



MEZINÁRODNÍ TESTOVÁNÍ DRŮBEŽE ÚSTRAŠICE

státní podnik

390 02 Tábor 2

Česká republika

Final report

PEKIN – TEST No. 181

XXXXXX

10 September – 28 October 2025

Study Investigator: **Jana Mlyniská Härtelová**
Ing. Markéta Krekulová

Ústrašice, December 2025

Basic tests information

The basic dates

Beginning of the test: 11 August 2025 (put into the incubator)
10 September 2025 (day old ducklings)
End of the test: 28 October 2025 – 49 days of age

Location

Mezinárodní testování drůbeže, s.p. Ústrašice – Testační stanice vodní drůbeže (Test station of water fowl).

Material and methods

Material

There were three treatments. 300 ducklings (150 males and 150 females) in the first sample, 400 ducklings (200 males and 200 females) in the second sample and 400 ducklings (200 males and 200 females) in the third sample. Total there were 1100 ducklings.

Origin of hatching eggs:

Sample No.	Sample	Breeding organization
1	XXXXXX	XXXXXX
2	XXXXXX	XXXXXX
3	XXXXXX	XXXXXX

Housing system

Ducklings were housed in deep litter rearing. Drinking water was supplied ad libitum by automatic nipple drinkers. Each pen was equipped with manually filled tube feeders.

Lighting program	Day 1 – 7	23 hours of light
	Day 8 – 37	18 hours of light
	Day 38 – 49	23 hours of light

Stocking density	Day 1 – 21	10.81 birds/m ²
	Day 22 – 49	4.28 birds/m ²

Feeding

Feed was produced in xxxxx.

Day 1 – 21	Starter “VKCH 1“
Day 22 – 35	Grower “VKCH 2”
Day 36 – 49	Finisher “VKCH 3“

Formulas of the feed

Components (%)	VKCH 1	VKCH 2	VKCH 3
Maize	10.000	10.000	7.000
Wheat	45.710	59.520	63.280
Extr. soybean meal	27.500	14.500	11.500
Rape seed meal	5.000	5.000	5.000
Wheat brans	5.000	4.000	7.000
Soybean oil	2.400	3.200	2.500
DL-methionine	0.290	0.160	0.170
L-lysine HCl	0.310	0.300	0.230
L-threonine	0.130	0.160	0.200
Limestone	1.410	1.750	1.750
MCP-monocalciumphosphate	1.200	0.400	0.400
Soda bicarbona	0.100	0.180	0.180
NaCl	0.400	0.300	0.260
Aminovitan VKCH-1 spec 0,2%	0.200	-	-
Aminovitan VKCH-2 spec 0,2%	-	0.200	0.200
Premix of cholin-chlorid 0,3%	0.300	0.300	0.300
Avizyme Porzyme XP	0.050	-	-
Axtra PHY 1500L+Xyl. 40000L	-	0.030	0.030
Nutrients (calculated values):			
CP (%)	22.369	18.088	17.285
ME (MJ/kg)	11.912	12.875	12.589
Lysine (g/kg)	13.411	10.054	8.862
Methionine (g/kg)	6.090	4.255	4.253
Threonine (g/kg)	9.052	7.503	7.546
Ca (g/kg)	10.482	10.258	10.240
P (g/kg)	7.463	5.138	5.337
Na (g/kg)	1.989	1.823	1.669

Veterinary precautions

The house were disinfected by xxxxx before the duck placement. There was used the wet disinfection and the gaseous disinfection.

Parameters recorded and Methods applied

Live weight

Live weight was measured on day 1 (all the birds in each pen were weighed altogether). On days 21, 35 and 42 (all the birds were weighed individually, without fasting) and 49 (all the birds were weighed individually after 12 hours of fasting).

Weight gain and average daily weight gain

Weight gains were calculated for the periods 1-21 days, 22-35 days, 36-42 days, 43-49 days and for the overall experiment (1-49 days).

Feed conversion ratio

Feed consumption per 1 kg of live weight was recorded per pen on days 21, 35, 42 and 49.

Feed consumption

Feed consumption was calculated for the periods 1-21 days, 22-35 days, 36-42 days, 43-49 days and for the overall experiment (1-49 days).

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.

Carcass analysis

The carcass analysis was done at 42 days and 49 days. The breast muscles were weighed with skin and thigh muscles were weighed with skin.

