



MEZINÁRODNÍ TESTOVÁNÍ DRŮBEŽE
státní podnik, ÚSTRAŠICE

390 02 Tábor 2

Tel.: 381 200 320

**3rd part fattening test of the final product of test
of parents from of broilers**

XXXXXX

27. 3. 2024 - 1. 5. 2024

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Ústrašice, May 2024

1 Basic tests information

1.1 The basic dates

setting in the hatchery:	5 March 2024
beginning of test:	27 March 2024
end of the test:	1 May 2024

1.2 Location of the test

Mezinárodní testování drůbeže, s.p. Ústrašice, Czech Republic

2 Material and methods

2.1 Material

There were 2 different samples in this test. Each sample consisted of 1260 hatching eggs of broilers xxxxx. There were 780 chicken in each sample, divided into 6 pens (130 broilers in each pen).

The parent flock is 51 weeks old at the time of hatching eggs collection.

Sample No. 1 – xxxxx		Sample No. 2 – xxxxx	
Box of fattening	Box of breeding	Box of fattening	Box of breeding
1	54	2	53
3	52	4	51
5	50	31	55
6	49	33	57
32	56	35	59
34	58	36	60

In the sample 1 there was added xxxxx – 500 g/t to the feed Grower (BR2).

2.2 Housing system

Pullets were kept in windowless house with full control of the environment. They were kept in deep litter system. Manually filled tube feeders and nipple automatic drinkers were used.

2.3 Lighting programme

Pullets were kept in windowless house. All the birds were submitted to the following lighting programme.

Age	Hours of light	Hours of darkness
Day 1 – 7	23	1
Day 8 – 32	18	6
Day 33 – 35	23	1

2.4 Stocking density

16 broilers per square meter

2.5 Feeding

Feed was produced in xxxxx.

Day 1 – 9 Starter (BR1)

Day 10 – 26 Grower (BR2)

Day 27 – 35 Grower (BR3)

Diet formulas

	Starter BR1	Grower BR2	Grower BR3
Age	Days 1 - 9	Days 10 - 26	Day 27 - 35
Components (%)			
Wheat	43.48	50.95	58.08
Maize	15.00	13.00	10.00
Soybean extr.	32.25	30.95	26.65
Soybean extr. groats	3.00	-	
Fish meal	1.50	-	-
MCP – monocalciumphosphate	0.75	0.35	0.18
Calcium carbonate	1.24	1.08	0.98
Salt	0.21	0.23	0.23
Soybean oil	1.30	1.58	1.00
Animal fat	-	0.50	1.72
Sodium sulfate	0.11	0.12	0.11
Cholinchlorid	0.04	0.04	0.03
Premixes of amino acid	0.87	0.88	0.80
Vitamin and mineral supplement	0.25	0.32	0.22
Nutrient content			
Crude protein (g/kg)	229.06	208.75	194.55
Fat (g/kg)	38.63	39.55	45.23
Lysine (g/kg)	12.77	11.63	10.58
Methionine (g/kg)	6.38	5.78	5.27
Ca (g/kg)	9.32	7.79	6.91
P (g/kg)	4.85	4.01	3.60
Vitamin A (IU/kg)	15000	10000	10000
Vitamin D3 (IU/kg)	5000	5000	5000
ME (MJ/kg)	12.23	12.65	13.03

The feed was without coccidiostats. xxxxx (1 kg/tonne) was in every group of feed.

2.6 Veterinary precautions

The chicken house was disinfected by xxxxx before the chick placement. After the chicks hatched, a spray vaccination against coccidiosis (xxxxx) was applied. On the first days old chickens was applied to the water solution of permanganate. On days 1 and 12 chickens were vaccinated with xxxxx.

3 Parameters recorded

3.1 Live weight

Live weight was measured on days 1 and 9 (all the birds in each pen were weighed altogether). On day 26 birds were weighed individually without fasting. On day 35 birds were weighed individually, after 12 hours of fasting.

