



MEZINÁRODNÍ TESTOVÁNÍ DRŮBEŽE
státní podnik, ÚSTRAŠICE

390 02 Tábor 2

Tel.: 381 200 320

THE COMPLETE REPORT

**the effect of additive to production of parent
forms of slowly growing broiler chicken**

31/2022

2021-2023

Ústřařice, February 2023

1. The basic characteristics of the test

DOC placement: 20. 8.2021
Rearing 154 days: 20. 1. 2022
Production 155 – 490 days: 21. 1. 2022 – 22. 12. 2022
End of the test: 8. 3. 2023

Experimental treatments:

Tr. No.	Treatment	Description	No. of pen	Birds per pen	No. of chick
1	T1	xxxxxx	6	100♀ + 10♂	600♀ + 60♂
2	T2	xxxxxx	6	100♀ + 10♂	600♀ + 60♂
3	T3	xxxxxx	7	80♀ + 9♂	560♀ + 63♂
4	T4	xxxxxx	7	80♀ + 9♂	560♀ + 63♂

2. Production period (155 – 490 days)

Females were moved to production houses at 21 weeks of age. Males were moved at 20 week of age. By the beginning of lay the animals had time to become acquainted with the new environment and a different way of feeding and drinking. Final selection before lay was done at 22 weeks. One sample was placed into six boxes in two halls (treatment 1 and 2) and into seven boxes in other two halls, according to the test station. To lay control was included in each sample 600 (560) females and 60 (63) males, therefore in each box were 100 (80) females and 10 (9) males. Selections are carried out primarily by negative selection by health and exterior, as well as by live weight of each bird.

Housing in laying halls: deep litter houses, automated heating and ventilation.

Stocking density (155 – 490 days):

House 15A: 12 pens 110 birds/pen (100 females + 10 males) Pen size: 18,4 m²
House 16B: 14 pens 89 birds/pen (80 females + 9 males) Pen size: 13,6 m²

Light programme:

Age (days)	Light hours	Light intensity (lux)
155 – 161 days (week 23)	14	60
from 162 day (week 24)	15	

Complete feed formulation:

Feed for females was produced by the feed mill xxxxx

Feed for males was produced by the feed mill xxxxx

Diet formulas:

Ingredient (%)	Females: NP-1	Males: NR
Wheat	52.14	61.49
Soybean ext. meal	16.65	10.00
Maize	13.00	20.00
Calcium carbonate	4.78	-
Sunflower ext. meal	4.20	-
Wheat bran	3.00	4.00
Limestone	3.00	2.10
Soyabean oil	1.22	-
Fish meal	0.60	-
Monocalcium phosphate	0.44	1.40
Salt	0.26	0.34
DL-Methionin	0.15	0.21
Lysin-HCL	0.03	0.22
Sodium sulfate	0.12	-
Premix (vitam., enz.,....)	0.41	0.25
Nutrient level (g)		
Protein	170.02	144.23
Fat	30.77	22.29
Lysine	7.82	7.39
Methionine	4.01	4.29
Calcium	30.49	12.57
Phosphorus	5.13	6.94
Vitamin A (m.j./kg)	10000.00	-
Vitamin D3 (m.j./kg)	3000.00	-
Metabolizable energy MJ/kg	11.07	12.17

Feeding management:

The flock was fed daily at 7⁰⁰ am separately males and females. Females were using troughs with grids, males tube pan feeders hanging higher. Oats (3g/birds) was fed daily at 12⁰⁰ on the litter. In the afternoon he was flung out into the litter grit.

System of drinking:

Nipple cup drinkem in production houses. Water was available the whole day.

Veterinary precautions:

The house was disinfected by 1% xxxxx liquid, then treated against red mites and finally by xxxxx aerosol on litter efore the placement of the flock.

During the laying has been given the vaccine xxxxx (every 6 weeks), xxxxx (36th and 54th week), xxxxx (30th and 48th week), xxxxx (24th, 42nd and 60th week), xxxxx (30th week) and xxxxx.

4. Method of results presentation

The final results of testing are in the following tables:

Tab. No.	1:	Laying control
	2:	Feed consumption
	3:	Egg weight in period
	4:	Laying intensity in periods
	5:	Distribution of eggs in periods
	6:	Mortality – hens in the laying period
	7a:	Statistical analysis – cocks at 434 days of age
	7b:	Statistical analysis – hens at 434 days of age
	8:	Hatchability of chicks in period
Graph No.:	1:	Laying intensity
Tab. No.	9:	Hatchability of fattening tests
	10:	Broiler performance at 21 days of age
	11:	Broiler performance at 35 days of age
	12:	Broiler performance at 56 days of age
	13:	Mortality during growing period
	14:	Results of carcass analysis at the age of 56 days
	15a:	Statistical analysis – cocks at 56 days of age
	15b:	Statistical analysis – hens at 56 days of age

