



Principal component analysis of body biometric traits in Marathwadi buffaloes

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Supplementary Table 1. Pearson correlation coefficient between eighteen morphometric variables of Marathwadi buffaloes

Trait	HW	LEG	NL	NC	BL	CG	AG	FL	FW	EL	HL	HBC	DBH	HBD	PBD	DBHP	TLS	RL
HW	1	0.771	0.328	0.414	0.327	0.589	0.388	0.354	0.198	0.454	0.172	0.178	0.362	0.465	-0.05	0.36	0.45	0.507
LEG	0.00	1	0.351	0.464	0.289	0.395	0.357	0.407	0.189	0.363	0.143	0.254	0.396	0.369	-0.08	0.283	0.427	0.357
NL	0.00	0.00	1	0.498	0.33	0.345	0.232	0.193	0.122	0.152	0.358	0.258	0.11	0.34	0.216	0.057	0.223	-0.01
NC	0.00	0.00	0.00	1	0.148	0.473	0.542	0.425	0.224	0.183	0.237	0.176	0.325	0.476	0.113	0.139	0.218	0.218
BL	0.00	0.002	0.00	0.071	1	0.265	0.236	0.038	-0.08	0.159	0.349	0.331	0.088	0.33	0.167	0.223	0.266	0.179
CG	0.00	0.00	0.00	0.00	0.004	1	0.584	0.318	0.25	0.36	0.167	0.271	0.354	0.521	0.079	0.312	0.317	0.378
AG	0.00	0.00	0.01	0.00	0.009	0.00	1	0.32	0.048	0.055	0.278	0.295	0.321	0.535	0.101	0.177	0.161	0.364
FL	0.00	0.00	0.027	0.00	0.355	0.001	0.001	1	0.228	0.074	0.196	0.255	0.308	0.29	0.028	0.123	0.179	0.286
FW	0.024	0.03	0.114	0.013	0.228	0.006	0.317	0.011	1	0.22	-0.04	0.146	0.152	0.197	0.054	0.224	0.16	0.173
EL	0.00	0.00	0.065	0.034	0.057	0.00	0.293	0.234	0.014	1	0.055	0.126	0.326	0.255	-0.05	0.224	0.358	0.197
HL	0.043	0.078	0.00	0.009	0.00	0.048	0.003	0.026	0.344	0.292	1	0.351	0.019	0.316	0.188	0.167	0.27	0.089
HBC	0.038	0.005	0.005	0.04	0.00	0.003	0.001	0.005	0.073	0.106	0	1	0.097	0.324	0.208	-0.001	0.145	0.007
DBH	0.00	0.00	0.139	0.00	0.193	0.00	0.001	0.001	0.066	0.00	0.425	0.168	1	0.312	-0.05	0.241	0.403	0.318
HBD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.002	0.025	0.005	0.001	0.001	0.001	1	0.252	0.203	0.271	0.359
PBD	0.319	0.203	0.016	0.132	0.048	0.216	0.159	0.393	0.296	0.296	0.03	0.019	0.313	0.006	1	-0.04	0.018	-0.11
DBHP	0.00	0.002	0.285	0.084	0.013	0.001	0.039	0.112	0.012	0.013	0.049	0.496	0.008	0.021	0.358	1	0.144	0.555
TLS	0.00	0.00	0.013	0.015	0.004	0.001	0.054	0.037	0.055	0.00	0.003	0.076	0.00	0.003	0.428	0.076	1	0.264
RL	0.00	0.00	0.447	0.015	0.037	0.00	0.00	0.002	0.043	0.025	0.19	0.474	0.001	0.00	0.13	0.00	0.004	1

HW, height at withers; LEG, leg length; NL, neck length; NC, neck circumference; BL, body length; CG, chest girth; AG, abdominal girth; FL, face length; FW, face width; EL, ear length; HL, horn length; HBC, horn base circumference; DBH, distance between horn; HBD, hip bone distance; PBD, pin bone distance; DBHP, distance between hip and pubis bone; TLS, tail length up to Switch and RL, rump length. Above diagonal are correlation coefficients and below diagonal are probabilities showing significance of the respective correlation coefficients.

Supplementary Table 2. Component Pattern matrix and component Structure matrix by Promax rotation in Marathwadi buffalo

Trait	Component Pattern Matrix					Component Structure Matrix				
	1	2	3	4	5	1	2	3	4	5
NC	.833	.030	.069	-.190	.054	.799	.378	.338	.157	.111
PG	.806	-.299	.150	.191	-.178	.778	.222	.391	.427	-.153
FL	.766	-.029	-.123	-.086	.092	.689	.509	.377	.489	.135
CG	.467	.151	.140	.234	.143	.678	.285	.126	.175	.133
HBD	.440	-.017	.377	.207	.118	.650	.371	.562	.420	.121
EL	-.274	.835	.020	.037	.274	.625	.799	.268	.548	-.068
TLS	-.121	.774	.150	-.061	-.016	.630	.776	.223	.360	-.091
LEG	.354	.624	-.034	-.047	-.092	.291	.722	.274	.242	-.036
HW	.254	.586	.016	.194	-.040	.174	.711	.125	.254	.234
DBH	.368	.415	-.238	.053	.044	.514	.565	-.006	.331	.038
HL	.015	-.015	.690	.048	-.203	.258	.176	.696	.178	-.196
BL	-.272	.256	.684	.212	-.275	.166	.374	.676	.350	-.307
PBD	-.030	-.306	.651	-.010	.359	.323	.197	.621	.015	.138
HBC	.144	.058	.578	-.146	.108	.440	.372	.599	-.067	.067
NL	.273	.279	.498	-.369	.016	.057	-.188	.575	-.087	.379
DBHP	-.180	.031	.048	.892	.173	.448	.393	.035	.856	-.084
RL	.185	-.003	-.157	.808	-.003	.212	.323	.135	.823	.070
FW	.085	.165	-.068	.163	.846	.244	.235	.039	.164	.826