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饲粮锌源与水平对冬毛期公貂体重、营养物质消化率及氮代谢的影响

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Effects of Dietary Zinc Source and Level on Body Weight, Nutrient Digestibility and Nitrogen Metabolism of Male Minks during Furring Period

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摘要 本试验旨在研究饲粮锌源与水平对冬毛期公貂体重、营养物质消化率及氮代谢的影响。选择84只公貂作为试验动物,随机分为7组,每组12只,饲粮中分别添加0(I组)、15(II组)、30(III组)、45(IV组)、60(V组)、75 mg/kg(VI组)蛋氨酸螯合锌和60 mg/kg硫酸锌(VII组)。预试期7 d,正试期40 d。结果表明,III组公貂的体重(140日龄)和平均日增重(120~140日龄)均显著高于I组和VII组($P<0.05$),脂肪消化率显著高于VI组($P<0.05$),沉积氮、净蛋白质利用率和蛋白质生物学价值显著高于II组($P<0.05$)。III组与VII组各项指标之间差异均不显著($P>0.05$)。由此可见,冬毛期公貂饲粮中蛋氨酸螯合锌适宜添加量为30 mg/kg。

关键词: 冬毛期 公貂 锌 体重 消化代谢

Abstract: This experiment was conducted to study the effects of dietary zinc source and level on body weight, nutrient digestibility and nitrogen metabolism of male minks in furring period. Eighty-four male minks were randomly assigned into 7 groups with 12 replicates. The diets were supplemented with 0 (group I), 15 (group II), 30 (group III), 45 (group IV), 60 (group V) and 75 mg/kg zinc methionine (group VI) and 60 mg/kg zinc sulfate (group VII), respectively. The adaptation period lasted for 7 days and the formal period lasted for 40 days. The results showed that body weight (140 days of age) and average daily gain (120 to 140 days of age) in group III were significantly higher than those in group I and group VI ($P<0.05$). Ether extract digestibility in group III was significantly higher than that in group VI ($P<0.05$). Nitrogen deposition, net protein utilization and protein biological value in group III were significantly higher than those in group II ($P<0.05$). There were no significant differences in these items between group III and group VII ($P>0.05$). In conclusion, 30 mg/kg is the optimal level of zinc methionine to add in diet of male minks in furring period.

Keywords: [furring period](#), [male mink](#), [zinc](#), [body weight](#), [digestibility and metabolism](#)

