



MEZINÁRODNÍ TESTOVÁNÍ DRŮBEŽE ÚSTRAŠICE

státní podnik

390 02 Tábor 2

Česká republika

BROILER FEEDING TEST No. 1232

Effect of feed additives to performance of broilers

XXXX

31 August – 4 October 2022

Study Investigator:
Associate Investigator:

Ing. Jan Tyl
Ing. Hana Horná
Ing. Markéta Krekulová
Ing. Hana Koželuhová

November 2022

Basic tests information

The basic dates

Beginning of the test: 8 August 2022 (setting in the incubator)
30 August 2022 (transfer to the chicken house)
End of the test: 4 October 2022

Material and methods

Material

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

Experimental treatments

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

Origin of hatching eggs: xxxxxx, age of the breeding flock was 42 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 xxxxx 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	36.50	33.00	30.00
Wheat	35.00	38.00	42.11
Maize	19.98	19.62	18.00
Soybean oil	4.40	5.50	6.20
Limestone	1.55	1.35	1.23
MCP	1.10	1.10	1.00
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	0.06	0.06	0.06
Premix AMVBR1 Plus	0.50	-	-
Premix AMVBR2 Plus	-	0.50	-
Premix AMVBR3 Plus	-	-	0.50
Nutrient content			
Crude protein (g/kg)	209.29	196.17	185.35
ME (MJ/kg)	12.12	12.49	12.75
Lysine (g/kg)	14.23	13.17	12.25
Methionine (g/kg)	6.04	5.46	5.02
Met.+Cys. (g/kg)	9.87	9.12	8.53
Ca (g/kg)	9.56	8.63	7.88
P dig. (g/kg)	3.34	3.33	3.15
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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	2b Weight gain
	2c Feed conversion ratio per 1 kg of live weight
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	11b Weight gain
	11c Feed conversion ratio per 1 kg of live weight
	11d Feed consumption per 1 kg of weight gain
	11e Feed consumption
	11f 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	89.40	82.80	92.50	1120	65.00	42.32
T2	2				1120		42.32
T3	3				1120		42.32
T4	4				1120		42.32
T5	5				980		42.35
T6	6				980		42.40
T7	7				980		42.35
T8	8				980		42.35

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	1120	42.32	1110	512.04	1104	1636.39	1102	2238.46
T2	2	1120	42.32	1110	519.87	1104	1630.23	1103	2255.58
T3	3	1120	42.32	1100	531.96	1094	1623.89	1092	2257.72
T4	4	1120	42.32	1106	528.35	1100	1580.79	1098	2173.32
T5	5	980	42.35	964	525.09	961	1601.59	961	2203.68
T6	6	980	42.40	968	517.50	965	1602.49	965	2209.71
T7	7	980	42.35	967	518.90	961	1658.98	960	2264.61
T8	8	980	42.35	972	520.45	970	1630.38	968	2235.74

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	469.71	33.55	1124.35	80.31	602.07	86.01	2196.14	62.75
T2	2	477.55	34.11	1110.35	79.31	625.36	89.34	2213.26	63.24
T3	3	489.64	34.97	1091.93	78.00	633.83	90.55	2215.40	63.30
T4	4	486.03	34.72	1052.44	75.17	592.52	84.65	2130.99	60.89
T5	5	482.75	34.48	1076.50	76.89	602.09	86.01	2161.34	61.75
T6	6	475.10	33.94	1084.99	77.50	607.22	86.75	2167.31	61.92
T7	7	476.56	34.04	1140.08	81.43	605.63	86.52	2222.27	63.49
T8	8	478.11	34.15	1109.93	79.28	605.36	86.48	2193.40	62.67

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	1052.01	1314.32	1516.30
T2	2	1031.05	1330.36	1497.90
T3	3	1039.04	1331.34	1490.60
T4	4	1008.50	1355.66	1559.09
T5	5	1036.70	1337.70	1540.92
T6	6	1054.99	1347.57	1548.31
T7	7	1042.57	1309.66	1508.23
T8	8	1043.83	1331.03	1511.17

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	1147.45	1434.50	2068.00	1545.87
T2	2	1123.11	1471.30	1936.36	1526.89
T3	3	1130.30	1474.50	1900.94	1519.66
T4	4	1097.19	1531.49	2105.74	1590.59
T5	5	1128.68	1485.87	2083.10	1571.66
T6	6	1150.01	1487.94	2079.63	1579.01
T7	7	1135.99	1432.55	2054.49	1537.45
T8	8	1136.80	1466.34	1998.18	1540.62

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	599.50	1784.40	1373.20	3757.10
T2	2	596.20	1806.80	1336.40	3739.40
T3	3	610.00	1767.30	1317.50	3694.80
T4	4	591.40	1773.10	1366.80	3731.30
T5	5	527.90	1537.10	1205.30	3270.30
T6	6	530.50	1559.60	1218.60	3308.70
T7	7	526.10	1571.10	1195.90	3293.10
T8	8	529.70	1579.40	1171.10	3280.20

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	10	150	6	5710	2	3813	18	11026	1.61									1	16			1		
T2	2	10	118	6	5317	1	2022	17	8524	1.52										16			1		
T3	3	20	191	6	7193	2	4189	28	13300	2.50									2	21			5		
T4	4	14	205	6	3248	2	1652	22	6954	1.96										16			6		
T5	5	16	302	3	1535	0	0	19	4559	1.94										12			7		
T6	6	12	190	3	2703	0	0	15	4612	1.53										11			4		
T7	7	13	283	6	4216	1	2341	20	9396	2.04										17			3		
T8	8	8	157	2	1510	2	3352	12	6439	1.22										10			2		

