



MEZINÁRODNÍ TESTOVÁNÍ DRŮBEŽE
ÚSTRAŠICE státní podnik

390 02 Tábor 2

Česká republika

BROILER FEEDING TEST No. 1237

Effect of feed additives to performance of broilers

XXXXX

29 August – 3 October 2023

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Basic tests information

The basic dates

Beginning of the test: 7 August 2023 (setting in the incubator)
29 August 2023 (transfer to the chicken house)
End of the test: 3 October 2023

Material and methods

Material

In total there were 8400 day old chicks of xxxxx. Day old chicks were randomly distributed into 8 dietary treatments.

Experimental treatments

Treatment No.	Treatment	Description	No. of pen	Birds per pen	No. of chick
1	T1	xxxxxx	7	140	980
2	T2	xxxxxx	8	140	1120
3	T3	xxxxxx	8	140	1120
4	T4	xxxxxx	8	140	1120
5	T5	xxxxxx	8	140	1120
6	T6	xxxxxx	7	140	980
7	T7	xxxxxx	7	140	980
8	T8	xxxxxx	7	140	980

Origin of hatching eggs: xxxxx, age of the breeding flock was 41 weeks.

Housing system

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

Lighting programme

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

Veterinary precautions

The chicken house was disinfected by Virkon before the chick placement. On day 1 chickens were vaccinated with xxxxx. On the first days old chickens was applied the water solution of permanganate.

Feed

Feed was produced in Mezinárodní testování drůbeže, s.p. Ústrašice

Day 1 – 14 Starter (BR1)

Day 15 – 28 Grower (BR2)

Day 29 – 35 Finisher (BR3)

Diet formulas

Components (%)	Starter BR1	Grower BR2	Finisher BR3
Soybean meal	38.00	33.00	30.00
Wheat	36.00	39.00	40.00
Maize	18.40	20.14	21.64
Soybean oil	3.50	3.90	4.60
Limestone	1.52	1.35	1.20
MCP	1.10	1.10	1.02
Salt	0.29	0.29	0.29
Sodium bicarbonate	0.12	0.15	0.15
L-lysine HCl	0.30	0.28	0.26
L-threonine	0.20	0.15	0.20
DL-methionine	0.07	0.14	0.13
Premix AMVBR1 Plus	0.50	-	-
Premix AMVBR2 Plus	-	0.50	-
Premix AMVBR3 Plus	-	-	0.50
Nutrient content			
Crude protein (g/kg)	221.84	204.67	193.35
ME (MJ/kg)	12.31	12.53	12.75
Lysine (g/kg)	14.65	13.21	12.27
Methionine (g/kg)	6.21	6.25	5.70
Met.+Cys. (g/kg)	10.14	9.94	9.23
Ca (g/kg)	9.60	8.74	7.90
P dig. (g/kg)	3.37	3.36	3.20
Na (g/kg)	1.53	1.61	1.61

Parameters recorded

Live weight

Live weight was measured on day 1 (all the birds in each pen were weighed altogether), 14 and 28 (all the 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 – 14 days, 15 – 28 days, 29 – 35 days and for the overall experiment (1 – 35 days).

Feed conversion ratio

Feed consumption and feed conversion ratio to gain ratio were calculated for the periods 1 – 14 days, 15 – 28 days, 29 – 35 days and for the overall experiment (1 – 35 days). The calculation was included weight of deaths.

Feed consumption

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

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 and reason of mortality on the day of death. Mortality was recorded for the periods 1 – 14 days, 15 – 28 days, 29 – 35 days and 1 – 35 days.

Carcass analysis

The carcass analysis was done in 6 birds per each pen (3 ♂ and 3 ♀) on day 35.

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, 14, 28, 35), daily weight gain and feed conversion ratio were statistically evaluated using the ANOVA single-factor model (Scheffe test) or nonparametric method (Kruskal-Wallis test).

Results

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	12b Weight gain
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	12d Feed consumption per 1 kg of weight gain
	12e Feed consumption
	12f Foot pad lesions
	12g Litter moisture

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	92.80	87.20	94.00	980	60.20	40.66
T2	2				1120		40.54
T3	3				1120		40.54
T4	4				1120		40.58
T5	5				1120		40.58
T6	6				980		40.61
T7	7				980		40.56
T8	8				980		40.51

Body weight per phases

Tab. No. 2a

Treatment	Tr. No.	Day 1		Day 14		Day 28		Day 35	
		Birds	Average body weight	Birds	Average body weight	Birds	Average body weight	Birds	Average body weight
			g		g		g		g
T1	1	980	40.66	976	528.52	970	1665.83	968	2253.83
T2	2	1120	40.54	1114	525.01	1105	1708.72	1104	2301.95
T3	3	1120	40.54	1117	530.22	1108	1695.63	1106	2272.53
T4	4	1120	40.58	1118	523.05	1112	1724.41	1110	2302.27
T5	5	1120	40.58	1115	531.63	1108	1710.15	1104	2294.12
T6	6	980	40.61	975	543.47	967	1686.13	967	2258.69
T7	7	980	40.56	970	529.39	955	1666.19	946	2238.10
T8	8	980	40.51	975	523.63	965	1676.46	959	2247.96

Weight gain per phases

Tab. No. 2b

Treatment	Tr. No.	Day 1 - 14		Day 15 - 28		Day 29 - 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	487.85	34.85	1137.31	81.24	588.00	84.00	2213.16	63.23
T2	2	484.47	34.61	1183.72	84.55	593.22	84.75	2261.41	64.61
T3	3	489.69	34.98	1165.41	83.24	576.90	82.41	2232.00	63.77
T4	4	482.47	34.46	1201.35	85.81	577.86	82.55	2261.69	64.62
T5	5	491.05	35.08	1178.52	84.18	583.97	83.42	2253.54	64.39
T6	6	502.86	35.92	1142.66	81.62	572.56	81.79	2218.08	63.37
T7	7	488.83	34.92	1136.80	81.20	571.91	81.70	2197.54	62.79
T8	8	483.12	34.51	1152.83	82.35	571.50	81.64	2207.45	63.07

Feed conversion ratio (Feed consumption per 1 kg of live weight)**Tab. No. 2c**

Treatment	Tr. No.	Feed conversion ratio		
		Day 14	Day 28	Day 35
		g/kg LW	g/kg LW	g/kg LW
T1	1	999.11	1269.92	1470.98
T2	2	983.71	1254.39	1458.97
T3	3	984.51	1257.70	1472.23
T4	4	994.50	1239.37	1450.89
T5	5	971.13	1256.49	1461.39
T6	6	962.13	1251.44	1466.63
T7	7	972.66	1287.17	1496.75
T8	8	986.61	1273.89	1493.40

Feed consumption per 1 kg of weight gain (WG)

