	21.54	30.28	911	44.56	62.66	71.12	77.18
		Ø	2221	1585	131	31	1.42	511	23.02	32.26	483	21.74	30.47	994	44.77	62.74	71.36	77.26
T5	5	♂	2394	1711	139	34	1.40	540	22.56	31.57	523	21.85	30.57	1063	44.41	62.14	71.47	77.28
		♀	2079	1503	123	32	1.53	473	22.77	31.48	461	22.20	30.70	935	44.97	62.18	72.32	78.24
		Ø	2236	1607	131	33	1.46	507	22.66	31.53	492	22.01	30.63	999	44.67	62.16	71.86	77.73
T6	6	♂	2348	1704	139	33	1.39	542	23.07	31.79	526	22.39	30.84	1067	45.46	62.62	72.59	78.50
		♀	2055	1470	120	35	1.68	487	23.68	33.10	438	21.32	29.80	925	45.00	62.90	71.55	77.41
		Ø	2201	1587	130	34	1.53	514	23.36	32.40	482	21.89	30.36	996	45.25	62.75	72.10	77.99

Results of carcass analysis

Tab. No. 4 (page 2)

Treatment	Tr. No.	Sex	Weight				Ratio of abd. fat to live weight	Breast muscles without skin			Thigh muscles with skin			Total muscles			Carcass	
			Total	Body	Gibl.	Abd. fat		Weight	Percentage		Weight	Percentage		Weight	Percentage		Value	Yield
									Total weight	Body carcass		Total weight	Body carcass					
g	g	g	g	%	g	%	%	g	%	%	g	%	%	%	%			
T7	7	♂	2360	1709	137	33	1.41	559	23.68	32.69	526	22.30	30.79	1085	45.98	63.47	72.44	78.26
		♀	2001	1453	121	29	1.46	465	23.26	32.03	444	22.19	30.57	910	45.45	62.60	72.61	78.65
		Ø	2180	1581	129	31	1.43	512	23.49	32.39	485	22.25	30.68	997	45.74	63.07	72.52	78.44
T8	8	♂	2391	1720	140	35	1.45	571	23.89	33.22	520	21.76	30.26	1092	45.65	63.48	71.92	77.76
		♀	2054	1476	122	31	1.49	478	23.26	32.37	451	21.95	30.55	929	45.21	62.92	71.85	77.80
		Ø	2223	1598	131	33	1.47	525	23.60	32.83	486	21.85	30.39	1010	45.45	63.22	71.89	77.78
T9	9	♂	2405	1710	141	30	1.25	562	23.38	32.88	535	22.25	31.28	1097	45.63	64.16	71.11	76.96
		♀	2085	1495	123	31	1.49	489	23.46	32.72	449	21.55	30.05	938	45.01	62.77	71.72	77.61
		Ø	2245	1602	132	31	1.37	526	23.42	32.80	492	21.92	30.71	1018	45.34	63.51	71.39	77.26
T10	10	♂	2405	1710	142	33	1.37	544	22.63	31.83	530	22.05	31.00	1074	44.68	62.83	71.11	77.00
		♀	2098	1521	124	35	1.65	493	23.50	32.41	445	21.23	29.28	938	44.73	61.70	72.50	78.43
		Ø	2251	1615	133	34	1.50	519	23.04	32.10	488	21.67	30.19	1006	44.70	62.30	71.76	77.67
T11	11	♂	2407	1734	140	33	1.35	564	23.44	32.54	534	22.20	30.81	1099	45.64	63.35	72.04	77.85
		♀	2037	1467	122	31	1.50	465	22.82	31.68	445	21.82	30.30	909	44.64	61.98	72.03	78.03
		Ø	2222	1601	131	32	1.42	515	23.16	32.15	489	22.03	30.58	1004	45.18	62.72	72.04	77.93
T12	12	♂	2393	1705	143	30	1.27	553	23.13	32.44	530	22.16	31.08	1083	45.28	63.53	71.28	77.27
		♀	2083	1507	122	35	1.66	497	23.87	33.01	459	22.03	30.45	956	45.90	63.46	72.33	78.16
		Ø	2238	1606	132	32	1.45	525	23.47	32.71	494	22.10	30.79	1020	45.57	63.50	71.77	77.69

Foot pad lesions**Tab. No. 5**

Treatment	Tr. No.	Evaluation	
		right foot	left foot
T1	1	0.10	0.07
T2	2	0.11	0.06
T3	3	0.08	0.09
T4	4	0.15	0.09
T5	5	0.13	0.13
T6	6	0.15	0.10
T7	7	0.17	0.08
T8	8	0.11	0.10
T9	9	0.13	0.11
T10	10	0.12	0.08
T11	11	0.14	0.06
T12	12	0.14	0.08