- 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) |

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	♂	2462	1715	141	30	1.24	576	33.57	23.38	537	31.33	21.82	1113	64.89	45.20	69.65	75.36
		♀	2122	1514	130	27	1.29	511	33.77	24.09	464	30.64	21.86	975	64.41	45.95	71.34	77.48
		Ø	2292	1614	135	29	1.26	543	33.66	23.71	500	31.01	21.84	1044	64.67	45.55	70.43	76.34
T2	2	♂	2411	1702	141	27	1.13	576	33.86	23.90	536	31.52	22.25	1113	65.38	46.15	70.59	76.42
		♀	2096	1470	127	23	1.07	499	33.92	23.79	452	30.72	21.55	950	64.64	45.34	70.15	76.22
		Ø	2254	1586	134	25	1.10	537	33.89	23.85	494	31.15	21.92	1032	65.03	45.77	70.38	76.33
T3	3	♂	2447	1722	144	30	1.24	580	33.67	23.69	538	31.22	21.97	1118	64.89	45.67	70.38	76.27
		♀	2070	1473	121	20	0.98	497	33.78	24.02	452	30.70	21.84	950	64.47	45.86	71.13	76.99
		Ø	2259	1597	133	25	1.12	539	33.72	23.85	495	30.98	21.91	1034	64.70	45.76	70.72	76.60
T4	4	♂	2390	1675	143	28	1.17	565	33.75	23.65	526	31.41	22.01	1091	65.16	45.66	70.07	76.07
		♀	2050	1462	121	25	1.21	480	32.86	23.43	453	31.01	22.11	933	63.87	45.53	71.29	77.17
		Ø	2220	1568	132	26	1.19	523	33.33	23.55	490	31.22	22.06	1012	64.56	45.60	70.64	76.58

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		Total weight	Body carcass		
			g	g	g	g		g	%	%	%	g	%	%	g	%	%	%
T5	5	♂	2417	1698	143	30	1.23	571	33.65	23.64	525	30.91	21.72	1096	64.56	45.36	70.26	76.19
		♀	2070	1448	128	23	1.10	486	33.55	23.47	445	30.70	21.48	930	64.25	44.95	69.97	76.16
		Ø	2243	1573	136	26	1.17	529	33.60	23.57	485	30.81	21.61	1013	64.42	45.17	70.13	76.17
T6	6	♂	2382	1647	137	26	1.11	553	33.58	23.22	509	30.90	21.37	1062	64.47	44.59	69.16	74.90
		♀	2088	1472	130	26	1.23	503	34.15	24.07	439	29.83	21.02	941	63.98	45.09	70.48	76.69
		Ø	2249	1568	134	26	1.16	530	33.82	23.58	477	30.44	21.22	1008	64.26	44.80	69.72	75.65
T7	7	♂	2482	1753	140	30	1.20	602	34.34	24.26	531	30.28	21.39	1133	64.62	45.64	70.64	76.29
		♀	2150	1516	132	27	1.25	518	34.18	24.11	462	30.47	21.49	980	64.66	45.60	70.53	76.69
		Ø	2316	1635	136	28	1.23	560	34.27	24.19	496	30.37	21.44	1057	64.63	45.63	70.59	76.48
T8	8	♂	2404	1694	141	27	1.12	576	34.01	23.97	519	30.65	21.60	1095	64.66	45.57	70.47	76.35
		♀	2074	1466	130	27	1.29	494	33.70	23.82	450	30.66	21.67	944	64.36	45.49	70.68	76.97
		Ø	2239	1580	136	27	1.20	535	33.86	23.90	484	30.66	21.63	1019	64.52	45.53	70.57	76.64

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

Treatment	Tr. No.	Evaluation	
		right foot	left foot
T1	1	2.19	2.24
T2	2	2.70	2.73
T3	3	2.70	2.64
T4	4	2.48	2.45
T5	5	2.14	2.15
T6	6	2.08	2.08
T7	7	2.38	2.36
T8	8	2.50	2.47

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	559	2392.83	273.06	11.41	543	2079.54	270.13	12.99
T2	2	551	2416.73	265.63	10.99	552	2094.73	266.74	12.73
T3	3	558	2418.92	272.72	11.27	534	2089.27	270.07	12.93
T4	4	556	2329.05	269.95	11.59	542	2013.56	262.65	13.04
T5	5	486	2376.93	303.85	12.78	475	2026.42	250.37	12.36
T6	6	481	2376.22	289.03	12.16	484	2044.24	253.25	12.39
T7	7	481	2443.53	273.39	11.19	479	2084.95	267.73	12.84
T8	8	495	2396.30	274.79	11.47	473	2067.72	250.35	12.11

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. 7a

Treatment	Treat. No.	No. of box	Average (g)	Standard deviation	Scheffe test								
					T1	T2	T3	T4	T5	T6	T7	T8	
T1	1	8	42.32	0.33		o	o	o	o	o	o	o	o
T2	2	8	42.32	0.33	1.000000		o	o	o	o	o	o	o
T3	3	8	42.32	0.33	1.000000	1.000000		o	o	o	o	o	o
T4	4	8	42.32	0.33	1.000000	1.000000	1.000000		o	o	o	o	o
T5	5	7	42.35	0.35	1.000000	1.000000	1.000000	1.000000		o	o	o	o
T6	6	7	42.40	0.40	0.999977	0.999977	0.999977	0.999977	0.999999		o	o	o
T7	7	7	42.35	0.35	1.000000	1.000000	1.000000	1.000000	1.000000	0.999999		o	o
T8	8	7	42.35	0.35	1.000000	1.000000	1.000000	1.000000	1.000000	0.999999	1.000000		o

