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## 饲料中性洗涤纤维水平对断奶至3月龄獭兔生长性能、氮代谢、毛皮品质和盲肠发酵的影响

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## Dietary Neutral Detergent Fiber Level Affects Growth Performance, Nitrogen Metabolism, Fur Quality and Caecum Fermentation of Rex Rabbits from Weaning to 3 Months of Age

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**摘要** 本试验旨在研究饲料中性洗涤纤维(NDF)水平对断奶至3月龄獭兔生长性能、氮代谢、毛皮品质和盲肠发酵的影响。选用体重一致的断奶獭兔200只,随机分成5组,每组40个重复,每个重复1只兔,分别饲喂NDF水平为26%、28%、30%、32%、34%的试验饲料,预试期7 d,正试期53 d。通过饲养试验、消化代谢试验和屠宰试验对各相关指标进行测定。结果表明:1)随着饲料NDF水平的升高,平均日增重先升高后降低,料重比先降低后升高,在饲料NDF水平为30%时分别达最高(20.63 g/d)和最低(3.82)。2)随着饲料NDF水平的升高,沉积氮先增高后降低,以30% NDF组最高;32%和34% NDF组的可消化氮( $P<0.05$ )、氮利用率( $P<0.01$ )分别显著和极显著低于其他3组。3)30% NDF组的毛皮重量(184.63 g)和毛皮面积(720.00 cm<sup>2</sup>)极显著高于其他4组( $P<0.01$ )。4)饲料NDF水平对氨态氮浓度以及乙酸、丙酸和丁酸含量影响不显著( $P>0.05$ )。综合本试验测定指标,断奶至3月龄生长獭兔饲料适宜的NDF水平为30%。

**关键词:** 中性洗涤纤维 獭兔 生长性能 氮代谢 毛皮品质 盲肠发酵

**Abstract:** This experiment was conducted to study the effects of dietary neutral detergent fiber (NDF) level on growth performance, nitrogen metabolism, fur quality and caecum fermentation of Rex rabbits from weaning to 3 months of age. Two hundred weaner Rex rabbits with similar body weight were randomly assigned to 5 groups with 40 replicates in each group and 1 rabbit per replicate. Rabbits in the 5 groups were fed experimental diets containing 26%, 28%, 30%, 32% and 34% NDF, respectively. The trial lasted for 7 days for adaptation, and 53 days for test. By breeding experiment, digestibility and metabolism experiment as well as slaughtering experiment, the related indexes were determined. The results showed as follows: 1) with the increase of dietary NDF level, average daily gain (ADG) tended to be increased firstly and then decreased, while feed/gain (F/G) showed the opposite tend, the highest ADG (20.63/d) and the lowest F/G (3.82) both appeared in 30% NDF group. 2) With the increase of dietary NDF level, retention nitrogen (RN) was increased firstly and then decreased, the highest level was in 30% NDF group; digestible nitrogen (DN,  $P<0.05$ ) and digestible nitrogen/nitrogen intake (DN/IN,  $P<0.01$ ) in 32% and 34% NDF groups were significantly lower than those in the other 3 groups. 3) The weight (184.63 g) and area (720.00 cm<sup>2</sup>) of fur in 30% NDF group were significantly higher than those in other groups ( $P<0.01$ ). 4) Dietary NDF level had influence on ammonia nitrogen concentration and contents of propionic acid, acetic acid and butyric acid ( $P>0.05$ ). In conclusion, the optimal dietary NDF level for Rex rabbits from weaning to 3 months of age is 30%.

**Keywords:** neutral detergent fiber, Rex rabbit, growth performance, nitrogen metabolism, fur quality, caecum fermentation

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