



**MEZINÁRODNÍ TESTOVÁNÍ DRŮBEŽE
ÚSTRAŠICE** státní podnik

390 02 Tábor 2

Česká republika

BROILER FEEDING TEST No. 14/2022

XXXXX

XXXXX

15 November – 20 December 2022

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Material and methods

Test term

Beginning of the test: 15 November 2022 (transfer to the chicken house)

End of the test: 20 December 2022

Birds

In total there were 1680 day old chicks of xxxxx. Day-old chicks were randomly distributed into 2 dietary treatments with 24 replicates per treatment and 35 chicken per replicate.

Origin 1-day old chicks: Mezinárodní testování drůbeže, s.p.

Age of the breeding flock: 32 weeks

Experimental treatments:

Tr. No.	Tr.	Description
1	T1	xxxxxx
2	T2	xxxxxx

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 Broilers. 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:

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: 12.96 broilers per square meter

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

Veterinary precautions

The chicken house was washed before the chick placement only, without disinfection.

On days 1 and 13 the chicken were vaccinated with xxxxx. On the first days chickens was applied xxxxx.

Feed

Feed was produced by International Poultry Testing Station Ústrašice

Day 1 - 10 Starter (BR 1)

Day 11- 28 Grower (BR2)

Day 29 - 35 Finisher (BR 3)

Diet formulas:

Components (%)	Starter BR1	Grower BR2	Finisher BR3
Soybean extr. groats	38.00	33.50	28.00
Wheat	32.50	35.73	41.35
Maize	20.82	21.00	21.00
Soybean oil	4.80	6.00	6.00
Calcium carbonate	1.34	1.25	1.05
MCP - monocalciumphosphate	1.14	1.08	1.15
Salt	0.29	0.30	0.29
Sodium sulfate	0.12	0.15	0.15
L-lysine	0.25	0.25	0.25
L-threonin	0.20	0.20	0.20
DL-methionin	0.05	0.05	0.06
AMV BR1 Plus	0.50	-	-
AMV BR2 Plus	-	0.50	-
AMV BR3 Plus	-	-	0.50
Nutrient content			
Crude protein (g/kg)	217.62	201.77	184.30
Fat (g/kg)	64.45	76.02	75.60
Lysine (g/kg)	14.21	13.04	11.66
Methionine (g/kg)	5.95	5.33	4.93
Ca (g/kg)	9.61	8.90	7.90
P (g/kg)	6.42	6.11	6.10
Vitamin A (IU/kg)	13500	10000	10000
Vitamin D3 (IU/kg)	5000	5000	5000
ME (MJ/kg)	11.90	12.30	12.47

Feed analyses for nutrient contents were performed at the laboratory of xxxxx

Nutrient content	Starter BR1: T1	Starter BR1: T2	Grower BR2: T1	Grower BR2: T2	Finisher BR3: T1	Finisher BR3: T2
Crude protein (g/kg)	223	217	206	201	194	194
Dry matter (%)	89.30	89.50	89.40	90.01	89.50	89.60
Fat (g/kg)	65.60	66.10	79.50	83.20	78.30	78.60
Crude fibre (g/kg)	26.30	25.40	29.80	27.50	22.60	24.90
Starch (g/kg)	367	370	372	378	372	378
ME (MJ/kg)	12.50	12.50	12.70	12.80	12.40	12.50

Parameters recorded and methods applied

Live weight

Live weight was measured on day 1 (all the birds in each pen were weighed altogether). On day 10 and 28 of age birds were weighed individually, without fasting. On day 35 birds were weighed individually, after 12 hours of fasting.

Feed consumption

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

Weight gain

Weight gain per phase and average daily weight gains were calculated for the periods 1 – 10 days, 11 – 28 days, 29 – 35 days and for the overall experiment (1 – 35 days).

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 – 28 days, 29 – 35 days and for the overall experiment (1 – 35 days). The calculation was included weight of deaths.

Mortality

All pens were checked twice 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 – 28 days, 29 – 35 days and 1 – 35 days.