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- [1] 杨颖,曲勃,高秀华,等.铜、锌在毛皮动物上的研究进展[J].饲料工业,2012,33(13):57-60.
- [2] CASE C L,CARLSON M S.Effect of feeding organic and inorganic sources of additional zinc on growth performance and zinc balance in nursery pigs[J].Journal of Animal Science,2002,80(7):1917-1924.
- [3] CREECH B L,SPEARS J W,FLOWERS W L,et al.Effect of dietary trace mineral concentration and source (inorganic vs. chelated) on performance,mineral status, and fecal mineral excretion in pigs from weaning through finishing[J].Journal of Animal Science,2004,82(7):2140-2147.
- [4] CAO J,HENRY P R,GUO R,et al.Chemical characteristics and relative bioavailability of supplemental organic zinc sources for poultry and ruminants[J].Journal of Animal Science,2000,78(8):2039-2054.
- [5] SWINKELS J W,KORNEGAY E T,ZHOU W,et al.Effectiveness of a zinc amino acid chelate and zinc sulfate in restoring serum and soft tissue zinc concentrations when fed to zinc-depleted pigs[J].Journal of Animal Science,1996,74(10):2420-2430.
- [6] VAN HEUGTEN E,SPEARS J W,KEGLEY E B,et al.Effects of organic forms of zinc on growth performance,tissue zinc distribution, and immune response of weanling pigs[J].Journal of Animal Science,2003,81(8):2063-2071.
- [7] CARLSON M S,BOREN C A,WU C,et al.Evaluation of various inclusion rates of organic zinc either as polysaccharide or proteinate complex on the growth performance,plasma, and excretion of nursery pigs[J].Journal of Animal Science,2004,82(5):1359-1366.
- [8] 李光玉,王凯英,赵靖波.毛皮动物矿物元素的需要[J].经济动物学报,2003(4):10-13.
- [9] 陈群,于维,于秀芳.不同锌源对猪早期生长及其相关基因表达的影响[J].吉林畜牧兽医,2008(7):6-8.
- [10] 贺翠婷,王林枫,杨改青,等.不同锌源和水平对奶山羊相关激素分泌的影响[J].中国畜牧兽医,2011(3):24-27.
- [11] 王淑明,张敏,封洋,等.不同锌水平对水貂生产性能及营养物质消化率的影响[J].经济动物学报,2009(4):207-210.
- [12] 计峰,罗绪刚,李素芬,等.高锌对断乳仔猪促生长作用及其机理的研究进展[J].动物营养学报,2003,15(3):1-5.
- [13] 王敏奇,许梓荣.饲粮中添加高剂量无机锌对断奶仔猪消化性能的影响[J].中国畜牧杂志,2003,39(1):15-16.
- [14] 任二军,蒋清奎,刘进军,等.不同锌源与锌水平日粮对生长期雌性水貂营养物质消化率及氮代谢的研究[J].中国畜牧兽医,2011(6):22-25.
- [1] 张铁涛,崔虎,高秀华,杨福合,李光玉,邢秀梅.低蛋白质饲粮中添加蛋氨酸对育成期蓝狐生长性能和营养物质消化代谢的影响[J].动物营养学报,2013,25(9): 2036-2043
- [2] 吴学壮,张铁涛,杨颖,刘志,高秀华,杨福合,邢秀梅.饲粮锌添加水平对繁殖期雄性水貂繁殖性能、营养物质消化率及氮代谢的影响[J].动物营养学报,2013,25(8): 1817-1824
- [3] 毛述宏,林鑫,杨阳,林仕梅,罗琳,李斌斌.甘露聚糖酶对罗非鱼生长性能、消化代谢和非特异性免疫力的影响[J].动物营养学报,2013,25(7): 1641-1647
- [4] 杨雅涵,孙伟丽,李光玉,王凯英,鲍坤,徐超,荆祎.饲粮蛋白质水平和限饲对冬毛期水貂生产性能、消化代谢和血清生化指标的影响[J].动物营养学报,2013,25(6): 1276-1284
- [5] 穆国柱,李福昌,王雪鹏,王春阳,吴振宇.饲粮豆油添加水平对断奶至3月龄獭兔生长性能、营养物质消化代谢、血清生化指标及皮毛质量的影响[J].动物营养学报,2013,25(6): 1375-1382
- [6] 张亚男,武书庚,张海军,岳洪源,齐广海.锌添加水平对蛋鸡生产性能和蛋壳品质的影响[J].动物营养学报,2013,25(5): 1093-1098
- [7] 陈苗璐,王宝维,张名爱,岳斌,葛文华,王迪,王姣,孟苓凤.饲粮锌水平对鹅生长性能、血清生化指标及激素含量的影响[J].动物营养学报,2013,25(5): 1105-1112
- [8] 刘佰阳,李光玉,鲍坤,刘晗璐,李丹丽,顾东,张涛.棉籽低聚糖对水貂生长性能、营养物质消化代谢、肠道菌群和免疫性能的影响[J].动物营养学报,2013,25(5): 1123-1130
- [9] 汪水平,王文娟,赵桥芳,龚秋瑜,徐基钊,张朝娟.小檗碱对肉兔消化代谢的影响[J].动物营养学报,2013,25(3): 609-616
- [10] 杨原志,吴业阳,董晓慧,谭北平,杨奇慧,迟淑艳,刘泓宇.方斑东风螺饲料中锌需要量的研究[J].动物营养学报,2013,25(3): 643-650
- [11] 郭建林,陈建明,孙丽慧,沈斌乾,潘茜.日本沼虾幼虾对饲料中锌的需求量[J].动物营养学报,2013,25(3): 661-668
- [12] 郭强,张铁涛,刘志,邢思远,杨福合,邢秀梅.饲粮锌水平对育成期蓝狐生长性能、营养物质消化率及氮代谢的影响[J].动物营养学报,2013,25(10): 2497-2503
- [13] 刘俊峰,刘亭亭,王欢,王子龙,颜伟玉,曾志将,吴小波.中华蜜蜂铜锌超氧化物歧化酶基因的克隆、序列分析及表达特征[J].动物营养学报,2012,24(8): 1512-1519
- [14] 王信喜,王志跃,杨海明,曹玉娟,朱晓春.饲粮能量蛋白质水平与赖氨酸水平对5~10周龄扬州鹅体重和屠宰性能的影响[J].动物营养学报,2012,24(6): 1044-1051
- [15] 苏莉娜,王安.饲粮锌水平对笼养蛋雏鸭生长性能、抗氧化功能及免疫器官发育的影响 [J]. 动物营养学报, 2012,(5): 815-821