Tab. No. 2d

Treatment	Tr. No.	Feed consumption per 1 kg of weight gain			
		1-14 days	15-28 days	29-35 days	1-35 days
		g/kg WG	g/kg WG	g/kg WG	g/kg WG
T1	1	1082.60	1396.56	2044.97	1498.24
T2	2	1066.21	1375.63	2051.74	1485.40
T3	3	1066.13	1382.73	2108.62	1499.18
T4	4	1078.25	1346.26	2086.73	1477.05
T5	5	1051.56	1386.08	2066.37	1487.94
T6	6	1040.08	1389.90	2104.36	1493.72
T7	7	1053.83	1436.28	2116.94	1524.98
T8	8	1069.52	1405.75	2145.22	1521.15

Feed consumption per phases

Tab. No. 2e

Treatment	Tr. No.	Feed consumption			
		Starter (1-14 days)	Grower (15-28 days)	Finisher (29-35 days)	Total
		kg	kg	kg	kg
T1	1	516.30	1543.20	1161.70	3221.20
T2	2	577.20	1802.10	1343.10	3722.40
T3	3	583.80	1791.60	1342.50	3717.90
T4	4	581.90	1804.70	1336.70	3723.30
T5	5	577.10	1813.60	1331.60	3722.30
T6	6	511.00	1542.40	1165.10	3218.50
T7	7	502.00	1563.60	1148.00	3213.60
T8	8	505.20	1568.40	1175.90	3249.50

Mortality

Tab. No. 3

Treatment	Tr. No.	Mortality in the period									Mortality according causes														
		Day 1 - 14		Day 15 - 28		Day 29 - 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	4	927	6	4977	2	2228	12	8132	1.22										1	8			3	
T2	2	6	1899	9	6736	1	1404	16	10039	1.43										1	12			3	
T3	3	3	731	9	9192	2	2011	14	11934	1.25											9			5	
T4	4	2	348	6	7764	2	2594	10	10706	0.89											9			1	
T5	5	5	1482	7	6359	4	6552	16	14393	1.43										1	11			4	
T6	6	5	1228	8	9111	0	0	13	10339	1.33											12			1	
T7	7	10	2599	15	10945	9	16263	34	29807	3.47										1	26			7	
T8	8	5	1519	10	8460	6	10143	21	20122	2.14											18			3	

- Causes:
- | | | |
|-------------------------|------------------------------------|---|
| 1 – Viral diseases | 6 – Wounds | 11 – Sudden death syndrome |
| 2 – Bacterial diseases | 7 – Digestive track diseases | 12 – Cannibalism |
| 3 – Moulds diseases | 8 – Respiratory tract diseases | 13 – Yolk sac. infam. |
| 4 – Parasitary diseases | 9 – Reproduction tract diseases | 14 – Culling and other causes |
| 5 – Tumors | 10 – Locomotion apparatus diseases | 15 – Sampling (excluded of calculation) |

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	♂	2397	1693	133	30	1.24	575	23.98	33.94	525	21.89	30.98	1099	45.87	64.93	70.65	76.19
		♀	2104	1498	123	28	1.32	503	23.90	33.58	462	21.96	30.86	965	45.86	64.45	71.17	77.03
		♂	2251	1595	128	29	1.28	539	23.94	33.77	493	21.92	30.93	1032	45.87	64.70	70.89	76.58
T2	2	♂	2428	1730	136	30	1.22	591	24.33	34.15	533	21.96	30.82	1124	46.29	64.97	71.25	76.86
		♀	2160	1545	123	28	1.30	525	24.33	34.01	469	21.72	30.37	995	46.05	64.37	71.53	77.24
		♂	2294	1638	130	29	1.26	558	24.33	34.08	501	21.85	30.61	1059	46.18	64.69	71.39	77.04
T3	3	♂	2488	1777	135	36	1.45	609	24.49	34.28	547	22.00	30.79	1156	46.49	65.08	71.43	76.84
		♀	2118	1522	122	28	1.34	511	24.11	33.55	465	21.97	30.56	976	46.08	64.11	71.87	77.64
		♂	2303	1650	128	32	1.40	560	24.32	33.94	506	21.98	30.69	1066	46.30	64.63	71.63	77.21
T4	4	♂	2449	1766	137	32	1.32	615	25.12	34.83	531	21.66	30.04	1146	46.77	64.87	72.10	77.69
		♀	2129	1521	123	29	1.35	513	24.09	33.73	463	21.74	30.43	976	45.82	64.16	71.42	77.20
		♂	2289	1643	130	31	1.33	564	24.64	34.32	497	21.69	30.22	1061	46.33	64.54	71.79	77.46

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	%	%	%
T5	5	♂	2469	1761	136	33	1.32	601	24.34	34.13	543	21.99	30.84	1144	46.33	64.97	71.31	76.81
		♀	2167	1553	124	29	1.33	525	24.25	33.84	472	21.78	30.39	997	46.02	64.23	71.65	77.36
		∅	2318	1657	130	31	1.32	563	24.30	33.99	508	21.89	30.63	1071	46.19	64.63	71.47	77.07
T6	6	♂	2442	1754	139	33	1.36	601	24.63	34.29	527	21.58	30.05	1128	46.21	64.34	71.81	77.51
		♀	2125	1521	123	30	1.43	512	24.08	33.63	459	21.60	30.16	970	45.68	63.80	71.60	77.41
		∅	2283	1637	131	32	1.39	557	24.37	33.99	493	21.59	30.10	1049	45.96	64.09	71.72	77.47
T7	7	♂	2445	1732	140	32	1.30	586	23.97	33.84	530	21.70	30.63	1116	45.67	64.47	70.83	76.54
		♀	2124	1503	123	26	1.22	503	23.69	33.48	461	21.72	30.70	964	45.41	64.18	70.76	76.56
		∅	2284	1617	131	29	1.26	545	23.84	33.67	496	21.71	30.66	1040	45.55	64.33	70.80	76.55
T8	8	♂	2491	1770	138	33	1.34	610	24.51	34.48	534	21.45	30.18	1145	45.95	64.66	71.07	76.59
		♀	2096	1489	120	28	1.36	511	24.40	34.34	447	21.33	30.03	959	45.73	64.36	71.05	76.79
		∅	2294	1630	129	31	1.35	561	24.46	34.42	491	21.40	30.11	1052	45.85	64.53	71.06	76.68

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

Treatment	Tr. No.	Evaluation	
		right foot	left foot
T1	1	2.26	2.30
T2	2	1.84	1.90
T3	3	1.52	1.54
T4	4	1.38	1.40
T5	5	1.66	1.63
T6	6	1.62	1.63
T7	7	1.95	1.95
T8	8	1.20	1.25

Litter moisture**Tab. No. 6**

Treatment	Tr. No.	Litter moisture (%)
T1	1	0.58
T2	2	0.54
T3	3	0.47
T4	4	0.44
T5	5	0.46
T6	6	0.46
T7	7	0.48
T8	8	0.43

