

## **Report of the WG on Milk Recording of Goat, held in Sousse, Tunisia in 2004**

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## **Summary**

The ICAR Working group on goat milk recording has carried out in 2004 a second biennial survey, and used answers from 12 countries. In some countries not recording goat exist. The report points out the state of milk recording in ICAR countries in 2003, the increasing importance of simplification of milk recording, the great diversity in lactation calculation, the development of optional recordings such as milk composition and somatic cell counts, urea, and in some countries the udder scoring, reproductive traits and other. The future activities of the working group will be the preparation of the ICAR guidelines, (clarification of the definition of milk traits) closely cooperation with working group on milk recording of sheep and co-operation with the milk testing laboratories working group.

## **Introduction**

Milk recording in goat is very diverse in countries. We asked (send the questionnaire) on more than 46 countries and from some of them we got the answer that no milk recording exist (Ireland, Australia, New Zealand). In biennial surveys allow to have a regular look at different topics related to the terms of reference of the working group, in ICAR member countries and in some other countries: situation of milk recording in the different countries and breeds, simplification of milk recording, milk traits, (milk composition, somatic cell count, other traits), molecular information, milk recording equipment, artificial insemination (AI) and progeny tests. The questionnaire was sent to 46 countries. The report was written using 15 replies received (30 %). The presentation of the results of the survey represents the tables (A, B, C, D, E).

### **Situation of milk recording in dairy goat**

The whole tables synthesizing the results of the survey are available tables A to E. In table A is presented the situation on 45 breeds (11 countries) and situation about size of population Official milk recording (A4, AT4, B4, E methods) is used out in countries (table A) and the table A shows that B recording is used in Croatia, Norway, France and Germany, method E is used in Germany (1 %) whereas other countries mostly implement AT recording. The percentage of recorded does is very diverse (0,14 – 87 %). The table B showing the situation of each breed inside country.

A4 method is being progressively replaced by two simplified designs for milk yield (AT or B4). The last survey confirms this trend and clearly shows that simplification of milk yield recording has widely spread among ICAR countries.

### **Milk composition and somatic cell count (SCC)**

The recording of milk quantity and quality is used and many countries implement optional recording. The table C summarizes by each breed the average milk yield per recorded does in kg and length of lactation. Two type of lactation calculation is used: total milk yield -case of milking from kidding, - without a suckling period (TMY) and: total milked milk -case of milking after a suckling period (TMM).

The questionnaire of the survey included the other following topics: recording of non-milking traits (reproductive, longevity, udder score, weights and growths,) as described in table C.

Artificial insemination is used in two countries (table D) and no progeny tested exist.

In table E is showed milk recording equipment used in each country, measurement volume, weight sampler on different manufacturer.

### **Acknowledgments**

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*Table A: Size of population and importance of milk recording for dairy goat breeds*

BREED (country)	SIZE OF POPULATION :	OFFICIAL MILK RECORDING (A or B or E nomenclature)		OTHER MILK RECORDING (D nomenclature)	
		Number of recorded females (% population)	Number of recorded flocks	Number of recorded females (% population)	Number of recorded flocks
Alpine(UK)	?	2 (A4)			
Anglo-Nubian (UK)	?	10 (A4)			
Sannen (UK)	?	435 (A4)			
Toggenburg (UK)	?	14 (A4)			
Others (UK)	?	133 (A4)			
White goats (Slovak Republic)	51000	607 (1,2%)	17		
Skopelos (Greece)	6471	4530 (70 %) (A4)	?		
Karystou (Greece)	25000	175 (0,7 %) (A4)	?		
Local (Greece)	1060000	1484 (0,14 %) (A4)	?		
Maltese (Italy)		3150 (AT)	68		
Garganica (Italy)		242 (AT)	6		
Girgentana (Italy)		380 (AT)	12		
Bionda dell' Adamello (Italy)		132 (AT)	6		
Saanen (Italy)		7876 (AT)	182		
Camosciata delle Alpi (Italy)		6312 (AT)	186		
Frisa (Italy)		276 (AT)	5		
Sarda (Italy)		4592 (AT)	58		
Derivata di Siria (Italy)		1287 (AT)	38		
Toggenburg (Italy)		2 (AT)	2		
Argentata dell'Etna (Italy)		531 (AT)	28		
Jonica (Italy)		980 (AT)	18		
Vallese (Italy)		12 (AT)	1		
Verzaschese (Italy)		191, (AT)	7		
Orobica (Italy)		851	60		

