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动物营养专题

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▶ 前沿资讯

1. 农业农村部副部长于康震在东北三省非洲猪瘟防控现场会上强调：采取有力措施，保障规模养猪场和种猪场生产安全

简介：10月16日，农业农村部副部长于康震赴辽宁省锦州市北镇市现场指导非洲猪瘟疫情处置并组织召开东北三省非洲猪瘟防控工作现场会。于康震强调，要充分认识当前复杂严峻的疫情形势，把规模化养猪场和种猪场“两场”的疫病防控工作摆在更加突出的位置，统筹疫病防控和产业发展，采取用力措施，切实保护好生猪产业和市场供给的基础。会上，于康震传达了中央领导同志关于非洲猪瘟防控的指示精神，听取辽宁、吉林和黑龙江三省防控和农业农村部驻辽宁省督导组工作汇报。他指出，前一阶段的防控工作总体上是有力有效的，但仍然存在部分薄弱环节，各地要进一步增强做好防控工作的自觉性和主动性，在党委、政府统一领导下，坚定信心，不畏艰难，打好打赢非洲猪瘟疫情的歼灭战。他要求，各地要全面升级和不断完善更新各项防控措施，做到与时俱进，关键要将各项防控措施落实到基层，落实到人、到村、到场、到户，彻底解决“最后一公里”甚至是“最后一米”的问题。他强调，各地要拿起法律的武器，严肃执纪问责，严厉追究防控工作中存在的各种违法违纪行为，严厉打击恶意传播疫情骗取国家扑杀补助的行为，一经查处，绝不姑息。

来源：农业农村部新闻办公室

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全文链接：

http://www.moa.gov.cn/xw/zwdt/201810/t20181017_6160921.htm

2. 世界饲料全景：聚焦亚太地区

简介：根据Feed Strategy杂志的World Feed Panorama 2018，2017年世界复合动物和水产养殖饲料产量增长近2%，达到910,000,000公吨。亚太地区继续占世界复合饲料产量的34%，是世界前25大饲料生产国中的9个。中国是世界第二大复合饲料生产国，也是最大的猪肉生产国和消费国。猪肉行业增长近9%。中国也是世界上最大的水产养殖生产国，2017年增长4.5%。然而，由于高致病性禽流感(HPAI)，鸡肉产量下降了6%。此外，与2016年相比，中国的复合饲料产量下降了0.5%。印度的饲料产量继续增长，比2016年增长5%，上升到世界复合饲料生产的第四位。根据美国农业部(USDA)的数据，商业乳制品对饲料的需求增长了15%，家禽饲料增长超过4.5%。尽管美国农业部报告称2017年越南的饲料需求下降了15%，但是自制动物饲料下降，而不是人造复合饲料，2017年增长了4.5%。家禽和猪饲料增长了3.5%，而水产养殖饲料增加了10%。主要由于韩国的高致病性禽流感爆发和牛饲料减少，2017年全国复合饲料产量下降了4.5%。韩国的一个亮点是猪饲料需求，2017年增长超过3.5%。日本的复合饲料产量较2016年增长1%，保持其作为世界第八大顶级生产国的地位。奶牛饲料出现下降，但全国其他畜牧业和畜禽业的涨幅略有增加。2017年泰国的复合饲料产量增长近5.5%。由于猪产量略有下降，泰国鸡肉产量增长近3%。泰国水产养殖业虽然很小，但由于虾饲料产量增加25%，泰国水产养殖业增长迅猛。

来源：中国饲料行业信息网

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全文链接：

学术文献

1. 鼠李糖乳杆菌的生物学功能

简介: 摘要: 鼠李糖乳杆菌是人和动物肠道的共生菌,其肠道黏着率高、定植力强。在仔猪饲料中添加鼠李糖乳杆菌,不仅可以减少抗生素的使用、减少细菌耐药性等问题,还可以改善仔猪感染性腹泻,促进其生长。本文就鼠李糖乳杆菌调节仔猪肠道菌群平衡、调节肠道免疫稳态、参与宿主营养物质代谢和改善仔猪腹泻等方面进行阐述,为鼠李糖乳杆菌在动物健康养殖中的应用提供参考。摘要: 鼠李糖乳杆菌是人和动物肠道的共生菌,其肠道黏着率高、定植力强。在仔猪饲料中添加鼠李糖乳杆菌,不仅可以减少抗生素的使用、减少细菌耐药性等问题,还可以改善仔猪感染性腹泻,促进其生长。本文就鼠李糖乳杆菌调节仔猪肠道菌群平衡、调节肠道免疫稳态、参与宿主营养物质代谢和改善仔猪腹泻等方面进行阐述,为鼠李糖乳杆菌在动物健康养殖中的应用提供参考。