Statistical analysis - Body weight at 35 days of age

Tab. No. 7

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	488	2415.17	287.62	11.91	480	2089.79	267.63	12.81
T2	2	566	2435.94	300.56	12.34	538	2160.99	294.64	13.63
T3	3	557	2425.66	258.01	10.64	549	2117.18	268.69	12.69
T4	4	557	2473.57	274.12	11.08	553	2129.73	298.71	14.03
T5	5	552	2460.07	259.46	10.55	552	2128.18	247.57	11.63
T6	6	478	2439.53	233.06	9.55	489	2081.91	208.59	10.02
T7	7	476	2418.15	226.23	9.36	470	2055.75	221.52	10.78
T8	8	486	2418.53	251.34	10.39	473	2072.69	216.13	10.43

Statistical analyses of performance results

Performance results were statistically evaluated using the ANOVA single-factor model (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. 8a

Treatment	Treat. No.	No. of box	Average (g)	Standard deviation	Scheffe test							
					T1	T2	T3	T4	T5	T6	T7	T8
T1	1	7	40.66	0.48		o	o	o	o	o	o	o
T2	2	8	40.54	0.57	0.999957		o	o	o	o	o	o
T3	3	8	40.54	0.57	0.999957	1.000000		o	o	o	o	o
T4	4	8	40.58	0.50	0.999998	1.000000	1.000000		o	o	o	o
T5	5	8	40.58	0.60	0.999998	1.000000	1.000000	1.000000		o	o	o
T6	6	7	40.61	0.64	1.000000	0.999999	0.999999	1.000000	1.000000		o	o
T7	7	7	40.56	0.40	0.999993	1.000000	1.000000	1.000000	1.000000	1.000000		o
T8	8	7	40.51	0.28	0.999878	1.000000	1.000000	0.999999	0.999999	0.999992	1.000000	

Body weight - day 14

Tab. No. 8b

Treatment	Treat. No.	No. of birds	Average (g)	Standard deviation	Kruskal-Wallis test							
					T1	T2	T3	T4	T5	T6	T7	T8
T1	1	976	528.52	94.25		***	***	***	***	o	o	o
T2	2	1114	525.01	86.98	0.000056		o	o	o	o	***	***
T3	3	1117	530.22	79.72	0.000000	1.000000		o	o	**	***	***
T4	4	1118	523.05	73.78	0.000050	1.000000	1.000000		o	o	***	***
T5	5	1115	531.63	90.27	0.000000	0.640127	1.000000	0.694663		***	***	***
T6	6	975	543.47	100.41	0.090702	0.909643	0.005123	0.836123	0.000135		o	*
T7	7	970	529.39	86.39	1.000000	0.000016	0.000000	0.000014	0.000000	0.120225		o
T8	8	975	523.63	77.71	1.000000	0.000001	0.000000	0.000001	0.000000	0.020534	1.000000	

Body weight - day 28

Tab. No. 8c

Treatment	Treat. No.	No. of birds	Average (g)	Standard deviation	Kruskal-Wallis test							
					T1	T2	T3	T4	T5	T6	T7	T8
T1	1	970	1665.83	242.63		***	***	***	***	o	o	o
T2	2	1105	1708.72	274.37	0.000000		o	o	o	***	***	***
T3	3	1108	1695.63	230.39	0.000000	1.000000		o	o	***	***	***
T4	4	1112	1724.41	272.43	0.000000	1.000000	0.179756		o	***	***	***
T5	5	1108	1710.15	226.86	0.000000	1.000000	1.000000	1.000000		***	***	***
T6	6	967	1686.13	238.04	1.000000	0.000000	0.000000	0.000000	0.000000		o	o
T7	7	955	1666.19	211.30	1.000000	0.000000	0.000000	0.000000	0.000000	1.000000		o
T8	8	965	1676.46	225.98	1.000000	0.000000	0.000000	0.000000	0.000000	1.000000	1.000000	

Body weight - day 35

Tab. No. 8d

Treatment	Treat. No.	No. of birds	Average (g)	Standard deviation	Kruskal-Wallis test							
					T1	T2	T3	T4	T5	T6	T7	T8
T1	1	968	2253.83	321.93		***	***	***	***	o	o	o
T2	2	1104	2301.95	327.79	0.000000		o	o	o	***	***	***
T3	3	1106	2272.53	305.14	0.000000	1.000000		o	o	***	***	***
T4	4	1110	2302.27	334.17	0.000000	1.000000	0.638388		o	***	***	***
T5	5	1104	2294.12	303.00	0.000000	1.000000	1.000000	1.000000		***	***	***
T6	6	967	2258.69	284.26	1.000000	0.000000	0.000000	0.000000	0.000000		o	o
T7	7	946	2238.10	288.00	1.000000	0.000000	0.000000	0.000000	0.000000	0.727473		o
T8	8	959	2247.96	291.42	1.000000	0.000000	0.000000	0.000000	0.000000	1.000000	1.000000	

Average weight gain (day 1-14)

Tab. No. 9a

Treatment	Treat. No.	No. of box	Average (g)	Standard deviation	Scheffe test								
					T 1	T 2	T 3	T 4	T 5	T 6	T 7	T 8	
T1	1	7	34.84	3.46		o	o	o	o	o	o	o	o
T2	2	8	34.61	3.60	1.000000		o	o	o	o	o	o	o
T3	3	8	34.98	2.54	1.000000	0.999999		o	o	o	o	o	o
T4	4	8	34.46	2.15	0.999999	1.000000	0.999992		o	o	o	o	o
T5	5	8	35.07	2.03	1.000000	0.999996	1.000000	0.999976		o	o	o	o
T6	6	7	35.91	3.29	0.999353	0.997188	0.999683	0.994473	0.999844		o	o	o
T7	7	7	34.93	2.89	1.000000	1.000000	1.000000	0.999997	1.000000	0.999641		o	o
T8	8	7	34.51	2.16	1.000000	1.000000	0.999997	1.000000	0.999989	0.996338	0.999999		o

Average weight gain (day 15-28)

Tab. No. 9b

Treatment	Treat. No.	No. of box	Average (g)	Standard deviation	Scheffe test								
					T 1	T 2	T 3	T 4	T 5	T 6	T 7	T 8	
T1	1	7	81.19	7.11		o	o	o	o	o	o	o	o
T2	2	8	84.57	9.94	0.997349		o	o	o	o	o	o	o
T3	3	8	83.25	6.19	0.999897	0.999994		o	o	o	o	o	o
T4	4	8	85.85	9.51	0.981375	0.999995	0.999396		o	o	o	o	o
T5	5	8	84.21	5.85	0.998719	1.000000	0.999999	0.999972		o	o	o	o
T6	6	7	81.67	6.29	1.000000	0.999014	0.999983	0.990213	0.999590		o	o	o
T7	7	7	81.25	5.07	1.000000	0.997656	0.999917	0.982830	0.998888	1.000000		o	o
T8	8	7	82.37	7.41	0.999998	0.999840	1.000000	0.996816	0.999953	1.000000	0.999999		o

