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**Session 34**

**Productive results of primiparous rabbit does with different live weight at first insemination**

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This study was performed to evaluate the relationship between body weight at first insemination and growth, feed intake, reproductive performance, and fertility rate of rabbit does. The ninety does used were fed ad libitum. At 17 weeks of age the does were inseminated and split, according to their body weight, among three groups of 30 animals each: Heavy (H; 3,900±97g), Medium (M; 3,661±54g), and Light (L; 3,554±98g). At kindling litters were equalized in number. Kits were weaned at 35 d of age. Does, kits and feed were weighted at the insemination, kindling, 18 d after kindling and weaning. The data from non-pregnant does were only considered for fertility rate. Data were analysed using the ANOVA procedures and Tukey test for means comparison. Does fertility and kits mortality rate were performed using c² test. The does body weight differed (P<0.05) at insemination, kindling and weaning, but the daily weight gain between insemination and weaning was similar (P>0.05; 10g/day) among groups. The feed intake of does was lower (P<0.05) in L group than in M and H groups (421, 466 and 463 g/d respectively) during the entire lactation period. The L group had higher fertility rate than H group (96.7 vs. 80.7%) but these results were not statistically different (P>0.05). Kits mortality during the first 18 days of life differ (P<0.001), was higher in L group and lower in H group (28.1, 19.1 and 8.3% in L, M and H group, respectively). A low body weight at first insemination did not affect the litter size (9.8 kits), nor the weight of kits (48g). The litter weight did not differ at kindling, but after 18 d of life the litter weight was lower in L group than in M and H group (2,008, 2,394 and 2,370 for L, M and H does, respectively, P<0.05). The results suggest that, under an intensive rearing system, the body weight of rabbit does at first insemination can have a positive effect on productivity, measured by growth and mortality of kits, but their fertility decreases.

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**Effect of two management systems of piggery waste slurry on biogas yield**

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Methane producing capacity of by-products depends on characteristics of the substrate. The characteristics of livestock manure substrates are very variable. Furthermore, livestock manure management is an important factor influencing these characteristics. The objective of this study was to determine the composition and biogas yield of two pig slurries: one from slatted floor storage; and the other from a separation of solid and liquid fraction. To determine slurry composition, organic matter (DQO and DBOlim), nutrients (nitrogen and phosphorus) and solids (total and volatile) content of the soluble and suspended fraction was analyzed. To determine biogas yield, anaerobic biodegradability test in hermetically closed vessels was done. Biogas was measured by manometric methods and methane by gas chromatography. Organic matter, nutrients and solids content was lower in slurries from the separation treatment than from slatted floor storage. Biogas yield, expressed per amount of DQO added and the percentage of methane of the total produced biogas was also lower in these slurries. Others studies have demonstrated that a separation treatment can improve biogas production in the liquid fraction. However, anaerobic digestion was done immediately after the separation treatment in most of these studies. In farm conditions, it is difficult to synchronize anaerobic digestion and separation treatment in time, thus microflora can consume easily biodegradable organic matter in the slurries. Separation of solid and liquid fraction can improve anaerobic digestion in slurries whenever it is done immediately after the separation treatment; otherwise a fast degradation of organic matter can occur.