Laying control

Tab. No. 1

Treatment	Tr. no.	Init. flock	Fertility	Hatchability		Average number of eggs per bird-housed			Aver. egg weight	Nr. of chicks hatched per 1 hen	Days at percent. of laying		Average live weight at the end of laying	
				set	fert.	total	hatch. eggs				30%	50%	cocks	hens
				birds	%	%	%	num.			num.	%	g	days
T1	1	600	92.86	88.97	95.81	252.12	226.48	89.83	61.35	201.49	160	162	5455.75	2276.84
T2	2	600	94.60	90.63	95.81	261.01	240.23	92.04	61.92	217.73	160	162	5312.04	2329.47
T3	3	560	95.40	91.51	95.92	249.80	229.92	92.04	61.62	210.39	160	162	5609.43	2343.72
T4	4	560	95.32	91.59	96.09	248.49	227.06	91.37	61.61	207.96	160	162	5840.53	2366.00

Feed consumption**Tab. No. 2**

Treatment	Tr. No.	Hens housed	Feed consumption per			
			1 feeding day	1 egg	1 hatch. egg	1 chick
			g	g	g	g
T1	1	600	142.66	181.31	201.84	226.87
T2	2	600	143.69	175.53	190.71	210.42
T3	3	560	144.22	181.57	197.26	215.57
T4	4	560	143.57	184.95	202.41	221.01

Egg weight in period (period = 28 days)

Tab. No. 3

Treatment	Tr. No.	Period												Average
		1	2	3	4	5	6	7	8	9	10	11	12	
T1	1	53.72	56.53	58.45	59.61	61.10	62.35	62.55	63.36	64.22	65.16	66.36	67.00	61.35
T2	2	53.55	56.99	58.46	60.04	61.51	62.65	63.23	64.14	65.08	65.50	67.00	67.70	61.92
T3	3	52.91	56.54	58.50	60.09	61.72	62.67	63.11	63.74	64.59	65.37	66.61	67.34	61.62
T4	4	53.41	56.47	58.38	59.91	61.56	62.78	63.16	63.94	64.60	65.57	66.74	67.94	61.61

1st period: 23th – 26th week of age

12th period: 67th – 70th week of age

Laying intensity
in four weeks long periods (%)

Tab. No. 4

Treatment	Tr. No.	Period											
		1	2	3	4	5	6	7	8	9	10	11	12
T1	1	67.02	96.39	93.88	89.61	84.80	78.36	74.18	71.51	69.22	63.83	59.16	52.48
T2	2	69.67	97.06	94.18	90.49	86.14	81.43	75.68	73.79	72.70	68.08	64.39	58.55
T3	3	69.51	95.60	92.77	87.85	83.69	76.14	73.15	71.10	67.89	64.28	57.91	52.26
T4	4	69.13	96.11	93.49	89.45	85.54	78.43	74.69	70.88	66.10	57.79	55.17	50.71

Distribution of eggs in period (%)

Tab. No. 5

Hatching eggs

Treatment	Tr. No.	Period												Average
		1	2	3	4	5	6	7	8	9	10	11	12	
T1	1	83.68	93.35	93.09	92.93	92.00	90.12	89.28	90.51	89.87	89.00	84.93	82.48	89.83
T2	2	85.71	94.79	94.43	95.16	94.37	92.17	92.06	92.44	92.53	91.65	88.54	85.90	92.04
T3	3	84.93	94.18	95.11	94.74	94.12	92.37	92.38	93.04	93.23	91.51	88.26	85.27	92.04
T4	4	85.02	94.32	94.37	94.23	93.31	90.93	91.55	92.43	91.83	90.08	87.79	84.34	91.37

Double-yolk eggs

Treatment	Tr. No.	Period												Average
		1	2	3	4	5	6	7	8	9	10	11	12	
T1	1	1.15	0.77	0.16	0.03	0.06	0.02	0.03	0.05	0.04	0.03	0.04	0.00	0.21
T2	2	0.99	0.72	0.15	0.05	0.03	0.05	0.01	0.01	0.02	0.01	0.05	0.00	0.18
T3	3	1.07	0.80	0.14	0.09	0.11	0.06	0.01	0.03	0.01	0.02	0.02	0.00	0.21
T4	4	1.14	0.57	0.08	0.06	0.07	0.02	0.03	0.01	0.02	0.01	0.01	0.00	0.18

Cracked eggs

Treatment	Tr. No.	Period												Average
		1	2	3	4	5	6	7	8	9	10	11	12	
T1	1	3.36	2.90	3.23	3.82	4.08	5.13	5.61	5.79	6.50	6.49	8.64	9.88	5.13
T2	2	3.12	2.02	2.15	1.89	2.29	3.22	3.30	3.89	3.98	3.98	5.54	6.00	3.27
T3	3	2.99	2.21	1.88	1.95	2.45	2.72	2.76	2.95	3.03	4.01	5.00	5.39	2.94
T4	4	2.74	2.18	2.41	2.46	3.07	3.73	3.58	3.82	4.90	4.88	5.09	6.10	3.53

