

digestive disorders and improve feed efficiency. This review first recalls some facts about the digestive microbiota composition in the main fermentation compartment, and its variability in rabbits with some new insights based on recent molecular approaches. The main functions of the digestive microbiota will then be explained. Finally some possible ways to control rabbit caecal microbiota will be described and a suitable timing for action will be defined.

REPRODUCTION AND GENETICS

EXPLORING THE RABBIT GENOME TO IDENTIFY SINGLE NUCLEOTIDE POLYMORPHISMS USEFUL FOR ASSOCIATION STUDIES

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High throughput genotyping platforms and next generation sequencing are changing the way in which animal genomes are investigated. In this study we applied a next generation sequencing technology (Ion Torrent PGM) to identify single nucleotide polymorphisms (SNPs) in the rabbit genome. Equimolar genomic DNA from different rabbit breeds was pooled and digested with 2 restriction fragments. Two reduced representation libraries were produced and sequenced on 2 different Ion Torrent 318 chips. A total of 6343257 reads were aligned to the rabbit genome (oryCun2.0), whereas 621483 reads resulted as “unmapped”. Variant calling produced a total of 65630 SNPs with a mapping quality of at least 10Q and covered by at least 4 reads in the point of the detected variation. This study represent the first one that identified a large number of SNPs in the rabbit genome. In addition, the SNPs identified will be useful to design a commercial high throughput genotyping platform that could have an important impact in the study of variability and identification of markers associated with production traits in rabbit populations.

EFFECT OF LIGHT INTENSITY ON PERFORMANCE OF RABBIT DOES

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The aim of the study was to compare the reproductive performance of rabbit does housed in 2 different light intensities. The experiment was conducted at the experimental rabbit farm of the Kaposvár University. Rabbit does (n=108) were randomly housed in 2 identical rooms which only differed in the light intensity (HL group: 150-200 lux; LL group: 10-20 lux). In both rooms 16L:8D lighting schedule was applied. Rabbit does were first inseminated at 16.5 wk of age. Forty-two d reproductive rhythm and single batch system was applied. Productive data of the first 3 consecutive reproductive cycles were evaluated. The light intensity did not influence the kindling rate and the body weight of the does at kindling. The litter size of HL group was higher compared to LL rabbits (born total: 10.69 vs. 9.91, NS; born alive: 10.21 vs. 9.29, $P=0.032$; litter size at 21 d: 8.66 vs. 8.26, $P=0.028$, respectively). The litter- and individual weight at 21 d, and suckling mortality did not differ in the 2 light intensities. Calculating the productivity index, the number of kits born alive per 100 artificial insemination (AI) was higher in the HL than in the LL group (769 vs. 712 kits, respectively), but the 2 groups did not differ for the total weight of the 21 d kits per 100 AI (HL: 229 kg; LL: 223 kg).

EFFECT OF INTENSIVE AND SEMI-INTENSIVE RHYTHM ON REPRODUCTIVE PERFORMANCE OF RABBIT DOES

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A total of 34 Pannon rabbit does were housed in commercial rabbit cages (floor area 0.32 m²) and inseminated 2 d after kindling (18 does; 33D group) or 11 d after kindling (16 does; 42D group). A single-batch system (all of the does in the group were inseminated on the same day) was used. Duration of the experiment was 193 d. During this period number of cycles were 5 and 4 in group 33D and 42D, respectively. There were not significant difference in kindling rates (33D: 75.6%, 42D: 85.2%), in litter size (33D: 9.02 and 8.69, 42D: 9.44 and 8.58, total and alive, respectively), suckling mortality (33D: 14.5%, 42D: 15.6%), and survival of does (33D: 71%, 42D: 81%) between the 2 groups. During the experiment, the percentages of does that kindled 0, 1, 2, 3, 4, and 5 times were 0, 0, 0, 8, 69, and 23% in does of 33D group; and 0, 0, 17, 58, and 25% in does of 42D group (in this group, does had maximum 4 kindlings). Significant differences were found in kindling rate of primiparous does (33D: 50.0%, 42D: 87.5%, $P<0.05$) and in mortality of