Statistical analysis - Body weight at 35 days of age

Tab. No. 6

Treatment	Tr. No.	Cocks				Hens			
		Number of birds	Average body weight	Standard deviation	Coefficient of variation	Number of birds	Average body weight	Standard deviation	Coefficient of variation
			g/birds	g/birds	%		g/birds	g/birds	%
T1	1	334	2436.59	276.49	11.35	349	2007.19	241.99	12.06
T2	2	340	2433.06	239.30	9.84	347	2040.37	227.18	11.13
T3	3	338	2394.88	257.16	10.74	344	1980.61	245.50	12.40
T4	4	335	2364.15	241.37	10.21	350	1976.94	225.16	11.39
T5	5	337	2334.84	251.84	10.79	348	1939.54	223.37	11.52
T6	6	344	2264.04	268.93	11.88	345	1971.80	260.99	13.24
T7	7	334	2301.14	229.47	9.97	343	1924.43	277.65	14.43
T8	8	330	2354.58	224.87	9.55	346	1979.13	250.95	12.68
T9	9	341	2366.48	244.26	10.32	340	2032.97	267.27	13.15
T10	10	342	2325.91	245.25	10.54	341	2040.18	237.85	11.66
T11	11	336	2338.84	210.93	9.02	347	1987.81	228.96	11.52
T12	12	335	2345.16	229.23	9.77	355	1985.83	207.92	10.47

Statistical analyses of performance results

Performance results were statistically evaluated using the ANOVA single-factor model (Duncan test, Scheffe test) or nonparametric method (Kruskal-Wallis test).

The following symbols are used for levels of significance:

$p \leq 0,001$	* * *	- differences are very high significant
$p \leq 0,01$	* *	- differences are high significant
$p \leq 0,05$	*	- differences are significant
$p > 0,05$	o	- differences are not significant

Body weight - day 1

Tab. No. 7a

Treatment	Treat. No.	No. of box	Average (g)	Standard deviation	Kruskal-Wallis test											
					T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12
T1	1	5	45.34	0.08		o	o	o	o	o	o	o	o	o	o	o
T2	2	5	45.14	0.17	1.000000		o	o	o	o	o	o	o	o	o	o
T3	3	5	45.14	0.10	1.000000	1.000000		o	o	o	o	o	o	o	o	o
T4	4	5	45.83	0.19	1.000000	0.843738	0.933677		**	o	**	o	o	o	***	o
T5	5	5	44.51	0.16	1.000000	1.000000	1.000000	0.005839		*	o	**	o	o	o	o
T6	6	5	45.63	0.08	1.000000	1.000000	1.000000	1.000000	0.042376		*	o	o	o	**	o
T7	7	5	44.31	0.46	0.865473	1.000000	1.000000	0.002712	1.000000	0.021470		**	o	o	o	o
T8	8	5	45.83	0.19	1.000000	0.887701	0.981741	1.000000	0.006294	1.000000	0.002932		o	o	***	o
T9	9	5	45.43	0.00	1.000000	1.000000	1.000000	1.000000	0.570982	1.000000	0.330436	1.000000		o	o	o
T10	10	5	45.09	0.08	1.000000	1.000000	1.000000	0.436006	1.000000	1.000000	1.000000	0.460447	1.000000		o	o
T11	11	5	43.69	0.31	0.174830	1.000000	1.000000	0.000246	1.000000	0.002507	1.000000	0.000268	0.056966	1.000000		o
T12	12	5	45.06	0.36	1.000000	1.000000	1.000000	0.527019	1.000000	1.000000	1.000000	0.555977	1.000000	1.000000	1.000000	

Body weight - day 10
Tab. No. 7b

Treatment	Treat. No.	No. of box	Average (g)	Standard deviation	Duncan test											
					T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12
T1	1	5	323.57	2.32		o	o	o	o	o	o	o	o	o	o	o
T2	2	5	328.24	5.95	0.408697		o	o	o	o	o	o	o	o	o	o
T3	3	5	318.63	15.38	0.383006	0.103547		o	o	o	o	o	o	o	o	o
T4	4	5	324.43	6.38	0.868998	0.482495	0.316170		o	o	o	o	o	o	o	o
T5	5	5	321.64	7.53	0.722519	0.257355	0.565094	0.622040		o	o	o	o	o	o	o
T6	6	5	325.43	4.24	0.731505	0.590710	0.243522	0.837853	0.508174		o	o	o	o	o	o
T7	7	5	321.25	10.14	0.676901	0.233106	0.593377	0.579049	0.936089	0.469409		o	o	o	o	o
T8	8	5	317.10	7.60	0.258293	0.060172	0.752977	0.208205	0.402085	0.155395	0.426759		o	o	o	o
T9	9	5	323.53	7.71	0.994879	0.411482	0.377804	0.870085	0.716551	0.734081	0.673272	0.254427		o	o	o
T10	10	5	323.57	5.94	0.999221	0.401052	0.388564	0.860672	0.728764	0.722026	0.681892	0.262679	0.994719		o	o
T11	11	5	325.80	3.03	0.688340	0.618269	0.221667	0.792981	0.471634	0.939496	0.434265	0.140022	0.689559	0.681254		o
T12	12	5	323.14	7.10	0.936049	0.378261	0.405511	0.819432	0.758099	0.687010	0.716365	0.276069	0.936300	0.939700	0.643946	