来源: 动物营养学报

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全文链接:

<http://agri.ckcest.cn/ass/141b855c-db28-4f89-8b91-27e528cb3875.pdf>

2 .Screening of the ability of natural feed ingredients commonly used in pig diets to interfere with the attachment of ETEC K88 (F4) to intestinal epithelial cells (猪饲料中常用天然饲料成分干扰ETEC K88 (F4) 与肠上皮细胞粘附能力的筛选)

简介: Enterotoxigenic Escherichia coli (ETEC) K88 (F4) is a worldwide cause of severe diarrhoea in the offspring of some animal species such as weaned pigs. Preventing ETEC K88 (F4) attaching to the small intestine by natural feed ingredients interfering with its fimbria-receptor recognition could be an alternative method to reduce diarrhoea occurrence. The purpose of this study is to evaluate the ability of different common ingredients in the formulation of pig diets, and particularly different kinds of cereal brans, to attach ETEC K88 (F4) (adhesion test, AT) and to block its attaching to intestinal epithelial cells (IPEC-J2) (blocking test, BT) in vitro . For the feed ingredients, wheat, corn, oats, barley, rye, extruded full-fat soybean meal, soybean meal, as well as sweet whey powder, all demonstrated a clear affinity to attach ETEC K88 (F4) ($P < 0.05$). Regarding rye, oats ($P < 0.01$) and also wheat ($P = 0.05$), all of them could also reduce ETEC K88 (F4) adhesion to IPEC-J2 cells. Among differently tested cereal brans, wheat bran, spelt bran, kamut bran, rye bran, oat bran and rice bran all demonstrated an ability to attach ETEC K88 (F4) ($P < 0.001$) and all of them were able to reduce ETEC K88 (F4) attachment to IPEC-J2 cells ($P < 0.001$), except rice bran. Results from these experiments highlight the functional properties of some common feed ingredients like rye, oats and wheat, in addition to their bran to prevent the adhesion of ETEC K88 (F4) to the intestinal epithelium. The properties of these ingredients could be considered as an additional criteria, together to their nutritive value, in the formulation of diets to prevent

the appearance of post-weaning diarrhoea.

来源: Animal Feed Science and Technology

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<http://agri.ckcest.cn/ass/dd971e21-187c-4cb1-967d-445d65df1682.pdf>

3 . Effect of time and dietary supplementation with processed yeasts (*Kluyveromyces fragilis*) on immunological parameters in weaned piglets (加工酵母(*Kluyveromyces fragilis*)对断奶仔猪免疫指标的影响)

简介: A feeding trial was conducted to investigate the effects of differently processed yeast products (hydrolyzed or non-hydrolyzed) derived from *Kluyveromyces fragilis* on immunological parameters of piglets in an early phase post weaning (days 1- 14). A total of 48 male and female piglets (6.17 ± 0.32 kg BW, weaned at day 25) were allocated to three dietary groups (n = 8 replicates with two piglets each) receiving a control diet (CON) or diets with 1% non-hydrolyzed yeast (Diet NHY) or 1% hydrolyzed yeast (Diet HY). The piglets were fed isoenergetic and isonitrogenous diets and had ad-libitum access to feed (mash form) and drinking water. Blood samples were taken at days 1 and 14 for differential blood count and phenotyping of lymphocytes and at days 1, 3 and 14 for analysis of phagocytic activity of leukocytes. Eight animals per treatment were sacrificed 2 weeks after weaning for jejunal and colonic tissue sampling for mRNA extraction and gene expression analysis of cytokines (TNF α , IL-6, IL-10, IL-12) and of tight junction proteins. Different treatments had no effect on piglet growth rate. Fecal scores were improved at day 8 after weaning in the yeast supplemented Groups HY and NHY (P < 0.05). Differential blood count, phenotyping of lymphocytes, and mRNA expression of cytokines and tight junction proteins were not affected by dietary treatment. Significant time-dependent effects on the blood concentrations (G/L) of leucocytes, lymphocytes, monocytes, and on phenotypes of peripheral lymphocytes (%) such as B-cells (P < 0.001), cytotoxic T-cells and monocytes (P < 0.01) have been observed. The difference between lymphocyte counts on days 1 and 14 was highest in Group HY (P < 0.001). Compared with Group CON, the phagocytic activity of monocytes at day 3 after weaning was higher in Groups HY and NHY (P < 0.05). In conclusion, both yeast products (HY and NHY) had minor effects on adaptive immune parameters, but increased innate immune response such as phagocytosis activity at day 3. Changes in adaptive immune response were more time-dependent than diet-dependent.

来源: Animal Feed Science and Technology

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<http://agri.ckcest.cn/ass/0bcffa2f-8ec0-40bf-8f62-b04ddc8c60e0.pdf>