*III Encontro Científico de Produção Animal Sustentável*
*05 de outubro de 2012*
*Instituto de Zootecnia, Nova Odessa, SP*

# CAPTURE AND TREATMENT OF GOAT MANURE

## *CAPTAÇÃO E TRATAMENTO DE ESTERCO DE CAPRINOS*

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The appropriate management and disposal of feces and urine derived from goat production systems can help minimize the environmental impact of the activity reflecting in animal welfare, good sanitary conditions, viable indexes and increase revenue by aggregating the activity value of the manure generated. Aiming to take advantage of zootechnical installation already used for the manure in rabbits' husbandry, it was carried out the suitability of a 15.40 m² pen (5.7 x 2.7 meters, filled with dirt) in the goat rearing of UPD Itapetininga/APTA-SAA being deployed on slatted floor system for capturing and processing goat manure. It was dug in the floor of the bay rectangular holes with 15 m² of surface and 80 cm of depth for capturing of the excrements, filled with layers of gravel (0.20 m), coal (0.20 m), medium sand (0, 15 m) and clay (0.05 m) being the surface in direct contact with feces and urine. The gap of 40 cm between the back of the slatted floor and the last layer allowed the accumulation of manure during the occupation of the stall. We used the pens for 10 consecutive months for the management of newly calved Saanen and crossbred Saanen/Boer goats for 10 to 15 days postpartum in controlled feeding and termination of 27 confined kids. The maintenance of the collection system and treatment of manure was done through constant sweeps in the slatted floor and periodical aplication of 30 g of superphosphate per m² directly in feces, in order to acidifying the compound. This measure contributed to the ambience and animal comfort, controlling flies and neutralizing odors and harmful actions of ammonia coming from the urine. To carry out the sanitary break in the stall, needed for new production cycle, the frames of the slatted floor were raised and about 2500 kg of manure was removed, followed by cleaning and disinfection of floors and pillars of support and rest for 45 days unused until the entry of the new batch of goats recently calved. Using this new manure system we observed great decrease in the occurrence of typical confined kids diseases, like diarrhea, pneumonia and omphalophlebitis, and lower overall mortality rate until slaughter when compared with goats reared in pens with dirt and litter. The investment for installation of the system was assessed $ 722.50 (U.S. $ 48.16/m²). Considering the potential use of the stall, placing 10 adult animals (1.5 m²/head), with average production of the adult animal of 600 kg of manure/year, can be obtained easily, 6000 kg of manure, with average price of $ 0.13/kg., which could revert to $ 780.00/production cycle, this feature would pay the investment in about two years. In order to improve the investment cost it can be used in the construction of treated pine wooden pallets, in view of durability, ease of working wood and the lowest price. In order to facilitate a return on investment, can be treated pine used in the construction of wooden pallets, in view of its durability, workability and lower price, which can replace other more expensive types of wood, with the same efficiency and advantage of being lighter, which facilitates the management and operational cleaning of pallets. Furthermore, the capture system can be strong allies on the aggregation of producers of small ruminants, increasing the production of humus, energy source for anaerobic digesters, manure crops and organic manure use in integrated agriculture systems, pastures and forest. The validated system made possible the manpower needed to maintain the stall tested, improving the management and performance of goats, other income generating activities for productive and sustainable.

Key words: goat, manure, organic fertilization, rural buildings.