

《中国农业发展战略研究》专题快报

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【动态资讯】

1. 我国玉米首次出现年度内产不足需

【**中国农业网**】近日，由中国淀粉工业协会联合艾格农业、国家粮油信息中心、光大期货在安徽蚌埠共同发布了2019年《中国玉米市场和淀粉行业年度分析及预测报告》（以下简称《报告》），该《报告》显示，我国农业供给侧结构性改革初显成效，玉米首次出现年度内的产不足需。《报告》指出，2018年继续降低玉米补贴，引导玉米种植面积的减少；与此同时引导玉米深加工产能增加，使得需求快速增长。并在2018年度首次出现当年玉米产不足需的情况，去库存效果明显。2018年继续对东北玉米深加工企业进行补贴，但补贴额度相应减少，主要在于促使新产玉米的就地加工转化，刺激消费需求的同时降低库存压力。大力推广燃料乙醇发展，玉米深加工产能继续提高。自2018年开始新建的玉米深加工项目陆续投产。玉米深加工产能的增加直接导致新玉米上市后企业高价抢购玉米，直接抬高了生产成本，新建项目一投产便陷入经营亏损的困境。我国玉米将长期处于“紧平衡”的供求状态，预计后期玉米深加工产能过剩问题将再度显现。2018年临储玉米累计成交1亿吨，比去年增加4200余万吨，临储玉米库存已降至1亿吨以下，成为影响市场供给的重要力量。

链接:

<http://www.zgny.com.cn/ifm/consultation/2019-4-25/555132.shtml>

2. USA: Alfalfa remains country's 3rd most valuable field crop

【**AgroNews**】According to figures released by the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS), alfalfa continues to be the third most valuable field crop produced in the U.S., valued at over \$9.9 billion. "Alfalfa represents incredible value to farmers both as a cash crop as well as a premium feed source," said Beth Nelson, President

of the National Alfalfa & Forage Alliance (NAFA). “There is no other crop that produces more protein per acre than alfalfa.” Alfalfa is key to sustainable agricultural systems and is an economic engine in rural communities its value for soil conservation, nitrogen fixation, energy savings, crop rotation, and wildlife habitat is unsurpassed. However, alfalfa must offer a competitive value for farmers in order to provide these benefits and maintain or expand its acreage base. Being recognized in policy and public research funding decisions is critical in keeping pace with other cropping choices.

链接:

<http://news.agropages.com/News/NewsDetail---30200.htm>

3. Getting fertilizer in the right place at the right rate

【EurekaAlert!】 We've all heard about the magical combination of being in the right place at the right time. Well for fertilizer, it's more accurate to say it should be in the right place at the right rate. A group of Canadian scientists wanted to find the perfect combination for farmers in their northern prairies. When farmers place fertilizer on a field, they'd like it to stay there. However, water that runs off a field can take some of the valuable fertilizer with it. In Canada this water can take two forms: rainfall runoff or snow melt. It's the latter type of water - snow melt - that causes the most runoff losses in the Canadian prairies. Knowing how each form of runoff affects fertilizer will impact their "right place, right rate" calculation. Rainfall runoff and snow melt runoff may result in different fertilizer management recommendations. So, Jeff Schoenau from the University of Saskatchewan and his team focused on runoff from snowmelt.

链接:

https://www.eurekaalert.org/pub_releases/2019-04/aso-a-gfi040819.php

4. China's grain import drops by 11.5% in 2018

【AgroNews】 By Think Real - According to the data published by China Customs, China imported 115.55 million tonnes in 2018, decreasing by 11.5% year on year, mainly resulted from the large reduction in the import volume of soybean. Moreover, China exported 3.66 million tonnes of grains in last year, increasing by 31.4% year on year.

链接:

