



MEZINÁRODNÍ TESTOVÁNÍ DRŮBEŽE  
státní podnik, ÚSTRAŠICE

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**1<sup>st</sup> part fattening test of the final product of 31. test  
of parents from of broilers**

**3. 5. 2022 - 28. 6. 2022**

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Ústrašice, October 2022

## 1 Basic tests information

### 1.1 The basic dates

setting in the hatchery: 11 April 2022  
beginning of test: 3 May 2022  
end of the test: 28 June 2022

### 1.2 Location of the test

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

## 2 Material and methods

### 2.1 Material

There were 4 different breeds in this test. 700 day old chicks JA (males and females) were divided by 35 birds per pen. Every treatment had 5 replications. The parent flock is 34 weeks old at the time of hatching eggs collection.

Treatment		Description
1	T1	xxxxx
2	T2	xxxxx
3	T3	xxxxx
4	T4	xxxxx

All the groups got xxxxx (1 kg/t).

All the groups got the yellow pigment (xxxxx) in the finisher phase at 50 g/t.

### 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 – 53	18	6
Day 54 – 56	23	1

### 2.4 Feeding

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

Day 1 – 21 Starter (BR1)  
Day 22 – 35 Grower (BR2)  
Day 36 – 56 Finisher (BR3)

## Diet formulas

	<b>Starter BR1</b>	<b>Grower BR2</b>	<b>Finisher BR3</b>
Age	Days 1 - 21	Days 22 - 35	Day 36 - 56
<b>Components (%)</b>			
Wheat	40.30	60.00	51.02
Soybean meal	33.80	29.00	25.00
Maize	17.00	20.00	15.00
Soybean oil	4.50	4.90	5.10
Limestone	1.50	1.28	1.24
MCP	1.30	1.40	1.10
Salt	0.30	0.30	0.30
Sodium bicarbonate	0.12	0.12	0.12
L-lysine	0.39	0.30	0.32
DL-methionine	0.09	0.09	0.10
L-threonine	0.20	0.20	0.20
Premix AMV BR1-PLUS 0,5%	0.50	-	-
Premix AMV BR2-PLUS 0,5%	-	0.50	-
Premix AMV BR3-PLUS 0,5%	-	-	0.50
<b>Nutrient content</b>			
Crude protein (g/kg)	200.19	183.34	169.36
ME (MJ/kg)	12.18	12.43	12.63
Lysine (g/kg)	14.26	12.36	11.51
Methionine (g/kg)	6.21	5.59	5.21
Met.+Cys. (g/kg)	9.93	9.10	8.54
Ca (g/kg)	9.62	8.74	7.96
P dig. (g/kg)	3.73	3.93	3.38
Na (g/kg)	1.57	1.57	1.57

### 2.5 Veterinary precautions

The chicken house was disinfected by xxxxx before the chick placement. On day 1 chickens were vaccinated with xxxxx.

No anticoccidials were not added to the diet. In order to prevent possible outbreaks of coccidiosis, an attenuated coccidiosis vaccine (xxxxx) with solvent was administrated as hatchery spray.

### **3 Parameters recorded**

#### **3.1 Live weight**

Live weight was measured on days 1 (all the birds in each pen were weighed altogether), 21 and 35 (all the birds were weighed individually, without fasting). On day 56 birds all the 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 – 21 days, 1 – 35 days and 1 – 56 days.

#### **3.3 Mortality**

All pens were checked twice 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 56. 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 56 days were statistically evaluated.

### **4 Results**

Tab. No.	1	Hatchability
	2a	Broiler results at the age of 21 days
	2b	Broiler results at the age of 35 days
	2c	Broiler results at the age of 56 days
	3	Mortality during growing period at the age of 56 days
	4	Results of carcass analysis
	5a	Statistical analysis - cocks
	5b	Statistical analysis - hens

**Hatchability**

Test: 31

Part fattening: 1

**Tab. No. 1**

Sample	Sample No.	Fertility	Hatchability		Birds housed	Average weight	
			Set	Fert.		hatch. eggs	1-day
		%	%	%		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

**Broiler results at the age of 21 days****Tab. No. 2a**

Test: 31

Part fattening: 1

Sample	Sample No.	Mortality		Average live weight at 21 days		FCR
		birds	%	birds	g	g
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 results at the age of 35 days****Tab. No. 2b**

Test: 31

Part fattening: 1

Sample	Sample No.	Mortality		Average live weight at 35 days		FCR
		birds	%	birds	g	g
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 results at the age of 56 days****Tab. No. 2c**

Test: 31

Part fattening: 1

Sample	Sample No.	Average live weight at 56 days						FCR
		male		female		average		
		birds	g	birds	g	birds	g	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



**Mortality during the masts in 56 days**

**Tab. No. 3**

Test: 31

Part fattening: 1

Sample	Sample 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

Causes: 1 – Viral diseases  
 2 – Bacterial diseases  
 3 – Moulds diseases  
 4 – Parasitary diseases  
 5 – Tumors

6 – Wounds  
 7 – Digestive track diseases  
 8 – Respiratory tract diseases  
 9 – Reproduction tract diseases  
 10 – Locomotion apparatus diseases

11 – Sudden death syndrome  
 12 – Cannibalism  
 13 – Yolk sac. infam.  
 14 – Culling and other causes  
 15 – Sampling (excluded of calculation)

Results of carcass analysis in 56 days

Tab. No. 4

Test: 31

Part fattening: 1

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	%	%	%
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
		♂	<b>2601</b>	<b>1908</b>	<b>141</b>	<b>65</b>	<b>2.51</b>	<b>513</b>	<b>19.73</b>	<b>26.91</b>	<b>639</b>	<b>24.58</b>	<b>33.52</b>	<b>1153</b>	<b>44.31</b>	<b>60.43</b>	<b>73.33</b>	<b>78.74</b>
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
		♂	<b>2597</b>	<b>1897</b>	<b>143</b>	<b>63</b>	<b>2.44</b>	<b>500</b>	<b>19.27</b>	<b>26.37</b>	<b>631</b>	<b>24.30</b>	<b>33.27</b>	<b>1131</b>	<b>43.57</b>	<b>59.64</b>	<b>73.05</b>	<b>78.55</b>
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
		♂	<b>2555</b>	<b>1854</b>	<b>145</b>	<b>63</b>	<b>2.45</b>	<b>490</b>	<b>19.18</b>	<b>26.43</b>	<b>617</b>	<b>24.16</b>	<b>33.29</b>	<b>1107</b>	<b>43.34</b>	<b>59.72</b>	<b>72.57</b>	<b>78.25</b>
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
		♂	<b>2604</b>	<b>1907</b>	<b>140</b>	<b>62</b>	<b>2.38</b>	<b>502</b>	<b>19.28</b>	<b>26.32</b>	<b>635</b>	<b>24.39</b>	<b>33.31</b>	<b>1137</b>	<b>43.67</b>	<b>59.63</b>	<b>73.24</b>	<b>78.60</b>

**Statistical analysis - Cocks on the age of 56 days**

**Tab. No. 5a**

Test: 31

Part fattening: 1

Cross	Sample	Sample size	Average	Standard deviation	Coefficient of variation	Standard error of mean	Precision select. average	Standard error of coeff. of variation
			g/birds	g/birds	%	g/birds	%	%
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 - Hens on the age of 56 days**

**Tab. No. 5b**

Test: 31

Part fattening: 1

Cross	Sample	Sample size	Average	Standard deviation	Coefficient of variation	Standard error of mean	Precision select. average	Standard error of coeff. of variation
			g/birds	g/birds	%	g/birds	%	%
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