Statistical analyses

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

Results

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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	96.00	88.50	92.19	840	57.00	38.63
T2	2						840

Body weight per phases**Tab. No. 2a**

Treatment	Tr. No.	Day 1		Day 10		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	840	38.63	840	303.33	840	1583.13	838	2152.21
T2	2	840	38.75	840	296.67	840	1559.44	837	2137.11

Weight gain per phases**Tab. No. 2b**

Treatment	Tr. No.	Day 1 - 10		Day 11 - 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	264.70	26.47	1279.80	71.10	569.08	71.13	2113.58	60.39
T2	2	257.92	25.79	1262.77	70.15	577.67	72.21	2098.36	59.95

Feed conversion per 1 kg of live weight**Tab. No. 2c**

Treatment	Tr. No.	Feed conversion ratio		
		Day 10	Day 28	Day 35
		g/kg live weight	g/kg live weight	g/kg live weight
T1	1	961.34	1584.79	1791.33
T2	2	991.55	1621.46	1805.48

Feed conversion per 1 kg of weight gain**Tab. No. 2d**

Treatment	Tr. No.	Feed conversion ratio			
		Day 1-10	Day 11-28	Day 29-35	Day 1-35
		g/kg weight gain	g/kg weight gain	g/kg weight gain	g/kg weight gain
T1	1	961.40	1732.56	2368.36	1807.58
T2	2	991.62	1769.45	2304.83	1822.02

Feed consumption per phases**Tab. No. 2e**

Treatment	Tr. No.	Feed consumption			
		Starter (day 1-10)	Grower (day 11-28)	Finisher (day 29-35)	Total (day 1-35)
		kg	kg	kg	kg
T1	1	244.95	1862.55	1127.35	3234.85
T2	2	247.10	1876.90	1112.65	3236.65

Mortality

Tab. No. 3

Treat.	Tr. No.	Mortality in the period									Mortality according causes																	
		Day 1 - 10		Day 11 - 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	0	0	0	0	2	2282	2	2282	0.48													2					
T2	2	0	0	0	0	3	3917	3	3917	0.71														1	2			

Causes:

- 1 - Viral diseases
- 2 - Bacterial diseases
- 3 - Fungal diseases
- 4 - Parasitary diseases
- 5 - Tumors

- 6 - Injuries
- 7 - Digestive tract diseases
- 8 - Respiratory tract diseases
- 9 - Reproduction tract diseases
- 10 - Locomotion apparatus diseases

- 11 - Sudden death syndrome
- 12 - Cannibalism
- 13 - Diverticulus inflammation
- 14 - Culling and other causes
- 15 - Sampling (excluded of calculation)

Results of carcass analysis

Tab. No. 4

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	♂	2427	1708	117	23	0.94	555	22.86	32.48	493	20.31	28.86	1048	43.17	61.34	70.38	75.19
		♀	2200	1505	110	24	1.08	485	22.03	32.22	436	19.82	28.98	921	41.86	61.20	68.39	73.38
		♂	2314	1607	113	23	1.00	520	22.47	32.36	465	20.08	28.92	984	42.55	61.28	69.43	74.33
T2	2	♂	2479	1657	121	22	0.88	533	21.48	32.13	490	19.76	29.56	1022	41.23	61.69	66.84	71.72
		♀	2215	1520	109	25	1.14	499	22.54	32.86	434	19.60	28.57	934	42.14	61.43	68.60	73.51
		♂	2347	1589	115	24	1.00	516	21.98	32.48	462	19.68	29.08	978	41.66	61.56	67.67	72.57

Foot pad lesions at 28 days of age**Tab. No. 5a**

Treatment	Tr. No.	Evaluation	
		right foot	left foot
T1	1	0.20	0.22
T2	2	0.26	0.24

Foot pad lesions at 35 days of age**Tab. No. 5b**

Treatment	Tr. No.	Evaluation	
		right foot	left foot
T1	1	0.43	0.42
T2	2	0.37	0.40

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	419	2258.82	255.69	11.32	419	2045.59	215.65	10.54
T2	2	417	2217.48	283.90	12.80	420	2057.32	208.49	10.13

Statistical analyses of performance results

Performance results were statistically evaluated using the ANOVA single-factor model (Scheffe test, Duncan 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

