

Supplementary Materials

Selection of efficient broiler strain for productive performances and immunity under local farming system in Bangladesh

Mostafizor Rahman^{1,2,†}, Hemayet Hossain^{3,†}, Milon Mia⁴, Md Jamilur Rahman⁵, Abu Al Farabi⁶, Zhokhar Dudayev⁷, Khadiza Akter Brishty⁸, Nadia Afrin⁹, Md. Arif Ishtiaq Shovon¹⁰, Md. Shahidur Rahman Chowdhury¹¹, Md. Masudur Rahman¹², Md. Mahfujur Rahman^{11*}

¹Department of Dairy & Poultry Science, Hajee Mohammad Danesh Science and Technology University, Dinajpur-5200, Bangladesh

²Faculty of Veterinary and Animal Sciences, Gono Bishwabidyalay, Dhaka-1344, Bangladesh

³Department of Anatomy and Histology, Sylhet Agricultural University, Sylhet-3100, Bangladesh

⁴Faculty of Veterinary Medicine, Chattogram Veterinary and Animal Sciences University, Chattogram-4202, Bangladesh

⁵Faculty of Veterinary Science, Bangladesh Agricultural University, Mymensingh-2202, Bangladesh

⁶Department of Microbiology and Veterinary Public Health, Chattogram Veterinary and Animal Sciences University, Chattogram-4202, Bangladesh

⁷Department of Microbiology and Public Health, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur-1706, Bangladesh

⁸Department of Zoology (GSSC), University of Dhaka, Dhaka-1000, Bangladesh

⁹Department of Medicine and Surgery, Chattogram Veterinary and Animal Sciences University, Chattogram, Bangladesh

¹⁰Faculty of Veterinary, Animal and Biomedical Sciences, Sylhet Agricultural University, Sylhet-3100, Bangladesh

¹¹Department of Medicine, Sylhet Agricultural University, Sylhet-3100, Bangladesh

¹²Department of Pathology, Sylhet Agricultural University, Sylhet-3100, Bangladesh

[†]These authors contributed equally

Professor Md. Mahfujur Rahman, DVM, PhD

Department of Medicine, Sylhet Agricultural University, Bangladesh

Cell: +88-01722113399

Email: mahfuj.vetmed@sau.ac.bd

Supplementary Table 1. The body weight gain of different strains of broiler chicken up to 6 weeks.

Week	Cobb 500	Ross	IR	EP	P-value	LS
1 st Week	112.93 ^a ±1.93	109.50 ^{ab} ±0.29	103.73 ^b ±3.47	93.93 ^c ±0.29	0.001	*
2 nd Week	321.40±7.87	319.00±2.00	304.27±2.79	305.07±4.79	0.075	NS
3 rd Week	479.67±5.36	473.00±6.81	514.33±65.33	467.33±2.67	0.750	NS
4 th Week	621.47±51.43	502.00±21.52	574.67±15.62	524.00±3.06	0.074	NS
5 th Week	640.80±18.59	627.83±6.21	576.00±44.77	557.33±3.71	0.118	NS
6 th Week	606.73±23.40	650.83±28.01	525.67±47.10	576.33±3.67	0.089	NS
Total BWG	2783 ^a ±108.58	2682.16 ^b ±64.84	2598.67 ^c ±179.08	2523.99 ^d ±18.19	0.034	*

One-way ANOVA with Duncan multiple range test (DMRT); ^{abc}Superscripts indicate significant variation among the group. Significance level <0.05. BWG, Body weight gain.

Supplementary Table 2. The average feed intake per bird per week.