Body weight - day 24
Tab. No. 7c

Treatment	Treat. No.	No. of birds	Average (g)	Standard deviation	Kruskal-Wallis test											
					T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12
T1	1	695	1330.75	166.68		o	o	o	o	o	***	***	o	o	o	***
T2	2	693	1355.86	175.93	0.618058		o	o	o	***	***	***	*	*	***	***
T3	3	692	1342.59	177.70	1.000000	1.000000		o	o	*	***	***	o	o	***	***
T4	4	691	1346.90	175.12	1.000000	1.000000	1.000000		o	**	***	***	o	o	***	***
T5	5	693	1328.98	169.57	1.000000	0.563939	1.000000	1.000000		o	***	***	o	o	o	***
T6	6	694	1302.56	173.05	1.000000	0.000090	0.026680	0.001298	1.000000		**	*	o	o	o	o
T7	7	687	1277.22	168.56	0.000000	0.000000	0.000000	0.000000	0.000000	0.006602		o	***	***	o	o
T8	8	687	1278.95	177.24	0.000000	0.000000	0.000000	0.000000	0.000000	0.020434	1.000000		***	***	o	o
T9	9	693	1318.89	179.81	1.000000	0.010792	0.878577	0.088473	1.000000	1.000000	0.000052	0.000213		o	o	*
T10	10	691	1317.57	165.39	1.000000	0.013228	1.000000	0.105845	1.000000	1.000000	0.000037	0.000156	1.000000		o	*
T11	11	690	1302.54	156.97	0.105307	0.000001	0.000532	0.000013	0.117215	1.000000	0.199202	0.481428	1.000000	1.000000		o
T12	12	696	1288.25	154.74	0.000328	0.000000	0.000000	0.000000	0.000380	1.000000	1.000000	1.000000	0.044880	0.036469	1.000000	

Body weight - day 35

Tab. No. 7d

Treatment	Treat. No.	No. of birds	Average (g)	Standard deviation	Kruskal-Wallis test											
					T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12
T1	1	683	2217.17	336.67		o	o	o	***	***	***	o	o	o	o	o
T2	2	687	2234.72	304.85	1.000000		o	**	***	***	***	***	o	o	**	**
T3	3	682	2185.92	325.65	1.000000	0.128812		o	o	*	**	o	o	o	o	o
T4	4	685	2166.31	303.04	0.861450	0.003466	1.000000		o	o	o	o	o	o	o	o
T5	5	685	2134.01	309.16	0.000100	0.000000	0.068492	1.000000		o	o	o	***	*	o	o
T6	6	689	2117.71	302.48	0.000009	0.000000	0.011551	0.335280	1.000000		o	o	***	**	o	o
T7	7	677	2110.28	316.96	0.000001	0.000000	0.001861	0.082138	1.000000	1.000000		o	***	***	o	o
T8	8	676	2162.41	303.49	0.369350	0.000929	1.000000	1.000000	1.000000	0.696840	0.203619		o	o	o	o
T9	9	681	2199.97	305.43	1.000000	1.000000	1.000000	1.000000	0.000907	0.000089	0.000011	1.000000		o	o	o
T10	10	683	2183.25	280.56	1.000000	0.413235	1.000000	1.000000	0.017558	0.002389	0.000388	1.000000	1.000000		o	o
T11	11	683	2160.50	281.59	0.555280	0.001769	1.000000	1.000000	1.000000	0.507894	0.143557	1.000000	1.000000	1.000000		o
T12	12	690	2160.29	282.81	0.841076	0.003424	1.000000	1.000000	1.000000	0.356172	0.097070	1.000000	1.000000	1.000000	1.000000	