Treat.	Tr. No.	No. of box	Average (g)	Standard deviation	Kruskal-Wallis test	
					T1	T2
T1	1	24	38.63	0.29	0.620691	o
T2	2	24	38.75	0.48		

Body weight – day 10

Tab. No. 7b

Treat.	Tr. No.	No. of birds	Average (g)	Standard deviation	Duncan test	
					T1	T2
T1	1	840	303.33	29.91	0.000010	***
T2	2	840	296.67	26.42		

Body weight – day 28**Tab. No. 7c**

Treat.	Tr. No.	No. of birds	Average (g)	Standard deviation	Duncan test	
					T1	T2
T1	1	840	1583.13	179.55	0.007414	**
T2	2	840	1559.44	182.90		

Body weight – day 35**Tab. No. 7d**

Treat.	Tr. No.	No. of birds	Average (g)	Standard deviation	Scheffe test	
					T1	T2
T1	1	838	2152.21	259.34	0.235605	o
T2	2	837	2137.11	261.37		

Average weight gain (day 1 – 10)**Tab. No. 8a**

Treat.	Tr. No.	No. of box	Average (g)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	26.47	1.23	0.032060	*
T2	2	24	25.79	0.86		

Average weight gain (day 11 – 28)**Tab. No. 8b**

Treat.	Tr. No.	No. of box	Average (g)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	71.10	5.54	0.556697	o
T2	2	24	70.15	5.53		

Average weight gain (day 29 – 35)**Tab. No. 8c**

Treat.	Tr. No.	No. of box	Average (g)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	71.10	9.14	0.672985	o
T2	2	24	72.10	7.00		

Average weight gain (day 1 – 35)**Tab. No. 8d**

Treat.	Tr. No.	No. of box	Average (g)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	60.38	4.63	0.714355	o
T2	2	24	59.93	3.82		

FCR 10**Tab. No. 9a**

Treat.	Tr. No.	No. of box	Average (g)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	962.25	32.65	0.017086	*
T2	2	24	992.23	49.50		

FCR 28**Tab. No. 9b**

Treat.	Tr. No.	No. of box	Average (g)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	1589.57	91.39	0.149162	o
T2	2	24	1625.15	75.91		

FCR 35**Tab. No. 9c**

Treat.	Tr. No.	No. of box	Average (g)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	1798.01	110.17	0.690500	o
T2	2	24	1809.66	90.15		

FCR per 1 kg of weight gain 1 – 10 day**Tab. No. 10a**

Treat.	Tr. No.	No. of box	Average (g)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	962.37	32.66	0.017082	*
T2	2	24	992.36	49.51		

FCR per 1 kg of weight gain 11 – 28 day**Tab. No. 10b**

Treat.	Tr. No.	No. of box	Average (g)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	1739.85	115.91	0.258744	o
T2	2	24	1775.39	98.70		

FCR per 1 kg of weight gain 29 – 35 day**Tab. No. 10c**

Treat.	Tr. No.	No. of box	Average (g)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	2400.21	292.30	0.338513	o
T2	2	24	2324.96	244.42		

FCR per 1 kg of weight gain 1 – 35 day**Tab. No. 10d**

Treat.	Tr. No.	No. of box	Average (g)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	1831.23	114.23	0.689206	o
T2	2	24	1843.36	93.63		

Feed intake (starter)**Tab. No. 11a**

Treat.	Tr. No.	No. of box	Average (kg)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	10.21	0.29	0.415465	o
T2	2	24	10.30	0.45		

Feed intake (grower)**Tab. No. 11b**

Treat.	Tr. No.	No. of box	Average (kg)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	77.61	3.26	0.560210	o
T2	2	24	78.20	3.78		

Feed intake (finisher)**Tab. No. 11c**

Treat.	Tr. No.	No. of box	Average (kg)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	46.97	3.06	0.470227	o
T2	2	24	46.36	2.76		

Feed intake (total)**Tab. No. 11d**

Treat.	Tr. No.	No. of box	Average (kg)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	134.79	5.58	0.963811	o
T2	2	24	134.86	5.77		

Mortality – % (day 1-35)**Tab. No. 12**

Treat.	Tr. No.	No. of box	Average (%)	Standard deviation	Duncan test	
					T1	T2
T1	1	24	0.24	0.81		
T2	2	24	0.36	1.75	0.763607	o