Statistical analyses

Performance results of final live weight (on days 49) were statistically evaluated.

Scheme of carcass analysis

Day of carcass analysis	Sample No.	Pen no.	Ducks per pen	Total ducks per treatment	Total ducks per day
42	1	1 (♂)	10	40	120
		1 (♀)	10		
		4 (♂)	10		
		4 (♀)	10		
	2	2 (♂)	10	40	
		2 (♀)	10		
		5 (♂)	10		
		5 (♀)	10		
	3	3 (♂)	10	40	
		3 (♀)	10		
		6 (♂)	10		
		6 (♀)	10		
49	1	1 (♂)	10	40	120
		1 (♀)	10		
		4 (♂)	10		
		4 (♀)	10		
	2	2 (♂)	10	40	
		2 (♀)	10		
		5 (♂)	10		
		5 (♀)	10		
	3	3 (♂)	10	40	
		3 (♀)	10		
		6 (♂)	10		
		6 (♀)	10		

Results

Tab. No.	1 Hatching results
	2 Performance results:
	2a Body weight
	2b Weight gain
	2c Feed conversion ratio
	2d Feed consumption
	3a Results of carcass analysis at the age 42
	3b Results of carcass analysis at the age 49
	4 Mortality
	5 Statistical analysis
	6 Performance results per pen:
	6a Body weight
	6b Weight gain
	6c Feed conversion ratio
	6d Feed consumption

Hatching results**Tab. No. 1**

Sample	Sample No.	Fertility	Hatchability		Birds housed		Average weight		
			Set eggs	Fertilized eggs	Males	Females	Hatching eggs	Day old males	Day old females
		%	%	%	number	number	g	g	g
xxxxxx	1	81.63	42.50	52.07	150	150	93.06	54.90	54.20
xxxxxx	2	88.40	52.00	58.82	200	200	83.70	48.50	48.10
xxxxxx	3	92.20	67.10	72.78	200	200	89.73	49.50	48.90

Performance results
Body weight per phases

Tab. No. 2a

Sample	Sample No.	Day 1		Day 21		Day 35		Day 42		Day 49	
		Birds	Average body weight	Birds	Average body weight	Birds	Average body weight	Birds	Average body weight	Birds	Average body weight
			g		g		g		g		g
xxxxxx	1	300	54.55	300	1586.03	300	3432.58	298	4076.12	246	4351.12
xxxxxx	2	400	48.30	400	1468.54	400	3161.45	399	3787.49	353	4028.17
xxxxxx	3	400	49.20	398	1415.15	397	3018.02	395	3593.21	350	3828.95

Sample	Sample No.	Sex	Day 1		Day 21		Day 35		Day 42		Day 49	
			Birds	Average body weight	Birds	Average body weight	Birds	Average body weight	Birds	Average body weight	Birds	Average body weight
				g		g		g		g		g
xxxxxx	1	♂	150	54.90	150	1602.39	150	3443.65	149	4162.74	122	4539.07
		♀	150	54.20	150	1569.67	150	3421.51	149	3989.50	124	4166.21
xxxxxx	2	♂	200	48.50	200	1490.01	200	3211.90	199	3890.36	176	4170.51
		♀	200	48.10	200	1447.08	200	3111.00	200	3685.13	177	3886.64
xxxxxx	3	♂	200	49.50	199	1431.47	198	3055.71	197	3688.87	173	3939.20
		♀	200	48.90	199	1398.83	199	2980.52	198	3498.04	177	3721.19

Weight gain per phases
Tab. No. 2b

Sample	Sample No.	Day 1 - 21		Day 22 - 35		Day 36 - 42		Day 43 - 49		Day 1 - 49	
		Weight gain per phase	Daily weight gain	Weight gain per phase	Weight gain per phase	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	g	g
xxxxx	1	1531.48	72.93	1846.55	131.90	643.54	71.50	275.00	39.29	4296.57	87.69
xxxxx	2	1420.24	67.63	1692.91	120.92	626.04	69.56	240.68	34.38	3979.87	81.22
xxxxx	3	1365.95	65.05	1602.87	114.49	575.19	63.91	235.74	33.68	3779.75	77.14