Body weight - day 14

Tab. No. 7b

Treatment	Treat. No.	No. of birds	Average (g)	Standard deviation	Kruskal-Wallis test							
					T1	T2	T3	T4	T5	T6	T7	T8
T1	1	1110	512.04	75.37		o	***	***	o	o	o	o
T2	2	1110	519.87	73.42	0.079273		o	o	***	***	***	***
T3	3	1100	531.96	81.30	0.000000	0.052687		o	***	***	***	***
T4	4	1106	528.35	80.53	0.000018	1.000000	1.000000		***	***	***	***
T5	5	964	525.09	78.02	1.000000	0.000476	0.000000	0.000000		o	o	o
T6	6	968	517.50	66.20	0.228458	0.000000	0.000000	0.000000	1.000000		o	o
T7	7	967	518.90	67.90	0.533036	0.000001	0.000000	0.000000	1.000000	1.000000		o
T8	8	972	520.45	67.18	1.000000	0.000100	0.000000	0.000000	1.000000	1.000000	1.000000	

Body weight - day 28

Tab. No. 7c

Treatment	Treat. No.	No. of birds	Average (g)	Standard deviation	Scheffe test							
					T1	T2	T3	T4	T5	T6	T7	T8
T1	1	1104	1636.39	221.06		o	o	***	o	o	o	o
T2	2	1104	1630.23	211.60	0.999675		o	***	o	o	o	o
T3	3	1094	1623.89	223.94	0.972660	0.999615		**	o	o	o	o
T4	4	1100	1580.79	218.79	0.000014	0.000289	0.004244		o	o	***	***
T5	5	961	1601.59	230.08	0.081396	0.285601	0.638835	0.719258		o	***	o
T6	6	965	1602.49	229.54	0.099751	0.327871	0.687155	0.669788	1.000000		***	o
T7	7	961	1658.98	223.47	0.619478	0.280000	0.077179	0.000000	0.000039	0.000057		o
T8	8	970	1630.38	216.88	0.999781	1.000000	0.999638	0.000561	0.321019	0.364344	0.330336	

Body weight - day 35

Tab. No. 7d

Treatment	Treat. No.	No. of birds	Average (g)	Standard deviation	Scheffe test							
					T1	T2	T3	T4	T5	T6	T7	T8
T1	1	1102	2238.46	313.47		o	o	**	o	o	o	o
T2	2	1103	2255.58	311.03	0.978072		o	***	o	o	o	o
T3	3	1092	2257.72	317.47	0.958047	1.000000		***	*	o	o	o
T4	4	1098	2173.32	309.50	0.001527	0.000004	0.000002		o	o	***	**
T5	5	961	2203.68	329.15	0.517017	0.054799	0.037421	0.694295		o	*	o
T6	6	965	2209.71	318.30	0.751197	0.147141	0.107920	0.450981	0.999984		*	o
T7	7	960	2264.61	324.52	0.834730	0.999695	0.999951	0.000000	0.012976	0.043360		o
T8	8	968	2235.74	310.12	1.000000	0.958362	0.929019	0.005574	0.666267	0.858945	0.778519	

Average weight gain (day 1-14)

Tab. No. 8a

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	8	33.55	2.14		o	o	o	o	o	o	o	o
T2	2	8	34.11	2.26	0.999915		o	o	o	o	o	o	o
T3	3	8	34.97	2.29	0.967717	0.998382		o	o	o	o	o	o
T4	4	8	34.71	2.29	0.990082	0.999851	1.000000		o	o	o	o	o
T5	5	7	34.47	2.07	0.998089	0.999996	0.999966	1.000000		o	o	o	o
T6	6	7	33.94	1.71	0.999994	1.000000	0.996041	0.999400	0.999960		o	o	o
T7	7	7	34.04	2.00	0.999971	1.000000	0.997921	0.999762	0.999990	1.000000		o	o
T8	8	7	34.15	2.06	0.999892	1.000000	0.999044	0.999925	0.999999	1.000000	1.000000		o

Average weight gain (day 15-28)

Tab. No. 8b

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	8	80.31	5.09		o	o	o	o	o	o	o	o
T2	2	8	79.31	3.25	0.999995		o	o	o	o	o	o	o
T3	3	8	77.99	7.68	0.998594	0.999967		o	o	o	o	o	o
T4	4	8	75.17	5.42	0.868368	0.955254	0.995260		o	o	o	o	o
T5	5	7	76.92	6.58	0.988034	0.998637	0.999994	0.999830		o	o	o	o
T6	6	7	77.48	5.99	0.996046	0.999767	1.000000	0.998922	1.000000		o	o	o
T7	7	7	81.45	3.15	0.999991	0.999357	0.986662	0.736923	0.949475	0.975605		o	o
T8	8	7	79.28	7.69	0.999995	1.000000	0.999979	0.964633	0.999000	0.999836	0.999418		o

Average weight gain (day 29-35)

Tab. No. 8c

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	8	86.00	7.22		o	o	o	o	o	o	o	o
T2	2	8	89.32	12.51	0.997849		o	o	o	o	o	o	o
T3	3	8	90.56	3.77	0.985043	0.999997		o	o	o	o	o	o
T4	4	8	84.67	6.95	0.999995	0.983152	0.938439		o	o	o	o	o
T5	5	7	85.98	7.53	1.000000	0.998217	0.987521	0.999997		o	o	o	o
T6	6	7	86.77	7.78	1.000000	0.999698	0.996093	0.999916	1.000000		o	o	o
T7	7	7	86.59	7.68	1.000000	0.999517	0.994732	0.999955	1.000000	1.000000		o	o
T8	8	7	86.48	5.81	1.000000	0.999379	0.993798	0.999970	1.000000	1.000000	1.000000		o

Average weight gain (day 1-35)

