



2018年第53期总167期

动物营养专题

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▶ 前沿资讯

1 . Top swine books for this year and next (今年和明年的热门猪类书籍)

简介: Our pick of 5m Publishing's top pig-related titles of 2018 and which titles to look out for in 2019. Our top picks from 2018 Piglet Nutrition Notes, Volume Two Aimed at the pig industry professional, Ioannis Mavromichalis provides a quick look-up advisory guide on common practical issues in pig production. The second volume continues the series by providing even more practical information regarding commercial piglet formulas, feeding practices, feed manufacturing, and additives.

来源: the pig site

发布日期: 2018-12-27

全文链接:

<http://www.thepigsite.com/swinenews/45775/top-swine-books-for-this-year-and-next/>

2. 华中农大生猪精准饲养团队阐明早期断奶仔猪抗腹泻作用机制

简介: 2018年12月13日, Cell子刊Cell Host & Microbe杂志以长文形式在线发表了我校农业微生物学国家重点实验室、生猪精准饲养团队晏向华教授课题组的早期断奶仔猪抗腹泻研究最新成果, 论文题目为“A Microbiota-Derived Bacteriocin Targets the Host to Confer Diarrhea Resistance in Early-Weaned Piglets”。该论文介绍了运用粪便微生物移植技术研究早期断奶仔猪肠道微生物介导的腹泻抗性机理, 对实施肠道菌群干预改善早期断奶仔猪肠道健康具有重要意义。

来源: 中国畜牧业信息网

发布日期: 2018-12-13

全文链接:

<http://www.caaa.cn/show/newsarticle.php?ID=398310>

▶ 学术文献

1 . Effect of route of inoculation on innate and adaptive immune responses to porcine epidemic diarrhea virus infection in suckling pigs (接种途径对乳猪猪流行性腹泻病毒感染的先天性和适应性免疫应答的影响)

简介: The effects of route of administration on systemic and gut mucosal immune responses induced by porcine epidemic diarrhea virus (PEDV) infection in suckling pigs were investigated. Twenty-four conventional 5-day-old suckling piglets were randomly divided into four groups and were inoculated orally, intranasally (I.N.), intramuscularly (I.M.) with PEDV or DMEM (mock). Pigs were monitored daily for clinical signs and fecal viral load. Blood samples were collected at 7, 14, 21 days post infection (dpi) and subjected for the analyses of serum antibody production, T cell and natural killer (NK) cell frequencies, NK cytotoxicity

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and serum cytokine levels. Oral inoculation led to higher levels of PEDV-specific IgA antibodies in both serum and gut mucosal sites than other routes of inoculation. Intranasal inoculation elicited significantly higher titers of virus-specific IgA antibodies in serum. PEDV-infected pigs regardless of inoculation routes had significantly lower NK cell frequencies than those of the control pigs at 14 dpi. The orally inoculated pigs had significantly higher CD3+CD8+T cell frequencies as compared to I.N. or I.M. inoculated pigs at 14 dpi, while there was no significant difference among orally, I.N. or I.M. inoculated pigs and control pigs in CD3+CD4+ T cell frequencies in peripheral blood. PEDV-infected and control pigs had low, but detectable NK cell activities at 14 and 21 dpi, however, NK cell activities were barely detectable at 7 dpi whether the pigs were infected or not. Serum IL-10 levels were induced drastically in orally infected pigs at 7 dpi and then gradually declined. Serum IL-12 levels followed a similar pattern while the fold-change was much lower. In conclusion, oral inoculation may generate more comprehensive immune responses.

来源: Veterinary Microbiology

发布日期: 2019-01-01

全文链接:

http://agri.ckcest.cn/file1/M00/06/5A/Csgk0FwkEuAFNLdAC0tYe_Z0oM165.pdf

2. 表达猪乳铁蛋白肽重组屎肠球菌对断奶仔猪生长性能的影响及其抗EPEC感染效果研究

简介: 摘要: 本试验以表达猪乳铁蛋白肽的重组屎肠球菌 (pNZ8112-PLFcin/Ef) 饲喂断奶仔猪, 研究其对仔猪生长性能的影响和抗产肠毒素大肠杆菌 (enterotoxigenic Escherichia coli, EPEC) 感染的效果。选取28日龄体重相近的健康断奶仔猪36头, 随机分为3组 (重组屎肠球菌组、空载体组和培养基组), 每组3个重复, 每个重复4头仔猪。重组屎肠球菌组和空载体组分别饲喂添加pNZ8112-PLFcin/Ef (6×10^{12} CFU/kg) 和 pNZ8112/Ef (6×10^{12} CFU/kg) 的基础日粮, 而培养基组饲喂含有相同体积的GM17液体培养基的基础日粮。试验期26d。结果显示, 与培养基组相比, 重组屎肠球菌组断奶仔猪的平均日增重极显著提高 ($P < 0.01$); 料重比显著降低 ($P < 0.05$); 腹泻率明显降低, 肠道菌群的均匀度和多样性指数均下降。为进一步探究表达猪乳铁蛋白肽的重组屎肠球菌对断奶仔猪抵抗EPEC感染的保护作用, 在连续饲喂21d后, 每个重复中随机挑选1头体重相近的断奶仔猪灌服EPEC。结果发现, 与培养基组相比, 攻菌后重组屎肠球菌组断奶仔猪血清白细胞介素-2 (IL-2)、免疫球蛋白G (IgG) 含量、肠黏液中分泌型免疫球蛋白A (sIgA) 水平均显著升高 ($P < 0.05$); 脾脏指数显著提高 ($P < 0.05$), 但胸腺指数、肠段长度及重量则均无显著差异 ($P > 0.05$)。综上所述, 表达猪乳铁蛋白肽的重组屎肠球菌能够起到促进断奶仔猪生长及抗EPEC感染的保护作用。

来源: 中国畜牧兽医

发布日期: 2018-12-18

全文链接:

<http://agri.ckcest.cn/file1/M00/06/5A/Csgk0FwkuTWAPzi6ABS5enAUHZc913.pdf>

3. 我国畜禽养殖废弃物资源化利用技术及模式研究

简介: 摘要: 畜禽养殖废弃物具有污染和资源二重性, 它是农村面源污染的主要来源,

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又具有巨大的资源化潜力。通过畜禽养殖废弃物资源化现状和政策解析,从能源化、肥料化、基质化、饲料化4个方面分析畜禽养殖废弃物的资源化潜力,从集中式和分散式两个层面阐述畜禽养殖废弃物的综合处理模式,因地制宜地研发适合我国畜禽养殖废弃物资源化利用的关键技术,加强集中式处理模式的推广应用,优化养殖业空间布局,是农业供给侧结构性改革的关键任务,也是实现畜禽养殖废弃物资源化利用、农业绿色发展和乡村振兴战略的重要内容。

来源: 再生资源与循环经济

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全文链接:

<http://agri.ckcest.cn/file1/M00/06/5A/Csgk0Fwkua-ACzqYAAVA4g0rBiE709.pdf>