



MEZINÁRODNÍ TESTOVÁNÍ DRŮBEŽE
státní podnik, ÚSTRAŠICE

390 02 Tábor 2

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**4th part fattening test
from the LIV. international parent test**

4. 6. 2026 - 6. 7. 2026

Study Investigator: Ing. Hana Horná
Ing. Markéta Krekulová

Ústrašice, August 2026

1 List of participants

Sample	Cross	Breeding organization	State
1	XXXXXX	XXXXXX	Germany
2	XXXXXX	XXXXXX	Netherlands
3	XXXXXX	XXXXXX	Germany
4	XXXXXX	XXXXXX	Netherlands
5	XXXXXX	XXXXXX	Germany
6	XXXXXX	XXXXXX	Germany
7	XXXXXX	XXXXXX	Germany
8	XXXXXX	XXXXXX	Germany
9	XXXXXX	XXXXXX	Netherlands
10	XXXXXX	XXXXXX	Germany
11	XXXXXX	XXXXXX	Germany
12	XXXXXX	XXXXXX	Netherlands

2 Basic tests information

2.1 The basic dates

setting in the hatchery:	13 May 2026
beginning of test:	4 June 2026
end of the test:	6 July 2026

2.2 Location of the test

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

3 Material and methods

3.1 Material

There were 12 different breeds in this test. Each sample consisted of 1080 hatching eggs. 560 broilers were sexed and placed always 280 females (in two pens) and 280 males (in two pens). Except sample 12, there were placed 270 females and 260 males. The parent flock is 60 weeks old at the time of hatching eggs collection.

3.2 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.

3.3 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 – 29	18	6
Day 30 – 32	23	1

3.4 Stocking density

17,2 broilers per square meter

3.5 Feeding

Feed was produced in xxxxx

Day 1 – 10 Starter (BR1)

Day 11 – 21 Grower (BR2-A)

Day 22 – 28 Grower (BR2-B)

Day 29 – 32 Finisher (BR3)

Diet formulas

	Starter BR1	Grower BR2-A	Grower BR2-B	Finisher BR3
Age	Day 1 - 10	Day 11 - 21	Day 22 - 28	Day 29 - 32
Components (%)				
Wheat	36.61	46.31	45.99	47.32
Maize	17.00	16.00	15.00	15.00
Soybean extr.	35.25	31.70	31.15	29.10
Soybean extr. groats	3.00	-	-	-
Fish meal	1.50	-	-	-
MCP – monocalciumphosphate	0.62	0.37	0.34	0.21
Calcium carbonate	1.23	1.05	1.02	0.95
Salt	0.21	0.23	0.23	0.23
Soybean oil	2.57	1.99	1.60	2.91
Animal fat	-	0.50	2.90	2.80
Sodium sulfate	0.11	0.13	0.12	0.12
Cholinchlorid	0.032	0.037	0.023	0.032
Premixes of amino acid	0.89	0.86	0.80	0.80
Vitamin and mineral supplement	0.68	0.53	0.53	0.33
AMV BR1 0,3 %	0.30	-	-	-
AMV BR2 0,3 %	-	0.30	0.30	-
AMV BR3 0,2 %	-	-	-	0.20
Nutrient content				
Crude protein (g/kg)	233.62	205.75	201.74	194.10
Fat (g/kg)	50.64	43.18	62.61	74.50
Lysine dig. (g/kg)	13.19	11.70	11.19	10.77
Methionine dig. (g/kg)	6.74	5.88	5.74	5.56
Ca phyt. (g/kg)	9.39	7.78	7.61	7.01
P dig. (g/kg)	4.71	3.89	3.81	3.50
Vitamin A (IU/kg)	15000	10000	10000	10000
Vitamin D3 (IU/kg)	5000	5000	5000	5000
ME (MJ/kg)	11.96	12.09	12.54	12.99

3.6 Veterinary precautions

The chicken house was disinfected by xxxxx before the chick placement. On the first days old chickens was applied to the water solution of permanganate. On days 1 and 12 chickens were vaccinated with xxxxx.

4 Parameters recorded

4.1 Live weight

Live weight was measured on days 1 (all the birds in each pen were weighed altogether), 7 and 14 (20 % of the birds were weighed altogether, without fasting). On day 32 birds were weighed individually, after 12 hours of fasting.