Average weight gain (day 29-35)

Tab. No. 9c

Treatment	Treat. No.	No. of box	Average (g)	Standard deviation	Scheffe test								
					T 1	T2	T 3	T 4	T 5	T 6	T 7	T 8	
T1	1	7	83.97	12.68		o	o	o	o	o	o	o	o
T2	2	8	84.71	7.29	1.000000		o	o	o	o	o	o	o
T3	3	8	82.41	9.45	0.999996	0.999926		o	o	o	o	o	o
T4	4	8	82.56	6.70	0.999998	0.999954	1.000000		o	o	o	o	o
T5	5	8	83.40	7.95	1.000000	0.999998	1.000000	1.000000		o	o	o	o
T6	6	7	81.76	10.30	0.999965	0.999697	1.000000	1.000000	0.999995		o	o	o
T7	7	7	81.64	8.77	0.999950	0.999602	1.000000	1.000000	0.999991	1.000000		o	o
T8	8	7	81.65	8.25	0.999950	0.999606	1.000000	1.000000	0.999991	1.000000	1.000000		o

Average weight gain (day 1-35)

Tab. No. 9d

Treatment	Treat. No.	No. of box	Average (g)	Standard deviation	Kruskal-Wallis test								
					T 1	T2	T 3	T 4	T 5	T 6	T 7	T 8	
T1	1	7	63.21	3.68		o	o	o	o	o	o	o	o
T2	2	8	64.62	4.10	1.000000		o	o	o	o	o	o	o
T3	3	8	63.77	2.65	1.000000	1.000000		o	o	o	o	o	o
T4	4	8	64.64	3.51	1.000000	1.000000	1.000000		o	o	o	o	o
T5	5	8	64.39	1.61	1.000000	1.000000	1.000000	1.000000		o	o	o	o
T6	6	7	63.38	2.08	1.000000	1.000000	1.000000	1.000000	1.000000		o	o	o
T7	7	7	62.80	1.59	1.000000	1.000000	1.000000	0.685299	1.000000	1.000000		o	o
T8	8	7	63.08	1.34	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		o

FCR 14

Tab. No. 10a

Treatment	Treat. No.	No. of box	Average (g/kg live weight)	Standard deviation	Scheffe test								
					T 1	T2	T 3	T 4	T 5	T 6	T 7	T 8	
T1	1	7	1006.17	95.27		o	o	o	o	o	o	o	o
T2	2	8	989.93	80.91	0.999959		o	o	o	o	o	o	o
T3	3	8	988.03	68.75	0.999912	1.000000		o	o	o	o	o	o
T4	4	8	996.33	39.96	0.999999	1.000000	0.999999		o	o	o	o	o
T5	5	8	973.03	45.64	0.995482	0.999931	0.999969	0.999411		o	o	o	o
T6	6	7	967.36	73.42	0.990269	0.999620	0.999789	0.998067	1.000000		o	o	o
T7	7	7	975.94	55.87	0.997936	0.999985	0.999995	0.999807	1.000000	1.000000		o	o
T8	8	7	989.19	59.06	0.999955	1.000000	1.000000	1.000000	0.999960	0.999755	0.999992		o

FCR 28

Tab. No. 10b

Treatment	Treat. No.	No. of box	Average (g/kg live weight)	Standard deviation	Scheffe test								
					T 1	T2	T 3	T 4	T 5	T 6	T 7	T 8	
T1	1	7	1275.79	86.79		o	o	o	o	o	o	o	o
T2	2	8	1261.52	91.27	0.999980		o	o	o	o	o	o	o
T3	3	8	1260.14	55.93	0.999963	1.000000		o	o	o	o	o	o
T4	4	8	1244.35	67.29	0.996271	0.999911	0.999950		o	o	o	o	o
T5	5	8	1257.91	34.86	0.999908	1.000000	1.000000	0.999982		o	o	o	o
T6	6	7	1254.46	66.68	0.999757	1.000000	1.000000	0.999998	1.000000		o	o	o
T7	7	7	1287.88	24.36	0.999995	0.998790	0.998320	0.973989	0.997247	0.995548		o	o
T8	8	7	1276.80	65.16	1.000000	0.999968	0.999943	0.995458	0.999866	0.999669	0.999997		o

Treatment	Treat. No.	No. of box	Average (g/kg live weight)	Standard deviation	Kruskal-Wallis test								
					T 1	T2	T 3	T 4	T 5	T 6	T 7	T 8	
T1	1	7	1473.46	51.66		o	o	o	o	o	o	o	o
T2	2	8	1462.45	66.49	1.000000		o	o	o	o	o	o	o
T3	3	8	1473.88	48.31	1.000000	1.000000		o	o	o	o	o	o
T4	4	8	1452.99	53.71	1.000000	1.000000	1.000000		o	o	o	o	o
T5	5	8	1461.94	30.71	1.000000	1.000000	1.000000	1.000000		o	o	o	o
T6	6	7	1467.56	43.98	1.000000	1.000000	1.000000	1.000000	1.000000		o	o	o
T7	7	7	1496.93	16.02	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		o	o
T8	8	7	1493.77	30.47	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		o

FCR per 1 kg of weight gain - 1-14 day

Tab. No. 11a

Treatment	Treat. No.	No. of box	Average (g/kg weight gain)	Standard deviation	Scheffe test							
					T 1	T 2	T 3	T 4	T 5	T 6	T 7	T 8
T1	1	7	1091.61	110.85		o	o	o	o	o	o	o
T2	2	8	1074.30	95.97	0.999978		o	o	o	o	o	o
T3	3	8	1070.56	78.64	0.999916	1.000000		o	o	o	o	o
T4	4	8	1080.67	47.85	0.999999	1.000000	0.999999		o	o	o	o
T5	5	8	1053.94	52.57	0.996198	0.999915	0.999979	0.999479		o	o	o
T6	6	7	1046.76	86.63	0.990891	0.999494	0.999808	0.998045	1.000000		o	o
T7	7	7	1058.04	65.78	0.998508	0.999986	0.999998	0.999863	1.000000	0.999999		o
T8	8	7	1072.76	67.90	0.999968	1.000000	1.000000	1.000000	0.999961	0.999721	0.999994	