Performance results per replicate

Body weight per phases

Tab. No. 13a (page 1)

Treatment	Tr. No.	Pen	Day 1		Day 10		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	1	35	38.57	35	296.09	35	1692.26	35	2327.43
		2	35	40.00	35	280.89	35	1518.03	35	2062.29
		5	35	38.57	35	309.03	35	1789.26	35	2440.80
		6	35	38.57	35	302.06	35	1602.11	35	2151.20
		9	35	38.57	35	315.69	35	1740.94	35	2387.80
		10	35	38.57	35	293.23	35	1529.31	34	2056.09
		13	35	38.57	35	302.49	35	1723.94	35	2432.14
		14	35	38.57	35	301.23	35	1419.37	35	2012.97
		17	35	38.57	35	305.63	35	1688.63	35	2344.26
		18	35	38.57	35	296.83	35	1582.49	35	2094.94
		21	35	38.57	35	309.57	35	1564.00	35	2180.63
		22	35	38.57	35	295.89	35	1587.77	35	2117.40
		27	35	38.57	35	291.34	35	1542.54	35	1994.74
		28	35	38.57	35	299.20	35	1522.97	34	2032.68
		31	35	38.57	35	287.69	35	1399.57	35	1885.37
		32	35	38.57	35	308.71	35	1690.51	35	2260.09
		35	35	38.57	35	292.09	35	1438.17	35	1900.17
		36	35	38.57	35	307.26	35	1574.91	35	2027.69
		39	35	38.57	35	306.03	35	1506.71	35	2137.29
		40	35	38.57	35	308.66	35	1600.11	35	2259.80
43	35	38.57	35	301.17	35	1501.34	35	2020.20		
44	35	38.57	35	343.63	35	1724.06	35	2346.91		
47	35	38.57	35	311.20	35	1525.69	35	2114.77		
48	35	38.57	35	314.43	35	1530.37	35	2059.17		

Body weight per phases

Tab. No. 13a (page 2)

Treatment	Tr. No.	Pen	Day 1		Day 10		Day 28		Day 35	
			Birds	Average body weight	Birds	Average body weight	Birds	Average body weight	Birds	Average body weight
				g		g		g		g
T2	2	3	35	38.57	35	298.17	35	1719.26	35	2303.97
		4	35	40.00	35	287.91	35	1569.03	35	2116.11
		7	35	38.57	35	305.66	35	1704.97	35	2271.14
		8	35	40.00	35	288.00	35	1491.83	35	2055.86
		11	35	38.57	35	307.89	35	1678.91	35	2315.26
		12	35	38.57	35	298.91	35	1513.91	35	1959.11
		15	35	38.57	35	308.34	35	1668.14	35	2304.14
		16	35	38.57	35	291.11	35	1519.51	35	2067.09
		19	35	38.57	35	313.14	35	1731.63	35	2339.20
		20	35	38.57	35	293.97	35	1555.37	35	2089.71
		23	35	38.57	35	296.94	35	1691.83	35	2296.49
		24	35	38.57	35	288.37	35	1558.54	35	2195.23
		25	35	38.57	35	288.29	35	1558.49	35	2106.57
		26	35	38.57	35	306.29	35	1662.29	35	2268.54
		29	35	38.57	35	294.63	35	1486.23	35	2054.17
		30	35	38.57	35	301.09	35	1579.20	35	2298.71
		33	35	38.57	35	287.69	35	1454.46	35	1953.60
		34	35	38.57	35	291.06	35	1529.46	35	2046.31
		37	35	38.57	35	278.74	35	1422.97	35	2005.40
		38	35	38.57	35	291.11	35	1507.29	35	2130.66
41	35	38.57	35	300.97	35	1386.80	35	2002.46		
42	35	38.57	35	305.20	35	1565.83	35	2110.31		
45	35	38.57	35	294.20	35	1504.34	35	2082.49		
46	35	40.00	35	302.46	35	1366.37	32	1897.63		

Weight gain per phases (WG) and daily weight gain

Tab. No. 13b (page 1)