BREED (country)	SIZE OF POPULATION :	OFFICIAL MILK RECORDING (A or B or E nomenclature)		OTHER MILK RECORDING (D nomenclature)	
		(AT)			
Roccamerano (Italy)		368 (AT)	15		
Messinese (Italy)		5696 (AT)	63		
Weißer Deutsche Edelziege (Germany)	7484	1481 (19,8%) A4(49%), B4 (31%), AT4 (19 %), E4 (1%)	52		
Bunte Deutsche Edelziege (Germany)	23221	3026 (13%) A4(49%), B4 (31%), AT4 (19 %), E4 (1%)	125		
Thüringerwaldziege (Germany)	1335	221 (16,5%) A4(49%), B4 (31%), AT4 (19 %), E4 (1%)	33		
Toggenburgerziege (Germany)	761	100 (13,1%) A4(49%), B4 (31%), AT4 (19 %), E4 (1%)	6		
Anglo Nubier (Germany)	1109	48 (4,3%) A4(49%), B4 (31%), AT4 (19 %), E4 (1%)	6		
Saannenziege (Germany)	849	692 (81,5%) A4(49%), B4 (31%), AT4 (19 %), E4 (1%)	5		
Undeclared breeds and/or crosses (Germany)	48823	1146 (2,3%) A4(49%), B4 (31%), AT4 (19 %), E4 (1%)	291		
Norwegian dairy goat (Norway)	47000	38000 (81%) (B4)	450		
French alpine (Croatia)	10000	3203 (32%) B4, AT	125		
German improved fawn goats (Croatia)	500	71 (14%) AT	4		
Sannan (Croatia)	1000	224 (22 %) (AT)	9		
Saanen (Slovenia)		368 (AT)	10		
Alpine (Slovenia)		1396 (AT)	34		
Local (Slovenia)		101 (AT)	7		
Saanen (Switzerland)		6'455 (A4)	958		
Appenzell (Switzerland)		863 (A4)	113		
Toggenburg (Switzerland)		3'294 (A4)	609		
Alpine (Chamois�e)		7'243	793		

BREED (country)	SIZE OF POPULATION :	OFFICIAL MILK RECORDING (A or B or E nomenclature)		OTHER MILK RECORDING (D nomenclature)	
(Switzerland)		(A4)			
Bündner Strahlen (Switzerland)		1'150 (A4)	137		
Nera Verzasca (Switzerland)		1'424 (A4)	50		
Pfauenziege (Switzerland)		626 (A4)	101		
Nubian (Switzerland)		36 (A4)	5		
Local and foreign dairy breeds (France)	800000	300000 (37,5 %) A4-A5 (210000) AT4-AT5 (90000)	2500		