The other non-standard eggs

Treatment	Tr. No.	Period												Average
		1	2	3	4	5	6	7	8	9	10	11	12	
T1	1	11.74	2.99	3.47	3.21	3.88	4.73	4.77	3.65	3.59	4.49	6.62	7.68	4.81
T2	2	10.18	2.47	3.27	2.90	3.35	4.55	4.63	3.34	3.47	4.33	5.91	8.08	4.48
T3	3	11.04	2.81	2.87	3.14	3.32	4.82	4.85	3.98	3.82	4.46	6.74	9.34	4.80
T4	4	11.04	2.90	3.12	3.19	3.68	5.27	4.84	3.73	3.69	5.03	7.11	9.60	4.94

Mortality - hens in the laying period

Tab. No. 6

Treatment	Tr. No.	Initial flock	Final flock	Mortality and sampling total		Mortality		Mortality according causes															
		birds	birds	birds	%	birds	%	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
T1	1	600	533	67	11.17	49	8.17										49						18
T2	2	600	534	66	11.00	48	8.00										48						18
T3	3	560	487	73	13.04	52	9.29										52						21
T4	4	560	496	64	11.43	43	7.68										43						21

Diagnostic: 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 - Reproductory 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)

Statistical analysis - Cocks at 490 days of age

Tab. No. 7a

Treatment	Tr. No.	Tr. size	Average live weight	Standard deviation	Coefficient of variation	Standard error of mean	Precision select. average	Standard error of coeff. of variation
			g/ks	g/ks	%	g/ks	%	%
T1	1	55	5455.75	889.10	16.30	119.89	2.20	1.61
T2	2	57	5312.04	730.12	13.74	96.71	1.82	1.32
T3	3	61	5609.43	830.36	14.80	106.32	1.90	1.38
T4	4	60	5840.53	674.40	11.55	87.06	1.49	1.08

Statistical analysis - Hens at 490 days of age

Tab. No. 7b

Treatment	Tr. No.	Tr. size	Average live weight	Standard deviation	Coefficient of variation	Standard error of mean	Precision select. average	Standard error of coeff. of variation
			g/ks	g/ks	%	g/ks	%	%
T1	1	533	2276.84	217.62	9.56	9.43	0.41	0.30
T2	2	534	2329.91	195.18	8.38	8.45	0.36	0.26
T3	3	487	2343.72	202.83	8.65	9.19	0.39	0.28
T4	4	496	2366.00	218.96	9.25	9.83	0.42	0.30

Hatchability of chicks in period

Tab. č. 8

Treatment	Tr. No.	Period	Average weight		Fertility	Hatchability	
			hatching eggs	day old chicks		Set eggs	Fertilized eggs
			g	g		%	%
T1	1	1	53.50	35.98	60.00	54.67	91.11
T2	2		53.50	36.55	58.33	41.67	71.43
T3	3		51.83	36.89	42.67	40.67	95.31
T4	4		53.17	37.12	68.67	66.00	96.12

Treatment	Tr. No.	Period	Average weight		Fertility	Hatchability	
			hatching eggs	day old chicks		Set eggs	Fertilized eggs
			g	g		%	%
T1	1	2	55.67	38.59	94.33	87.67	92.93
T2	2		55.50	39.37	87.67	73.67	84.03
T3	3		55.60	37.60	91.33	86.00	94.16
T4	4		55.53	37.98	94.00	87.33	92.91

Treatment	Tr. No.	Period	Average weight		Fertility	Hatchability	
			hatching eggs	day old chicks		Set eggs	Fertilized eggs
			g	g		%	%
T1	1	3	57.67	37.73	96.00	89.67	93.40
T2	2		57.33	38.17	95.67	87.33	91.29
T3	3		58.33	39.15	95.67	90.67	94.77
T4	4		58.17	38.55	93.67	91.67	97.86

Treatment	Tr. No.	Period	Average weight		Fertility	Hatchability	
			hatching eggs	day old chicks		Set eggs	Fertilized eggs
			g	g		%	%
T1	1	4	59.33	39.45	95.33	91.67	96.15
T2	2		59.50	40.04	96.00	93.67	97.57
T3	3		59.50	40.77	95.67	90.33	94.43
T4	4		59.67	39.75	96.67	92.67	95.86

Treatment	Tr. No.	Period	Average weight		Fertility	Hatchability	
			hatching eggs	day old chicks		Set eggs	Fertilized eggs
			g	g		%	%
T1	1	5	60.28	40.29	94.67	90.67	95.75
T2	2		60.56	40.31	95.11	91.89	96.59
T3	3		60.56	40.61	93.44	89.33	95.58
T4	4		60.33	39.74	94.89	89.89	94.73

