

Supplemental data for

Tilahun, K., Melesse, A. and Betsha, S. (2026) “Phenotypic diversity of indigenous goats across three agroecological zones in southeastern Ethiopia”, *Genetic Resources*, 7(13), pp. 29–40. doi: [10.46265/genresj.SARW4599](https://doi.org/10.46265/genresj.SARW4599)

Supplemental Table 2. Univariate test statistics to identify the relative importance of each morphometric trait to discriminate the goats’ population in the three agroecologies.

Variable	Total standard deviation	Pooled standard deviation	Between standard deviation	R-Square	R-Square / (1-RSq)	F Value	Pr > F
BW	5.32	5.33	0.25	0.002	0.002	0.44	0.6432
CG	6.12	6.01	1.47	0.04	0.04	11.8	<.0001
HW	4.60	4.52	1.08	0.04	0.04	11.4	<.0001
BL	5.18	5.18	0.37	0.003	0.003	1.00	0.3697
RH	4.13	4.07	0.85	0.03	0.03	8.71	0.0002
PG	8.57	8.37	2.33	0.05	0.05	15.4	<.0001
CD	2.71	2.59	1.00	0.09	0.10	29.4	<.0001
CW	2.26	2.21	0.57	0.04	0.04	13.2	<.0001
SW	1.99	1.87	0.85	0.12	0.14	41.2	<.0001
RL	1.73	1.72	0.24	0.01	0.01	3.78	0.0234
RW	1.50	1.48	0.34	0.03	0.04	10.4	<.0001
HdL	1.73	1.71	0.30	0.02	0.02	6.03	0.0026
HdW	1.77	1.76	0.27	0.02	0.02	4.64	0.0101
EL	1.31	1.18	0.72	0.20	0.25	73.7	<.0001
EW	0.59	0.57	0.19	0.07	0.08	22.9	<.0001
FCC	0.71	0.71	0.10	0.01	0.01	4.32	0.0138

BW= body weight; CG= chest girth; HW= height at withers; BL= body length; RH= rump length; PG= paunch girth; CW= chest width; CD= chest depth; SW= shoulder width; RL= rump length; RH= rump height; HdL= head length; HdW= head width; EL= ear length; EW= ear width and FCC= fore canon circumferences

Supplemental Table 3. Total-sample standardized canonical coefficients

Variable	Can1	Can2
BW	-0.61	0.15
CG	0.34	-1.11
HW	-0.36	0.46
BL	-0.20	-0.19
RH	-0.23	0.46
PG	0.21	0.62
CD	0.91	0.08
CW	0.21	-0.22
SW	0.58	0.51
RL	-0.10	-0.61
HdW	-0.39	-0.45
HdL	-0.21	0.75
EW	0.17	-0.18
EL	-0.48	0.08
EW	0.45	0.21
FCC	-0.38	0.06

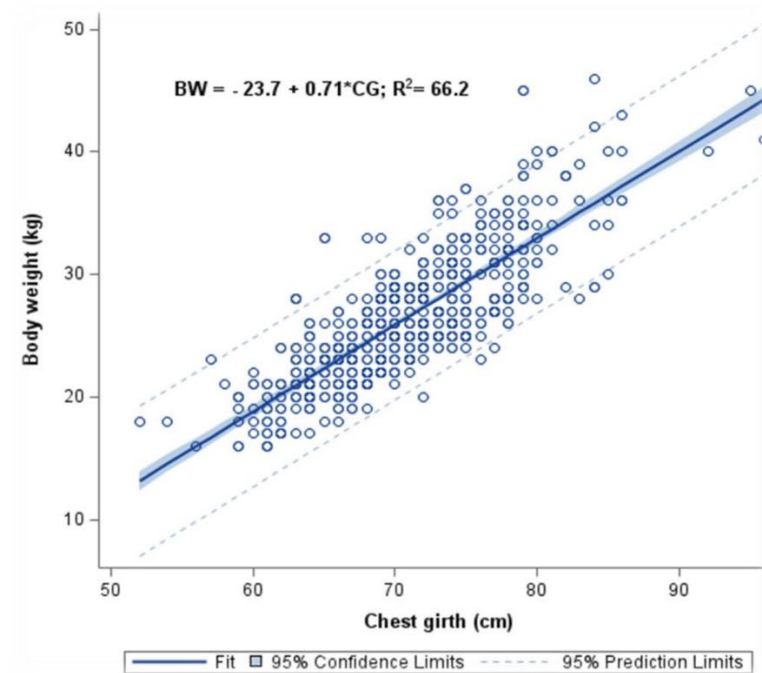
BW= body weight; CG= chest girth; HW= height at withers; BL= body length; RH= rump length; PG= paunch girth; CW= chest width; CD= chest depth; SW= shoulder width; RL= rump length; RH= rump height; HdL= head length; HdW= head width; EL= ear length; EW= ear width and FCC= fore canon circumferences

Supplemental Table 4. Total canonical structure

Variable	Can1	Can2
BW	-0.04	-0.04
CG	0.16	-0.28
HW	-0.22	0.18
BL	-0.03	-0.10
RH	-0.16	0.22
PG	0.29	-0.05
CD	0.40	-0.05
CW	0.26	-0.13
SW	0.44	0.23
RL	-0.03	-0.20
RW	-0.05	-0.33
HdL	-0.01	0.26
HdW	0.16	-0.05
EL	-0.59	0.05
EW	0.32	0.20
FCC	-0.16	0.04

BW= body weight; CG= chest girth; HW= height at withers; BL= body length; RH= rump length; PG= paunch girth; CW= chest width; CD= chest depth; SW= shoulder width; RL= rump length; RH= rump height; HdL= head length; HdW= head width; EL= ear length; EW= ear width and FCC= fore canon circumferences

Supplemental Figure 1. Graphical presentation of the regression equation for the estimation of male and female goats using the combined data



BW= body weight; CG= chest girth