Sample	Sample No.	Sex	Day 1 - 21		Day 22 - 35		Day 36 - 42		Day 43 - 49		Day 1 - 49	
			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	Weight gain per phase	Daily weight gain
			g	g	g	g	g	g	g	g	g	g
xxxxx	1	♂	1547.49	73.69	1841.26	131.52	719.09	102.73	376.32	53.76	4484.17	91.51
		♀	1515.47	72.17	1851.85	132.27	567.98	81.14	176.71	25.24	4112.01	83.92
xxxxx	2	♂	1441.51	68.64	1721.89	122.99	678.47	96.92	280.15	40.02	4122.01	84.12
		♀	1398.98	66.62	1663.92	118.85	574.13	82.02	201.51	28.79	3838.54	78.34
xxxxx	3	♂	1381.97	65.81	1624.24	116.02	633.17	90.45	250.33	35.76	3889.70	79.38
		♀	1349.93	64.28	1581.69	112.98	517.51	73.93	223.15	31.88	3672.29	74.94

Feed conversion ratio (Feed consumption per 1 kg of live weight)**Tab. No. 2c**

Sample	Sample No.	Feed conversion ratio			
		Day 21	Day 35	Day 42	Day 49
		g/kg LW	g/kg LW	g/kg LW	g/kg LW
xxxxx	1	1346.55	1565.88	1952.44	2801.35
xxxxx	2	1394.92	1623.23	2020.30	2769.24
xxxxx	3	1367.47	1543.21	1925.78	2667.27

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

Sample	Sample No.	Feed consumption				
		Starter (1-21 days)	Grower (22-35 days)	Finisher (36-42 days)	Finisher (43-49 days)	Total
		kg	kg	kg	kg	kg
xxxxxx	1	640.70	971.80	759.10	626.90	2998.50
xxxxxx	2	819.40	1233.30	1000.40	884.60	3937.70
xxxxxx	3	770.20	1078.80	884.30	841.20	3574.50

Results of carcass analysis with skin at the age 42 days

Tab. No. 3a

Sample	Sample No.	Sex	Weight				Ratio of abd. fat to live weight	Breast muscles with skin			Thigh muscles with skin			Total muscles with skin			Carcass	
			Total	Body	Gibl.	Abd. fat		Weight	Percentage		Weight	Percentage		Weight	Percentage		Value	Yield
									Total weight	Body carcass		Total weight	Body carcass					
g	g	g	g	%	g	%	%	g	%	%	g	%	%	%	%			
xxxxxx	1	♂	4333	2834	383	47	1.07	818	18.87	28.85	658	15.19	23.22	1476	34.06	52.07	65.42	74.25
		♀	4111	2679	338	46	1.12	774	18.84	28.91	594	14.44	22.16	1368	33.28	51.07	65.16	73.37
		Ø	4222	2756	360	46	1.10	796	18.86	28.88	626	14.83	22.71	1422	33.68	51.59	65.29	73.82
xxxxxx	2	♂	3978	2538	368	40	1.00	717	18.02	28.24	585	14.70	23.03	1301	32.72	51.27	63.81	73.06
		♀	3753	2408	310	47	1.26	726	19.35	30.15	545	14.53	22.64	1271	33.88	52.79	64.17	72.43
		Ø	3865	2473	339	44	1.13	721	18.66	29.17	565	14.61	22.84	1286	33.28	52.01	63.98	72.75
xxxxxx	3	♂	3655	2293	336	36	0.97	655	17.93	28.57	522	14.29	22.77	1177	32.22	51.34	62.75	71.93
		♀	3368	2230	303	36	1.07	659	19.58	29.57	508	15.08	22.79	1167	34.66	52.36	66.20	75.20
		Ø	3511	2261	319	36	1.02	657	18.72	29.06	515	14.67	22.78	1172	33.39	51.84	64.40	73.50