Tab. No. 8d

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	8	62.75	2.30		o	o	o	o	o	o	o	o
T2	2	8	63.23	1.27	0.999981		o	o	o	o	o	o	o
T3	3	8	63.30	2.63	0.999956	1.000000		o	o	o	o	o	o
T4	4	8	60.89	1.81	0.917203	0.765248	0.739503		o	o	o	o	o
T5	5	7	61.75	3.08	0.998232	0.979767	0.974296	0.999279		o	o	o	o
T6	6	7	61.92	2.73	0.999487	0.990202	0.987000	0.997674	1.000000		o	o	o
T7	7	7	63.51	2.14	0.999674	1.000000	1.000000	0.684907	0.955675	0.974823		o	o
T8	8	7	62.67	2.28	1.000000	0.999957	0.999912	0.944526	0.999168	0.999791	0.999492		o

FCR 14

Tab. No. 9a

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	8	1054.66	59.18		o	o	o	o	o	o	o	o
T2	2	8	1034.98	73.56	0.999816		o	o	o	o	o	o	o
T3	3	8	1041.79	65.02	0.999990	1.000000		o	o	o	o	o	o
T4	4	8	1013.14	91.91	0.979396	0.999633	0.997849		o	o	o	o	o
T5	5	7	1039.78	69.41	0.999978	1.000000	1.000000	0.998920		o	o	o	o
T6	6	7	1056.71	54.28	1.000000	0.999717	0.999978	0.977727	0.999958		o	o	o
T7	7	7	1045.07	54.97	0.999999	0.999998	1.000000	0.996567	1.000000	0.999997		o	o
T8	8	7	1046.55	55.31	1.000000	0.999996	1.000000	0.995443	1.000000	0.999999	1.000000		o

FCR 28

Tab. No. 9b

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	8	1314.98	26.94		o	o	o	o	o	o	o	o
T2	2	8	1331.60	42.68	0.999290		o	o	o	o	o	o	o
T3	3	8	1333.15	44.87	0.998727	1.000000		o	o	o	o	o	o
T4	4	8	1357.20	45.45	0.846600	0.989167	0.992575		o	o	o	o	o
T5	5	7	1340.06	56.87	0.992240	0.999994	0.999999	0.999304		o	o	o	o
T6	6	7	1349.76	49.82	0.949689	0.998985	0.999435	0.999998	0.999988		o	o	o
T7	7	7	1310.18	26.69	1.000000	0.997084	0.995475	0.790475	0.981897	0.917308		o	o
T8	8	7	1334.09	65.84	0.998588	1.000000	1.000000	0.995302	1.000000	0.999690	0.995246		o

FCR 35

Tab. No. 9c

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	8	1517.18	41.69		o	o	o	o	o	o	o	o
T2	2	8	1498.74	41.94	0.998717		o	o	o	o	o	o	o
T3	3	8	1491.74	41.39	0.990389	0.999998		o	o	o	o	o	o
T4	4	8	1560.10	44.04	0.844567	0.454747	0.309749		o	o	o	o	o
T5	5	7	1543.47	60.25	0.990478	0.839818	0.711731	0.999479		o	o	o	o
T6	6	7	1550.08	55.49	0.965302	0.719657	0.568740	0.999983	0.999999		o	o	o
T7	7	7	1509.31	49.82	0.999997	0.999975	0.999253	0.730686	0.964254	0.910353		o	o
T8	8	7	1511.97	38.28	1.000000	0.999886	0.998134	0.781880	0.977289	0.936150	1.000000		o

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

Tab. No. 10a

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	8	1150.94	69.65		o	o	o	o	o	o	o	o
T2	2	8	1128.15	85.94	0.999820		o	o	o	o	o	o	o
T3	3	8	1133.84	75.04	0.999974	1.000000		o	o	o	o	o	o
T4	4	8	1103.00	105.13	0.980053	0.999653	0.998677		o	o	o	o	o
T5	5	7	1132.61	80.43	0.999967	1.000000	1.000000	0.999188		o	o	o	o
T6	6	7	1152.20	62.39	1.000000	0.999795	0.999967	0.981022	0.999959		o	o	o
T7	7	7	1139.22	64.82	0.999998	0.999999	1.000000	0.997034	1.000000	0.999998		o	o
T8	8	7	1140.30	65.81	0.999999	0.999998	1.000000	0.996432	1.000000	0.999999	1.000000		o

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

Tab. No. 10b

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	8	1438.47	77.75		o	o	o	o	o	o	o	o
T2	2	8	1473.50	62.51	0.999417		o	o	o	o	o	o	o
T3	3	8	1484.62	120.92	0.996559	1.000000		o	o	o	o	o	o
T4	4	8	1539.24	123.12	0.772201	0.971569	0.990304		o	o	o	o	o
T5	5	7	1493.40	107.89	0.991856	0.999990	1.000000	0.997345		o	o	o	o
T6	6	7	1494.87	104.57	0.990445	0.999983	1.000000	0.997843	1.000000		o	o	o
T7	7	7	1433.89	50.44	1.000000	0.998963	0.995000	0.763112	0.989153	0.987456		o	o
T8	8	7	1476.74	125.96	0.999169	1.000000	1.000000	0.982486	0.999998	0.999996	0.998599		o

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

Tab. No. 10c

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	8	2078.99	181.76		o	o	o	o	o	o	o	o
T2	2	8	1969.69	277.29	1.000000		o	o	o	o	o	o	o
T3	3	8	1900.85	93.70	1.000000	1.000000		o	o	o	o	o	o
T4	4	8	2113.98	135.85	1.000000	1.000000	0.593122		o	o	o	o	o
T5	5	7	2096.36	170.66	1.000000	1.000000	1.000000	1.000000		o	o	o	o
T6	6	7	2090.94	177.38	1.000000	1.000000	1.000000	1.000000	1.000000		o	o	o
T7	7	7	2066.08	182.56	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		o	o
T8	8	7	2007.28	212.67	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		o

