Supplementary 3: Shoulder height of modern sheep breeds found in Northern, Eastern, Southern and Western Africa

Breed	Location	Notes	Shoulder	Reference	
			Height (cm)		
	So	outhern Afr	uthern Africa		
Nguni	Makhathini Research	-	61.97±4.04	Oosthuizen, 2018	
	Station, KwaZulu-				
	Natal Province, South				
	Africa				
Nguni	Dundee Research	-	63.45±4.34	Oosthuizen, 2018	
	Station, KwaZulu-				
	Natal Province, South				
	Africa				
Pedi	Limpopo Province,	Ewe	60	Epstein, 1971	
	South Africa				
Fat-tailed	Former Transvaal	Ewe	60	Ryder, 1983	
haired	Province, South				
	Africa				
Tswana	Botswana	Female,	65.8±1.6 –	Monau et al., 2018	
		over 48	65.9±0.9		
		months			
		of age			
Unspecified	Eastern Cape	Rams	59.98	Tyasi et al., 2015	
indigenous	Province, South				
breed.	Africa				
Possibly					
Nguni					
Sabi	Zimbabwe	-	60.4	Hall, 1999	
Namaqua	Carnavon, Northern	Rams	74.2±4.1	Qwabe, 2011	
Afrikaner	Cape province, South				
	Africa				

Afrikaner Cape province, South Africa Dorper Free State Province, Improved 60.9±2.43 Van Rooyen et a 2012 Thin-tailed Angola, Zambia, - 60 Ryder, 1983 Eastern Africa Blackhead Somalia Female 59.97±0.21 Ferew, 2008 Blackhead Somalia Male 61.30±0.30 Ferew, 2008 Horro Ethiopia Ewe. 1 59.2 ±1.20 Tibbo et al., 200 year old Horro Ethiopia Ram. 1 59.9 ±1.20 Tibbo et al., 200 cited in Edea, 2008 Horro Ethiopia Female 65.2 ± 3.00 Solomon, 2004; cite in Edea, 2008	004;
Dorper Free State Province, South Africa breed. Yearling ewes Thin-tailed Angola, Zambia, Lair Zimbabwe Eastern Africa Blackhead Somalia Female 59.97±0.21 Ferew, 2008 Blackhead Somalia Male 61.30±0.30 Ferew, 2008 Horro Ethiopia Ewe. 1 59.2±1.20 Tibbo et al., 200 year old cited in Edea, 2008 Horro Ethiopia Female 65.2±3.00 Solomon, 2004; cite in Edea, 2008 Horro Ethiopia Female 65.2±3.00 Solomon, 2004; cite in Edea, 2008	004;
South Africa breed. Yearling ewes Thin-tailed Angola, Zambia, - 60 Ryder, 1983 hair Zimbabwe Eastern Africa Blackhead Somalia Female 59.97±0.21 Ferew, 2008 Blackhead Somalia Male 61.30±0.30 Ferew, 2008 Horro Ethiopia Ewe. 1 59.2 ±1.20 Tibbo et al., 200 year old cited in Edea, 2008 Horro Ethiopia Ram. 1 59.9 ±1.20 Tibbo et al., 200 cited in Edea, 2008 Horro Ethiopia Female 65.2 ± 3.00 Solomon, 2004; cited in Edea, 2008	004;
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Thin-tailed Angola, Zambia, - 60 Ryder, 1983 hair Zimbabwe Eastern Africa Blackhead Somalia Female 59.97 ± 0.21 Ferew, 2008 Blackhead Somalia Male 61.30 ± 0.30 Ferew, 2008 Horro Ethiopia Ewe. 1 59.2 ± 1.20 Tibbo et al., 200 cited in Edea, 2008 Horro Ethiopia Ram. 1 59.9 ± 1.20 Tibbo et al., 200 cited in Edea, 2008 Horro Ethiopia Female 65.2 ± 3.00 Solomon, 2004; cite in Edea, 2008	004;
Thin-tailed Angola, Zambia, - 60 Ryder, 1983 Eastern Africa Blackhead Somalia Female 59.97 ± 0.21 Ferew, 2008 Blackhead Somalia Male 61.30 ± 0.30 Ferew, 2008 Horro Ethiopia Ewe. 1 59.2 ± 1.20 Tibbo et al., 200 cited in Edea, 2008 Horro Ethiopia Ram. 1 59.9 ± 1.20 Tibbo et al., 200 year old cited in Edea, 2008 Horro Ethiopia Female 65.2 ± 3.00 Solomon, 2004; cited in Edea, 2008	004;
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Horro Ethiopia Ram. 1 59.9 ± 1.20 Tibbo et al., 200 year old cited in Edea, 2008 Horro Ethiopia Female 65.2 ± 3.00 Solomon, 2004; cited in Edea, 2008	004;
Horro Ethiopia Ram. 1 59.9 ± 1.20 Tibbo et al., 200 cited in Edea, 2008 Horro Ethiopia Female 65.2 ± 3.00 Solomon, 2004; cited in Edea, 2008	004;
year old cited in Edea, 2008 Horro Ethiopia Female 65.2 ± 3.00 Solomon, 2004; cited in Edea, 2008	•
Horro Ethiopia Female 65.2 ± 3.00 Solomon, 2004; cita in Edea, 2008	}
in Edea, 2008	
	ited
Home Ethionia Mala 1 (101+0/2 Waredown 2000 '	
Horro Ethiopia Male. 1 61.91 ± 0.62 Kassahun, 2000; cite	ited
year old in Edea, 2008	
Bonga Ethiopia Female 64.00 Tibbo & Ginbar, 200	004;
cited in Edea, 2008	}
Bonga Ethiopia Female 65.8 ± 2.7 Solomon, 2004; cite	ited
in Edea, 2008	
Bonga Ethiopia Male 73.00 Tibbo & Ginbar, 200	004;
cited in Edea, 2008	}
Menz Ethiopia Male. 1 59.89 ± 0.44 Kassahun, 2000; cite	ited
year old in Edea, 2008	
Gumuz Ethiopia Ewe 63.59 ± 2.80 Solomon, 2007; cite	ited
in Edea, 2008	
Gumuz Ethiopia Ram 68.31 ± 3.80 Solomon, 2007; cite	ited
in Edea, 2008	

