



Phenotypic Characterization and Weight Estimation of Young Thalli Sheep Through Multivariate Traits

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Supplementary Table I. Correlation coefficients among multivariate traits of 0-3-month age group animals.

	WH	BL	HL	HW	EL	EW	NL	NW	HG	RL	RW	TL	BD	SPW	BiW	BW
WH	1	.87**	.55**	.52**	.68**	.55**	.53**	.65**	.84**	.70**	.40**	.09	.73**	.72**	.07	-.08
BL		1	.53**	.44**	.66**	.47**	.56**	.57**	.81**	.67**	.37**	.09	.73**	.77**	.09	-.02
HL			1	.26	.42**	.50**	.39**	.31*	.55**	.40**	.27	.25	.47**	.45*	.29*	.02
HW				1	.33*	.35*	.33*	.29*	.40**	.35*	.03	.27	.26	.36*	.10	-.07
EL					1	.62**	.44**	.53**	.59**	.35*	.28	.16	.65**	.50**	-.02	.18
EW						1	.41**	.36*	.52**	.38**	.20	.14	.48**	.32	.05	-.08
NL							1	.60**	.62**	.43**	.20	.02	.49**	.53**	.04	-.02
NW								1	.49**	.54**	.46**	-.03	.52**	.45*	.02	-.15
HG									1	.67**	.32*	-.01	.84**	.84**	.06	.02
RL										1	.51**	.04	.51**	.56**	.24	-.05
RW											1	-.01	.30*	.27	.03	.06
TL												1	-.04	.10	.06	-.06
BD													1	.86**	.04	.06
SPW														1	-.01	-.11
BiW															1	.16
BW																1

**Correlation is significant $P \leq 0.01$ (2-tailed). * Correlation is significant $P \leq 0.05$ (2-tailed). WH, withers height; HW, head width; HL, head length; EL, ear length; EW, ear width; BL, body length; NW, neck width; NL, neck length; HG, heart girth; RW, rump width; RL, rump length; BD, barrel depth; TL, tail length; SPW, sacral pelvic width; BW, live body weight; BiW, birth weight.

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Supplementary Table II. Correlation coefficients among multivariate traits of 4-6-month age group animals.

	WH	BL	HL	HW	EL	EW	NL	NW	HG	RL	RW	TL	BD	SPW	BiW	BW
WH	1	.88**	.76**	.52**	.72**	.67**	.81**	.86**	.90**	.81**	.27*	.31*	.86**	.84**	.45**	.68**
BL		1	.75**	.51**	.60**	.58**	.77**	.81**	.91**	.77**	.32*	.44**	.87**	.85**	.33*	.63**
HL			1	.31*	.51**	.36**	.63**	.67**	.71**	.73**	.43**	.27	.71**	.64**	.23	.51**
HW				1	.40**	.64**	.61**	.54**	.53**	.39**	-.43**	-.01	.50**	.60**	.58**	.48**
EL					1	.73**	.58**	.63**	.66**	.59**	.16	.22	.63**	.70**	.33*	.53**
EW						1	.59**	.56**	.61**	.55**	-.11	.09	.51**	.69**	.49**	.56**
NL							1	.76**	.76**	.64**	.07	.28	.73**	.77**	.45**	.61**
NW								1	.86**	.75**	.21	.28	.84**	.83**	.44**	.61**
HG									1	.80**	.30*	.37**	.94**	.94**	.43**	.60**
RL										1	.41**	.38**	.80**	.74**	.38**	.59**
RW											1	.39**	.30*	.26	-.35*	.14
TL												1	.44**	.34*	-.20	.32*
BD													1	.91**	.39**	.54**
SPW														1	.54**	.51**
BiW															1	.22
BW																1

For abbreviations and statistical details, see Supplementary Table I.

Supplementary Table III. Correlation coefficients among multivariate traits of 7-9-month age group animals.

	WH	BL	HL	HW	EL	EW	NL	NW	HG	RL	RW	TL	BD	SPW	BiW	BW
WH	1	.77**	.67**	.53**	.44*	.78**	.52**	.64**	.79**	.80**	-.11	.39*	.78**	.74**	.36*	.56**
BL		1	.59**	.52**	.33	.63**	.61**	.58**	.68**	.70**	-.06	.21	.61**	.62**	.43*	.58**
HL			1	.45**	.36*	.43*	.39*	.47**	.79**	.71**	.22	.27	.55**	.62**	.31	.52**
HW				1	.07	.55**	.82**	.65**	.68**	.55**	-.58**	.17	.56**	.68**	.20	.24
EL					1	.40*	.08	.34	.44*	.43*	.17	.31	.38*	.49**	.02	.20
EW						1	.58**	.60**	.58**	.56**	-.40*	.12	.51**	.62**	.28	.32
NL							1	.68**	.63**	.54**	-.45**	.11	.60**	.69**	.26	.24
NW								1	.67**	.54**	-.32	.24	.64**	.70**	.09	.25
HG									1	.83**	-.04	.48**	.86**	.88**	.24	.57**
RL										1	.09	.45**	.78**	.72**	.52**	.54**
RW											1	.14	-.08	-.14	-.02	.07
TL												1	.57**	.51**	.03	.51**
BD													1	.87**	.33	.48**
SPW														1	.31	.50**
BiW															1	.30
BW																1

For abbreviations and statistical details, see Supplementary Table I.