FCR - day 10

Tab. No. 8a

Treatment	Treat. No.	No. of box	Average (g)	Standard deviation	Duncan test											
					T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12
T1	1	5	941.40	21.63		o	o	o	o	o	o	o	o	o	o	o
T2	2	5	927.90	29.76	0.574759		o	o	o	o	o	o	o	o	o	o
T3	3	5	955.96	52.84	0.532587	0.256330		o	o	o	o	o	o	o	o	o
T4	4	5	932.67	17.67	0.714769	0.816246	0.343374		o	o	o	o	o	o	o	o
T5	5	5	940.29	24.07	0.960574	0.595440	0.514554	0.737847		o	o	o	o	o	o	o
T6	6	5	941.33	18.34	0.997128	0.571858	0.537608	0.711036	0.959834		o	o	o	o	o	o
T7	7	5	938.23	30.31	0.891397	0.650139	0.464823	0.799782	0.919828	0.887857		o	o	o	o	o
T8	8	5	970.27	46.29	0.223280	0.088587	0.486364	0.128765	0.216571	0.228162	0.190088		o	o	o	o
T9	9	5	943.99	39.54	0.899727	0.507534	0.598877	0.638581	0.872144	0.903732	0.807455	0.259320		o	o	o
T10	10	5	950.46	34.50	0.690966	0.358872	0.788317	0.466872	0.669438	0.696123	0.611546	0.366020	0.767957		o	o
T11	11	5	947.85	16.71	0.768766	0.414370	0.711174	0.531827	0.747106	0.774960	0.686118	0.324253	0.850680	0.898831		o
T12	12	5	936.74	31.55	0.845709	0.686632	0.431602	0.842527	0.871477	0.841164	0.942203	0.173143	0.763373	0.572536	0.645541	

FCR - day 24

Tab. No. 8b

Treatment	Treat. No.	No. of box	Average (g)	Standard deviation	Duncan test											
					T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12
T1	1	5	1189.74	45.60		o	o	o	o	o	o	o	o	o	o	o
T2	2	5	1163.41	65.83	0.359368		o	o	o	o	**	*	o	o	*	*
T3	3	5	1183.44	36.85	0.803068	0.475049		o	o	o	*	o	o	o	o	o
T4	4	5	1181.78	32.62	0.768434	0.496133	0.947916		o	o	*	o	o	o	o	o
T5	5	5	1189.83	39.96	0.996998	0.365967	0.812778	0.774539		o	o	o	o	o	o	o
T6	6	5	1178.26	39.96	0.682530	0.557205	0.848167	0.889122	0.687787		*	o	o	o	o	o
T7	7	5	1246.15	34.33	0.058391	0.006661	0.036772	0.033349	0.056139	0.025646		o	o	o	o	o
T8	8	5	1232.91	32.00	0.144085	0.022294	0.097351	0.089362	0.139664	0.071311	0.600631		o	o	o	o
T9	9	5	1200.55	33.88	0.688701	0.209298	0.541601	0.513793	0.671576	0.445784	0.117789	0.259484		o	o	o
T10	10	5	1204.21	43.43	0.605728	0.172047	0.469626	0.442930	0.594241	0.380656	0.143447	0.305601	0.884730		o	o
T11	11	5	1229.90	30.70	0.168693	0.027870	0.115780	0.106997	0.162293	0.086200	0.547156	0.905065	0.294778	0.341426		o
T12	12	5	1226.88	26.59	0.195253	0.034524	0.136260	0.126933	0.185670	0.103305	0.491981	0.823482	0.329369	0.371214	0.905101	

FCR - day 35

Tab. No. 8c

Treatment	Treat. No.	No. of box	Average (g)	Standard deviation	Kruskal-Wallis test											
					T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12
T1	1	5	1440.11	32.43		o	o	o	o	o	o	o	o	o	o	o
T2	2	5	1427.11	22.55	1.000000		o	o	o	o	o	o	o	o	o	o
T3	3	5	1455.78	38.69	1.000000	1.000000		o	o	o	o	o	o	o	o	o
T4	4	5	1488.59	23.90	1.000000	0.460447	1.000000		o	o	o	o	o	o	o	o
T5	5	5	1499.55	29.92	0.742150	0.146030	1.000000	1.000000		o	o	o	o	o	o	o
T6	6	5	1468.57	37.48	1.000000	1.000000	1.000000	1.000000	1.000000		o	o	o	o	o	o
T7	7	5	1519.01	78.56	1.000000	0.412737	1.000000	1.000000	1.000000	1.000000		o	o	o	o	o
T8	8	5	1464.33	31.54	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		o	o	o	o
T9	9	5	1461.63	27.26	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		o	o	o
T10	10	5	1469.24	13.82	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		o	o
T11	11	5	1495.39	29.51	1.000000	0.248541	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		o
T12	12	5	1480.79	24.28	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	

Body weight (BW) per box
Tab. No. 9a (page 1)