FCR per 1 kg of weight gain - 15-28 day

Tab. No. 11b

Treatment	Treat. No.	No. of box	Average (g/kg weight gain)	Standard deviation	Scheffe test							
					T 1	T 2	T 3	T 4	T 5	T 6	T 7	T 8
T1	1	7	1403.13	96.02		o	o	o	o	o	o	o
T2	2	8	1388.81	132.56	0.999999		o	o	o	o	o	o
T3	3	8	1388.44	92.26	0.999999	1.000000		o	o	o	o	o
T4	4	8	1355.53	101.16	0.996094	0.999514	0.999549		o	o	o	o
T5	5	8	1389.52	63.72	0.999999	1.000000	1.000000	0.999442		o	o	o
T6	6	7	1394.96	99.16	1.000000	1.000000	1.000000	0.998824	1.000000		o	o
T7	7	7	1438.20	48.32	0.999558	0.995088	0.994852	0.910305	0.995507	0.998267		o
T8	8	7	1414.72	121.53	1.000000	0.999928	0.999920	0.985341	0.999940	0.999991	0.999970	

FCR per 1 kg of weight gain - 29-35 day

Tab. No. 11c

Treatment	Treat. No.	No. of box	Average (g/kg weight gain)	Standard deviation	Scheffe test							
					T 1	T 2	T 3	T 4	T 5	T 6	T 7	T 8
T1	1	7	2081.67	292.65		o	o	o	o	o	o	o
T2	2	8	2065.95	189.82	1.000000		o	o	o	o	o	o
T3	3	8	2132.17	236.77	0.999968	0.999746		o	o	o	o	o
T4	4	8	2097.09	154.27	1.000000	0.999999	0.999997		o	o	o	o
T5	5	8	2080.07	163.98	1.000000	1.000000	0.999950	1.000000		o	o	o
T6	6	7	2131.31	247.81	0.999977	0.999815	1.000000	0.999998	0.999964		o	o
T7	7	7	2134.32	186.64	0.999966	0.999750	1.000000	0.999996	0.999947	1.000000		o
T8	8	7	2165.07	229.38	0.999250	0.997194	0.999998	0.999760	0.998952	0.999998	0.999999	

FCR per 1 kg of weight gain - 1-35 day

Tab. No. 11d

Treatment	Treat. No.	No. of box	Average (g/kg weight gain)	Standard deviation	Kruskal-Wallis test							
					T 1	T 2	T 3	T 4	T 5	T 6	T 7	T 8
T1	1	7	1500.91	54.12		o	o	o	o	o	o	o
T2	2	8	1489.09	69.16	1.000000		o	o	o	o	o	o
T3	3	8	1500.93	50.24	1.000000	1.000000		o	o	o	o	o
T4	4	8	1479.28	55.81	1.000000	1.000000	1.000000		o	o	o	o
T5	5	8	1488.52	31.85	1.000000	1.000000	1.000000	1.000000		o	o	o
T6	6	7	1494.71	45.49	1.000000	1.000000	1.000000	1.000000	1.000000		o	o
T7	7	7	1525.17	16.69	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		o
T8	8	7	1521.54	31.40	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	

Body weight (BW) per box

Tab. No. 12a (page 1)

Treatment	Tr. No.	Box No.	Day 1		Day 14		Day 28		Day 35	
			Birds	BW	Birds	BW	Birds	BW	Birds	BW
				g		g		g		g
T1	1	1	140	40.36	138	466.38	137	1475.99	137	2161.39
		9	140	41.07	139	494.46	136	1547.28	136	2061.54
		17	140	41.43	140	513.50	140	1730.64	139	2415.47
		25	140	40.71	140	582.93	138	1687.50	137	2192.66
		42	140	40.00	140	519.15	140	1621.07	140	2220.93
		50	140	40.36	139	603.45	139	1902.37	139	2379.28
		58	140	40.71	140	519.14	140	1690.50	140	2338.79
T2	2	2	140	40.36	140	467.29	139	1492.16	139	2106.40
		10	140	41.07	140	528.43	139	1689.06	139	2264.96
		18	140	41.43	139	522.66	139	1890.22	139	2418.85
		26	140	40.71	140	601.71	139	1648.49	139	2341.73
		34	140	40.00	138	549.42	137	1666.50	137	2232.63
		41	140	40.36	140	444.02	138	1537.25	137	2141.68
		49	140	40.71	139	562.76	137	1919.56	137	2532.92
57	140	39.64	138	524.35	137	1829.49	137	2377.52		
T3	3	3	140	40.36	140	499.36	139	1564.17	138	2127.54
		11	140	41.07	140	502.57	139	1666.55	138	2156.59
		19	140	41.43	139	533.09	138	1888.48	138	2389.86
		27	140	40.71	140	608.93	139	1721.65	139	2345.90
		33	140	40.00	140	518.00	140	1646.50	140	2242.50
		40	140	40.36	138	549.06	137	1725.04	137	2276.93
		48	140	40.71	140	510.47	140	1704.43	140	2298.21
56	140	39.64	140	520.57	136	1649.34	136	2343.31		
T4	4	4	140	40.36	140	474.07	140	1434.29	140	2062.07
		12	140	41.07	140	518.86	138	1687.32	137	2306.06
		20	140	41.43	139	537.41	137	1911.46	137	2447.96
		28	140	40.71	140	565.57	138	1813.91	137	2412.63
		32	140	40.00	140	509.86	140	1614.86	140	2251.57
		39	140	40.36	140	560.50	140	1775.36	140	2307.43
		47	140	40.71	140	511.45	140	1865.14	140	2394.29
55	140	40.00	139	506.69	139	1697.48	139	2241.29		

Body weight (BW) per box

Tab. No. 12a (page 2)

Treatment	Tr. No.	Box No.	Day 1		Day 14		Day 28		Day 35	
			Birds	BW	Birds	BW	Birds	BW	Birds	BW
				g		g		g		g
T5	5	5	140	40.36	138	506.74	138	1617.32	138	2229.86
		13	140	41.07	139	520.86	139	1708.85	138	2294.71
		21	140	41.79	140	581.21	139	1653.97	139	2272.86
		29	140	40.71	140	525.71	140	1705.79	139	2342.66
		31	140	40.00	140	489.36	140	1613.36	140	2253.43
		38	140	40.36	139	557.91	138	1728.33	137	2232.92
		46	140	40.36	139	542.03	138	1865.80	137	2364.67
		54	140	40.00	140	529.07	136	1790.85	136	2363.32
T6	6	6	140	40.36	139	495.18	139	1519.71	139	2153.02
		14	140	41.07	138	487.03	137	1606.64	137	2252.85
		22	140	41.79	140	588.29	139	1648.04	139	2235.40
		30	140	40.71	139	580.07	138	1790.00	138	2384.28
		37	140	40.00	140	598.64	135	1826.44	135	2313.11
		45	140	40.36	140	539.38	140	1648.00	140	2248.93
		53	140	40.00	139	514.60	139	1768.02	139	2225.71
T7	7	7	140	40.36	140	500.36	139	1622.01	137	2186.35
		15	140	41.07	140	491.14	139	1572.16	138	2191.52
		23	140	41.07	137	605.77	136	1675.61	133	2312.77
		36	140	40.71	139	559.28	136	1725.74	136	2205.37
		44	140	40.00	139	525.62	133	1688.12	133	2227.29
		52	140	40.36	136	523.97	134	1796.81	134	2320.86
		60	140	40.36	139	501.08	138	1589.49	135	2226.15
T8	8	8	140	40.36	140	504.14	137	1571.61	136	2195.15
		16	140	40.71	138	502.32	138	1800.94	136	2292.94
		24	140	40.71	139	585.11	137	1669.94	137	2283.09
		35	140	40.71	139	542.81	139	1598.71	139	2201.73
		43	140	40.00	140	506.42	140	1585.14	139	2208.42
		51	140	40.36	139	510.00	136	1764.29	134	2307.45
		59	140	40.71	140	514.79	138	1746.96	138	2249.42

