

2018年12月19日 星期三

[首页](#)[期刊介绍](#)[编委会](#)[编辑部](#)[投稿须知](#)[英文刊IFA](#)[会议信息](#)[联系我们](#)[留言与回复](#)

动物营养学报 2011, Vol. 23 Issue (03) :403-409 DOI: 10.3969/j.issn.1006-267x.2011.03.008

[实验方法](#)[最新目录](#) | [下期目录](#) | [过刊浏览](#) | [高级检索](#)[<< Previous Articles](#) | [Next Articles >>](#)

不同方法测定肉鸭内源磷排泄量的比较研究

陈翔, 刘国华*, 刘宏

(中国农业科学院饲料研究所, 北京100081)

A Comparison of Different Methods to Measure the Endogenous Phosphorus Output in

CHEN Xiang, LIU Hong

(Feed Research Institute, Chinese Academy of Agricultural Sciences, Beijing 100081, China)

摘要

参考文献

相关文章

**Download:** PDF (951KB) | [HTML](#) (0KB) | **Export:** BibTeX or EndNote (RIS) | **Supporting Info**

摘要 本研究通过比较无磷饲料法、梯度回归法和差量法测定肉鸭内源磷排泄量的差异,旨在确立合理的肉鸭内源磷排泄量测定方法。选取21日龄雄性樱桃谷肉鸭150只,随机分成5个处理,每个处理设6个重复,每个重复5只鸭。采用无磷原料配制无磷纯合饲料,以豆粕为唯一含磷原料配制总磷水平分别为0.20%、0.35%、0.51%和0.55%的低磷梯度饲料。试验饲料中均添加0.4%二氧化钛(TiO₂)作为外源指示剂。试验肉鸭21~24日龄采食全价颗粒饲料,25~30日龄采食相应的试验饲料,并按重复准确记录采食量。收集28~30日龄期间全部排泄物,风干,测定磷和TiO₂含量,计算内源磷排泄量。结果显示,饲料磷水平在0.20%~0.55%范围内,饲料磷摄入量与粪磷排泄量之间存在显著的线性关系($P < 0.05$),内源磷的排泄量基本稳定。无磷饲料法、梯度回归法和差量法测得的肉鸭内源磷排泄量分别为1.20、0.37和0.29 g/kg DMI。由此得出,梯度回归法和差量法测得的肉鸭内源磷排泄量基本一致,这2种方法都是可行的;而采用无磷饲料法测定肉鸭内源磷排泄量存在较大误差。

关键词: 肉鸭;磷;内源磷排泄量;测定方法

Abstract: In order to establish a reasonable method to measure the endogenous phosphorus output in meat ducks, P-free method, regression analysis method and difference method were used to measure the endogenous phosphorus output in meat ducks. One hundred and fifty 21-day-old healthy male cherry valley ducks were randomly assigned into 5 treatments with 6 replicates per treatment and 5 ducks per replicate. P-free pure diet was formulated with P-free feedstuffs. Soybean meal was used as the only source of phosphorus to formulate 4 P-low gradient diets containing different levels of phosphorus (0.20%, 0.35%, 0.51% or 0.55%) based on corn starch. Titanium dioxide (TiO₂) with the supplemental level of 0.4% was added to experimental diets as exogenous marker. During 21- to 24-day-old, all ducks were fed with complete pellet feed. During 25- to 30-day-old, ducks were fed with experimental diets and the feed intake recorded by replicate. The excreta were collected by replicate from 28- to 30-day-old. All samples were air-dried, and total phosphorus and TiO₂ contents were measured. Endogenous phosphorus output was calculated. The results showed that there was no significant linear relationship between dietary phosphorus input and fecal phosphorus output ($P < 0.05$), and the endogenous phosphorus output remained relatively stable. The endogenous phosphorus output in meat ducks was 1.20, 0.37 and 0.29 g/kg DMI, respectively, when measured by P-free method, regression analysis method and difference method. In conclusion, the endogenous phosphorus output in meat ducks can be measured by both regression analysis method and difference method, but a larger error was caused by P-free method. [Chinese Journal of Animal Nutrition, 2011, 23 (3) : 403 -409]

Keywords: meat ducks; phosphorus; endogenous phosphorus output; measuring method

引用本文:

. 不同方法测定肉鸭内源磷排泄量的比较研究[J]. 动物营养学报, 2011,V23(03): 403-409

. A Comparison of Different Methods to Measure the Endogenous Phosphorus Output in Meat Ducks[J]. Chinese Journal of Animal Nutrition, 2011,V23(03): 403-409.

链接本文:

http://211.154.163.124/Jweb_dwyy/CN/10.3969/j.issn.1006-267x.2011.03.008 或http://211.154.163.124/Jweb_dwyy/CN/Y2011/V23/I03/403

没有本文参考文献

没有找到本文相关文献

Copyright 2010 by 动物营养学报