Treatment	Tr. No.	Box No.	Day 1		Day 10		Day 24		Day 35	
			Birds	BW	Birds	BW	Birds	BW	Birds	BW
				g		g		g		g
T1	1	1	140	45.29	140	324.29	139	1262.09	136	2183.16
		13	140	45.43	139	325.90	138	1304.78	133	2224.06
		25	140	45.29	140	320.00	138	1345.87	136	2228.38
		48	140	45.43	140	325.00	140	1355.93	139	2237.12
		60	140	45.29	140	322.64	140	1384.43	139	2212.95
T2	2	2	140	45.14	140	332.14	139	1253.38	139	2199.86
		14	140	45.00	140	320.71	140	1318.79	140	2248.93
		26	140	45.00	139	332.37	137	1392.26	134	2258.81
		47	140	45.43	139	333.09	137	1410.29	136	2208.53
		59	140	45.14	140	322.86	140	1405.79	138	2257.83
T3	3	3	140	45.14	140	327.14	139	1299.21	138	2190.94
		15	140	45.14	140	330.00	139	1333.38	136	2191.69
		27	140	45.14	139	318.71	138	1356.96	136	2178.01
		46	140	45.00	139	325.18	137	1351.17	135	2113.56
		58	140	45.29	140	292.14	139	1372.45	137	2254.31
T4	4	4	140	45.71	140	332.14	140	1291.43	137	2154.45
		16	140	46.14	140	327.86	139	1320.72	139	2123.74
		28	140	45.71	140	325.71	138	1395.29	137	2200.95
		45	140	45.86	140	320.71	136	1349.34	135	2133.63
		57	140	45.71	140	315.71	138	1378.77	137	2218.91
T5	5	5	140	44.71	138	323.19	138	1285.72	135	2150.59
		17	140	44.57	140	333.57	139	1274.96	138	2030.07
		29	140	44.29	140	320.00	139	1343.81	138	2153.26
		44	140	44.43	140	313.57	138	1345.65	136	2129.93
		56	140	44.57	140	317.86	139	1394.53	138	2206.52
T6	6	6	140	45.57	140	330.71	139	1252.59	139	2084.60
		18	140	45.71	140	328.57	138	1285.29	138	2061.59
		30	140	45.57	140	320.00	140	1360.93	136	2160.81
		43	140	45.71	140	324.29	138	1246.74	138	2076.96
		55	140	45.57	140	323.57	139	1366.33	138	2205.43

Body weight (BW) per box
Tab. No. 9a (page 2)

Treatment	Tr. No.	Box No.	Day 1		Day 10		Day 24		Day 35	
			Birds	BW	Birds	BW	Birds	BW	Birds	BW
				g		g		g		g
T7	7	7	140	43.71	139	325.18	138	1261.52	137	2175.04
		19	140	44.43	139	328.78	137	1251.90	135	2070.59
		36	140	44.00	139	317.99	138	1274.20	135	2114.89
		42	140	44.57	140	329.29	137	1260.00	136	1946.47
		54	140	44.86	140	305.00	137	1338.61	134	2245.67
T8	8	8	140	45.86	138	321.01	136	1275.81	136	2218.82
		20	140	45.71	140	313.57	138	1303.77	134	2128.66
		35	140	45.57	139	325.18	138	1228.55	137	2134.01
		41	140	46.00	140	320.00	135	1249.11	131	2110.69
		53	140	46.00	140	305.71	140	1336.00	138	2216.88
T9	9	9	140	45.43	140	328.57	140	1243.93	137	2151.53
		21	140	45.43	139	324.46	139	1302.95	139	2230.72
		34	140	45.43	139	328.78	139	1304.53	136	2165.44
		40	140	45.43	140	325.71	138	1370.29	136	2182.50
		52	140	45.43	138	310.14	137	1374.45	133	2270.90
T10	10	10	140	45.14	139	325.18	138	1248.48	138	2112.97
		22	140	45.14	138	323.19	137	1274.01	136	2166.99
		33	140	45.00	139	328.06	138	1353.19	136	2204.04
		39	140	45.14	140	327.86	139	1372.52	137	2219.78
		51	140	45.00	140	313.57	139	1338.78	136	2213.24
T11	11	11	140	43.14	139	323.74	139	1286.12	138	2131.67
		23	140	43.86	138	330.43	138	1307.68	137	2173.80
		32	140	43.71	138	323.91	136	1300.22	136	2216.32
		38	140	43.86	139	327.34	138	1294.28	135	2184.30
		50	140	43.86	140	323.57	139	1324.32	137	2097.37
T12	12	12	140	45.00	140	326.43	138	1291.01	137	2193.43
		24	140	45.00	140	312.14	139	1263.67	136	2095.51
		31	140	44.57	140	327.86	139	1323.88	139	2207.41
		37	140	45.14	140	329.29	140	1256.71	139	2144.75
		49	140	45.57	140	320.00	140	1306.07	139	2159.42

Weight gain (WG) and daily weight gain (DWG) per box

Tab. No. 9b (page 1)