Table C – Milk yield recorded dairy goat breeds

COUNTRY	BREED	Average milk yield per recorded does in kg (length in days) [a = TMY / b = TMM / c=TSMM] ref = reference length in days			Number of flocks (goat)	
		yearlings (12-18 months)	Adults (>18 months)	all does		
<b>UK</b>	ANGLO NUBIAN	905 [a]	1071 [a]	1038 [a]	4 (594)	
	ALPINE	748 [a]	1042 [a]	983 [a]		
	SAANEN	976 [a]	950 [a]	962 [a]		
	TOGGENBURG	-	1339 [a]	1339 [a]		
	OTHERS	1129 [a]	1034 [a]	1070 [a]		
	TOTAL	978 [a]	994 [a]	987 [a]		
<b>SLOVAK REPUBLIC</b>	WHITE GOATS	-	508,9 [b]	508,9 [b]	17 (607)	
<b>BELGIUM</b>	-	-	-	-	-	
<b>ITALY</b>	MALTESE	242.....[b]	339.....[b]	326.....[b]	68 (3150)	
	GARGANICA	117.....[b]	136.....[b]	134.....[b]	6 (242)	
	GIRGENTANA	282.....[b]	345.....[b]	336.....[b]	12 (380)	
	BIONDA DELL'ADAMELLO	-	329.....[b]	329.....[b]	6 (132)	
	SAANEN	373.....[b]	605.....[b]	521.....[b]	182 (7876)	
	CAMOSCIATA DELLE ALPI	343.....[b]	525.....[b]	478.....[b]	186 (6312)	
	FRISA	271.....[b]	356.....[b]	343.....[b]	5 (276)	
	SARDA	162.....[b]	229.....[b]	221.....[b]	58 (4592)	
	DERIVATA DI SIRIA	121.....[b]	413.....[b]	409.....[b]	38 (1287)	
	TOGGENBURG	382.....[b]	270.....[b]	326.....[b]	2 (2)	
	ARGENTATA DELL'ETNA	138.....[b]	187.....[b]	185.....[b]	28 (531)	
	JONICA	158.....[b]	253.....[b]	248.....[b]	18 (980)	
	VALLESE	106.....[b]	195.....[b]	173.....[b]	1 (12)	
	VERZASCHESE	185.....[b]	331.....[b]	321.....[b]	7 (191)	
	OROBICA	184.....[b]	282.....[b]	277.....[b]	60 (851)	
	ROCCAVERANO	246.....[b]	390.....[b]	363.....[b]	15 (368)	
	MESSINESE	137.....[b]	182.....[b]	177.....[b]	63 (5696)	
	LARIANA	-	198.....[b]	198.....[b]	-	
	<b>GERMANY</b>	WEIÙE DEUTSCHE EDELZIEGE			764 (240) [a]	52 (1481)
		BUNTE DEUTSCHE EDELZIEGE			626 (240) [a]	125 (3026)
THÜRINGERWALDZIEGE				767 (240) [a]	33 (221)	
TOGGENBURGERZIEGE				732 (240) [a]	6 (100)	
ANGLONUBIER				621 (240) [a]	6 (48)	
TOTAL				681 (240) [a]		
<b>NORWAY</b>	NORWEGIAN DAIRY GOAT			576 [a]	450 (38000)	
<b>CROATIA</b>	FRENCH ALPINE (AT)	345 (187) [b]	519 (214) [b]	450 (199) [b]	(2549)	
	FRENCH ALPINE (B4)	291 (175) [b]	424 (188) [b]	379 (183) [b]	(654)	
	GERMAN IMPROVED FAWN GOATS	247 (159) [b]	401 (178) [b]	378 (174) [b]	4 (71)	
	SANNAN	561 (208) [b]	704 (224) [b]	666 (220) [b]	9 (224)	
<b>GREECE</b>	SKOPELOS			359		
	KARYSTOU			82		
	LOCAL			140		
<b>SLOVENIA</b>	SAANEN			523(246) [b]	10 (368)	
	ALPINE			419(244) [b]	34 (1396)	
	LOCAL			226(203) [b]	7 (101)	
<b>SWITZERLAND</b>	SAANEN	600 (263) [a]	828 (272) [a]	778 (270) [a]	(3297)	
	APPENZELL	522 (255) [a]	754 (264) [a]	694 (262) [a]	(434)	
	TOGGENBURG	555 (259) [a]	793 (271) [a]	738 (268) [a]	(1183)	
	ALPINE (CHAMOISEE)	522 (252) [a]	735 (265) [a]	687 (262) [a]	(3245)	
	BÜNDER STRAHLEN	355 (219) [a]	576 (239) [a]	539 (235) [a]	(456)	
	NERA VERZASCA	-	439 (207) [a]	439 (207) [a]	(334)	
	PFAUENZIEGE	322 (248) [a]	511 (238) [a]	475 (236) [a]	(202)	
	NUBIAN	780 (300) [a]	891 (300) [a]	828 (300) [a]	(14)	
	TOTAL	546 (255)	749 (263) [a]	705 (262) [a]	(9176)	
	<b>FRANCE</b>	TOTAL	651 (282) [a]	772 (275) [a]	734 (277) [a]	2500 (300000)