4.2 Feed conversion ratio (FCR)

Feed conversion ratio was calculated as feed consumption per 1 kg of live weight for the periods 1 – 14 days and 1 – 32 days.

4.3 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.

4.4 Carcass analysis

The carcass analysis was done on 20 cocks and 20 hens per each genotype on day 32. Breast muscles was weighed without skin and thigh muscles with bone and skin.

4.5 Statistical analyses

Performance results of live weight at the age of 32 days were statistically evaluated.

5 Results

Tab. No.	1	Hatchability
	2a	Broiler results at the age of 7 days
	2b	Broiler results at the age of 14 days
	2c	Broiler results at the age of 32 days
	3a	Mortality during growing period at the age of 14 days
	3b	Mortality during growing period at the age of 32 days
	4	Results of carcass analysis
	5a	Statistical analysis – cocks
	5b	Statistical analysis – hens

Hatchability**Tab. No. 1**

Test: 54

Part fattening: 4

Cross	Sample	Fertility	Hatchability		Birds housed	Average weight		
			Set	Fert.		hatch. eggs	1-day	
		%	%	%		g	♂ g	♀ g
XXXXXX	1	84.81	69.63	82.10	560	69.16	52.43	51.73
XXXXXX	2	82.50	62.69	75.98	560	65.13	48.80	48.66
XXXXXX	3	73.89	61.57	83.33	560	72.80	56.06	54.44
XXXXXX	4	78.43	57.87	73.79	560	70.71	51.76	51.87
XXXXXX	5	80.74	67.31	83.37	560	70.50	52.54	52.08
XXXXXX	6	70.56	54.35	77.03	560	72.64	54.09	53.98
XXXXXX	7	89.91	69.72	77.55	560	73.11	52.25	52.04
XXXXXX	8	85.19	72.22	84.78	560	72.07	54.26	53.59
XXXXXX	9	72.96	53.33	73.10	560	67.35	48.59	47.99
XXXXXX	10	79.44	63.80	80.30	560	72.67	54.05	53.49
XXXXXX	11	91.30	76.39	83.67	560	70.00	52.08	51.80
XXXXXX	12	66.48	49.44	74.37	530	68.97	50.42	49.34

This is the true fertility (broken eggs) not the candling fertility.

Broiler results at the age of 7 days

Tab. No. 2a

Test: 54

Part fattening: 4

Cross	Sample	Average live weight at 7 days								
		male			female			average		
		mortality		live weight	mortality		live weight	mortality		live weight
		birds	%	g	birds	%	g	birds	%	g
XXXXXX	1	0	0.00	218.17	1	0.36	209.17	1	0.18	213.67
XXXXXX	2	0	0.00	204.17	0	0.00	196.00	0	0.00	200.08
XXXXXX	3	1	0.36	221.50	1	0.36	211.67	2	0.36	216.58
XXXXXX	4	0	0.00	193.17	0	0.00	193.33	0	0.00	193.25
XXXXXX	5	0	0.00	218.83	0	0.00	212.33	0	0.00	215.58
XXXXXX	6	0	0.00	217.83	1	0.36	207.50	1	0.18	212.68
XXXXXX	7	0	0.00	220.50	0	0.00	210.33	0	0.00	215.42
XXXXXX	8	0	0.00	225.67	1	0.36	199.33	1	0.18	212.52
XXXXXX	9	0	0.00	200.83	1	0.36	195.17	1	0.18	198.01
XXXXXX	10	0	0.00	211.67	1	0.36	212.83	1	0.18	212.25
XXXXXX	11	0	0.00	222.00	1	0.36	217.33	1	0.18	219.67
XXXXXX	12	0	0.00	201.17	1	0.37	194.83	1	0.19	197.95