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

Tab. No. 12b (page 1)

Treatment	Tr. No.	Box No.	Day 1 - 14		Day 15 - 28		Day 29 - 35		Day 1 - 35	
			WG	DWG	WG	DWG	WG	DWG	WG	DWG
			g	g	g	g	g	g	g	g
T1	1	1	426.02	30.43	1009.61	72.11	685.40	97.91	2121.03	60.60
		9	453.39	32.39	1052.82	75.20	514.26	73.47	2020.47	57.73
		17	472.07	33.72	1217.14	86.94	684.82	97.83	2374.04	67.83
		25	542.22	38.73	1104.57	78.90	505.16	72.17	2151.95	61.48
		42	479.15	34.23	1101.92	78.71	599.86	85.69	2180.93	62.31
		50	563.09	40.22	1298.92	92.78	476.91	68.13	2338.92	66.83
		58	478.43	34.17	1171.36	83.67	648.29	92.61	2298.08	65.66
T2	2	2	426.93	30.49	1024.87	73.21	614.24	87.75	2066.04	59.03
		10	487.36	34.81	1160.64	82.90	575.90	82.27	2223.89	63.54
		18	481.23	34.37	1367.55	97.68	528.63	75.52	2377.42	67.93
		26	561.00	40.07	1046.77	74.77	693.24	99.03	2301.02	65.74
		34	509.42	36.39	1117.08	79.79	566.13	80.88	2192.63	62.65
		41	403.66	28.83	1093.22	78.09	604.43	86.35	2101.32	60.04
		49	522.05	37.29	1356.80	96.91	613.36	87.62	2492.21	71.21
T3	3	3	459.00	32.79	1064.82	76.06	563.36	80.48	2087.18	59.63
		11	461.50	32.96	1163.98	83.14	490.05	70.01	2115.52	60.44
		19	491.66	35.12	1355.38	96.81	501.38	71.63	2348.43	67.10
		27	568.22	40.59	1112.73	79.48	624.24	89.18	2305.19	65.86
		33	478.00	34.14	1128.50	80.61	596.00	85.14	2202.50	62.93
		40	508.70	36.34	1175.98	84.00	551.90	78.84	2236.57	63.90
		48	469.76	33.55	1193.96	85.28	593.79	84.83	2257.50	64.50
T4	4	4	433.71	30.98	960.21	68.59	627.79	89.68	2021.71	57.76
		12	477.79	34.13	1168.46	83.46	618.74	88.39	2264.99	64.71
		20	495.98	35.43	1374.05	98.15	536.50	76.64	2406.53	68.76
		28	524.86	37.49	1248.34	89.17	598.71	85.53	2371.92	67.77
		32	469.86	33.56	1105.00	78.93	636.71	90.96	2211.57	63.19
		39	520.14	37.15	1214.86	86.78	532.07	76.01	2267.07	64.77
		47	470.74	33.62	1353.69	96.69	529.14	75.59	2353.58	67.25
55	466.69	33.34	1190.79	85.06	543.81	77.69	2201.29	62.89		

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

Tab. No. 12b (page 2)

Treatment	Tr. No.	Box No.	Day 1 - 14		Day 15 - 28		Day 29 - 35		Day 1 - 35	
			WG	DWG	WG	DWG	WG	DWG	WG	DWG
			g	g	g	g	g	g	g	g
T5	5	5	466.38	33.31	1110.58	79.33	612.54	87.51	2189.50	62.56
		13	479.79	34.27	1187.99	84.86	585.86	83.69	2253.64	64.39
		21	539.42	38.53	1072.76	76.63	618.89	88.41	2231.07	63.74
		29	485.00	34.64	1180.07	84.29	636.88	90.98	2301.95	65.77
		31	449.36	32.10	1124.00	80.29	640.07	91.44	2213.43	63.24
		38	517.55	36.97	1170.42	83.60	504.59	72.08	2192.56	62.64
		46	501.67	35.83	1323.77	94.55	498.87	71.27	2324.31	66.41
		54	489.07	34.93	1261.77	90.13	572.48	81.78	2323.32	66.38
T6	6	6	454.82	32.49	1024.53	73.18	633.31	90.47	2112.66	60.36
		14	445.96	31.85	1119.61	79.97	646.20	92.31	2211.78	63.19
		22	546.50	39.04	1059.75	75.70	587.36	83.91	2193.61	62.67
		30	539.36	38.53	1209.93	86.42	594.28	84.90	2343.57	66.96
		37	558.64	39.90	1227.80	87.70	486.67	69.52	2273.11	64.95
		45	499.02	35.64	1108.62	79.19	600.93	85.85	2208.57	63.10
		53	474.60	33.90	1253.42	89.53	457.68	65.38	2185.71	62.45
T7	7	7	460.00	32.86	1121.66	80.12	564.34	80.62	2145.99	61.31
		15	450.07	32.15	1081.02	77.22	619.36	88.48	2150.45	61.44
		23	564.70	40.34	1069.84	76.42	637.16	91.02	2271.70	64.91
		36	518.57	37.04	1166.45	83.32	479.63	68.52	2164.66	61.85
		44	485.62	34.69	1162.50	83.04	539.17	77.02	2187.29	62.49
		52	483.61	34.54	1272.84	90.92	524.05	74.86	2280.50	65.16
		60	460.72	32.91	1088.41	77.74	636.66	90.95	2185.79	62.45
T8	8	8	463.78	33.13	1067.46	76.25	623.54	89.08	2154.79	61.57
		16	461.61	32.97	1298.62	92.76	492.00	70.29	2252.23	64.35
		24	544.40	38.89	1084.83	77.49	613.15	87.59	2242.38	64.07
		35	502.10	35.86	1055.90	75.42	603.02	86.15	2161.02	61.74
		43	466.42	33.32	1078.72	77.05	623.27	89.04	2168.42	61.95
		51	469.64	33.55	1254.29	89.59	543.16	77.59	2267.09	64.77
		59	474.08	33.86	1232.17	88.01	502.46	71.78	2208.71	63.11

Feed conversion ratio (Feed konsum. per 1 kg of live weight) per box Tab. No. 12c (page 1)