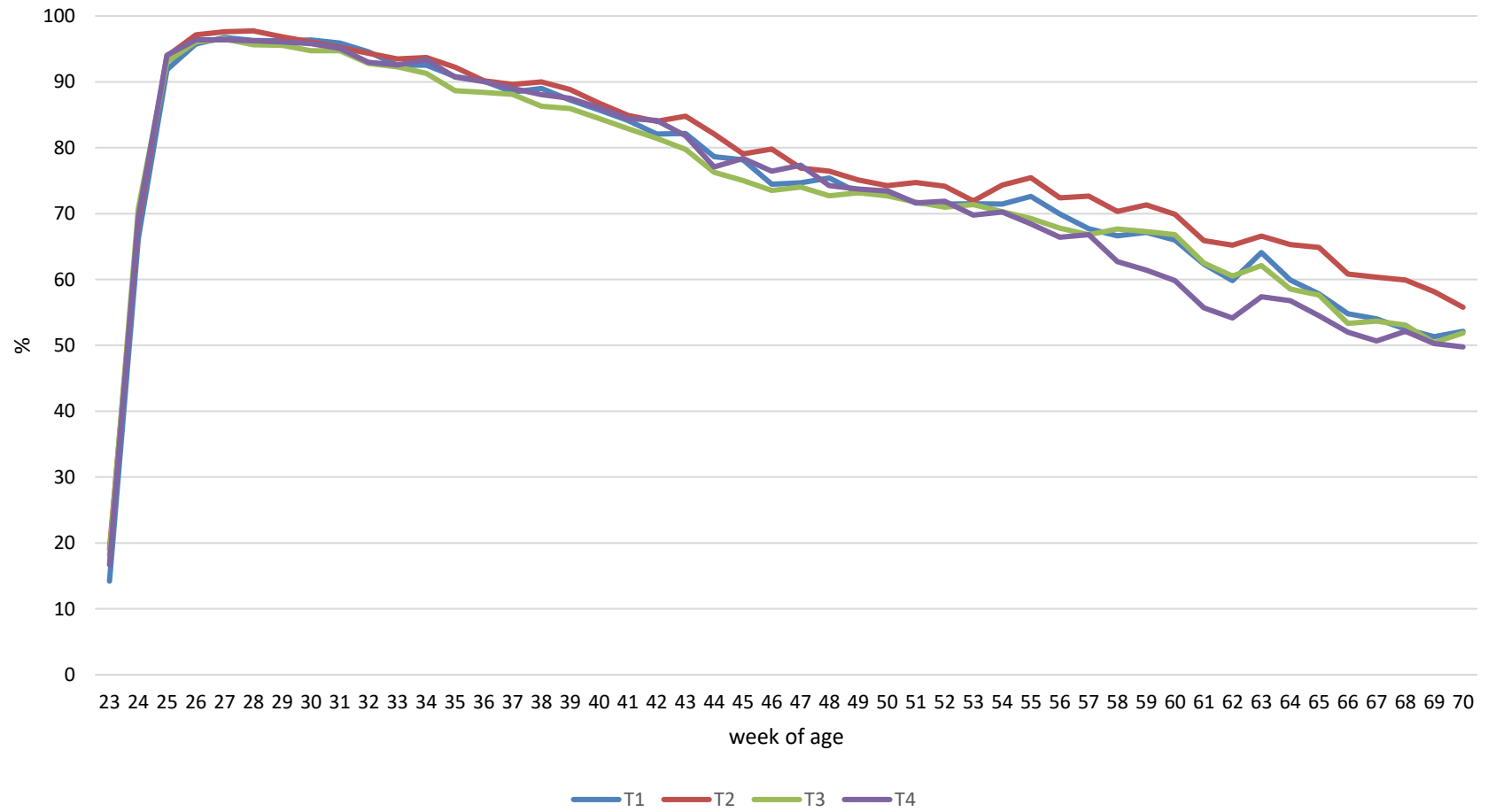
Treatment	Tr. No.	Period	Average weight		Fertility	Hatchability	
			hatching eggs	day old chicks		Set eggs	Fertilized eggs
			g	g		%	%
T1	1	6	61.58	43.25	95.00	89.83	94.56
T2	2		61.50	43.30	94.33	89.17	94.51
T3	3		61.83	41.11	91.17	85.33	93.64
T4	4		61.50	40.42	93.33	87.83	94.11

Treatment	Tr. No.	Period	Average weight		Fertility	Hatchability	
			hatching eggs	day old chicks		Set eggs	Fertilized eggs
			g	g	%	%	%
T1	1	7	61.67	42.91	95.00	91.67	96.49
T2	2		63.00	43.82	97.67	94.33	96.59
T3	3		62.67	43.53	96.67	92.67	95.86
T4	4		63.20	44.09	96.00	93.00	96.88

Treatment	Tr. No.	Period	Average weight		Fertility	Hatchability	
			hatching eggs	day old chicks		Set eggs	Fertilized eggs
			g	g	%	%	%
T1	1	8	62.67	42.37	90.67	87.33	96.32
T2	2		63.33	42.72	95.67	89.33	93.38
T3	3		63.00	40.12	92.67	86.00	92.81
T4	4		63.17	39.92	92.67	86.00	92.81

Treatment	Tr. No.	Period	Average weight		Fertility	Hatchability	
			hatching eggs	day old chicks		Set eggs	Fertilized eggs
			g	g	%	%	%
T1	1	9	63.50	45.91	92.00	85.67	93.12
T2	2		64.00	43.51	92.00	87.33	94.93
T3	3		64.00	44.44	91.33	84.00	91.97
T4	4		63.33	44.02	90.67	86.33	95.22