Table C - Recording of other traits

<u>COUNTRY</u> BREED	Traits	On-farm recording	Breeding evaluation	Use in selection
<u>UK</u>	-	-	-	-
<u>SLOVAK REPUB.</u>	YES	YES	YES	YES
<u>BELGIUM</u>	-	-	-	-
<u>ITALY</u>	Reproductive (Herdbook)	Yes	No	No
<u>GERMANY</u>	Reproductivity Weights and Growths Udder Score Appearance Score	Yes Yes Yes Yes	Some Some Some Some	Yes Some Yes Yes
<u>NORWAY</u>	Milking ability (udder score)	Yes	Yes	Yes
<u>CROATIA</u>	Reproductive traits, weights and growths	Yes	No	Yes
<u>GREECE</u>	-	-	-	-
<u>SLOVENIA</u>	Reproductive traits, birth weight	Yes	Yes	Some
	Fertility, Prolificacy	Yes	Yes	Some
<u>SWITZERLAND</u> All breeds Walliser Schwarzzhals  Boar	Number of kids at birth Weight of kids at birth and at the 40 <sup>th</sup> day  Weight of kids at birth and at the 40 <sup>th</sup> day	Yes Yes (controller for second weight) Yes (controller for second weight)	No Calculation of daily gain  Calculation of daily gain	Not explicitly Yes  Yes
<u>FRANCE</u>	Reproductive Udder score Morphology score		Yes Yes	Yes Yes Yes

*Table D - Breeding scheme using artificial insemination (AI)*

<u>COUNTRY</u>	BREED	AI		Number of AI progeny-tested bucks per year	Selection Criteria
		year of starting	AI per year (semen)		
<u>UK</u>		-	-	-	-
<u>SLOVAK REPUBLIC</u>		-	-	-	-
<u>BELGIUM</u>		-	-	-	-
<u>ITALY</u>		-	-	-	-
<u>GERMANY</u>		-	-	-	-
<u>NORWAY</u>	Norwegian dairy goat	1974	960 (frozen)		Fat Protein Lactose Milk Udder
<u>CROATIA</u>		-	-	-	-
<u>GREECE</u>		-	-	-	-
<u>SLOVENIA</u>		2000	25	-	-
<u>SWITZERLAND</u>			Approx. 1.200	-	-
<u>FRANCE</u>		1972	8000 (fresh) 68000 (frozen)	150-200	Total Fat Total Protein

*Table E - Milk recording equipment used*

COUNTRY	USE OF JARS		USE OF MILK METERS	
	manufacturer	Measurement (1) / sampler (2)	manufacturer	Measurement (1) / sampler (2)
UK	-	-	-	-
SLOVAK REPUBLIC	-		TRU TEST HI	VOLUME
BELGIUM	-	-	-	-
ITALY	ALFA LAVAL  ROYAL  WESTFALIA SEPARATOR  MISURATORE ITALIANA  MIBO	Volume – No sampler  Volume – No sampler Volume – No sampler  Volume – No sampler  Volume – No sampler	TRU-TEST Mod. H.I.	Weight – Sampler (not autosampler)
GERMANY	-	-	-	Weight (no sampler) Some Tru Tester
NORWAY	-	No	Tru-Test H1 Tru-Test FV Tru-Test FD-5G	-
CROATIA	“CARTEL” GERMANY	Measurment – volume Sampler - no	-	-
GREECE	-	-	-	-
SLOVENIA			TRU TEST	Volume
SWITZERLAND	-	-	-	-
FRANCE			Tru test	Volume