Treatment	Tr. No.	Box no.	Feed conversion ratio		
			Day 14	Day 28	Day 35
			g/kg LW	g/kg LW	g/kg LW
T1	1	1	1073.02	1363.33	1492.50
		9	1132.69	1331.61	1535.74
		17	1021.00	1244.79	1413.81
		25	892.05	1229.09	1490.44
		42	1012.64	1357.57	1525.75
		50	867.46	1119.26	1404.98
		58	1044.30	1284.91	1451.00
T2	2	2	1077.65	1366.88	1522.79
		10	982.70	1264.74	1492.41
		18	931.06	1139.93	1399.27
		26	887.94	1317.97	1443.24
		34	931.79	1277.30	1491.56
		41	1119.64	1373.04	1553.87
		49	949.84	1144.77	1350.33
T3	3	3	1028.47	1332.14	1554.22
		11	989.20	1246.95	1518.23
		19	1051.13	1156.27	1419.05
		27	839.88	1236.51	1432.62
		33	1009.38	1294.09	1482.08
		40	938.40	1264.22	1503.12
		48	1020.07	1233.34	1433.72
T4	4	4	1033.60	1374.00	1539.37
		12	1015.97	1284.15	1487.55
		20	1011.54	1162.68	1390.47
		28	929.53	1220.65	1427.94
		32	1010.09	1257.08	1424.72
		39	936.66	1235.57	1479.07
		47	1008.34	1168.43	1387.23
55	1024.91	1252.21	1487.56		

Feed conversion ratio (Feed konsum. per 1 kg of live weight) per box Tab. No. 12c (page 2)

Treatment	Tr. No.	Box no.	Feed conversion ratio		
			Day 14	Day 28	Day 35
			g/kg LW	g/kg LW	g/kg LW
T5	5	5	1034.30	1300.83	1503.19
		13	956.31	1258.88	1456.79
		21	893.45	1288.74	1473.02
		29	997.28	1249.11	1435.27
		31	1004.23	1278.61	1445.10
		38	946.19	1261.68	1501.41
		46	945.30	1189.17	1415.20
		54	1007.16	1236.24	1465.53
T6	6	6	1010.70	1309.40	1494.49
		14	1081.10	1304.56	1461.07
		22	894.85	1286.38	1511.28
		30	925.49	1135.61	1375.08
		37	885.34	1216.13	1468.69
		45	948.18	1311.11	1482.61
		53	1025.87	1218.04	1479.71
T7	7	7	1039.26	1297.45	1499.70
		15	1002.04	1313.47	1506.48
		23	883.50	1278.56	1474.19
		36	929.64	1286.33	1523.58
		44	952.76	1273.68	1496.90
		52	1002.60	1247.66	1495.22
		60	1021.81	1317.98	1482.43
T8	8	8	976.20	1338.15	1533.74
		16	1038.81	1189.43	1479.72
		24	889.22	1275.81	1475.96
		35	932.38	1331.30	1533.41
		43	1023.99	1347.78	1496.16
		51	1042.47	1252.27	1486.35
		59	1021.23	1202.88	1451.04

Treatment	Tr. No.	Box no.	Feed consumption per 1 kg of weight gain			
			1-14 days	15-28 days	29-35 days	1-35 days
			g/kg WG	g/kg WG	g/kg WG	g/kg WG
T1	1	1	1175.74	1498.83	1772.10	1521.43
		9	1235.74	1426.79	2157.56	1567.59
		17	1110.61	1339.20	1846.72	1438.58
		25	959.02	1408.73	2384.60	1518.98
		42	1097.18	1520.07	1980.23	1553.73
		50	929.81	1236.78	2546.39	1429.37
		58	1133.16	1391.55	1884.09	1476.70
T2	2	2	1179.53	1499.86	1902.08	1552.73
		10	1065.51	1393.52	2163.65	1520.06
		18	1011.64	1219.95	2327.16	1423.82
		26	952.37	1566.28	1742.42	1468.88
		34	1005.15	1450.62	2126.10	1519.24
		41	1231.58	1477.41	2019.98	1584.14
		49	1024.27	1226.59	1999.29	1372.72
T3	3	3	1118.90	1475.06	2186.29	1584.55
		11	1077.23	1358.80	2454.01	1547.91
		19	1140.13	1197.91	2413.64	1444.35
		27	900.06	1455.54	1974.18	1458.08
		33	1093.84	1424.77	2001.44	1509.00
		40	1013.45	1418.40	2253.67	1530.74
		48	1108.47	1324.53	2008.90	1459.58
T4	4	4	1129.78	1542.07	1917.17	1570.10
		12	1103.30	1404.70	2054.71	1514.92
		20	1096.41	1222.22	2212.24	1414.70
		28	1001.62	1352.78	2070.05	1452.62
		32	1096.08	1371.04	1849.90	1450.49
		39	1009.34	1373.47	2291.58	1505.41
		47	1095.54	1228.91	2158.48	1411.23
55	1113.28	1349.08	2222.55	1514.78		

Treatment	Tr. No.	Box no.	Feed consumption per 1 kg of weight gain			
			1-14 days	15-28 days	29-35 days	1-35 days
			g/kg WG	g/kg WG	g/kg WG	g/kg WG
T5	5	5	1124.71	1423.07	2038.33	1531.27
		13	1038.34	1392.24	2044.48	1483.61
		21	962.67	1503.59	1968.01	1500.71
		29	1080.99	1361.30	1942.31	1460.77
		31	1093.63	1398.07	1864.75	1471.21
		38	1020.41	1413.11	2329.71	1529.39
		46	1021.27	1290.56	2259.18	1440.01
		54	1089.53	1334.20	2193.77	1491.21
T6	6	6	1100.76	1454.25	1939.11	1523.22
		14	1181.28	1402.38	1854.74	1488.57
		22	963.28	1504.86	2144.70	1540.20
		30	995.71	1236.83	2100.96	1399.20
		37	948.73	1381.51	2435.31	1495.09
		45	1024.87	1487.69	1952.93	1509.70
		53	1112.72	1297.17	2491.43	1506.97
T7	7	7	1130.44	1413.27	2088.43	1528.11
		15	1093.47	1456.04	2005.67	1535.56
		23	948.53	1505.76	2000.09	1501.58
		36	1003.04	1460.96	2385.41	1552.86
		44	1031.61	1424.47	2210.29	1525.29
		52	1087.45	1351.57	2352.51	1522.67
		60	1111.71	1455.32	1897.88	1510.15
T8	8	8	1061.15	1512.25	2037.17	1563.01
		16	1130.91	1248.26	2553.71	1506.85
		24	956.05	1486.81	2026.17	1503.17
		35	1008.27	1537.10	2069.91	1562.49
		43	1111.81	1499.79	1875.19	1523.79
		51	1132.23	1339.54	2271.44	1513.50
		59	1108.92	1279.32	2321.89	1477.98