Treatment	Tr. No.	Box No.	Day 1 - 10		Day 11 - 24		Day 25 - 35		Day 1 - 35	
			WG	DWG	WG	DWG	WG	DWG	WG	DWG
			g	g	g	g	g	g	g	g
T1	1	1	279.00	27.90	937.80	66.99	921.08	83.73	2137.88	61.08
		13	280.47	28.05	978.88	69.92	919.28	83.57	2178.63	62.25
		25	274.71	27.47	1025.87	73.28	882.51	80.23	2183.10	62.37
		48	279.57	27.96	1030.93	73.64	881.19	80.11	2191.69	62.62
		60	277.36	27.74	1061.79	75.84	828.52	75.32	2167.66	61.93
T2	2	2	287.00	28.70	921.24	65.80	946.47	86.04	2154.71	61.56
		14	275.71	27.57	998.07	71.29	930.14	84.56	2203.93	62.97
		26	287.37	28.74	1059.89	75.71	866.54	78.78	2213.81	63.25
		47	287.66	28.77	1077.20	76.94	798.24	72.57	2163.10	61.80
		59	277.71	27.77	1082.93	77.35	852.04	77.46	2212.68	63.22
T3	3	3	282.00	28.20	972.07	69.43	891.73	81.07	2145.80	61.31
		15	284.86	28.49	1003.38	71.67	858.31	78.03	2146.55	61.33
		27	273.56	27.36	1038.25	74.16	821.06	74.64	2132.87	60.94
		46	280.18	28.02	1025.99	73.28	762.39	69.31	2068.56	59.10
		58	246.86	24.69	1080.30	77.16	881.86	80.17	2209.02	63.11
T4	4	4	286.43	28.64	959.29	68.52	863.02	78.46	2108.74	60.25
		16	281.71	28.17	992.86	70.92	803.02	73.00	2077.60	59.36
		28	280.00	28.00	1069.58	76.40	805.66	73.24	2155.23	61.58
		45	274.86	27.49	1028.62	73.47	784.29	71.30	2087.77	59.65
		57	270.00	27.00	1063.05	75.93	840.14	76.38	2173.19	62.09
T5	5	5	278.47	27.85	962.54	68.75	864.87	78.62	2105.88	60.17
		17	289.00	28.90	941.39	67.24	755.11	68.65	1985.50	56.73
		29	275.71	27.57	1023.81	73.13	809.45	73.59	2108.98	60.26
		44	269.14	26.91	1032.08	73.72	784.27	71.30	2085.50	59.59
		56	273.29	27.33	1076.68	76.91	811.99	73.82	2161.95	61.77
T6	6	6	285.14	28.51	921.88	65.85	832.01	75.64	2039.03	58.26
		18	282.86	28.29	956.72	68.34	776.30	70.57	2015.88	57.60
		30	274.43	27.44	1040.93	74.35	799.88	72.72	2115.24	60.44
		43	278.57	27.86	922.45	65.89	830.22	75.47	2031.24	58.04
		55	278.00	27.80	1042.76	74.48	839.10	76.28	2159.86	61.71

Weight gain (WG) and daily weight gain (DWG) per box

Tab. No. 9b (page 2)

Treatment	Tr. No.	Box No.	Day 1 - 10		Day 11 - 24		Day 25 - 35		Day 1 - 35	
			WG	DWG	WG	DWG	WG	DWG	WG	DWG
			g	g	g	g	g	g	g	g
T7	7	7	281.47	28.15	936.34	66.88	913.51	83.05	2131.32	60.89
		19	284.35	28.43	923.12	65.94	818.69	74.43	2026.16	57.89
		36	273.99	27.40	956.22	68.30	840.69	76.43	2070.89	59.17
		42	284.71	28.47	930.71	66.48	686.47	62.41	1901.90	54.34
		54	260.14	26.01	1033.61	73.83	907.06	82.46	2200.81	62.88
T8	8	8	275.16	27.52	954.79	68.20	943.01	85.73	2172.97	62.08
		20	267.86	26.79	990.20	70.73	824.89	74.99	2082.94	59.51
		35	279.61	27.96	903.37	64.53	905.46	82.31	2088.44	59.67
		41	274.00	27.40	929.11	66.37	861.58	78.33	2064.69	58.99
		53	259.71	25.97	1030.29	73.59	880.88	80.08	2170.88	62.03
T9	9	9	283.14	28.31	915.36	65.38	907.60	82.51	2106.10	60.17
		21	279.03	27.90	978.49	69.89	927.77	84.34	2185.29	62.44
		34	283.35	28.33	975.76	69.70	860.91	78.26	2120.01	60.57
		40	280.29	28.03	1044.58	74.61	812.21	73.84	2137.07	61.06
		52	264.72	26.47	1064.31	76.02	896.45	81.50	2225.47	63.58
T10	10	10	280.04	28.00	923.30	65.95	864.49	78.59	2067.83	59.08
		22	278.05	27.80	950.83	67.92	892.97	81.18	2121.84	60.62
		33	283.06	28.31	1025.13	73.22	850.86	77.35	2159.04	61.69
		39	282.71	28.27	1044.66	74.62	847.26	77.02	2174.64	62.13
		51	268.57	26.86	1025.21	73.23	874.46	79.50	2168.24	61.95
T11	11	11	280.60	28.06	962.37	68.74	845.55	76.87	2088.52	59.67
		23	286.58	28.66	977.25	69.80	866.11	78.74	2129.94	60.86
		32	280.20	28.02	976.31	69.74	916.10	83.28	2172.61	62.07
		38	283.48	28.35	966.94	69.07	890.02	80.91	2140.44	61.16
		50	279.71	27.97	1000.75	71.48	773.06	70.28	2053.52	58.67
T12	12	12	281.43	28.14	964.59	68.90	902.42	82.04	2148.43	61.38
		24	267.14	26.71	951.53	67.97	831.85	75.62	2050.51	58.59
		31	283.29	28.33	996.03	71.14	883.53	80.32	2162.84	61.80
		37	284.14	28.41	927.43	66.24	888.03	80.73	2099.61	59.99
		49	274.43	27.44	986.07	70.43	853.35	77.58	2113.85	60.40