Central	Ethiopia	Female	61.79 ± 4.80	Sisay, 2002; cited in	
Highland				Edea, 2008	
Central	Ethiopia	Male	64.72 ± 5.90	Sisay, 2002; cited in	
Highland				Edea, 2008	
Rift Valley	Ethiopia	Female	60.02 ± 3.30	Sisay, 2002; cited in	
				Edea, 2008	
Rift Valley	Ethiopia	Male	60.94 ± 3.90	Sisay, 2002; cited in	
				Edea, 2008	
Washera	Ethiopia	Female	69.1± 0.20	Mengiste, 2008; cited	
				in Edea, 2008	
Washera	Ethiopia	Male	70.0 ± 1.90	Mengiste, 2008; cited	
				in Edea, 2008	
Fat-tailed	Eritrea, Ethiopia,	-	60	Ryder, 1983	
haired	Somalia				
Fat-tailed	Kenya	Ram	70	Ryder, 1983	
haired					
Fat-tailed	Kenya	Ewe	60	Ryder, 1983	
haired					
Fat-rumped	Somalia	-	65	Ryder, 1983	
haired					
Fat-rumped	Sudan	-	55	Ryder, 1983	
haired					
Western Africa					
Vina	Sudano Guinean zone,	-	72.33±0.48	Bayeni et al., 2018	
	Cameroon				
Mbere	Sudano Guinean zone,	-	69.07±0.39	Bayeni et al., 2018	
	Cameroon				
Djerem	Sudano Guinean zone,	-	68.34±0.44	Bayeni et al., 2018	
	Cameroon				
Mayo Banyo	Sudano Guinean zone,	-	69.00±0.40	Bayeni et al., 2018	
	Cameroon				

West African	Ajegunle Abeokuta,	Male	44.0 - 69.0	Sowande & Sobola,
Dwarf Sheep	Ogun State, Nigeria		(average:	2008
			56.19)	
West African	Ajegunle Abeokuta,	Female	34.0 - 66.0	Sowande & Sobola,
Dwarf Sheep	Ogun State, Nigeria		(average:	2008
			52.73)	
Thin-tailed	Sudan Desert	Ram	85	Ryder, 1983
hair				
Thin-tailed	Sudan Desert	Ewe	75	Ryder, 1983
hair				
Thin-tailed	Eritrea	Ram	100	Ryder, 1983
hair				
Thin-tailed	Eritrea	Ewe	85	Ryder, 1983
hair				
Thin-tailed	West Africa (country	Ram	80	Ryder, 1983
hair Tuareg	not specified)			
Thin-tailed	West Africa (country	Ewe	50	Ryder, 1983
hair Tuareg	not specified)			
Thin-tailed	West Africa (country	-	80	Ryder, 1983
hair Maure	not specified)			
Thin-tailed	West Africa (country	-	70	Ryder, 1983
hair Fulani	not specified)			
Thin-tailed	Democratic Republic	-	70	Ryder,1983
hair	of the Congo			
Tropical	Sudan	-	55	Ryder, 1983
dwarf Sudan				
Nilotic				
Tropical	Democratic Republic	-	45	Ryder, 1983
dwarf	of the Congo			
Tropical	Cameroon	-	50	Ryder, 1983
dwarf				
Tropical	West Africa (country	-	50	Ryder, 1983
dwarf	not specified)			

North Africa				
Thin-tailed	Macina (country not	-	70	Ryder, 1983
woolly	specified)			
Thin-tailed	Dongola (country not	-	60	Ryder, 1983
woolly	specified)			
Thin-tailed	Zaghawa (country not	Ram	80	Ryder, 1983
woolly	specified)			
Thin-tailed	Zaghawa (country not	Ewe	70	Ryder, 1983
woolly	specified)			
Thin-tailed	Arrit (country not	Ram	70	Ryder, 1983
woolly	specified)			
Thin-tailed	Arrit (country not	Ewe	60	Ryder, 1983
woolly	specified)			