Feed consumption per box

Tab. No. 12e (page 1)

Treatment	Tr. No.	Box No.	Feed consumption			
			Starter (1-14 days)	Grower (15-28 days)	Finisher (29-35 days)	Total
			kg	kg	kg	kg
T1	1	1	69.40	207.70	166.40	443.50
		9	78.10	205.60	150.90	434.60
		17	73.40	228.20	174.70	476.30
		25	72.80	215.70	163.60	452.10
		42	73.60	234.50	166.30	474.40
		50	73.10	223.30	168.80	465.20
		58	75.90	228.20	171.00	475.10
T2	2	2	70.50	213.40	162.40	446.30
		10	72.70	225.80	173.20	471.70
		18	67.80	231.90	171.00	470.70
		26	74.80	228.50	167.90	471.20
		34	71.50	221.90	164.90	458.30
		41	69.60	223.00	167.00	459.60
		49	74.50	229.20	168.00	471.70
57	75.80	228.40	168.70	472.90		
T3	3	3	71.90	219.10	167.80	458.80
		11	69.60	220.30	165.40	455.30
		19	78.10	224.70	167.00	469.80
		27	71.60	224.70	171.30	467.60
		33	73.20	225.10	167.00	465.30
		40	71.60	228.70	170.40	470.70
		48	72.90	221.40	167.00	461.30
56	74.90	227.60	166.60	469.10		
T4	4	4	68.60	207.30	168.50	444.40
		12	73.80	227.00	172.60	473.40
		20	75.80	232.50	162.60	470.90
		28	73.60	236.00	169.50	479.10
		32	72.10	212.10	164.90	449.10
		39	73.50	233.60	170.70	477.80
		47	72.20	232.90	159.90	465.00
		55	72.30	223.30	168.00	463.60

Feed consumption per box

Tab. No. 12e (page 2)

Treatment	Tr. No.	Box No.	Feed consumption			
			Starter (1-14 days)	Grower (15-28 days)	Finisher (29-35 days)	Total
			Kg	kg	kg	kg
T5	5	5	72.70	218.10	172.30	463.10
		13	69.60	229.90	163.80	463.30
		21	72.70	225.10	169.30	467.10
		29	73.40	224.90	170.30	468.60
		31	68.80	220.00	167.10	455.90
		38	73.50	228.70	161.50	463.70
		46	71.80	235.80	156.50	464.10
		54	74.60	231.10	170.80	476.50
T6	6	6	69.80	207.10	170.70	447.60
		14	73.30	217.20	164.20	454.70
		22	73.70	222.10	175.10	470.90
		30	74.80	207.50	172.30	454.60
		37	74.20	231.60	160.00	465.80
		45	71.60	230.90	164.30	466.80
		53	73.60	226.00	158.50	458.10
T7	7	7	72.80	220.70	162.30	455.80
		15	68.90	218.70	169.80	457.40
		23	74.10	219.60	170.90	464.60
		36	72.40	232.40	155.60	460.40
		44	69.80	222.10	158.50	450.40
		52	72.60	230.80	165.20	468.60
		60	71.40	219.30	165.70	456.40
T8	8	8	68.90	221.90	172.00	462.80
		16	72.70	223.70	172.00	468.40
		24	72.50	222.10	170.20	464.80
		35	70.60	225.60	173.50	469.70
		43	72.60	226.50	162.90	462.00
		51	74.30	229.50	164.30	468.10
		59	73.60	219.10	161.00	453.70

Foot pad lesions

Tab. No. 12f (page 1)

Treatment	Tr. No.	Box No.	Evaluation	
			right foot	left foot
T1	1	1	1.67	1.69
		9	3.60	3.59
		17	2.40	2.53
		25	1.18	1.17
		42	2.01	2.23
		50	2.02	2.06
		58	2.96	2.86
T2	2	2	1.23	1.32
		10	2.84	2.76
		18	1.53	1.56
		26	1.29	1.29
		34	2.11	2.15
		41	1.50	1.65
		49	1.75	1.93
57	2.47	2.54		
T3	3	3	0.81	0.83
		11	2.40	2.45
		19	1.30	1.33
		27	1.52	1.50
		33	1.39	1.43
		40	1.77	1.75
		48	0.96	1.05
56	2.04	1.96		
T4	4	4	0.59	0.58
		12	2.64	2.72
		20	1.77	1.90
		28	1.98	1.93
		32	1.02	0.97
		39	1.25	1.18
		47	0.72	0.83
55	1.09	1.12		

Foot pad lesions

Tab. No. 12f (page 2)

Treatment	Tr. No.	Box No.	Evaluation	
			right foot	left foot
T5	5	5	0.40	0.43
		13	2.70	2.76
		21	2.56	2.44
		29	2.27	2.24
		31	1.98	1.79
		38	0.79	0.72
		46	0.77	0.83
		54	1.79	1.77
T6	6	6	0.77	0.63
		14	2.96	3.07
		22	1.16	1.10
		30	1.84	1.92
		37	1.36	1.33
		45	2.04	2.10
		53	1.22	1.27
T7	7	7	3.55	3.47
		15	2.67	2.79
		23	2.08	2.01
		36	1.28	1.10
		44	1.02	1.11
		52	1.70	1.84
		60	1.29	1.26
T8	8	8	3.01	2.96
		16	1.56	1.71
		24	1.47	1.53
		35	0.33	0.29
		43	0.29	0.45
		51	1.09	1.18
		59	0.69	0.68

Litter moisture

Tab. No. 12g (page 1)

Treatment	Tr. No.	Box No.	Litter moisture (%)
T1	1	1	0.62
		9	0.44
		17	0.51
		25	0.51
		42	0.49
		50	1.07
		58	0.45
T2	2	2	0.41
		10	0.45
		18	0.44
		26	0.53
		34	0.51
		41	0.49
		49	1.07
		57	0.46
T3	3	3	0.49
		11	0.52
		19	0.46
		27	0.47
		33	0.50
		40	0.41
		48	0.46
		56	0.44
T4	4	4	0.37
		12	0.48
		20	0.46
		28	0.44
		32	0.47
		39	0.43
		47	0.38
		55	0.50

Litter moisture

Tab. No. 12g (page 2)

Treatment	Tr. No.	Box No.	Litter moisture (%)
T5	5	5	0.49
		13	0.44
		21	0.44
		29	0.46
		31	0.47
		38	0.46
		46	0.48
		54	0.42
T6	6	6	0.51
		14	0.47
		22	0.43
		30	0.44
		37	0.50
		45	0.45
		53	0.44
T7	7	7	0.50
		15	0.48
		23	0.50
		36	0.44
		44	0.44
		52	0.56
		60	0.43
T8	8	8	0.45
		16	0.39
		24	0.45
		35	0.41
		43	0.42
		51	0.40
		59	0.50