Graph no. 1: Intenzity of lay



Results of feeding trials

Hatchability of fattening tests – 1st part fattening

Tab. No. 9

Treatment	Tr. No.	Fertility	Hatchability		Birds housed	Average weight	
			Set eggs	Fertilized eggs		hatching eggs	day old chicks
		%	%	%		g	g
T1	1	94.29	90.16	95.67	175	57.78	39.43
T2	2	94.92	90.48	95.27	175	58.17	39.71
T3	3	95.24	92.22	96.83	175	59.05	39.14
T4	4	94.60	91.43	96.64	175	58.73	39.71

Hatchability of fattening tests – 2nd part fattening

Treatment	Tr. No.	Fertility	Hatchability		Birds housed	Average weight	
			Set eggs	Fertilized eggs		hatching eggs	day old chicks
		%	%	%		g	g
T1	1	91.43	87.78	96.01	175	61.51	40.57
T2	2	94.29	90.79	93.26	175	61.27	40.00
T3	3	95.56	90.79	94.94	175	62.14	40.86
T4	4	96.03	91.54	95.54	175	62.14	41.14

Hatchability of fattening tests – 3rd part fattening

Treatment	Tr. No.	Fertility	Hatchability		Birds housed	Average weight	
			Set eggs	Fertilized eggs		hatching eggs	day old chicks
		%	%	%		g	g
T1	1	82.50	78.18	94.70	420	65.50	43.93
T2	2	86.85	80.83	93.07	420	66.20	44.29
T3	3	81.35	76.33	93.88	420	65.78	43.93
T4	4	87.33	79.18	90.67	420	65.90	45.00

Hatchability of fattening tests – 4th part fattening

Treatment	Tr. No.	Fertility	Hatchability		Birds housed	Average weight	
			Set eggs	Fertilized eggs		hatching eggs	day old chicks
		%	%	%		g	g
T1	1	70.22	61.77	87.55	175	67.02	44.57
T2	2	63.55	56.00	88.66	175	67.04	45.14
T3	3	77.77	62.22	81.41	175	67.55	45.14
T4	4	74.44	68.00	91.53	175	67.35	44.57

Broiler performance at 21 days of age – 1st part fattening

Tab. No. 10

Treatment	Tr. No.	Mortality		Average live weight at 21 days		FCR
		birds	%	birds	g	g/kg
T1	1	0	0.00	175	661.83	1506.82
T2	2	1	0.57	174	658.70	1503.20
T3	3	0	0.00	175	655.99	1506.57
T4	4	1	0.57	174	667.20	1497.04

Broiler performance at 21 days of age – 2nd part fattening

Treatment	Tr. No.	Mortality		Average live weight at 21 days		FCR
		birds	%	birds	g	g/kg
T1	1	0	0.00	175	677.81	1559.79
T2	2	0	0.00	175	665.35	1549.13
T3	3	2	1.14	173	651.80	1442.57
T4	4	2	1.14	173	656.80	1487.30

Broiler performance at 21 days of age – 3rd part fattening

Treatment	Tr. No.	Mortality		Average live weight at 21 days		FCR
		birds	%	birds	g	g/kg
T1	1	0	0.00	420	630.02	1519.61
T2	2	0	0.00	420	651.36	1504.91
T3	3	0	0.00	420	636.46	1520.68
T4	4	0	0.00	420	634.99	1501.71

Broiler performance at 21 days of age – 4th part fattening

Treatment	Tr. No.	Mortality		Average live weight at 21 days		FCR
		birds	%	birds	g	g/kg
T1	1	1	0.57	174	693.21	1545.48
T2	2	0	0.00	175	682.87	1534.20
T3	3	0	0.00	175	690.99	1539.99
T4	4	0	0.00	175	701.45	1540.81

Broiler performance at 35 days of age – 1st part fattening

Tab. No. 11

Treatment	Tr. No.	Mortality		Average live weight at 35 days		FCR
		birds	%	birds	g	g/kg
T1	1	0	0.00	175	1496.76	1682.86
T2	2	1	0.57	174	1501.47	1685.23
T3	3	0	0.00	175	1489.06	1702.82
T4	4	1	0.57	174	1513.41	1652.07

Broiler performance at 35 days of age – 2nd part fattening

Treatment	Tr. No.	Mortality		Average live weight at 35 days		FCR
		birds	%	birds	g	g/kg
T1	1	0	0.00	175	1504.61	1753.91
T2	2	0	0.00	175	1494.70	1711.39
T3	3	3	1.71	172	1478.46	1659.04
T4	4	3	1.71	172	1475.97	1708.02

Broiler performance at 35 days of age – 3rd part fattening

Treatment	Tr. No.	Mortality		Average live weight at 35 days		FCR
		birds	%	birds	g	g/kg
T1	1	0	0.00	420	1512.06	1725.84
T2	2	0	0.00	420	1550.16	1740.94
T3	3	0	0.00	420	1495.89	1777.45
T4	4	0	0.00	420	1530.43	1774.47

