

( )

\*

( ( // : // : ) )

- ( )

)

±

(

/ / / / / / / / / / / / / / / /

( / / )

Archive of SID

)

(

( )

(.)

( )

/ /

/ /

/ /

( )'

/ /

/ /

/ /

/

/ /

/ /

( )

±

/

/

/

/

/

/

/

/

/

/

/

/

±

/

/

/

/

/

±

/

/

/

/

/

(.)

( )

$$y_i = \mathbf{X}_i \mathbf{b}_i + \mathbf{Z}_i \mathbf{a}_i + \mathbf{W}_i \mathbf{m}_i + \mathbf{e}_i$$

$(i=1, \dots, n)$

$\mathbf{y}_i$

$\mathbf{b}_i$

$\mathbf{a}_i$

$\mathbf{m}_i$

$\mathbf{e}_i$

$\mathbf{W}_i$

$\mathbf{Z}_i$

$\mathbf{X}_i$

Archive of SID

---

2. Horro  
3. Sabi

---

1. Restricted Maximum Likelihood

( )	/	/	/	( )
/	/	/	( )	( )
/	/	/	( )	( )
/			( )	( )
/			( )	
/	/	/	( )	
/	/	/	( )	
/	/	/	( )	
/	/	/	( )	
/	/	/	( )	
/	/	/	( )	
/	/	/	( )	

( ) ( ) ( )

/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /

/ ± /	/ ± /	/ ± /	/ ± /
/ ± /	/ ± /	/ ± /	
/ ± /	/ ± /		
/ ± /			

وزن شیرگیری

( )

:

( )  
 ( / )  
 ( / ) ( / )

/ ± /  
 / ± / / ± / / ± / / ± /  
 / ± / / ± / / ± / / ± /  
 / ± / / ± / / ± / / ± /

( ) ( )  
 / / ( )

( / )  
 / ± / / ± / / ± /  
 / ± / / ± / / ± /

/ ( )  
 / ± /

( / ± / ) ( / ± / )  
 ( / ± / ) ( / ± / )

( / ± / ) ( )

( / ± / )  
 ( )

/ / / /  
 ( )

/ ± / / ± / / ± / / ± /  
 / ± / / ± /  
 ( ) ( ) ( )



( ) / )

- / /

/ ± / / ± / / ± / / ± /

( )

( / ) ( / )

( )

/

/

(\* )

همبستگی ژنتیکی						
وزن بدن در کشتار	وزن شش ماهگی				وزن شیرگیری	
±	±	±	±	±	±	±
±	±	±	±	±	±	±
±	±	±	±	±	±	±
±	±	±	±	±	±	±
±	±	±	±	±	±	±
±	±	±	±	±	±	±
±	±	±	±	±	±	±
±	±	±	±	±	±	±
±	±	±	±	±	±	±

مجموع چربی لاشه و دنبه

همبستگی فنوتیپی						
وزن بدن در کشتار	وزن شش ماهگی				وزن شیرگیری	
±	±	±	±	±	±	±
±	±	±	±	±	±	±
±	±	±	±	±	±	±
±	±	±	±	±	±	±
±	±	±	±	±	±	±
±	±	±	±	±	±	±
±	±	±	±	±	±	±
±	±	±	±	±	±	±
±	±	±	±	±	±	±

± /	/ ± /	/ ± /	± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /
/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /	/ ± /