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

Tab. No. 10d

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	8	1546.82	43.26		o	o	o	o	o	o	o	o
T2	2	8	1527.78	43.44	0.998776		o	o	o	o	o	o	o
T3	3	8	1520.89	43.13	0.991495	0.999999		o	o	o	o	o	o
T4	4	8	1591.67	45.76	0.841539	0.453525	0.315843		o	o	o	o	o
T5	5	7	1574.37	62.93	0.990061	0.838955	0.718317	0.999479		o	o	o	o
T6	6	7	1580.91	57.89	0.966062	0.725035	0.583044	0.999979	0.999999		o	o	o
T7	7	7	1538.59	51.60	0.999997	0.999978	0.999393	0.726144	0.962941	0.911365		o	o
T8	8	7	1541.50	39.85	1.000000	0.999889	0.998371	0.780017	0.976870	0.938017	1.000000		o

Body weight (BW) per box

Tab. No. 11a (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	42.14	140	475.00	138	1579.71	137	2217.30
		9	140	42.86	140	522.50	139	1573.60	139	2143.17
		17	140	41.79	139	564.24	138	1560.07	138	2118.84
		25	140	42.14	139	495.04	138	1651.16	138	2319.35
		34	140	42.50	138	507.75	138	1702.75	138	2237.39
		42	140	42.50	138	476.96	138	1678.70	138	2282.25
		50	140	42.14	139	527.48	139	1686.47	139	2352.88
		58	140	42.50	137	527.45	136	1659.04	135	2236.15
T2	2	2	140	42.14	139	490.43	138	1571.74	138	2265.14
		10	140	42.50	139	540.58	139	1584.17	139	2333.96
		18	140	41.79	139	579.14	138	1668.04	138	2217.10
		26	140	42.14	136	494.41	136	1599.34	136	2239.78
		33	140	42.50	138	535.94	136	1693.90	136	2203.46
		41	140	42.86	139	489.57	138	1570.94	138	2276.09
		49	140	42.14	140	502.50	139	1674.03	138	2290.80
		57	140	42.50	140	526.07	140	1679.43	140	2217.36
T3	3	3	140	42.14	140	513.00	140	1621.57	139	2269.86
		11	140	42.50	137	565.55	136	1556.47	136	2197.06
		19	140	41.79	136	507.87	136	1539.93	136	2143.60
		27	140	42.14	134	520.00	132	1651.74	132	2297.65
		32	140	42.86	140	528.00	140	1618.71	140	2220.43
		40	140	42.50	138	595.87	136	1522.65	135	2168.52
		48	140	42.14	139	501.87	138	1756.88	138	2366.16
		56	140	42.50	136	523.53	136	1722.28	136	2398.24
T4	4	4	140	42.14	137	499.20	137	1564.82	137	2224.23
		12	140	42.50	138	554.57	137	1473.21	137	2101.39
		20	140	41.79	139	562.37	138	1632.90	138	2170.14
		28	140	42.14	137	503.43	137	1531.17	136	2081.76
		31	140	42.86	138	526.09	137	1676.35	137	2244.45
		39	140	42.50	139	577.77	137	1553.36	137	2143.07
		47	140	42.14	140	500.57	140	1616.79	140	2170.21
		55	140	42.50	138	502.25	137	1596.57	136	2251.25

Body weight (BW) per box

Tab. No. 11a (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	42.14	138	517.61	138	1633.33	138	2292.83
		13	140	42.50	139	535.04	139	1491.22	139	2094.60
		21	140	41.79	137	475.40	137	1617.08	137	2197.96
		29	140	42.14	136	511.40	135	1562.30	135	2078.37
		38	140	42.50	139	555.76	138	1526.16	138	2121.23
		46	140	42.86	137	517.88	137	1730.58	137	2314.67
		54	140	42.50	138	561.67	137	1651.82	137	2325.84
T6	6	6	140	42.14	137	506.20	137	1603.43	137	2252.26
		14	140	42.86	139	536.98	137	1531.39	137	2125.26
		22	140	41.79	140	496.57	140	1706.64	140	2234.21
		30	140	42.14	138	503.19	138	1521.45	138	2084.78
		37	140	42.86	138	522.68	138	1518.19	138	2134.35
		45	140	42.50	139	496.40	138	1635.94	138	2330.07
		53	140	42.50	137	561.02	137	1699.05	137	2307.08
T7	7	7	140	42.14	140	514.71	140	1673.71	140	2300.29
		15	140	42.50	138	566.88	137	1649.27	137	2208.03
		23	140	41.79	140	505.43	139	1660.86	138	2283.26
		36	140	42.14	139	493.09	139	1574.82	139	2168.06
		44	140	42.50	136	485.96	132	1675.61	132	2383.64
		52	140	42.86	137	539.27	137	1721.53	137	2308.39
		60	140	42.50	137	527.15	137	1658.54	137	2205.47
T8	8	8	140	42.14	138	538.12	138	1489.64	138	2118.41
		16	140	42.86	140	560.43	139	1589.35	138	2159.13
		24	140	41.79	138	509.57	138	1692.17	138	2311.96
		35	140	42.14	138	480.22	138	1615.80	138	2219.35
		43	140	42.50	140	488.00	140	1738.43	139	2345.11
		51	140	42.50	139	529.42	138	1717.54	138	2259.20
		59	140	42.50	139	537.12	139	1568.92	139	2236.26