Broiler performance at 35 days of age – 4th part fattening

Treatment	Tr. No.	Mortality		Average live weight at 35 days		FCR
		birds	%	birds	g	g/kg
T1	1	1	0.57	174	1546.30	1737.78
T2	2	0	0.00	175	1546.93	1731.88
T3	3	0	0.00	175	1537.96	1745.99
T4	4	0	0.00	175	1541.69	1709.08

Broiler performance at 56 days of age – 1st part fattening

Tab. No. 12

Treatment	Tr. No.	Average live weight at 56 days						FCR
		male		female		average		
		birds	g	birds	g	birds	g	
T1	1	73	2720.48	55	2248.45	128	2517.66	2328.55
T2	2	73	2785.26	54	2354.69	127	2602.18	2287.88
T3	3	70	2724.31	61	2351.11	131	2550.53	2291.79
T4	4	57	2770.88	58	2320.86	115	2543.91	2248.94

Broiler performance at 56 days of age – 2nd part fattening

Treatment	Tr. No.	Average live weight at 56 days						FCR
		male		female		average		
		birds	g	birds	g	birds	g	
T1	1	71	2848.32	70	2319.64	141	2585.86	2245.56
T2	2	66	2849.86	79	2355.62	145	2580.59	2151.56
T3	3	62	2816.26	73	2382.33	135	2581.61	2171.29
T4	4	52	2861.69	85	2350.64	137	2544.61	2222.95

Broiler performance at 56 days of age – 3rd part fattening

Treatment	Tr. No.	Average live weight at 56 days						FCR
		male		female		average		
		birds	g	birds	g	birds	g	
T1	1	200	3108.24	195	2744.20	395	2928.52	2067.88
T2	2	200	3253.54	195	2787.18	395	3023.31	2070.89
T3	3	176	3080.67	220	2666.89	396	2850.79	2163.76
T4	4	197	3188.56	199	2720.12	396	2953.16	2141.60

Broiler performance at 56 days of age – 4th part fattening

Treatment	Tr. No.	Average live weight at 56 days						FCR
		male		female		average		
		birds	g	birds	g	birds	g	
T1	1	88	2919.32	86	2452.43	174	2688.56	2178.92
T2	2	87	2935.79	88	2452.88	175	2692.95	2200.32
T3	3	94	2922.72	81	2435.47	175	2697.19	2208.69
T4	4	92	2919.23	82	2429.27	174	2688.33	2173.38

Mortality during growing period – 1st part fattening

Tab. No. 13

Treatment	Tr. No.	Mortality in the period								Mortality according causes														
		1 - 21		22 - 35		36 - 56		1 - 56		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		birds	%	birds	%	birds	%	birds	%															
T1	1	0	0.00	0	0.00	21	12.00	21	12.00										21					26
T2	2	1	0.57	0	0.00	21	12.00	22	12.57									4	18					26
T3	3	0	0.00	0	0.00	19	10.86	19	10.86										19					25
T4	4	1	0.57	0	0.00	33	18.86	34	19.43									1	33					26

Mortality during growing period – 2nd part fattening

Treatment	Tr. No.	Mortality in the period								Mortality according causes														
		1 - 21		22 - 35		36 - 56		1 - 56		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		birds	%	birds	%	birds	%	birds	%															
T1	1	0	0.00	0	0.00	4	2.29	4	2.29									1	3					30
T2	2	0	0.00	0	0.00	3	1.71	3	1.71									1	2					27
T3	3	2	1.14	1	0.57	8	4.57	11	6.29									6	5					29
T4	4	2	1.14	1	0.57	7	4.00	10	5.71									3	7					28

- 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) |

Mortality during growing period – 3rd part fattening

Treatment	Tr. No.	Mortality in the period								Mortality according causes														
		1 - 21		22 - 35		36 - 56		1 - 56		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		birds	%	birds	%	birds	%	birds	%															
T1	1	0	0.00	0	0.00	1	0.24	1	0.24											1				24
T2	2	0	0.00	0	0.00	1	0.24	1	0.24											1				24
T3	3	0	0.00	0	0.00	0	0.00	0	0.00															24
T4	4	0	0.00	0	0.00	0	0.00	0	0.00															24

Mortality during growing period – 4th part fattening

Treatment	Tr. No.	Mortality in the period								Mortality according causes														
		1 - 21		22 - 35		36 - 56		1 - 56		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		birds	%	birds	%	birds	%	birds	%															
T1	1	1	0.57	0	0.00	0	0.00	1	0.57													1		
T2	2	0	0.00	0	0.00	0	0.00	0	0.00															
T3	3	0	0.00	0	0.00	0	0.00	0	0.00															
T4	4	0	0.00	0	0.00	1	0.57	1	0.57									1						

- 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 at 56 days of age – 1st part fattening

