

ABSTRACT

MANURE MANAGEMENT APPLICATIONS in DAIRY CATTLE FARMS in AYDIN and THE IMPROVEMENTS for THE USE in PLANT PRODUCTION

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2014, 80 pages

The aim of this study is to investigate the collection and storage methods of the manure produced in the dairy cattle farms of Aydın. The improvements in manure management and the general characteristics of the facilities were also investigated for the assessment of the methods which can be used to increase the approximate fertilizer value of the manure-compost. For this purpose, facilities with intense manure production included in this study are selected among the ones in which the number of heads on the farm is over 100. The total number of facilities is 87 and they are distributed around 13 different districts of Aydın including the central.

69,55% of the farmers, the owners of the facilities included in this study, are under age 50. The ages of youngest and oldest farmers are 28 and 74, respectively. The percentage of facility owners who has a university degree were 14,9%, whereas most of the facility owners have an elementary school degree (43,7%). The types of the farms evaluated in this study were closed-wall and semi-open barn buildings: 48,2% of them being as closed-wall and 41,4% of them being semi-open buildings. The classification of the farms based on their number of head showed that 89,6% of the farms have heads ranging in numbers 100 to 200. There was only 1 farm in which the number of heads is over 300. Most of the farms (72,4% of the farms evaluated) were located in flat terrain.

The information collected from the dairy cattle farms assessed in this study showed that, in 67,8% of the farms an tractor is used for the collection of manure produced in barns. The percentage of manual collection is 14,9%, and there were only 9 farms (10,4% of the farms evaluated) in which the manure was collected with scrapers equipped with chain. 89,7% of the farms do not have any impermeable manure pits. All of the manure produced from the farms evaluated in this study is used in agriculture. 87,4% of the facilities use the manure they produce for their farms, whereas 12,6% of them export the manure they generate.

None of the facilities assess manure in modern applications. The manure were transported without manure aging. As a result, the farms are not able to use the on-farm biogas technology. The last chapter of this study includes recommendations for the effective use of manure and presents management strategies.

Keywords: Manure, dairy cattle farms, Aydın