## REFERENCES

1. Abegaz, S., J. B. van Wyk & J. J. Olivier. 2005. Model comparisons and genetic and environmental parameter estimates of growth and Kleiber ratio in Horro sheep. *S. Afr. J. Anim. Sci.* 35(1): 30- 40.
2. Asadi, A. 1999. Estimates of genetic and environmental parameters on productivity traits and determination selection criterion in Lori-Bakhtiari Sheep . Ph. D. Thesis. College of Agriculture, University of Tarbiat Modarees. 107 pp.
3. Botkin, M. P., R.A. Field, M.L. Riley, J. C. Nolan & G.R. Roehrkaase. 1969. Heritability of carcass traits in lambs. *J. Anim. Sci.* 29: 251-255.
4. Badenhorst, M. A., J. J. Olivier, S. J. Schoeman & J. Delpont. 1991. Investigation of selection criteria for Afrino sheep. Genetic parameters of growth and wool traits. . *S. Afr. J. Anim. Sci.* 21: 162.
5. Bennett, G. L., D. L. Johnson, A. H. Kirton & A. H. Carter. 1991. Genetic and environmental effects on carcass characteristics of Southdown × Romney lambs: II. Genetic and phenotypic variation. *J. Anim. Sci.* 69: 1864-1874.
6. Chapman, A. B. 1985. *General and Quantitative Genetics*. Elsevier Science Publishers. B. V. Amsterdam, Netherland.
7. Ermais, E., A. Yami & J. E. O. Rege. 2006. Slaughter characteristics of Menz and Horro sheep. *Small Rumin. Res.* 64: 10-15.
8. Farid, A. 1991. Carcass physical and chemical composition three fat-tailed breeds of sheep. *Meat. Sci.* 29:109-120.
9. Fogarty, N. M. 1995. Genetic parameters for live weight, fat and muscle measurements, wool production and reproduction in sheep: a review. *Anim. Breed. Abstr.* 63: 101-143.



10. Matika, O., J. B. Van Wyk, G.J. Erasmus & R.L. Baker. 2003. Genetic parameter estimates in Sabi sheep. *Live. Prod. Sci.* 79: 17-28.
11. Kvame, T & O. Vangen. 2007. Selection for lean weight based on ultrasound and CT in a meat line of sheep. *Livest. Sci.* 106: 232-242.
12. Meyer, K. 2007. WOMBAT- A program for mixed model analyses by restricted maximum likelihood. User Notes. Animal Genetics and Breeding Unit, Armidale, 55pp.
13. Miraei-Ashtiani, S. R., S. A. R. Seyedalain & M. Moradi-Shahrbabak. 2007. Variance components and heritabilities for body weight traits in Sangsari sheep, using univariate and multivariate animal models. *Small Rumin. Res.* 73: 109-114.
14. Olson, L. W. G. E. Dickerson, J. D. Crouse & H. A. Glimp. 1976. Selection criteria for intensive market lamb production: carcass and growth traits. *J. Anim. Sci.* 43:90-101.
15. Parratt, A. C., C. M. Burt, G. L. Bennett, J. N. Clark, A. H. Kirton & A. L. Rae. 1987. Heritabilities, genetic and phenotypic correlations for carcass traits and ultrasonic fat depth of sheep. *Proceedings of the AAABG.* 6: 76-78.
16. Robison, O. W. 1981. The influence of maternal genetic effects on the efficiency of selection- A review. *Livest. Prod. Sci.* 8: 121- 137.
17. Safari, A & N. M. Fogarty. 2003. Genetic parameters for sheep production traits: Estimates from the literature. *Technical Bulletin Vol. 49. NSW. Agriculture, Orange, Australia.* <http://www.sheep.crc.org.au/articles.php3?rc=145>.
18. Safari, E., N. M. Fogarty & A. R. Gilmour. 2005. A review of genetic parameter estimates for wool, growth, meat and reproduction traits in sheep. *Livest. Prod. Sci.* 92:271-289.
19. Vatankhah, M., M. Moradi-Shahrbabak, A. Nejati – Javaremi, & S. R. Miraei-Ashtiani. 2005. Review of growth traits parameters for some Iranian breeds of sheep. *Pajouhesh & Sazandegi.* 18 (4): 19-28.
20. Van Wyk, J. B., G.J. Erasmus & K. V. Konstantinov. 1993. Variance component and heritability estimates of early growth traits in the Elsenburg Dormer sheep stud. *S. Afr. J. Anim. Sci.* 23: 72-76.
21. Waldron, D. F., J. N. Clarke, A. L. Rae, A. H. Kirton & G. L. Bennett. 1992. Genetic & phenotypic parameter estimates for selection to improve lamb carcass traits. *New Zealand. J. Agric. Res.* 35: 287-298.
22. Wolf, B. T., C. Smith, J. W. B. King & D. Nicholson. 1981. Genetic parameters of growth and carcass composition in crossbred lambs. *Anim. Prod.* 32:1-7.
23. Yazdi, M. H., G. Engström, A. Näsholm, K. Johansson, H. Jorjani & L.E. Liljedahl. 1997. Genetic parameters for lamb weight at different ages and wool production in Baluchi sheep. *Anim. Sci.* 65: 247-255.