Week	Cobb 500	Ross	IR	EP	P-value	LS
1 st Week	111.33 ^b ±0.88	116.33 ^a ±0.33	111.33 ^b ±0.00	116.52 ^a ±0.88	0.000	*
2 nd Week	324.67 ^b ±6.77	353.33 ^b ±1.45	356.33 ^b ±20.70	397.00 ^a ±1.15	0.011	*
3 rd Week	521.83 ^b ±3.08	535.07 ^b ±2.26	611.00 ^a ±29.58	617.77 ^a ±0.98	0.003	*
4 th Week	720.23±43.40	704.27±4.53	732.33±14.30	795.74±3.07	0.093	NS
5 th Week	945.00±35.00	920.88±20.46	962.85±11.43	988.71±4.60	0.220	NS
6 th Week	1070.00±15.28	1009.37±55.81	987.37±57.07	1131.83±15.97	0.137	NS
Total FI	3693.06 ^b ±104.41	3639.25 ^c ±84.84	3761.21 ^b ±133.08	4047.57 ^a ±26.65	0.012	*

FI, feed intake. One-way ANOVA with Duncan multiple range test (DMRT); ^{abc}Superscripts indicate significant variation among the group. Significance level <0.05.

Supplementary Table 3. ND Titre among the different broiler strains.

	COBB	ROSS	IR	EP	P value	LS
MDA	3.50±0.22	3.83±0.17	3.33±0.21	3.17±0.17	0.125	NS
1st wk	3.33±0.21	3.67±0.21	3.17±0.17	3.33±0.21	0.375	NS
2nd wk	3.33±0.21	3.50±0.22	3.00±0.00	3.17±0.17	0.241	NS
3rd wk	3.50±0.34	3.67±0.33	3.33±0.33	3.33±0.21	0.849	NS
4th wk	4.33±0.21	4.50±0.22	4.00±0.26	3.83±0.17	0.152	NS
5th wk	4.50±0.43	4.67±0.61	4.33±0.21	4.17±0.17	0.830	NS
6th wk	5.00±0.52	5.33±0.56	4.83±0.60	4.50±0.34	0.716	NS

Supplementary Table 4. H5N1 Titre among the different broiler strains.

	COBB	ROSS	IR	EP	P value	LS
MDA	4.33±0.21	4.50±0.22	4.00±0.26	3.83±0.31	0.258	NS
1st wk	4.17±0.17	4.33±0.21	3.83±0.31	3.67±0.33	0.292	NS
2nd wk	4.00±0.26	4.17±0.31	3.67±0.33	3.50±0.34	0.434	NS
3rd wk	3.83±0.17	4.00±0.26	3.50±0.34	3.33±0.21	0.258	NS
4th wk	3.67±0.21	3.83±0.31	3.33±0.21	3.17±0.17	0.188	NS
5th wk	3.33 ^a ±0.33	3.50 ^a ±0.22	2.50 ^{ab} ±0.34	2.17 ^b ±0.48	0.042	*
6th wk	2.67 ^a ±0.21	2.83 ^a ±0.40	1.33 ^b ±0.42	1.17 ^b ±0.48	0.010	*

Supplementary Table 5. H9N2 Titre among the different broiler strains.

	COBB	ROSS	IR	EP	P value	LS
MDA	4.00 ^{ab} ±0.26	4.50 ^a ±0.22	3.50 ^b ±0.22	3.33 ^b ±0.21	0.008	*
1st wk	3.83 ^{ab} ±0.17	4.33 ^a ±0.21	3.33 ^{bc} ±0.21	3.17 ^c ±0.17	0.001	*
2nd wk	3.67 ^b ±0.21	4.17 ^a ±0.17	3.17 ^c ±0.17	3.00 ^c ±0.00	0.000	*
3rd wk	3.50 ^{ab} ±0.22	3.83 ^a ±0.17	3.00 ^{bc} ±0.26	2.83 ^c ±0.17	0.010	*
4th wk	3.33 ^{ab} ±0.33	3.50 ^b ±0.22	2.67 ^{bc} ±0.21	2.33 ^c ±0.21	0.011	*
5th wk	2.67 ^a ±0.42	2.83 ^a ±0.17	2.17 ^a ±0.17	1.33 ^b ±0.21	0.003	*
6th wk	2.17 ^a ±0.31	2.33 ^a ±0.21	1.17 ^b ±0.17	0.33 ^c ±0.21	0.000	*