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

Tab. No. 11b (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	432.86	30.92	1104.71	78.91	637.59	91.08	2175.16	62.15
		9	479.64	34.26	1051.10	75.08	569.57	81.37	2100.31	60.01
		17	522.45	37.32	995.83	71.13	558.77	79.82	2077.05	59.34
		25	452.90	32.35	1156.12	82.58	668.19	95.46	2277.21	65.06
		34	465.25	33.23	1195.00	85.36	534.64	76.38	2194.89	62.71
		42	434.46	31.03	1201.74	85.84	603.55	86.22	2239.75	63.99
		50	485.34	34.67	1158.99	82.79	666.40	95.20	2310.74	66.02
		58	484.95	34.64	1131.60	80.83	577.10	82.44	2193.65	62.68
T2	2	2	448.29	32.02	1081.31	77.24	693.41	99.06	2223.00	63.51
		10	498.08	35.58	1043.60	74.54	749.78	107.11	2291.46	65.47
		18	537.35	38.38	1088.91	77.78	549.06	78.44	2175.31	62.15
		26	452.27	32.31	1104.93	78.92	640.44	91.49	2197.64	62.79
		33	493.44	35.25	1157.96	82.71	509.56	72.79	2160.96	61.74
		41	446.71	31.91	1081.37	77.24	705.14	100.73	2233.23	63.81
		49	460.36	32.88	1171.53	83.68	616.77	88.11	2248.66	64.25
		57	483.57	34.54	1153.36	82.38	537.93	76.85	2174.86	62.14
T3	3	3	470.86	33.63	1108.57	79.18	648.28	92.61	2227.72	63.65
		11	523.05	37.36	990.92	70.78	640.59	91.51	2154.56	61.56
		19	466.08	33.29	1032.06	73.72	603.68	86.24	2101.81	60.05
		27	477.86	34.13	1131.74	80.84	645.91	92.27	2255.51	64.44
		32	485.14	34.65	1090.71	77.91	601.71	85.96	2177.57	62.22
		40	553.37	39.53	926.78	66.20	645.87	92.27	2126.02	60.74
		48	459.73	32.84	1255.01	89.64	609.28	87.04	2324.02	66.40
		56	481.03	34.36	1198.75	85.63	675.96	96.57	2355.74	67.31
T4	4	4	457.06	32.65	1065.62	76.12	659.42	94.20	2182.09	62.35
		12	512.07	36.58	918.65	65.62	628.18	89.74	2058.89	58.83
		20	520.58	37.18	1070.52	76.47	537.25	76.75	2128.35	60.81
		28	461.29	32.95	1027.74	73.41	550.60	78.66	2039.62	58.27
		31	483.23	34.52	1150.26	82.16	568.10	81.16	2201.59	62.90
		39	535.27	38.23	975.59	69.68	589.71	84.24	2100.57	60.02
		47	458.43	32.75	1116.21	79.73	553.43	79.06	2128.07	60.80
		55	459.75	32.84	1094.32	78.17	654.68	93.53	2208.75	63.11

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

Tab. No. 11b (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	475.47	33.96	1115.72	79.69	659.49	94.21	2250.69	64.31
		13	492.54	35.18	956.19	68.30	603.38	86.20	2052.10	58.63
		21	433.61	30.97	1141.68	81.55	580.88	82.98	2156.17	61.60
		29	469.26	33.52	1050.90	75.06	516.07	73.72	2036.23	58.18
		38	513.26	36.66	970.40	69.31	595.07	85.01	2078.73	59.39
		46	475.02	33.93	1212.70	86.62	584.09	83.44	2271.81	64.91
		54	519.17	37.08	1090.16	77.87	674.01	96.29	2283.34	65.24
T6	6	6	464.06	33.15	1097.23	78.37	648.83	92.69	2210.12	63.15
		14	494.12	35.29	994.41	71.03	593.87	84.84	2082.40	59.50
		22	454.78	32.48	1210.07	86.43	527.57	75.37	2192.42	62.64
		30	461.05	32.93	1018.26	72.73	563.33	80.48	2042.64	58.36
		37	479.82	34.27	995.51	71.11	616.16	88.02	2091.49	59.76
		45	453.90	32.42	1139.54	81.40	694.13	99.16	2287.57	65.36
		53	518.52	37.04	1138.03	81.29	608.03	86.86	2264.58	64.70
T7	7	7	472.57	33.76	1159.00	82.79	626.57	89.51	2258.15	64.52
		15	524.38	37.46	1082.39	77.31	558.76	79.82	2165.53	61.87
		23	463.64	33.12	1155.43	82.53	622.40	88.91	2241.47	64.04
		36	450.95	32.21	1081.73	77.27	593.24	84.75	2125.92	60.74
		44	443.46	31.68	1189.65	84.98	708.03	101.15	2341.14	66.89
		52	496.41	35.46	1182.26	84.45	586.86	83.84	2265.53	64.73
		60	484.65	34.62	1131.39	80.81	546.93	78.13	2162.97	61.80
T8	8	8	495.98	35.43	951.52	67.97	628.77	89.82	2076.27	59.32
		16	517.57	36.97	1028.92	73.49	569.78	81.40	2116.27	60.46
		24	467.78	33.41	1182.61	84.47	619.78	88.54	2270.17	64.86
		35	438.08	31.29	1135.58	81.11	603.55	86.22	2177.21	62.21
		43	445.50	31.82	1250.43	89.32	606.68	86.67	2302.61	65.79
		51	486.92	34.78	1188.11	84.87	541.67	77.38	2216.70	63.33
		59	494.62	35.33	1031.80	73.70	667.34	95.33	2193.76	62.68

