Relations among birth weight and some body measurements at birth in Saanen kids

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Animal material

This study was carried out at the commercial dairy goat farm in Bafra province of Samsun, Turkey.

Birth type - Sex	Number of animals
Single - Female	14
Single - Male	10
Multiple - Female	18
Multiple - Male	20
	62

Statistics

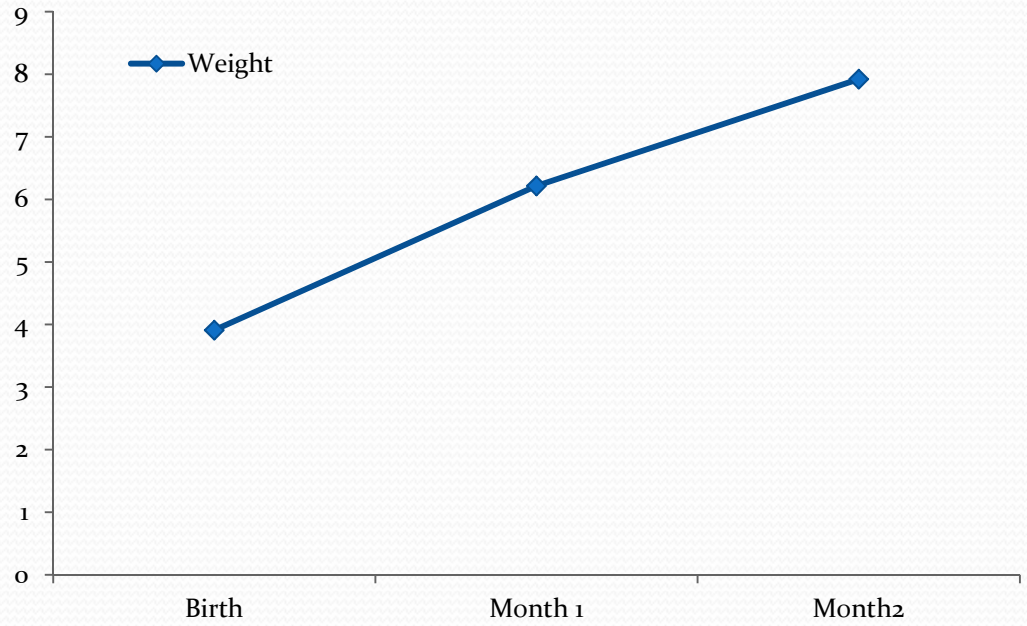
All data showed Johnson SU distribution which is closely related to Normal distribution. So, Pearson correlation was used for relation analysis and linear regression was used for model building with stepwise variable selection approach.

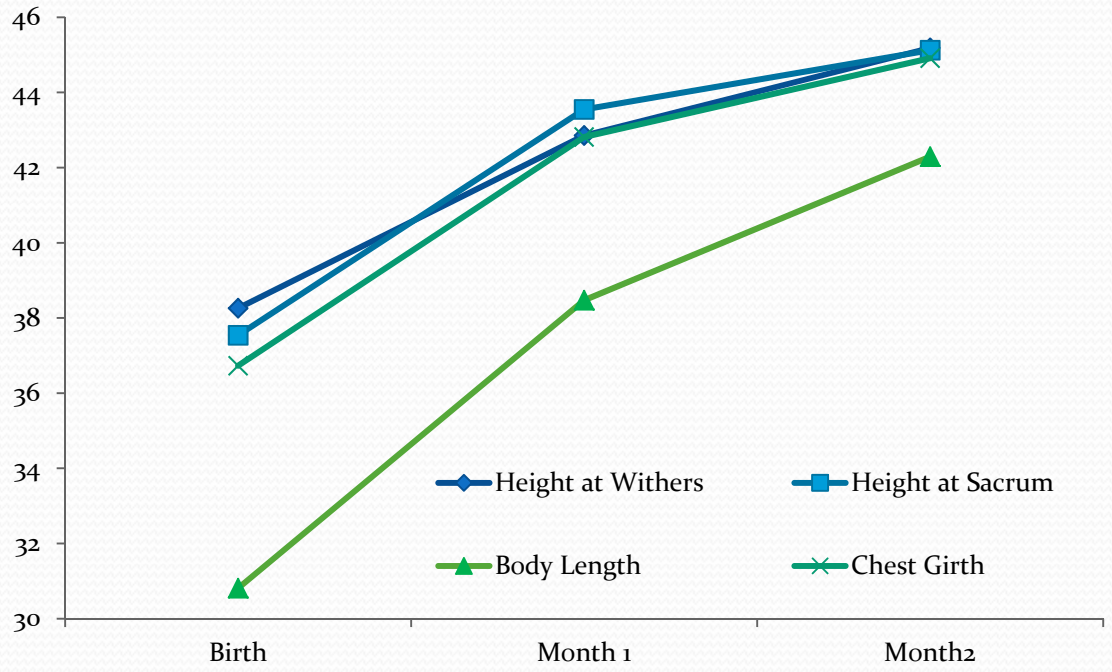
Results

	Body Length	Height at Sacrum	Height at Withers	Chest Girth
Weight	.829**	.475**	.688**	.912**
Body Length		.466**	.764**	.843**
Height at Sacrum			.696**	.492**
Height at Withers				.700**

Model

$$BW=-6.532+0.238(CG)+0.055(BL)$$


9
8
7
6
5
4
3
2
1
0
Weight
Birth
Month 1
Month2


46
44
42
40
38
36
34
32
30
Birth
Month 1
Month2
Height at Withers
Height at Sacrum
Body Length
Chest Girth

PATH Analysis

	Correlation with BW	Direct effect	Indirect effect			
			HW	BL	CG	Total
HW	0.720**	0.233**	-	0.123	0.364	0.487
BL	0.714**	0.193**	0.148	-	0.373	0.521
CG	0.856**	0.590**	0.144	0.122	-	0.266

Thank you…