

INTRODUCTION OF A PORTABLE MILKING MACHINE IN DIFFERENT FARMING SYSTEMS



Milking in extensive sheep and goats breeding is usually done by hand. Milk hygiene is closely related to the quality of milk products and human health

COMMON SMALL RUMINANT MILKING TYPES IN TURKEY

In the case study, 50 heads of Akkaraman sheep breed and 50 heads Hair goats breed were subjected to either machine milking or milking hand milking with objective of demonstrating a portable milking machine to breeders



*MILKING AND HYGIENE ARE VERY IMPORTANT
TO BOTH ANIMAL AND HUMAN HEALTH
MILKING MACHINES MAINTAIN ARE MORE
THAN HAND MILKING*

For sustainability in sheep and goat breeding, the profitability of farms is essential. A milking machine for sheep and goats will provide longer milking periods and better quality of the product, saving time and labour, thus enhancing the sustainability of the activity.

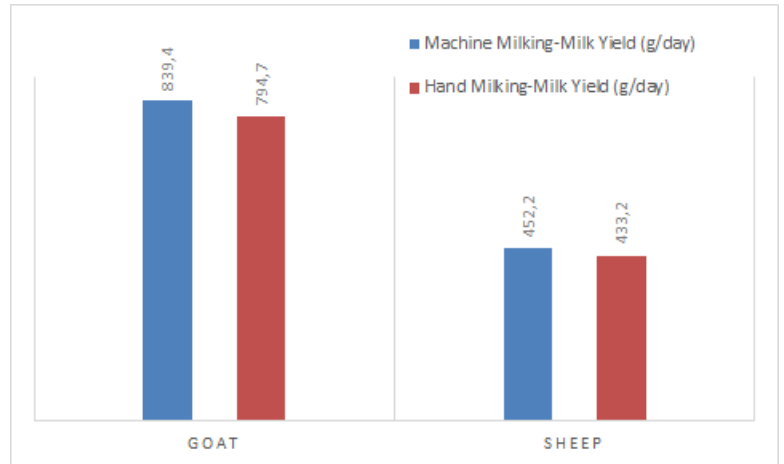


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HAND MILKING IS DONE WIDELY IN SMALL RUMINANT FARMS IN TURKEY

FARMER SURVEY

Machine milking and hand milking were performed in two sheep and goat farms (one sheep and one goat farm, each farm consisted of 50 animals) in Nigde province of Turkey.



MACHINE MILKING AND HAND MILKING

EFFECT OF MACHINE MILKING

As shown above in the graph, machine milking has a positive effect on the daily milk production of both goats and sheep. Besides, it is well known that machine milking is more hygienic than hand milking.



THE GOATS FARM

HAND MILKING IS DONE GENERALLY BY WOMEN

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MACHINE MILKING HAS POSSITIVE EFFECT ON MILK YIELD

MACHINE MILKING

Machine milking of goats and sheep is rarely used in Turkey. But, it would be more widely adopted by effective demonstrations to the breeders.

Traits	Goat		Sheep	
	Machine Milking	Hand Milking	Machine Milking	Hand Milking
N	25	25	25	25
Live weight, kg	45,95±0,89	46,44±0,88	53,55±0,61	52,8±0,61
Milk production, g / day	839,40±22,4	794,66±22,1	452,2±25,7	433,2±25,7
Dry matter,%	12,70±0,22	12,3±0,21	16,90±0,31	16,60±0,30
Fat,%	3,40±0,15	3,44±0,15	6,80±0,27	6,40±0,26
Crude protein,%	4,40±0,12	4,28±0,12	5,90±0,16	6,10±0,15
Lactose,%	4,72±0,13	4,71±0,13	4,40±0,13	4,60±0,12

EFFECT OF THE MILKING TYPE ON MILK CHARACTERISTICS OF GOATS AND SHEEP

USABILITY OF MACHINE MILKING

Machine milking is more suitable for intensive management systems than for extensive systems. But, a portable milking machine can be used widely in extensive small ruminant breeding with some improvements.



PORTABLE MILKING MACHINE DEMONSTRATION

INTRODUCTION PORTABLE MILKING MACHINE IN DIFFERENT FARMING SYSTEMS

MILKING PROBLEMS

General problems of milking in small ruminant farms:

- *low milk production of local breeds.*
- *cost of milking machine*
- *structure of the udder*
- *electricity*
- *low milk price*
- *transport and cooling of milk*
- *habit of hand milking and milking staff*

VISITING OF SHEEP FARM



1

Machine milking has a positive effect on milk production

2

Machine milking is easier than hand milking and it is more hygienic

3

Machine milking should be promoted and expanded

4

The cost of machine milking should be compensated with subsidies

**NEW MILKING INOVATIONS SHOULD BE USED TO INCREASE THE
SUSTAINABILITY OF GOATS AND SHEEP FARMING**

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