Results of carcass analysis with skin at the age 49 days

Tab. No. 3b

Sample	Sample No.	Sex	Weight				Ratio of abd. fat to live weight	Breast muscles with skin			Thigh muscles with skin			Total muscles with skin			Carcass	
			Total	Body	Gibl.	Abd. fat		Weight	Percentage		Weight	Percentage		Weight	Percentage		Value	Yield
									Total weight	Body carcass		Total weight	Body carcass					
g	g	g	g	%	g	%	%	g	%	%	g	%	%	%	%			
xxxxxx	1	♂	4280	2919	394	53	1.23	914	21.36	31.31	640	14.95	21.92	1554	36.31	53.23	68.20	77.42
		♀	3914	2672	342	50	1.28	852	21.77	31.89	588	15.02	22.01	1440	36.79	53.90	68.26	77.01
		Ø	4097	2795	368	51	1.26	883	21.55	31.59	614	14.99	21.96	1497	36.54	53.55	68.23	77.22
xxxxxx	2	♂	4124	2829	387	58	1.42	870	21.09	30.75	616	14.93	21.76	1485	36.02	52.51	68.59	77.98
		♀	3840	2620	334	56	1.45	827	21.54	31.57	562	14.65	21.46	1390	36.19	53.03	68.24	76.95
		Ø	3982	2725	361	57	1.43	849	21.31	31.15	589	14.79	21.62	1438	36.10	52.76	68.42	77.48
xxxxxx	3	♂	4496	3055	406	50	1.11	981	21.81	32.10	651	14.48	21.30	1632	36.29	53.40	67.96	76.99
		♀	4194	2946	368	65	1.55	920	21.93	31.22	618	14.73	20.97	1537	36.66	52.19	70.24	79.00
		Ø	4345	3000	387	57	1.32	950	21.87	31.67	634	14.60	21.14	1584	36.47	52.81	69.06	77.96

Mortality

Tab. No. 4

Sample	Sample No.	Mortality in the period						Mortality according causes													
		Day 1-21	Day 22-35	Day 36-42	Day 43-49	Day 1-49		1	2	3	4	5	6	7	8	9	10	11	12	13	14
		birds	birds	birds	birds	birds	%														
xxxxxx	1	0	0	2	12	14	4.67										12	2			
xxxxxx	2	0	0	1	6	7	1.75										5	2			
xxxxxx	3	2	1	2	5	10	2.50										9	1			

Sample	Sample No.	Sex	Mortality in the period						Mortality according causes													
			Day 1-21	Day 22-35	Day 36-42	Day 43-49	Day 1–49		1	2	3	4	5	6	7	8	9	10	11	12	13	14
			birds	birds	birds	birds	birds	%														
xxxxxx	1	♂	0	0	1	7	8	5.33										6	2			
		♀	0	0	1	5	6	4.00										6				
xxxxxx	2	♂	0	0	1	3	4	2.00										2	2			
		♀	0	0	0	3	3	1.50										3				
xxxxxx	3	♂	1	1	1	4	7	3.50										6	1			
		♀	1	0	1	1	3	1.50										3				

Diagnostic:

1 - Virus caused diseases
 2 - Bacteria caused diseases
 3 - Mould caused diseases
 4 - Parasite caused diseases
 5 - Tumors

6 - Injuries
 7 - Gastrointest diseases
 8 - Respiratory diseases
 9 - Reproduct. org. diseases
 10 - Mobility app. diseases

11 - Sudden death syndrome
 12 - Cannibalism
 13 - Yolk sac. inflam.
 14 - Other causes

Statistical analysis of body weight on day 49

Tab. No. 5

Sample	Sample No.	Males				Females			
		Number of birds	Average body weight	Divergence valuation	Variations coeff. valuation	Number of birds	Average body weight	Divergence valuation	Variations coeff. valuation
			g/birds	g/birds	%		g/birds	g/birds	%
xxxxxx	1	122	4539.07	722.52	15.92	124	4166.21	518.67	12.45
xxxxxx	2	176	4170.51	502.76	12.06	177	3886.64	376.44	9.69
xxxxxx	3	173	3939.20	480.70	12.20	177	3721.19	367.25	9.87