Broiler results at the age of 14 days
Tab. No. 2b

Test: 54

Part fattening: 4

Cross	Sample	Average live weight at 14 days								
		male			female			average		
		birds	live weight	FCR	birds	live weight	FCR	birds	live weight	FCR
			g	g		g	g		g	g
xxxxxx	1	278	623.17	938.58	278	549.67	1027.44	556	586.42	980.22
xxxxxx	2	278	530.83	1128.94	280	490.00	1107.87	558	510.34	1118.79
xxxxxx	3	279	613.17	954.56	278	543.33	1062.59	557	578.31	1005.21
xxxxxx	4	279	533.17	1100.48	279	486.67	1170.28	558	509.92	1133.79
xxxxxx	5	278	622.33	942.15	279	540.83	1048.43	557	581.51	991.66
xxxxxx	6	278	623.83	935.27	278	545.83	1076.17	556	584.83	1001.02
xxxxxx	7	279	615.00	983.77	278	541.67	1059.21	557	578.40	1019.03
xxxxxx	8	279	607.33	997.37	279	514.33	1115.69	558	560.83	1051.62
xxxxxx	9	279	528.33	1088.16	278	490.83	1204.82	557	509.62	1144.24
xxxxxx	10	277	607.67	976.10	277	543.67	1065.77	554	575.67	1018.44
xxxxxx	11	279	625.33	968.09	278	547.33	1050.22	557	586.40	1006.35
xxxxxx	12	257	533.17	1147.98	268	494.33	1126.95	525	513.34	1137.64

Broiler results at the age of 32 days

Tab. No. 2c

Test: 54

Part fattening: 4

Cross	Sample	Average live weight at 32 days								
		male			female			average		
		birds	live weight	FCR	birds	live weight	FCR	birds	live weight	FCR
			g	g		g	g		g	g
xxxxx	1	274	2332.08	1314.11	276	1976.59	1389.08	550	2153.69	1348.64
xxxxx	2	271	1945.09	1454.70	277	1906.10	1352.11	548	1925.38	1403.36
xxxxx	3	275	2309.13	1362.81	277	2148.12	1377.07	552	2228.33	1369.71
xxxxx	4	276	2203.01	1385.46	278	2090.86	1362.21	554	2146.73	1374.10
xxxxx	5	275	2329.20	1344.51	278	1901.15	1431.17	553	2114.01	1383.69
xxxxx	6	266	2397.33	1368.69	275	2078.58	1447.67	541	2235.30	1406.02
xxxxx	7	275	2213.56	1390.60	273	1960.22	1458.50	548	2087.35	1422.36
xxxxx	8	270	2382.67	1352.05	278	2020.86	1453.19	548	2199.12	1399.20
xxxxx	9	271	2129.23	1447.61	272	1751.58	1564.34	543	1940.06	1500.40
xxxxx	10	264	2397.58	1264.38	275	2056.11	1444.92	539	2223.36	1349.56
xxxxx	11	270	2217.48	1398.98	275	1936.76	1380.18	545	2075.83	1390.13
xxxxx	12	251	2164.94	1391.98	264	1802.39	1456.19	515	1979.09	1421.96

Mortality in the age 14 days

Tab. No. 3a

Test: 54

Part fattening: 4

Cross	Sample	Mortality in the period						Mortality according causes													
		male		female		total		1	2	3	4	5	6	7	8	9	10	11	12	13	14
		birds	%	birds	%	birds	%														
XXXXXX	1	2	0.71	2	0.71	4	0.71											3			1
XXXXXX	2	2	0.71	0	0.00	2	0.36											2			
XXXXXX	3	1	0.36	2	0.71	3	0.54											3			
XXXXXX	4	1	0.36	1	0.36	2	0.36											2			
XXXXXX	5	2	0.71	1	0.36	3	0.54											3			
XXXXXX	6	2	0.71	2	0.71	4	0.71											4			
XXXXXX	7	1	0.36	2	0.71	3	0.54											3			
XXXXXX	8	1	0.36	1	0.36	2	0.36											2			
XXXXXX	9	1	0.36	2	0.71	3	0.54											1			2
XXXXXX	10	3	1.07	3	1.07	6	1.07											5			1
XXXXXX	11	1	0.36	2	0.71	3	0.54											3			
XXXXXX	12	3	1.15	2	0.74	5	0.94											5			