Feed conversion ratio (Feed konsum. per 1 kg of live weight) per box Tab. No. 11c (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	1120.30	1317.57	1471.25
		9	1036.23	1347.73	1551.26
		17	928.24	1357.88	1578.60
		25	1112.58	1320.80	1513.11
		34	1057.40	1287.21	1551.18
		42	1076.21	1282.17	1520.57
		50	1058.38	1301.84	1459.91
		58	1047.96	1304.64	1491.56
T2	2	2	1096.39	1346.96	1466.66
		10	981.37	1367.47	1448.78
		18	896.11	1282.42	1531.87
		26	1103.49	1370.30	1525.78
		33	994.14	1307.37	1557.67
		41	1081.95	1391.68	1511.33
		49	1093.11	1283.83	1441.55
		57	1033.27	1302.74	1506.30
T3	3	3	1044.28	1317.51	1499.47
		11	959.57	1374.21	1543.45
		19	1019.22	1357.32	1511.69
		27	1064.36	1302.31	1465.42
		32	1080.90	1361.75	1456.93
		40	942.64	1393.42	1552.73
		48	1130.19	1265.40	1459.11
		56	1093.14	1293.29	1445.15
T4	4	4	1056.01	1355.54	1510.19
		12	916.94	1440.21	1624.13
		20	949.82	1344.46	1588.24
		28	1095.89	1402.94	1601.72
		31	1049.74	1310.81	1537.81
		39	863.48	1367.39	1581.83
		47	1123.00	1319.20	1521.57
		55	1050.25	1317.08	1515.30

Feed conversion ratio (Feed konsum. per 1 kg of live weight) per box Tab. No. 11c (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	1042.64	1326.15	1505.88
		13	1081.13	1414.87	1594.22
		21	1149.18	1314.99	1550.70
		29	1065.15	1382.78	1625.09
		38	947.71	1380.25	1580.51
		46	1030.40	1245.36	1478.05
		54	962.27	1316.00	1469.83
T6	6	6	1084.54	1346.65	1508.82
		14	993.19	1395.79	1612.88
		22	1098.96	1293.68	1556.32
		30	1066.36	1394.27	1574.84
		37	1004.61	1409.13	1617.29
		45	1136.43	1305.22	1474.48
		53	1012.87	1303.58	1505.95
T7	7	7	1044.96	1281.15	1469.07
		15	939.83	1320.29	1577.24
		23	1052.85	1302.35	1465.14
		36	1097.51	1364.11	1568.52
		44	1100.60	1307.18	1457.00
		52	1016.34	1292.74	1499.60
		60	1063.36	1303.45	1528.57
T8	8	8	1016.52	1446.84	1569.59
		16	967.37	1322.21	1553.07
		24	1065.66	1300.92	1509.99
		35	1133.80	1361.57	1469.58
		43	1091.92	1239.21	1481.75
		51	1036.28	1300.05	1519.68
		59	1014.28	1367.85	1480.16

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	1229.36	1403.19	1858.95	1500.09
		9	1128.82	1503.37	2115.70	1583.06
		17	1002.95	1602.55	2198.16	1610.70
		25	1216.70	1410.08	1992.19	1541.36
		34	1155.37	1385.00	2392.25	1581.65
		42	1182.24	1364.57	2185.14	1549.80
		50	1150.87	1412.79	1860.09	1486.72
		58	1141.22	1426.17	2029.44	1521.21
T2	2	2	1200.17	1461.35	1738.95	1494.80
		10	1065.69	1567.63	1620.61	1475.84
		18	966.17	1489.17	2293.78	1561.61
		26	1208.69	1490.65	1915.04	1555.86
		33	1080.76	1455.19	2393.94	1589.10
		41	1186.46	1532.84	1778.85	1540.68
		49	1193.17	1365.51	1874.52	1468.62
		57	1124.08	1425.65	2141.81	1535.73
T3	3	3	1137.74	1443.94	1955.63	1527.85
		11	1039.10	1612.66	1957.07	1574.67
		19	1112.96	1524.65	1906.21	1542.61
		27	1161.90	1413.21	1888.34	1494.20
		32	1176.39	1497.71	1712.96	1485.60
		40	1016.08	1683.61	1934.16	1584.36
		48	1234.52	1319.83	2019.51	1485.89
		56	1192.03	1381.34	1832.92	1471.95
T4	4	4	1154.54	1497.36	1878.46	1539.93
		12	993.97	1758.60	2057.87	1658.26
		20	1026.61	1553.63	2330.73	1619.83
		28	1197.93	1553.98	2163.56	1635.66
		31	1144.06	1431.66	2208.66	1568.38
		39	932.52	1670.33	2150.02	1614.41
		47	1226.23	1407.18	2112.80	1551.70
		55	1148.13	1441.22	2009.76	1545.16

Feed consumption per 1 kg of weight gain (WG) per box

Tab. No. 11d (page 2)

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	1136.20	1458.08	1951.43	1534.47
		13	1175.03	1601.84	2037.68	1627.47
		21	1261.20	1384.82	2209.10	1581.35
		29	1162.84	1540.07	2362.57	1659.85
		38	1026.70	1630.05	2095.71	1613.23
		46	1124.61	1338.03	2169.46	1506.50
		54	1041.68	1500.89	1848.60	1497.71
T6	6	6	1184.82	1468.20	1910.23	1538.20
		14	1079.92	1615.22	2177.97	1646.59
		22	1199.95	1373.59	2405.90	1585.98
		30	1164.86	1557.07	2063.29	1607.77
		37	1095.30	1622.51	2131.01	1650.88
		45	1243.54	1379.23	1874.93	1502.21
		53	1096.98	1448.27	2073.23	1534.77
T7	7	7	1138.14	1386.05	1971.04	1496.49
		15	1016.54	1522.04	2340.95	1608.72
		23	1147.75	1412.28	1900.17	1492.61
		36	1200.76	1485.77	2111.33	1599.84
		44	1208.57	1394.34	1816.82	1484.79
		52	1105.27	1420.02	2108.21	1528.54
		60	1157.50	1416.77	2214.07	1559.18
T8	8	8	1103.48	1692.18	1861.24	1601.85
		16	1047.48	1516.30	2200.02	1584.65
		24	1161.44	1403.19	2082.31	1538.14
		35	1244.33	1458.11	1758.91	1498.43
		43	1196.09	1296.70	2186.13	1509.19
		51	1127.26	1418.65	2218.06	1549.18
		59	1102.02	1552.08	1744.29	1509.04