Treatment	Tr. No.	Box	Day 1 - 10		Day 11 - 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	257.51	25.75	1396.17	77.57	635.17	79.40	2288.86	65.40
		2	240.89	24.09	1237.14	68.73	544.26	68.03	2022.29	57.78
		5	270.46	27.05	1480.23	82.23	651.54	81.44	2402.23	68.64
		6	263.49	26.35	1300.06	72.23	549.09	68.64	2112.63	60.36
		9	277.11	27.71	1425.26	79.18	646.86	80.86	2349.23	67.12
		10	254.66	25.47	1236.09	68.67	526.77	65.85	2017.52	57.64
		13	263.91	26.39	1421.46	78.97	708.20	88.53	2393.57	68.39
		14	262.66	26.27	1118.14	62.12	593.60	74.20	1974.40	56.41
		17	267.06	26.71	1383.00	76.83	655.63	81.95	2305.69	65.88
		18	258.26	25.83	1285.66	71.43	512.46	64.06	2056.37	58.75
		21	271.00	27.10	1254.43	69.69	616.63	77.08	2142.06	61.20
		22	257.31	25.73	1291.89	71.77	529.63	66.20	2078.83	59.40
		27	252.77	25.28	1251.20	69.51	452.20	56.53	1956.17	55.89
		28	260.63	26.06	1223.77	67.99	509.71	63.71	1994.11	56.97
		31	249.11	24.91	1111.89	61.77	485.80	60.73	1846.80	52.77
		32	270.14	27.01	1381.80	76.77	569.57	71.20	2221.51	63.47
		35	253.51	25.35	1146.09	63.67	462.00	57.75	1861.60	53.19
		36	268.69	26.87	1267.66	70.43	452.77	56.60	1989.11	56.83
		39	267.46	26.75	1200.69	66.70	630.57	78.82	2098.71	59.96
		40	270.09	27.01	1291.46	71.75	659.69	82.46	2221.23	63.46
43	262.60	26.26	1200.17	66.68	518.86	64.86	1981.63	56.62		
44	305.06	30.51	1380.43	76.69	622.86	77.86	2308.34	65.95		
47	272.63	27.26	1214.49	67.47	589.09	73.64	2076.20	59.32		
48	275.86	27.59	1215.94	67.55	528.80	66.10	2020.60	57.73		

Weight gain per phases (WG) and daily weight gain

Tab. No. 13b (page 2)

Treatment	Tr. No.	Box	Day 1 - 10		Day 11 - 28		Day 29 - 35		Day 1 - 35	
			WG	DWG	WG	DWG	WG	DWG	WG	DWG
			g	g	g	g	g	g	g	g
T2	2	3	259.60	25.96	1421.09	78.95	584.71	73.09	2265.40	64.73
		4	247.91	24.79	1281.11	71.17	547.09	68.39	2076.11	59.32
		7	267.09	26.71	1399.31	77.74	566.17	70.77	2232.57	63.79
		8	248.00	24.80	1203.83	66.88	564.03	70.50	2015.86	57.60
		11	269.31	26.93	1371.03	76.17	636.34	79.54	2276.69	65.05
		12	260.34	26.03	1215.00	67.50	445.20	55.65	1920.54	54.87
		15	269.77	26.98	1359.80	75.54	636.00	79.50	2265.57	64.73
		16	252.54	25.25	1228.40	68.24	547.57	68.45	2028.51	57.96
		19	274.57	27.46	1418.49	78.80	607.57	75.95	2300.63	65.73
		20	255.40	25.54	1261.40	70.08	534.34	66.79	2051.14	58.60
		23	258.37	25.84	1394.89	77.49	604.66	75.58	2257.91	64.51
		24	249.80	24.98	1270.17	70.57	636.69	79.59	2156.66	61.62
		25	249.71	24.97	1270.20	70.57	548.09	68.51	2068.00	59.09
		26	267.71	26.77	1356.00	75.33	606.26	75.78	2229.97	63.71
		29	256.06	25.61	1191.60	66.20	567.94	70.99	2015.60	57.59
		30	262.51	26.25	1278.11	71.01	719.51	89.94	2260.14	64.58
		33	249.11	24.91	1166.77	64.82	499.14	62.39	1915.03	54.72
		34	252.49	25.25	1238.40	68.80	516.86	64.61	2007.74	57.36
		37	240.17	24.02	1144.23	63.57	582.43	72.80	1966.83	56.20
		38	252.54	25.25	1216.17	67.57	623.37	77.92	2092.09	59.77
41	262.40	26.24	1085.83	60.32	615.66	76.96	1963.89	56.11		
42	266.63	26.66	1260.63	70.03	544.49	68.06	2071.74	59.19		
45	255.63	25.56	1210.14	67.23	578.14	72.27	2043.91	58.40		
46	262.46	26.25	1063.91	59.11	531.25	66.41	1857.63	53.08		