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

Mortality during the masts in 32 days

Tab. No. 3b

Test: 54

Part fattening: 4

Cross	Sample	Mortality in the period						Mortality according causes													
		1 - 14		15 - 32		1 - 32		1	2	3	4	5	6	7	8	9	10	11	12	13	14
		birds	%	birds	%	birds	%														
XXXXXX	1	4	0.71	6	1.07	10	1.79											9			1
XXXXXX	2	2	0.36	10	1.79	12	2.14										1	11			
XXXXXX	3	3	0.54	5	0.89	8	1.43											8			
XXXXXX	4	2	0.36	4	0.71	6	1.07											6			
XXXXXX	5	3	0.54	4	0.71	7	1.25											7			
XXXXXX	6	4	0.71	15	2.68	19	3.39											19			
XXXXXX	7	3	0.54	9	1.61	12	2.14											12			
XXXXXX	8	2	0.36	10	1.79	12	2.14										2	10			
XXXXXX	9	3	0.54	14	2.50	17	3.04										1	14			2
XXXXXX	10	6	1.07	15	2.68	21	3.75											19			2
XXXXXX	11	3	0.54	12	2.14	15	2.68											15			
XXXXXX	12	5	0.94	10	1.89	15	2.83										1	14			

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

Results of carcass analysis in 32 days
Tab. No. 4 (page 1)

Test: 54

Part fattening: 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	♂	2313	1632	134	20	0.88	561	24.23	34.35	496	21.44	30.40	1057	45.68	64.75	70.54	76.35
		♀	1980	1434	117	23	1.18	486	24.53	33.86	424	21.44	29.59	910	45.97	63.44	72.46	78.38
		♂	2146	1533	126	22	1.02	523	24.37	34.12	460	21.44	30.02	983	45.81	64.14	71.42	77.29
xxxxxx	2	♂	2137	1484	129	22	1.01	477	22.32	32.14	461	21.58	31.08	938	43.89	63.22	69.43	75.46
		♀	1907	1350	120	24	1.27	447	23.45	33.11	402	21.11	29.81	849	44.55	62.92	70.81	77.08
		♂	2022	1417	124	23	1.13	462	22.85	32.60	432	21.36	30.47	894	44.20	63.08	70.08	76.22
xxxxxx	3	♂	2338	1679	137	25	1.07	573	24.50	34.12	515	22.03	30.68	1088	46.54	64.80	71.81	77.65
		♀	2128	1541	122	28	1.32	527	24.75	34.16	458	21.53	29.73	985	46.28	63.89	72.43	78.14
		♂	2233	1610	129	27	1.19	550	24.62	34.14	487	21.79	30.22	1036	46.41	64.37	72.11	77.89
xxxxxx	4	♂	2209	1575	137	25	1.12	530	24.00	33.66	478	21.65	30.36	1008	45.65	64.03	71.30	77.52
		♀	2042	1451	125	30	1.47	498	24.40	34.34	433	21.19	29.82	931	45.59	64.16	71.06	77.17
		♂	2125	1513	131	27	1.29	514	24.19	33.99	455	21.43	30.10	970	45.62	64.09	71.19	77.35
xxxxxx	5	♂	2307	1655	136	22	0.97	563	24.40	34.01	510	22.12	30.83	1073	46.52	64.84	71.75	77.63
		♀	2002	1444	114	25	1.26	500	24.99	34.63	439	21.92	30.38	939	46.91	65.01	72.16	77.86
		♂	2154	1550	125	24	1.11	531	24.67	34.30	474	22.03	30.62	1006	46.70	64.92	71.94	77.74
xxxxxx	6	♂	2495	1801	145	25	1.01	611	24.47	33.90	556	22.26	30.84	1166	46.73	64.74	72.18	77.98
		♀	2103	1522	121	28	1.32	514	24.47	33.80	456	21.70	29.98	971	46.17	63.79	72.38	78.14
		♂	2299	1661	133	26	1.15	562	24.47	33.85	506	22.01	30.45	1068	46.48	64.30	72.27	78.05

Results of carcass analysis in 32 days

Tab. No. 4 (page 2)