Feed consumption per box

Tab. No. 11e (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	74.50	215.00	161.90	451.40
		9	75.80	220.10	167.50	463.40
		17	72.90	221.00	169.50	463.40
		25	76.70	226.70	183.70	487.10
		34	74.20	228.40	176.50	479.10
		42	71.40	226.30	182.00	479.70
		50	77.70	227.60	172.30	477.60
		58	76.30	219.30	159.80	455.40
T2	2	2	74.80	218.40	166.40	459.60
		10	73.80	227.40	168.90	470.10
		18	72.30	224.50	173.80	470.60
		26	74.80	224.00	166.80	465.60
		33	73.80	228.90	165.90	468.60
		41	73.70	229.10	173.10	475.90
		49	76.90	224.30	160.20	461.40
		57	76.10	230.20	161.30	467.60
T3	3	3	75.00	224.10	177.10	476.20
		11	74.60	218.00	170.50	463.10
		19	70.80	214.00	156.50	441.30
		27	74.80	213.10	161.00	448.90
		32	79.90	228.70	144.30	452.90
		40	77.60	215.30	169.80	462.70
		48	78.90	228.90	169.80	477.60
		56	78.40	225.20	168.50	472.10
T4	4	4	73.00	218.60	169.70	461.30
		12	70.40	221.90	177.10	469.40
		20	74.30	229.30	172.80	476.40
		28	75.90	218.80	160.80	455.50
		31	76.40	225.10	171.90	473.40
		39	69.40	223.30	173.70	466.40
		47	78.70	219.90	163.70	462.30
		55	73.30	216.20	177.10	466.60

Feed consumption per box

Tab. No. 11e (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	74.70	224.50	177.60	476.80
		13	80.50	212.90	170.90	464.30
		21	75.70	216.60	175.80	468.10
		29	74.80	218.40	164.60	457.80
		38	73.30	218.30	172.10	463.70
		46	73.80	222.30	173.60	469.70
		54	75.10	224.10	170.70	469.90
T6	6	6	75.60	220.70	169.80	466.10
		14	74.20	221.40	177.20	472.80
		22	76.40	232.70	177.70	486.80
		30	74.40	218.80	160.40	453.60
		37	72.80	222.90	181.20	476.90
		45	78.50	217.30	179.60	475.40
		53	78.60	225.80	172.70	477.10
T7	7	7	75.30	224.90	172.90	473.10
		15	74.10	226.30	179.20	479.60
		23	74.50	226.80	164.50	465.80
		36	75.30	223.40	174.10	472.80
		44	73.30	220.10	169.80	463.20
		52	75.80	230.00	169.50	475.30
		60	77.80	219.60	165.90	463.30
T8	8	8	76.10	222.20	161.50	459.80
		16	75.90	217.50	174.20	467.60
		24	75.60	229.00	178.10	482.70
		35	75.30	228.50	146.50	450.30
		43	74.60	227.00	183.20	484.80
		51	76.40	232.60	165.80	474.80
		59	75.80	222.60	161.80	460.20

Foot pad lesions

Tab. No. 11f (page 1)

Treatment	Tr. No.	Box No.	Evaluation	
			right foot	left foot
T1	1	1	2.01	2.12
		9	3.02	3.24
		17	1.41	1.41
		25	1.71	1.75
		34	1.96	1.90
		42	2.20	2.18
		58	3.04	3.10
		2	2.45	2.52
T2	2	10	2.46	2.42
		18	3.09	3.03
		26	2.46	2.43
		33	1.23	1.26
		41	2.22	2.37
		49	3.47	3.56
		50	3.67	3.66
		57	3.25	3.28
T3	3	3	1.72	1.84
		11	3.42	3.30
		19	3.15	3.06
		27	3.17	3.09
		32	2.04	2.02
		40	2.31	2.16
		48	2.62	2.58
		56	3.21	3.14
T4	4	4	0.77	0.83
		12	3.15	3.20
		20	3.11	3.04
		28	3.18	3.16
		31	1.38	1.32
		39	2.26	2.16
		47	3.80	3.76
		55	2.15	2.11

Foot pad lesions

Tab. No. 11f (page 2)

Treatment	Tr. No.	Box No.	Evaluation	
			right foot	left foot
T5	5	5	1.83	1.97
		13	3.35	3.29
		21	2.04	2.05
		29	2.27	2.22
		38	0.76	0.75
		46	2.13	2.08
		54	2.58	2.66
T6	6	6	1.09	1.12
		14	2.69	2.71
		22	1.55	1.59
		30	3.17	3.17
		37	1.75	1.74
		45	1.97	1.90
		53	2.34	2.35
T7	7	7	3.03	3.07
		15	2.91	2.95
		23	2.79	2.72
		36	1.63	1.55
		44	0.87	0.76
		52	2.26	2.31
		60	3.09	3.12
T8	8	8	2.80	2.78
		16	3.16	3.12
		24	2.21	2.22
		35	2.19	2.17
		43	2.33	2.29
		51	2.43	2.36
		59	2.37	2.35