Feed conversion ratio (Feed consum. per 1 kg of live weight)

Tab. No. 13c (page 1)

Treatment	Tr. No.	Box	Feed conversion ratio		
			Day 10	Day 28	Day 35
			g/kg live weight	g/kg live weight	g/kg live weight
T1	1	1	979.45	1553.29	1731.52
		2	1007.02	1566.88	1776.81
		5	929.18	1405.21	1610.13
		6	979.00	1608.59	1832.86
		9	932.21	1450.77	1673.99
		10	950.01	1615.10	1923.57
		13	954.00	1460.11	1619.38
		14	948.50	1674.79	1796.92
		17	944.19	1543.09	1703.25
		18	976.99	1642.08	1925.73
		21	913.71	1489.77	1669.24
		22	975.28	1605.12	1743.38
		27	985.58	1667.93	1951.56
		28	954.93	1651.85	1928.53
		31	993.15	1698.48	1887.46
		32	944.01	1482.22	1745.83
		35	978.19	1668.79	1919.38
		36	943.83	1525.71	1781.06
		39	998.97	1587.18	1727.16
		40	971.95	1666.85	1789.67
43	1024.57	1682.30	1947.47		
44	873.04	1487.36	1675.76		
47	950.24	1707.90	1864.44		
48	985.92	1708.27	1927.27		

Feed conversion ratio (Feed consum. per 1 kg of live weight)

Tab. No. 13c (page 2)

Treatment	Tr. No.	Box	Feed conversion ratio		
			Day 10	Day 28	Day 35
			g/kg live weight	g/kg live weight	g/kg live weight
T2	2	3	1039.67	1524.74	1739.85
		4	1046.94	1706.24	1886.21
		7	930.08	1535.84	1778.84
		8	1036.71	1575.25	1760.82
		11	974.39	1555.43	1674.61
		12	994.07	1678.71	1976.84
		15	991.48	1556.05	1729.18
		16	1015.80	1690.39	1914.36
		19	875.91	1530.35	1700.21
		20	942.75	1692.75	1869.70
		23	962.19	1514.84	1698.87
		24	1000.69	1665.48	1899.57
		25	1015.86	1676.54	1868.98
		26	979.48	1504.81	1721.68
		29	1037.63	1724.40	1909.70
		30	1024.86	1642.78	1702.19
		33	983.22	1653.05	1846.41
		34	1030.73	1578.52	1794.17
		37	1055.76	1690.63	1822.22
		38	1020.71	1594.16	1717.11
41	930.32	1738.84	1819.91		
42	1020.41	1684.18	1885.30		
45	883.75	1579.24	1758.20		
46	1020.22	1710.47	1956.96		

Treatment	Tr. No.	Box	Feed conversion ratio			
			Day 1-10	Day 11-28	Day 29-35	Day 1-35
			g/kg weight gain	g/kg weight gain	g/kg weight gain	g/kg weight gain
T1	1	1	979.57	1674.99	2206.38	1760.70
		2	1007.16	1694.00	2362.33	1811.95
		5	929.29	1504.59	2172.86	1635.98
		6	979.13	1754.87	2487.25	1866.33
		9	932.32	1565.63	2274.73	1701.47
		10	950.14	1772.88	2880.49	1960.97
		13	954.12	1567.81	2007.10	1645.48
		14	948.62	1870.45	2088.95	1832.02
		17	944.31	1675.45	2115.74	1731.74
		18	977.12	1795.64	2801.63	1961.85
		21	913.82	1631.93	2124.46	1699.30
		22	975.41	1749.38	2157.85	1775.73
		27	985.71	1826.82	2919.06	1990.04
		28	955.05	1822.24	2785.20	1966.17
		31	993.28	1880.97	2431.92	1926.89
		32	944.13	1602.46	2528.22	1776.14
		35	978.32	1844.79	2699.44	1959.14
		36	943.95	1666.74	2669.27	1815.60
		39	999.10	1737.10	2061.62	1758.90
		40	972.07	1832.92	2087.57	1820.74
43	1024.70	1847.36	2714.76	1985.38		
44	873.13	1640.28	2197.25	1703.76		
47	950.36	1902.04	2269.86	1899.07		
48	986.04	1895.06	2561.05	1964.06		