Tab. No. 14

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	♂	2859	2100	148	65	2.26	548	19.17	26.10	722	25.26	34.39	1270	44.43	60.48	73.45	78.62
		♀	2343	1715	134	66	2.82	478	20.41	27.90	557	23.75	32.46	1035	44.16	60.36	73.17	78.89
		♂	2601	1908	141	65	2.51	513	19.73	26.91	639	24.58	33.52	1153	44.31	60.43	73.33	78.74
T2	2	♂	2794	2035	143	62	2.23	523	18.70	25.68	685	24.52	33.68	1208	43.23	59.36	72.82	77.96
		♀	2399	1759	142	64	2.68	478	19.92	27.17	577	24.04	32.79	1055	43.96	59.97	73.30	79.23
		♂	2597	1897	143	63	2.44	500	19.27	26.37	631	24.30	33.27	1131	43.57	59.64	73.05	78.55
T3	3	♂	2719	1960	155	61	2.23	511	18.79	26.06	663	24.37	33.80	1173	43.16	59.86	72.10	77.79
		♀	2391	1748	136	65	2.70	469	19.62	26.85	572	23.92	32.72	1041	43.54	59.57	73.09	78.77
		♂	2555	1854	145	63	2.45	490	19.18	26.43	617	24.16	33.29	1107	43.34	59.72	72.57	78.25
T4	4	♂	2832	2055	148	64	2.27	526	18.58	25.60	701	24.77	34.13	1227	43.34	59.72	72.57	77.80
		♀	2376	1759	132	60	2.52	478	20.12	27.17	569	23.95	32.35	1047	44.06	59.52	74.02	79.56
		♂	2604	1907	140	62	2.38	502	19.28	26.32	635	24.39	33.31	1137	43.67	59.63	73.24	78.60

Results of carcass analysis at 56 days of age – 2nd part fattening

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	♂	2926	2085	168	75	2.57	514	17.57	24.66	703	24.02	33.72	1217	41.59	58.38	71.25	77.00
		♀	2386	1713	133	69	2.88	443	18.57	25.87	550	23.05	32.10	993	41.62	57.97	71.79	77.39
		♂	2656	1899	151	72	2.71	479	18.02	25.20	626	23.59	32.99	1105	41.60	58.19	71.49	77.18
T2	2	♂	2884	2035	163	70	2.44	499	17.30	24.52	698	24.19	34.27	1197	41.49	58.79	70.57	76.22
		♀	2425	1747	137	76	3.15	467	19.25	26.73	558	23.03	31.97	1025	42.28	58.69	72.03	77.67
		♂	2655	1891	150	73	2.76	483	18.19	25.54	628	23.66	33.21	1111	41.85	58.75	71.24	76.88
T3	3	♂	3004	2145	177	79	2.63	536	17.83	24.97	719	23.93	33.51	1254	41.76	58.49	71.40	77.29
		♀	2464	1766	138	82	3.34	458	18.60	25.95	573	23.25	32.44	1031	41.86	58.39	71.68	77.27
		♂	2734	1956	157	81	2.95	497	18.18	25.41	646	23.63	33.03	1143	41.80	58.44	71.53	77.28
T4	4	♂	2970	2132	170	78	2.62	538	18.12	25.24	722	24.32	33.88	1260	42.43	59.12	71.78	77.51
		♀	2423	1730	136	75	3.11	449	18.51	25.93	561	23.15	32.42	1010	41.67	58.35	71.40	77.01
		♂	2696	1931	153	77	2.84	493	18.30	25.55	642	23.79	33.23	1135	42.09	58.77	71.61	77.29

Results of carcass analysis at 56 days of age – 3rd part fattening

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	♂	3150	2136	166	69	2.19	591	18.75	27.66	684	21.70	32.01	1274	40.45	59.67	67.79	73.07
		♀	2762	1885	151	72	2.59	520	18.83	27.58	585	21.19	31.05	1105	40.02	58.63	68.25	73.71
		♂	2956	2010	159	70	2.38	555	18.79	27.62	634	21.46	31.56	1190	40.25	59.18	68.00	73.37
T2	2	♂	3324	2273	180	80	2.41	593	17.83	26.08	756	22.74	33.25	1348	40.57	59.33	68.39	73.82
		♀	2916	1974	152	82	2.80	556	19.06	28.17	614	21.05	31.10	1170	40.11	59.27	67.68	72.90
		♂	3120	2123	166	81	2.59	574	18.41	27.05	685	21.95	32.25	1259	40.36	59.30	68.06	73.39
T3	3	♂	3210	2130	172	80	2.49	538	16.76	25.25	704	21.92	33.02	1242	38.68	58.28	66.36	71.71
		♀	2708	1887	143	60	2.22	531	19.61	28.13	581	21.45	30.77	1112	41.05	58.90	69.70	75.00
		♂	2959	2009	157	70	2.37	534	18.06	26.60	642	21.70	31.96	1177	39.76	58.57	67.89	73.21
T4	4	♂	3210	2201	170	62	1.95	595	18.52	27.02	712	22.18	32.36	1307	40.71	59.37	68.56	73.86
		♀	2928	2012	152	66	2.26	577	19.69	28.66	617	21.07	30.66	1194	40.76	59.32	68.71	73.89
		♂	3069	2107	161	64	2.10	586	19.08	27.80	665	21.65	31.55	1250	40.73	59.35	68.63	73.87

