



2018年第52期总166期

动物营养专题

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▶ 前沿资讯

1. “AI+养猪” 农业步入新阶段！

简介: 近年来,互联网大佬们踏入农业养殖大队的消息层出不穷,前有网易,后有阿里、京东,都开始对人工智能养猪情有独钟,猪开始成为互联网公司的宠儿。这种不走寻常路的养猪“套路”,究竟有怎样的优势所在呢?下面全程高能!事实上,三家公司进入养猪行业,并非是一时兴起。在他们看来,人工智能和养猪相结合,是技术驱动生产效率的提升,同时也是对传统养猪行业进行的一种改造升级。

来源: 中国畜牧兽医学会信息技术分会微信公众号

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全文链接:

https://mp.weixin.qq.com/s?biz=MzAwNzUyMTk0Mg==&mid=2533521336&idx=1&sn=4e38574a11a21a4c3c318385fe793425&chksm=898a0441befd8d57bcb7c4a8984cd1b8a71ca1705988e9430e01de391e29211dc17c3ef77464&mpshare=1&scene=1&srcid=1219tscHRrBAXIRo7FFoWRTX&pass_ticket=8dW%2B3pjfOyUvhl7%2Be0JRwUJQyJ1MNI862SjYn6XeF%2FnDVx1miIBJMT%2FswH%2BuEqIW#rd

2. 俄罗斯限制从中国进口所有种类动物饲料和添加剂

简介: 据俄罗斯联邦动植物卫生监督局发布消息,自12月14日起限制从中国进口所有种类的饲料和饲料添加剂,经过非洲猪瘟病毒消除处理的除外。消息称,此举旨在防止非洲猪瘟病毒从中国转播到俄罗斯。非洲猪瘟是猪的一种特别危险的传染性疾病,虽并不对人构成威胁,但却会对农业生产造成严重损害,因为目前非洲猪瘟还无法治愈,也无法使用相关疫苗预防。因此,只能通过严格的检疫措施来制止该病的传播。

来源: 中俄资讯网 中国饲料行业信息网

发布日期:2018-12-19

全文链接:

<http://www.feedtrade.com.cn/news/international/2018-12-19/2032025.html>

3. GM pigs resist infection with the classical swine fever virus (转基因猪可以抵抗猪瘟病毒感染)

简介: Researchers have developed genetically modified pigs that are protected from classical swine fever virus (CSFv). According to a study published 13 December in the open-access journal PLOS Pathogens by Hongsheng Ouyang of Jilin University, and colleagues, the authors have noted that these pigs offer potential benefits over commercial vaccination and could reduce economic losses related to classical swine fever. CSFv is responsible for a highly contagious, often fatal disease that causes significant economic losses.

来源: the pig site

发布日期:2018-12-17

全文链接:

<http://www.thepigsite.com/swinenews/45743/gm-pigs-resist-infection-with-the-classical-swine-fever-virus/>

学术文献

1. 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/M00/06/59/Csgk0FwbUu2AWSh1ABS5enAUHZc541.pdf>

2 . Oral administration of coated PEDV-loaded microspheres elicited PEDV-specific immunity in weaned piglets (口服施用包被PEDV的微粒在断奶仔猪中引发PEDV特异性免疫)

简介: Porcine epidemic diarrhea virus (PEDV) infects pigs of all ages by invading villous epithelial cells of the small intestine causing severe diarrhea with high mortality rate in suckling piglets. Mucosal immunity is believed to play an important role in PEDV control and mucosal delivery of vaccines induces mucosal immunity more efficiently than parenteral vaccination. In this study, coated PEDV-loaded microspheres with the size range of 700900 nm in diameter were developed by centrifugal granulation-fluidized bed coating and demonstrated as an effective oral delivery system to protect PEDV antigens against the complex gastrointestinal environment by detecting the live virus particles in microspheres after the simulated gastric fluid treatment and the PEDV RNA in fecal swabs collected from all weaned piglets (100%) orally inoculated with coated PEDV-loaded microspheres. Weaned piglets orally immunized with coated PEDV-loaded microspheres developed higher levels of PEDV-specific antibodies (IgG and IgA) in their sera and saliva than those negative control groups ($p < 0.001$ or $p < 0.01$). Furthermore, neutralization assays demonstrated that serum

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antibodies in coated PEDV-loaded microspheres groups could significantly inhibit virus infection in Vero cells, compared to PEDV only group ($p < 0.05$). Overall, our results indicate that the coated PEDV-loaded microspheres might serve as an effective way to induce PEDV-specific mucosal immunity in pigs against PEDV.

来源: Vaccine

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全文链接:

<http://agri.ckcest.cn/file1/M00/00/00/Csgk0VwbUVGANv9iABKPobM2fw0950.pdf>