Supplementary Table IV. Correlation coefficients among multivariate traits of 10-12-month age group animals.

	WH	BL	HL	HW	EL	EW	NL	NW	HG	RL	RW	TL	BD	SPW	BiW	BW
WH	1	.84**	.69**	.56**	.50**	.37*	.70**	.63**	.76**	.70**	.01	-.23	.74**	.71**	-.18	.81**
BL		1	.75**	.52**	.50**	.43*	.50**	.59**	.74**	.71**	.03	-.19	.74**	.72**	-.04	.80**
HL			1	.30	.45**	.25	.46**	.59**	.69**	.70**	.23	-.25	.69**	.74**	.01	.73**
HW				1	.22	.58**	.66**	.57**	.58**	.54**	-.5**	-.11	.59**	.62**	-.01	.51**
EL					1	.49**	.41*	.28	.46**	.44**	.37*	.10	.46**	.41*	.05	.37*
EW						1	.47**	.46**	.41*	.48**	-.12	-.01	.46**	.45*	.02	.30
NL							1	.57**	.61**	.64**	-.12	-.06	.51**	.53**	.02	.62**
NW								1	.77**	.77**	-.1	-.35	.64**	.71**	-.11	.60**
HG									1	.80**	.10	-.21	.86**	.84**	-.01	.78**
RL										1	.03	-.15	.70**	.78**	.08	.72**
RW											1	.14	-.01	.05	.03	.12
TL												1	-.26	-.12	.03	-.07
BD													1	.88**	.12	.72**
SPW														1	.28	.69**
BiW															1	-.11
BW																1

For abbreviations and statistical details, see Supplementary Table I.

Supplementary Table V. Component matrix of young Thalli sheep.

	0-3 month age group						4-6 month age group			
	Components				Communalities		Components		Communalities	
	1	2	3	4	Initial	Extraction	1	2	Initial	Extraction
WH	.928	-.015	-.088	.033	1.000	0.871	.962	.015	1.000	0.925
BL	.896	-.030	-.019	-.019	1.000	0.804	.920	.144	1.000	0.868
HG	.890	-.084	.021	-.130	1.000	0.816	.943	.089	1.000	0.898
HL	.654	.357	.201	.044	1.000	0.598	.772	.275	1.000	0.672
HW	.516	.444	-.245	.066	1.000	0.528	.625	-.635	1.000	0.793
EL	.772	.023	-.006	-.410	1.000	0.764	.774	-.095	1.000	0.608
EW	.658	.221	-.140	-.214	1.000	0.547	.712	-.397	1.000	0.665
NL	.691	-.096	-.117	-.035	1.000	0.501	.855	-.167	1.000	0.758
NW	.723	-.304	-.129	.251	1.000	0.694	.905	-.020	1.000	0.819
RL	.747	-.084	.159	.417	1.000	0.764	.852	.218	1.000	0.774
RW	.462	-.356	.259	.375	1.000	0.547	.237	.880	1.000	0.831
TL	.125	.747	-.170	.043	1.000	0.604	.384	.551	1.000	0.451
BD	.816	-.179	.051	-.251	1.000	0.763	.911	.156	1.000	0.854
BW	.137	.411	.653	.385	1.000	0.762	.446	-.651	1.000	0.622
BW	-.004	-.014	.753	-.512	1.000	0.829	.711	.016	1.000	0.506

	7-9 month age group					10-12 month age group					
	Components			Communalities		Components				Communalities	
	1	2	3	Initial	Extraction	1	2	3	4	Initial	Extraction
WH	.903	.085	.015	1.000	0.823	.878	.037	-.120	-.186	1.000	0.820
BL	.824	.014	.232	1.000	0.732	.852	.120	-.067	-.045	1.000	0.747
HG	.926	.112	-.134	1.000	0.889	.894	.118	-.056	.040	1.000	0.819
HL	.743	.297	.117	1.000	0.654	.757	.359	-.214	.095	1.000	0.758
HW	.724	-.536	-.044	1.000	0.813	.729	-.570	.127	.031	1.000	0.874
EL	.447	.367	-.430	1.000	0.520	.485	.383	.593	-.178	1.000	0.765
EW	.744	-.284	-.019	1.000	0.635	.560	-.246	.530	-.069	1.000	0.660
NL	.727	-.513	.042	1.000	0.793	.724	-.289	.195	-.032	1.000	0.647
NW	.754	-.297	-.283	1.000	0.738	.808	-.070	-.167	.012	1.000	0.686
RL	.882	.235	.147	1.000	0.855	.874	.109	.070	.078	1.000	0.787
RW	-.17	.860	.082	1.000	0.774	-.18	.878	.160	-.122	1.000	0.844
TL	.451	.461	-.380	1.000	0.560	-.32	-.096	.624	-.297	1.000	0.587
BD	.862	.103	-.131	1.000	0.770	.875	.139	.009	.158	1.000	0.809
BW	.410	.078	.778	1.000	0.779	-.03	.095	.357	.907	1.000	0.960
BW	.607	.379	.172	1.000	0.541	.847	.044	-.167	-.106	1.000	0.759

For abbreviations and statistical details, see Supplementary Table I.