Feed conversion per 1 kg of weight gain

Tab. No. 13d (page 2)

Treatment	Tr. No.	Box	Feed conversion ratio			
			Day 1-10	Day 11-28	Day 29-35	Day 1-35
			g/kg weight gain	g/kg weight gain	g/kg weight gain	g/kg weight gain
T2	2	3	1039.80	1626.52	2372.34	1769.48
		4	1047.08	1854.41	2402.34	1922.55
		7	930.20	1668.16	2510.60	1809.57
		8	1036.85	1704.09	2251.66	1795.76
		11	974.51	1685.91	1989.04	1702.98
		12	994.20	1847.15	2990.63	2016.54
		15	991.60	1684.07	2183.29	1758.62
		16	1015.94	1850.26	2535.87	1950.76
		19	876.02	1674.82	2184.34	1728.72
		20	942.88	1867.54	2384.77	1904.86
		23	962.31	1632.49	2213.77	1727.89
		24	1000.83	1816.40	2472.63	1933.55
		25	1015.99	1826.48	2416.20	1903.84
		26	979.60	1623.47	2316.32	1751.46
		29	1037.76	1894.21	2394.61	1946.25
		30	1024.99	1788.35	1832.59	1731.24
		33	983.35	1818.20	2409.85	1883.60
		34	1030.86	1707.27	2432.28	1828.63
		37	1055.91	1845.29	2143.73	1857.96
		38	1020.84	1731.43	2014.39	1748.77
41	930.44	1962.95	2002.51	1855.65		
42	1020.54	1844.88	2463.66	1920.40		
45	883.87	1748.32	2223.87	1791.38		
46	1020.35	1906.71	2657.87	2000.28		

Feed consumption per phases

Tab. No. 13e (page 1)

Treatment	Tr. No.	Box	Feed consumption			
			Starter (D 1-10)	Grower (D 11-28)	Finisher (D 29-35)	Total (D 1-35)
			kg	kg	kg	kg
T1	1	1	10.15	81.85	49.05	141.05
		2	9.90	73.35	45.00	128.25
		5	10.05	77.95	49.55	137.55
		6	10.35	79.85	47.80	138.00
		9	10.30	78.10	51.50	139.90
		10	9.75	76.70	49.70	136.15
		13	10.10	78.00	49.75	137.85
		14	10.00	73.20	43.40	126.60
		17	10.10	81.10	48.55	139.75
		18	10.15	80.80	50.25	141.20
		21	9.90	71.65	45.85	127.40
		22	10.10	79.10	40.00	129.20
		27	10.05	80.00	46.20	136.25
		28	10.00	78.05	47.95	136.00
		31	10.00	73.20	41.35	124.55
		32	10.20	77.50	50.40	138.10
		35	10.00	74.00	43.65	127.65
		36	10.15	73.95	42.30	126.40
		39	10.70	73.00	45.50	129.20
		40	10.50	82.85	48.20	141.55
43	10.80	77.60	49.30	137.70		
44	10.50	79.25	47.90	137.65		
47	10.35	80.85	46.80	138.00		
48	10.85	80.65	47.40	138.90		

Feed consumption per phases

Tab. No. 13e (page 2)