Test: 54

Part fattening: 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			%	%		%	%		%	%		
xxxxxx	7	♂	2313	1650	135	20	0.86	543	23.46	32.89	513	22.17	31.09	1056	45.63	63.99	71.32	77.17
		♀	1940	1386	117	22	1.14	474	24.42	34.17	420	21.68	30.33	894	46.10	64.50	71.47	77.48
		♂	2126	1518	126	21	0.99	508	23.90	33.48	467	21.95	30.74	975	45.85	64.22	71.39	77.31
xxxxxx	8	♂	2421	1730	144	23	0.95	575	23.73	33.22	527	21.78	30.48	1102	45.51	63.70	71.45	77.39
		♀	2054	1486	124	24	1.19	502	24.43	33.75	450	21.89	30.25	951	46.32	64.00	72.38	78.41
		♂	2242	1611	134	24	1.06	539	24.04	33.46	489	21.83	30.37	1028	45.87	63.83	71.86	77.84
xxxxxx	9	♂	2165	1533	129	22	1.01	526	24.31	34.34	453	20.93	29.57	980	45.25	63.91	70.80	76.77
		♀	1794	1275	108	26	1.42	432	24.09	33.90	371	20.70	29.13	803	44.80	63.03	71.06	77.07
		♂	1979	1404	119	24	1.20	479	24.21	34.14	412	20.83	29.37	892	45.04	63.51	70.92	76.91
xxxxxx	10	♂	2469	1775	140	24	0.98	587	23.78	33.08	548	22.18	30.85	1135	45.96	63.93	71.90	77.56
		♀	2090	1506	116	25	1.22	517	24.72	34.31	455	21.76	30.20	971	46.48	64.51	72.06	77.59
		♂	2279	1640	128	25	1.09	552	24.21	33.64	501	21.99	30.55	1053	46.20	64.20	71.97	77.57
xxxxxx	11	♂	2249	1589	133	23	1.01	526	23.41	33.12	483	21.47	30.37	1009	44.87	63.49	70.68	76.58
		♀	1949	1392	117	24	1.25	471	24.14	33.80	411	21.07	29.50	881	45.21	63.30	71.43	77.44
		♂	2099	1491	125	24	1.12	498	23.75	33.43	447	21.28	29.97	945	45.03	63.40	71.03	76.98
xxxxxx	12	♂	2226	1577	134	23	1.03	525	23.60	33.31	474	21.31	30.08	1000	44.91	63.39	70.85	76.87
		♀	1844	1312	113	22	1.20	436	23.65	33.23	385	20.88	29.34	821	44.53	62.56	71.17	77.29
		♂	2035	1445	123	23	1.11	481	23.62	33.27	430	21.12	29.74	910	44.74	63.01	71.00	77.06

Statistical analysis - Cocks on the age of 32 days

Tab. No. 5a

Test: 54

Part fattening: 4

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	%	%
xxxxxx	1	274	2332.08	319.09	13.68	19.28	0.83	0.60
xxxxxx	2	271	1945.09	243.55	12.52	14.79	0.76	0.55
xxxxxx	3	275	2309.13	215.62	9.34	13.00	0.56	0.40
xxxxxx	4	276	2203.01	331.11	15.03	19.93	0.90	0.66
xxxxxx	5	275	2329.20	217.30	9.33	13.10	0.56	0.40
xxxxxx	6	266	2397.33	244.52	10.20	14.99	0.63	0.45
xxxxxx	7	275	2213.56	219.49	9.92	13.24	0.60	0.43
xxxxxx	8	270	2382.67	255.95	10.74	15.58	0.65	0.47
xxxxxx	9	271	2129.23	243.37	11.43	14.78	0.69	0.50
xxxxxx	10	264	2397.58	273.81	11.42	16.85	0.70	0.50
xxxxxx	11	270	2217.48	229.68	10.36	13.98	0.63	0.45
xxxxxx	12	251	2164.94	272.37	12.58	17.19	0.79	0.57

Statistical analysis - Hens on the age of 32 days

Tab. No. 5b

Test: 54

Part fattening: 4

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	%	%
XXXXXX	1	276	1976.59	238.95	12.09	14.38	0.73	0.52
XXXXXX	2	277	1906.10	259.61	13.62	15.60	0.82	0.59
XXXXXX	3	277	2148.12	250.77	11.67	15.07	0.70	0.50
XXXXXX	4	278	2090.86	289.78	13.86	17.38	0.83	0.60
XXXXXX	5	278	1901.15	195.16	10.27	11.70	0.62	0.44
XXXXXX	6	275	2078.58	210.46	10.13	12.69	0.61	0.44
XXXXXX	7	273	1960.22	207.73	10.60	12.57	0.64	0.46
XXXXXX	8	278	2020.86	196.56	9.73	11.79	0.58	0.42
XXXXXX	9	272	1751.58	239.99	13.70	14.55	0.83	0.60
XXXXXX	10	275	2056.11	238.68	11.61	14.39	0.70	0.50
XXXXXX	11	275	1936.76	194.55	10.05	11.73	0.61	0.43
XXXXXX	12	264	1802.39	242.50	13.45	14.92	0.83	0.60