Performance results per pen

Body weight per phases

Tab. No. 6a

Sample	Sample No.	Pen	Sex	Day 1		Day 21		Day 35		Day 42		Day 49	
				Birds	Average body weight	Birds	Average body weight	Birds	Average body weight	Birds	Average body weight	Birds	Average body weight
					g		g		g		g		g
xxxxxx	1	1	♂	100	54.60	100	1574.40	100	3340.93	100	4056.19	84	4493.92
			♀	100	54.00	100	1529.92	100	3359.47	100	3915.02	86	4103.97
		4	♂	50	55.20	50	1658.38	50	3649.10	49	4380.20	38	4638.87
			♀	50	54.40	50	1649.16	50	3545.60	49	4141.49	38	4307.08
xxxxxx	2	2	♂	100	49.00	100	1494.89	100	3223.12	100	3974.50	89	4185.62
			♀	100	48.40	100	1480.08	100	3155.13	100	3797.81	89	3973.60
		5	♂	100	48.00	100	1485.12	100	3200.67	99	3805.37	87	4155.06
			♀	100	47.80	100	1414.08	100	3066.87	100	3572.45	88	3798.69
xxxxxx	3	3	♂	100	49.00	99	1426.62	98	3063.06	97	3687.90	84	3946.93
			♀	100	49.20	99	1409.12	99	2962.01	98	3545.43	87	3757.84
		6	♂	100	50.00	100	1436.27	100	3048.50	100	3689.82	89	3931.91
			♀	100	48.60	100	1388.64	100	2998.85	100	3451.59	90	3685.76

Weight gain per phases

Tab. No. 6b

Sample	Sample No.	Pen	Sex	Day 1 - 21		Day 22 - 35		Day 36 - 42		Day 43 – 49		Day 1 – 49	
				Weight gain per phase	Daily weight gain	Weight gain per phase	Daily weight gain	Weight gain per phase	Daily weight gain	Weight gain per	Daily weight gain	Weight gain per phase	Daily weight gain
				g	g	g	g	g	g	g	g	g	g
xxxxx	1	1	♂	1519.80	72.37	1766.53	126.18	715.26	102.18	437.73	62.53	4439.32	90.60
			♀	1475.92	70.28	1829.55	130.68	555.55	79.36	188.95	26.99	4049.97	82.65
		4	♂	1603.18	76.34	1990.72	142.19	731.10	104.44	258.66	36.95	4583.67	93.54
			♀	1594.76	75.94	1896.44	135.46	595.89	85.13	165.59	23.66	4252.68	86.79
xxxxx	2	2	♂	1445.89	68.85	1728.23	123.45	751.38	107.34	211.12	30.16	4136.62	84.42
			♀	1431.68	68.18	1675.05	119.65	642.68	91.81	175.79	25.11	3925.20	80.11
		5	♂	1437.12	68.43	1715.55	122.54	604.70	86.39	349.68	49.95	4107.06	83.82
			♀	1366.28	65.06	1652.79	118.06	505.58	72.23	226.24	32.32	3750.89	76.55
xxxxx	3	3	♂	1377.62	65.60	1636.45	116.89	624.84	89.26	259.03	37.00	3897.93	79.55
			♀	1359.92	64.76	1552.89	110.92	583.42	83.35	212.41	30.34	3708.64	75.69
		6	♂	1386.27	66.01	1612.23	115.16	641.32	91.62	242.09	34.58	3881.91	79.22
			♀	1340.04	63.81	1610.21	115.02	452.74	64.68	234.17	33.45	3637.16	74.23

Feed conversion ratio (Feed consumption per 1 kg of live weight)

Tab. No. 6c

Sample	Sample No.	Pen	Feed conversion ratio			
			Day 21	Day 35	Day 42	Day 49
			g/kg LW	g/kg LW	g/kg LW	g/kg LW
xxxxxx	1	1	1361.33	1548.71	1932.83	2706.90
		4	1318.80	1597.84	1989.88	3004.30
xxxxxx	2	2	1393.96	1635.24	1985.90	2747.70
		5	1395.90	1611.00	2056.74	2791.71
xxxxxx	3	3	1395.61	1550.51	1923.77	2692.44
		6	1339.51	1536.04	1927.77	2642.97

Feed consumption per phases

Tab. No. 6d

Sample	Sample No.	Pen	Feed consumption				
			Starter (1-21 days)	Grower (22-35 days)	Finisher (36-42 days)	Finisher (43-49 days)	Total
			kg	kg	kg	kg	kg
xxxxxx	1	1	422.60	615.10	503.00	436.50	1977.20
		4	218.10	356.70	256.10	190.40	1021.30
xxxxxx	2	2	414.70	628.30	500.50	451.80	1995.30
		5	404.70	605.00	499.90	432.80	1942.40
xxxxxx	3	3	391.80	528.30	436.50	416.30	1772.90
		6	378.40	550.50	447.80	424.90	1801.60