3.2 Feed conversion ratio (FCR)

Feed conversion ratio was calculated as feed consumption per 1 kg of live weight for the periods 1 – 9 days, 1 – 26 days and 1 – 35 days.

3.3 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.

3.4 Carcass analysis

The carcass analysis was done on 3 cocks and 3 hens per each pen on day 35. Breast muscles was weighed without skin and thigh muscles with bone and skin.

3.5 Statistical analyses

Performance results of live weight at the age of 35 days were statistically evaluated.

4 Results

Tab. No.	1	Hatchability
	2a	Broiler results at the age of 9 days
	2b	Broiler results at the age of 26 days
	2c	Broiler results at the age of 35 days
	3	Mortality during growing period at the age of 35 days
	4	Results of carcass analysis
	5	Statistical analysis
	6	Performance results per pen
	6a	Broiler results at the age of 9 days
	6b	Broiler results at the age of 26 days
	6c	Broiler results at the age of 35 days

Hatchability**Tab. No. 1**

Cross	Sample	Fertility	Hatchability		Birds housed	Average weight	
			Set	Fert.		hatch. eggs	1-day
		%	%	%		g	g
XXXXX	1	97.06	87.86	90.50	780	67.48	46.53
XXXXX	2	97.30	87.70	90.14	780	67.73	47.20

Broiler results at the age of 9 days**Tab. No. 2a**

Cross	Sample	Mortality		Live weight		FCR
		Birds	%	Birds	g	g
XXXXXX	1	6	0.77	774	257.04	951.88
XXXXXX	2	2	0.26	778	260.10	952.03

Broiler results at the age of 26 days**Tab. No. 2b**

Cross	Sample	Mortality		Live weight		FCR
		Birds	%	Birds	g	g
XXXXXX	1	14	1.79	766	1486.66	1346.51
XXXXXX	2	8	1.03	772	1474.41	1350.49

Broiler results at the age of 35 days

Tab. No. 2c

Cross	Sample	Male		Female		Average		FCR	IEV
		birds	live weight	birds	live weight	birds	live weight		
			g		g		g		
xxxxx	1	376	2423.06	366	2088.25	742	2257.91	1568.57	391
xxxxx	2	381	2442.99	366	2131.34	747	2290.29	1535.97	408

The fattening efficiency index (IEV) means the level of fattening and is characterized mainly by its length, feed consumption per 1 kg live weight, achieved live weight and percentage of chicken deaths.

Calculation:

$$\text{IEV} = \frac{\% \text{ live} \times \text{average weight at slaughter (kg)}}{\text{fattening length (days)} \times \text{feed consumption (kg / bw)}} \times 100$$

Mortality during the masts in 35 days

Tab. No. 3

Cross	Sample	Mortality in the period						Mortality according causes														
		1 - 9	10 - 26	27 - 35	1 - 35			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		birds	birds	birds	birds	g	%															
xxxxx	1	6	8	0	14	5335	1.79											10			4	24
xxxxx	2	2	6	1	9	6138	1.15											9				24

- 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 in 35 days

Tab. No. 4

Cross	Sample	Sex	Weight				Ratio of abd. fat to live weight	Breast meat without skin			Thigh meat with bone and skin			Breast meat and thighs			Carcass	
			Total	Body	Gibl.	Abd. fat		weight	percentage		weight	percentage		weight	percentage		value	quality
									total weight	body carcass		total weight	body carcass		total weight	body carcass		
			g	g	g	g		%	g	%	%	g	%	%	g	%	%	%
xxxxxx	1	♂	2343	1793	141	22	0.95	625	26.69	34.87	532	22.69	29.65	1157	49.38	64.53	76.53	82.54
		♀	2268	1519	122	22	0.96	532	23.46	35.02	454	20.01	29.88	986	43.47	64.90	66.99	72.35
		♂	2306	1656	131	22	0.95	579	25.10	34.94	493	21.38	29.76	1072	46.47	64.70	71.83	77.53
xxxxxx	2	♂	2361	1751	141	24	1.02	607	25.71	34.66	524	22.19	29.91	1131	47.90	64.57	74.19	80.15
		♀	2307	1552	120	23	1.01	541	23.44	34.85	456	19.78	29.41	997	43.22	64.26	67.25	72.47
		♂	2334	1651	131	24	1.02	574	24.59	34.75	490	21.00	29.67	1064	45.59	64.42	70.76	76.35