Treatment	Tr. No.	Box	Feed consumption			
			Starter (D 1-10)	Grower (D 11-28)	Finisher (D 29-35)	Total (D 1-35)
			kg	kg	kg	kg
T2	2	3	10.85	80.90	48.55	140.30
		4	10.55	83.15	46.00	139.70
		7	9.95	81.70	49.75	141.40
		8	10.45	71.80	44.45	126.70
		11	10.50	80.90	44.30	135.70
		12	10.40	78.55	46.60	135.55
		15	10.70	80.15	48.60	139.45
		16	10.35	79.55	48.60	138.50
		19	9.60	83.15	46.45	139.20
		20	9.70	82.45	44.60	136.75
		23	10.00	79.70	46.85	136.55
		24	10.10	80.75	55.10	145.95
		25	10.25	81.20	46.35	137.80
		26	10.50	77.05	49.15	136.70
		29	10.70	79.00	47.60	137.30
		30	10.80	80.00	46.15	136.95
		33	9.90	74.25	42.10	126.25
		34	10.50	74.00	44.00	128.50
		37	10.30	73.90	43.70	127.90
		38	10.40	73.70	43.95	128.05
41	9.80	74.60	43.15	127.55		
42	10.90	81.40	46.95	139.25		
45	9.10	74.05	45.00	128.15		
46	10.80	71.00	44.70	126.50		

Treatment	Tr. No.	Box	Evaluation	
			right foot	left foot
T1	1	1	0.03	0.23
		2	0.00	0.00
		5	0.09	0.09
		6	0.06	0.06
		9	0.06	0.00
		10	0.09	0.09
		13	0.11	0.20
		14	0.14	0.23
		17	0.11	0.31
		18	0.03	0.06
		21	0.46	0.60
		22	0.06	0.09
		27	0.14	0.11
		28	0.17	0.29
		31	0.29	0.03
		32	0.23	0.09
		35	0.91	0.71
		36	0.14	0.37
		39	0.11	0.09
		40	0.63	0.60
43	0.14	0.14		
44	0.26	0.26		
47	0.11	0.20		
48	0.34	0.43		

Treatment	Tr. No.	Box	Evaluation	
			right foot	left foot
T2	2	3	0.89	0.86
		4	0.00	0.00
		7	0.06	0.06
		8	0.06	0.11
		11	0.31	0.14
		12	0.00	0.06
		15	0.14	0.31
		16	0.03	0.06
		19	0.23	0.31
		20	0.14	0.20
		23	0.34	0.23
		24	0.20	0.20
		25	0.11	0.11
		26	0.31	0.34
		29	1.37	1.00
		30	0.26	0.17
		33	0.69	0.26
		34	0.34	0.11
		37	0.23	0.40
		38	0.03	0.17
41	0.17	0.23		
42	0.23	0.14		
45	0.03	0.09		
46	0.06	0.17		

Treatment	Tr. No.	Box	Evaluation	
			right foot	left foot
T1	1	1	0.40	0.31
		2	0.03	0.17
		5	0.14	0.26
		6	0.09	0.09
		9	0.03	0.14
		10	0.12	0.15
		13	0.34	0.37
		14	0.03	0.17
		17	0.43	0.54
		18	0.17	0.11
		21	0.97	1.00
		22	0.23	0.29
		27	0.60	0.49
		28	0.62	0.44
		31	0.46	0.66
		32	1.03	0.91
		35	2.17	1.63
		36	0.66	0.63
		39	0.26	0.17
		40	0.46	0.43
43	0.14	0.17		
44	0.40	0.26		
47	0.06	0.00		
48	0.46	0.60		

Treatment	Tr. No.	Box	Evaluation	
			right foot	left foot
T2	2	3	1.40	1.66
		4	0.06	0.06
		7	0.09	0.23
		8	0.06	0.14
		11	0.63	0.71
		12	0.09	0.20
		15	0.60	0.57
		16	0.20	0.17
		19	0.34	0.54
		20	0.23	0.29
		23	0.49	0.49
		24	0.09	0.09
		25	0.20	0.06
		26	0.23	0.31
		29	1.51	1.20
		30	0.66	0.46
		33	0.43	0.77
		34	0.97	0.89
		37	0.06	0.11
		38	0.09	0.17
41	0.23	0.11		
42	0.14	0.14		
45	0.06	0.11		
46	0.13	0.13		