Treatment	Tr. No.	Box No.	Feed conversion ratio		
			Day 10	Day 24	Day 35
			g/kg LW	g/kg LW	g/kg LW
T1	1	1	936.12	1254.60	1467.47
		13	907.57	1208.04	1457.69
		25	946.43	1193.32	1458.19
		48	951.65	1146.82	1388.14
		60	965.24	1145.91	1429.08
T2	2	2	918.28	1246.01	1419.30
		14	910.91	1214.86	1433.38
		26	922.57	1083.59	1401.19
		47	907.64	1132.92	1461.87
		59	980.09	1139.68	1419.81
T3	3	3	934.50	1240.85	1475.79
		15	924.24	1179.64	1446.27
		27	957.53	1174.83	1452.77
		46	917.09	1183.65	1504.29
		58	1046.45	1138.20	1399.80
T4	4	4	933.33	1217.92	1501.48
		16	949.89	1212.19	1508.71
		28	912.28	1140.53	1459.90
		45	917.59	1170.47	1507.44
		57	950.23	1167.81	1465.43
T5	5	5	956.03	1228.45	1477.53
		17	912.21	1222.69	1524.43
		29	930.80	1194.33	1515.78
		44	929.38	1173.17	1521.87
		56	973.03	1130.53	1458.15
T6	6	6	922.25	1195.11	1482.80
		18	941.30	1123.80	1416.88
		30	968.75	1170.42	1464.35
		43	927.31	1232.96	1519.88
		55	947.02	1169.01	1458.95

Treatment	Tr. No.	Box No.	Feed conversion ratio		
			Day 10	Day 24	Day 35
			g/kg LW	g/kg LW	g/kg LW
T7	7	7	899.23	1258.26	1455.64
		19	945.12	1278.97	1562.25
		36	959.48	1257.95	1528.37
		42	915.40	1247.27	1620.98
		54	971.90	1188.28	1427.82
T8	8	8	968.54	1251.67	1428.50
		20	993.17	1204.29	1475.86
		35	910.48	1249.37	1440.52
		41	946.43	1265.89	1508.86
		53	1032.71	1193.33	1467.93
T9	9	9	904.35	1244.33	1469.75
		21	951.60	1219.91	1426.70
		34	918.57	1200.08	1493.43
		40	938.60	1156.27	1477.32
		52	1006.82	1182.15	1440.95
T10	10	10	935.90	1262.87	1486.19
		22	941.32	1236.94	1451.21
		33	905.86	1180.94	1478.50
		39	976.03	1160.86	1461.14
		51	993.17	1179.45	1469.17
T11	11	11	933.87	1243.49	1485.94
		23	962.23	1213.12	1459.67
		32	964.35	1261.19	1499.11
		38	951.63	1246.90	1491.16
		50	927.15	1184.78	1541.08
T12	12	12	949.67	1246.54	1494.58
		24	981.69	1231.61	1502.97
		31	934.64	1189.37	1440.00
		37	898.05	1254.97	1483.75
		49	919.64	1211.92	1482.66

Feed consumption per box

Tab. No. 9d (page 1)