Statistical analysis - Body weight at 35 days of age

Tab. No. 5

Cross	Sample	Cocks				Hens			
		Sample size	Average	Standard deviation	Coefficient of variation	Sample size	Average	Standard deviation	Coefficient of variation
			g/birds	g/birds	%		g/birds	g/birds	%
XXXXX	1	376	2423.06	241.31	9.96	366	2088.25	216.82	10.38
XXXXX	2	381	2442.99	220.10	9.01	366	2131.34	203.72	9.56

Broiler results at the age of 9 days

Tab. No. 6a

Cross	Sample	Box	Mortality		Live weight		FCR
			birds	%	birds	g	g
xxxxx	1	1	1	0.77	129	247.29	998.51
		3	1	0.77	129	276.36	909.73
		5	1	0.77	129	251.16	918.05
		6	2	1.54	128	250.39	951.56
		32	0	0.00	130	251.54	987.77
		34	1	0.77	129	265.50	950.16
xxxxx	2	2	1	0.77	129	264.73	942.27
		4	1	0.77	129	259.69	978.20
		31	0	0.00	130	248.08	1017.05
		33	0	0.00	130	256.54	950.52
		35	0	0.00	130	261.15	907.22
		36	0	0.00	130	270.38	921.76

Broiler results at the age of 26 days

Tab. No. 6b

Cross	Sample	Box	Mortality		Live weight		FCR
			birds	%	birds	g	g
xxxxx	1	1	3	2.31	127	1407.12	1380.06
		3	4	3.08	126	1517.74	1284.83
		5	1	0.77	129	1519.37	1333.91
		6	3	2.31	127	1421.92	1421.27
		32	2	1.54	128	1560.87	1333.41
		34	1	0.77	129	1491.97	1332.85
xxxxx	2	2	2	1.54	128	1432.86	1385.27
		4	3	2.31	127	1501.68	1337.70
		31	0	0.00	130	1503.52	1358.59
		33	1	0.77	129	1452.05	1353.28
		35	1	0.77	129	1456.14	1317.27
		36	1	0.77	129	1500.08	1351.64

Broiler results at the age of 35 days

Tab. No. 6c

Cross	Sample	Box	Male		Female		Average		FCR	IEV
			birds	live weight	birds	live weight	birds	live weight		
				g		g		g		
xxxxx	1	1	63	2401.27	60	1955.67	123	2183.90	1583.67	373
		3	58	2445.52	64	2063.28	122	2245.00	1537.28	392
		5	62	2436.29	63	2100.63	125	2267.12	1561.53	399
		6	63	2344.29	60	2048.33	123	2199.92	1636.64	363
		32	64	2480.16	60	2206.00	124	2347.50	1557.82	411
		34	66	2431.52	59	2157.80	125	2302.32	1537.99	411
xxxxx	2	2	63	2396.98	61	2068.36	124	2235.32	1575.27	387
		4	61	2547.87	62	2119.68	123	2332.03	1518.31	415
		31	64	2479.38	62	2112.10	126	2298.65	1554.98	409
		33	64	2381.09	61	2199.18	125	2292.32	1520.39	414
		35	64	2417.81	60	2120.50	124	2273.95	1523.65	407
		36	65	2439.08	60	2169.17	125	2309.52	1524.30	416

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Calculation:

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