Statistical analysis – Cocks – body weight at 56 days of age – 1st part fattening

Tab. No. 15a

Treatment	Tr. No.	Tr. size	Average live weight	Standard deviation	Coefficient of variation	Standard error of mean	Precision select. average	Standard error of coeff. of variation
			g/ks	g/ks	%	g/ks	%	%
T1	1	73	2720.48	269.67	9.91	31.56	1.16	0.83
T2	2	73	2785.26	214.93	7.72	25.16	0.90	0.65
T3	3	70	2724.31	200.92	7.38	24.01	0.88	0.63
T4	4	57	2770.88	258.39	9.33	34.23	1.24	0.89

Statistical analysis – Cocks – body weight at 56 days of age – 2nd part fattening

Treatment	Tr. No.	Tr. size	Average live weight	Standard deviation	Coefficient of variation	Standard error of mean	Precision select. average	Standard error of coeff. of variation
			g/ks	g/ks	%	g/ks	%	%
T1	1	71	2848.32	223.85	7.86	26.57	0.93	0.67
T2	2	66	2849.86	250.49	8.79	30.83	1.08	0.78
T3	3	62	2816.26	284.13	10.09	36.09	1.28	0.92
T4	4	52	2861.69	302.08	10.56	41.89	1.46	1.06

Statistical analysis – Cocks – body weight at 56 days of age – 3rd part fattening

Treatment	Tr. No.	Tr. size	Average live weight	Standard deviation	Coefficient of variation	Standard error of mean	Precision select. average	Standard error of coeff. of variation
			g/ks	g/ks	%	g/ks	%	%
T1	1	200	3108.24	274.86	8.84	19.44	0.63	0.45
T2	2	200	3253.54	393.61	12.10	27.83	0.86	0.62
T3	3	176	3080.67	400.68	13.01	30.20	0.98	0.71
T4	4	197	3188.56	328.42	10.30	23.40	0.73	0.53

Statistical analysis – Cocks – body weight at 56 days of age – 4th part fattening

Treatment	Tr. No.	Tr. size	Average live weight	Standard deviation	Coefficient of variation	Standard error of mean	Precision select. average	Standard error of coeff. of variation
			g/ks	g/ks	%	g/ks	%	%
T1	1	88	2919.32	260.60	8.93	27.78	0.95	0.68
T2	2	87	2935.79	257.97	8.79	27.66	0.94	0.68
T3	3	94	2922.72	217.88	7.45	22.47	0.77	0.55
T4	4	92	2919.23	246.84	8.46	25.74	0.88	0.63

Statistical analysis – Hens – body weight at 56 days of age – 1st part fattening

Tab. No. 15b

Treatment	Tr. No.	Tr. size	Average live weight	Standard deviation	Coefficient of variation	Standard error of mean	Precision select. average	Standard error of coeff. of variation
			g/ks	g/ks	%	g/ks	%	%
T1	1	55	2248.45	196.93	8.76	26.55	1.18	0.85
T2	2	54	2354.69	148.97	6.33	20.27	0.86	0.62
T3	3	61	2351.11	137.43	5.85	17.60	0.75	0.54
T4	4	58	2320.86	221.56	9.55	29.09	1.25	0.90

Statistical analysis – Hens – body weight at 56 days of age – 2nd part fattening

Treatment	Tr. No.	Tr. size	Average live weight	Standard deviation	Coefficient of variation	Standard error of mean	Precision select. average	Standard error of coeff. of variation
			g/ks	g/ks	%	g/ks	%	%
T1	1	70	2319.64	183.45	7.91	21.93	0.95	0.68
T2	2	79	2355.62	193.04	8.19	21.72	0.92	0.66
T3	3	73	2382.33	202.01	8.48	23.64	0.99	0.71
T4	4	85	2350.64	208.69	8.88	22.64	0.96	0.69

Statistical analysis – Hens – body weight at 56 days of age – 3rd part fattening

Treatment	Tr. No.	Tr. size	Average live weight	Standard deviation	Coefficient of variation	Standard error of mean	Precision select. average	Standard error of coeff. of variation
			g/ks	g/ks	%	g/ks	%	%
T1	1	195	2744.20	315.50	11.50	22.59	0.82	0.59
T2	2	195	2787.18	348.83	12.52	24.98	0.90	0.65
T3	3	220	2666.89	327.01	12.26	22.05	0.83	0.59
T4	4	199	2720.12	306.31	11.26	21.71	0.80	0.57

Statistical analysis – Hens – body weight at 56 days of age – 4th part fattening

Treatment	Tr. No.	Tr. size	Average live weight	Standard deviation	Coefficient of variation	Standard error of mean	Precision select. average	Standard error of coeff. of variation
			g/ks	g/ks	%	g/ks	%	%
T1	1	86	2452.43	284.87	11.62	30.72	1.25	0.90
T2	2	88	2452.88	240.55	9.81	25.64	1.05	0.75
T3	3	81	2435.47	275.31	11.30	30.59	1.26	0.91
T4	4	82	2429.27	236.49	9.73	26.12	1.08	0.77