Treatment	Tr. No.	Box No.	Feed consumption			
			Starter (1-10 days)	Grower (11-24 days)	Finisher (25-35 days)	Total
			kg	kg	kg	kg
T1	1	1	42.50	179.30	222.30	444.10
		13	41.30	177.00	227.00	445.30
		25	42.40	180.60	226.10	449.10
		48	43.30	174.40	216.40	434.10
		60	43.60	178.50	220.10	442.20
T2	2	2	42.70	175.00	217.00	434.70
		14	40.90	183.40	227.00	451.30
		26	42.80	165.30	225.80	433.90
		47	42.20	178.30	223.50	444.00
		59	44.30	180.00	222.40	446.70
T3	3	3	42.80	181.70	225.10	449.60
		15	42.70	176.40	220.50	439.60
		27	42.50	178.00	215.50	436.00
		46	41.50	178.90	216.00	436.40
		58	42.80	175.20	219.90	437.90
T4	4	4	43.40	176.80	230.50	450.70
		16	43.60	180.00	223.10	446.70
		28	41.60	180.00	223.40	445.00
		45	41.20	177.90	222.70	441.80
		57	42.00	182.30	226.70	451.00
T5	5	5	42.90	175.40	220.00	438.30
		17	42.60	174.70	213.60	430.90
		29	41.70	182.10	229.20	453.00
		44	40.80	178.90	229.30	449.00
		56	43.30	176.50	228.00	447.80
T6	6	6	42.70	165.90	221.70	430.30
		18	43.30	156.90	204.00	404.20
		30	43.40	179.60	215.90	438.90
		43	42.10	170.90	223.70	436.70
		55	42.90	179.40	224.90	447.20

Feed consumption per box

Tab. No. 9d (page 2)

Treatment	Tr. No.	Box No.	Feed consumption			
			Starter (1-10 days)	Grower (11-24 days)	Finisher (25-35 days)	Total
			kg	kg	kg	kg
T7	7	7	40.80	179.40	217.40	437.60
		19	43.40	178.50	223.20	445.10
		36	42.60	179.60	224.60	446.80
		42	42.20	176.00	217.70	435.90
		54	41.50	178.30	219.90	439.70
T8	8	8	43.20	175.50	214.10	432.80
		20	43.60	174.50	214.70	432.80
		35	41.20	171.00	212.20	424.40
		41	42.40	175.20	215.60	433.20
		53	44.20	179.00	231.80	455.00
T9	9	9	41.60	175.10	224.40	441.10
		21	43.20	178.10	221.50	442.80
		34	42.20	175.70	229.40	447.30
		40	42.80	176.50	225.30	444.60
		52	43.70	180.50	222.60	446.80
T10	10	10	42.50	176.90	216.10	435.50
		22	42.30	174.70	213.30	430.30
		33	41.60	179.80	226.70	448.10
		39	44.80	177.40	228.70	450.90
		51	43.60	176.70	230.90	451.20
T11	11	11	42.10	180.30	216.80	439.20
		23	44.10	175.10	218.60	437.80
		32	43.50	181.40	229.20	454.10
		38	43.50	180.20	222.90	446.60
		50	42.00	177.90	230.80	450.70
T12	12	12	43.40	180.70	230.60	454.70
		24	42.90	174.10	219.30	436.30
		31	42.90	176.60	223.10	442.60
		37	41.40	179.40	222.60	443.40
		49	41.20	180.40	226.00	447.60

Foot pad lesions

Tab. No. 9e (page 1)

Treatment	Tr. No.	Box	Evaluation	
			right foot	left foot
T1	1	1	0.08	0.10
		13	0.20	0.05
		25	0.15	0.15
		48	0.05	0.00
		60	0.03	0.05
T2	2	2	0.08	0.03
		14	0.18	0.10
		26	0.15	0.13
		47	0.10	0.00
		59	0.03	0.03
T3	3	3	0.05	0.18
		15	0.15	0.08
		27	0.13	0.10
		46	0.00	0.08
		58	0.05	0.03
T4	4	4	0.15	0.08
		16	0.13	0.10
		28	0.13	0.18
		45	0.33	0.08
		57	0.03	0.03
T5	5	5	0.13	0.08
		17	0.15	0.13
		29	0.15	0.15
		44	0.23	0.20
		56	0.00	0.08
T6	6	6	0.13	0.05
		18	0.15	0.13
		30	0.18	0.13
		43	0.28	0.13
		55	0.03	0.05

Foot pad lesions

Tab. No. 9e (page 2)

Treatment	Tr. No.	Box	Evaluation	
			right foot	left foot
T7	7	7	0.08	0.03
		19	0.13	0.13
		36	0.30	0.08
		42	0.28	0.13
		54	0.05	0.03
T8	8	8	0.13	0.08
		20	0.10	0.15
		35	0.05	0.05
		41	0.23	0.18
		53	0.03	0.05
T9	9	9	0.13	0.10
		21	0.13	0.23
		34	0.08	0.05
		40	0.25	0.13
		52	0.05	0.03
T10	10	10	0.23	0.05
		22	0.13	0.13
		33	0.05	0.03
		39	0.20	0.13
		51	0.00	0.05
T11	11	11	0.13	0.05
		23	0.15	0.15
		32	0.08	0.00
		38	0.28	0.08
		50	0.08	0.03
T12	12	12	0.20	0.05
		24	0.18	0.13
		31	0.05	0.05
		37	0.23	0.13
		49	0.05	0.05