



Repeatability of udder health and welfare traits of semi-extensively reared dairy goats in Greece



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Objective

To estimate the repeatability of udder health and welfare traits in three semi-extensively reared dairy goat breeds in Greece

Materials and Methods

- 1210 dairy goats
- 7 farms & 3 breeds
- Monthly records
- 2 milking periods
- Mixed linear & non-linear models

Udder health traits

- Somatic cell count (SCC)
- Total viable count (TVC)
- UHP1, UHP2 and UHP3*
- Udder asymmetry
- Udder abscess

Welfare traits

- Ear injuries and lesions
- Horn injuries and lesions
- Head skin lesions
- Arthritis and overgrown claws
- Body abscess

Trait*	Definition with thresholds for SCC > 10 ⁶ cells/ml & TVC > 20×10 ³ cfu/ml
UHP1 (1-2)	1=at least one trait below, 2=both above thresholds
UHP2 (1-3)	1=both traits below, 2=one of two above, 3=both above thresholds
UHP3 (1-4)	1=both traits below, 2=only TVC above, 3=only SCC above, 4=both above



Eghoria (n=418)



Skopelos (n=429)



Damascus (n=363)



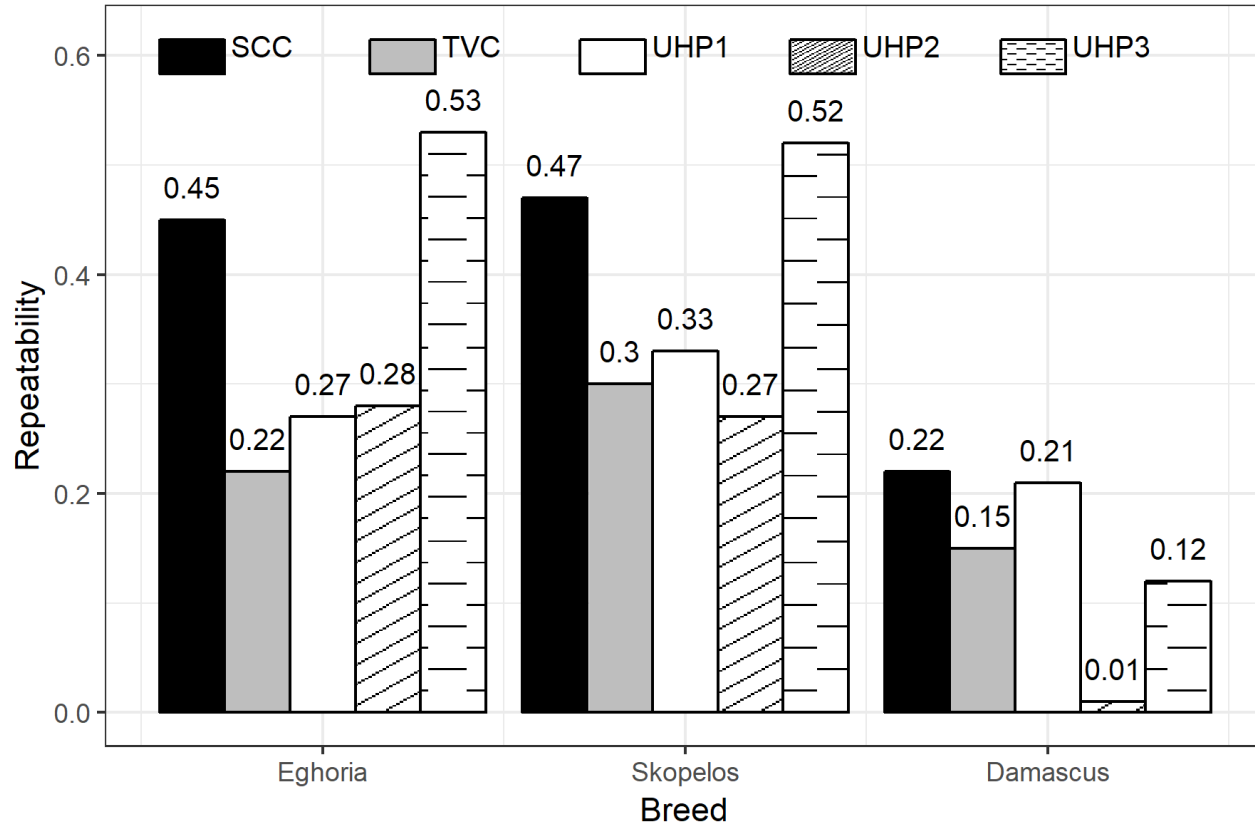


Results



Trait repeatability estimates from within-breed analyses

Udder health traits (SCC, TVC, UHP1, UHP2, UHP3)



Udder asymmetry and abscess and welfare traits

Trait	Eghoria		Skopelos		Damascus	
	R	SE	R	SE	R	SE
Udder asymmetry	0.25	0.01	0.28	0.03	0.34	0.02
Udder abscess	0.20	0.02	0.28	0.02	0.22	0.03
Ear injuries and lesions	0.78	0.03	0.68	0.03	0.40	0.13
Horn injuries and lesions	0.77	0.03	0.79	0.03	0.63	0.03
Head skin lesions	0.05	0.02	0.03	0.10	0.17	0.05
Arthritis	0.05	0.02	NA*	NA*	0.73	0.03
Overgrown claws	0.05	0.02	0.12	0.05	0.15	0.04
Body abscess	0.25	0.04	0.08	0.07	0.20	0.04

*Presence of arthritis in a very low frequency





Results



Highest trait repeatability estimates from across-breed analyses



Conclusions

Significant variation between individuals indicates potential for improved management and genetic selection practices to enhance udder health and welfare in dairy goats.

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