<http://news.agropages.com/News/NewsDetail---30188.htm>

5. 宿州出招防治农田白色污染

【中国农业新闻网】为做好降解农膜新产品的示范推广工作，安徽省宿州市农业农村局、财政局、生态环境局制定了《关于加强推广使用降解农膜新产品 全面推进农业面源污染治理工作实施方案》。今年计划落实10万亩降解农膜任务，每亩降解农膜市价100元左右。同时，积极争取财政资金投入，重点支持可降解农膜和废旧农膜回收再利用的技术研发、技术推广、试点示范、宣传培训以及开展以旧换新、以奖代补；积极争取对废旧农膜回收加工和降解农膜生产企业的信贷、土地、税收、贴息等方面的扶持力度。落实国家促进资源节约和再利用的各项优惠政策，对从事废旧农膜回收加工利用的企业及其设立的回收点，各县区每年根据其回收加工量，采取以奖代补扶持措施，给予奖励扶持。对防治废旧农膜污染成绩突出的县区，经考核后给予适当奖励，以奖促治。宿州市采取政策集成、技术集成、项目集成的方式，通过政府引导、园区示范、企业带动、以奖代促，组织实施降解农膜新产品推广项目，全面推进农业面源污染治理和农业生态可持续发展。项目优先向使用农膜的贫困村及贫困户倾斜；优先向带动扶贫增收效果好的种植大户、家庭农场、专业合作社及农业产业化联合体、龙头企业等新型经营主体倾斜；优先向农业项目区，包括国家及省级现代农业示范区倾斜。为保障项目落实，宿州市还组织有关专家制定推广降解地膜技术要求、技术规程和作业规范，加快新技术、新产品的示范推广，为地膜污染防治管理和安全使用提供全程科技服务。通过一手抓废旧农膜回收利用，一手抓降解农膜新产品推广使用，力争到2020年，基本建成废旧农膜回收网络基本形成，资源化利用水平显著提升，“白色污染”得到有效控制。

链接:

http://www.farmer.com.cn/jjpd/nz/nzdt/201904/t20190423_1440251.htm

6. Mixing grass varieties may reduce insect infestations in lawns

【EurekAlert!】 Annapolis, MD; April 22, 2019--A simple change in the choice of grass varieties for many lawns in the United States could be a key tool for fending off fall armyworm infestations, according to new research. St. Augustinegrass (*Stenotaphrum secundatum*) is the most common turfgrass species in the southeastern United States, and it is typically planted with a single cultivar across an entire lawn. But multiple cultivated varieties, or cultivars, of St. Augustinegrass are commercially available, and landscape entomologists at the University of Florida and the U.S. Department of Agriculture recently sought to find out which, if any, of those cultivars offered natural resistance to the fall armyworm (*Spodoptera frugiperda*), a caterpillar that commonly damages lawns. Their tests found that none of the six common St. Augustinegrass cultivars rose above the rest in

resisting fall armyworm infestation. But, when the cultivars were planted together in mixtures of two or four cultivars, it was a different story. The fall armyworm clearly preferred the single-cultivar plantings.

链接:

https://www.eurekalert.org/pub_releases/2019-04/esoa-mgv041519.php

7. 科技创新是破解农业绿色发展难题的关键

【科技日报】习近平总书记多次强调，要“依靠科技进步，走中国特色现代化农业道路”。在2016年5月30日全国科技创新大会、两院院士大会、中国科协第九次全国代表大会上，习近平总书记突出强调了新型工业化、信息化、城镇化、农业现代化“四化同步”的目标，提出绿色发展是生态文明建设的必然要求，而科技创新则是破解绿色发展难题的关键所在。农业现代化是“四化同步”的短板，党的十九大提出实施乡村振兴战略，开启了我国农业现代化建设的新篇章。2017年习近平总书记在审议《关于创新体制机制推进农业绿色发展的意见》时指出，推进农业绿色发展是农业发展观的一场深刻革命，是农业供给侧结构性改革的主攻方向。实施乡村振兴战略，绿色发展既是目标要求，也是实现手段，农业绿色科技体系是实施农业绿色发展道路的重要支撑，必将带来新一轮的农业生产革命。

链接:

http://digitalpaper.stdaily.com/http_www.kjrb.com/kjrb/html/2019-04/22/content_419734.htm?div=-1

8. 中国农业大学曲周实验站绿色发展科普周活动启动

【中国农业信息网】近日，中国农业大学携手河北省邯郸市曲周县，在该县启动中国农业大学曲周实验站绿色发展乡村振兴暨科普周活动。该活动旨在落实科技兴农的战略方针，推动农业绿色发展，提高农民科技素质，引领乡村振兴。据了解，中国农业大学扎根服务曲周已有46年历史，用实际行动将农业科学知识传播到千家万户，不只解决了农民的吃饭问题，也为曲周县农业绿色、可持续发展发挥了重要作用。目前，中国农业大学曲周实验站发展面貌焕然一新，将展示更多农业技术成果，并向全县开放，让农民获取更多农业信息技术。此次科普周活动持续到4月19日，活动期间，实验站展示农业绿色发展展板、以色列现代农业技术，以及实验站现代仪器设备和有机种植技术等。同时，中国农业大学“科技小院”技术及产品也得以展示亮相，中国农业大学资源与环境学院教授张福锁以及以色列希伯来大学教授摩西·申克尔开展了农业绿色技术培训会，并与农民面对面交流。曲周将尽可能地创造有利条件，不遗余力地与中国农业大学继续深化县

校合作，开展科普活动，用农业科技改变生活，共同促进曲周县农业绿色发展，引领乡村振兴。

链接:

http://www.agri.cn/V20/ZX/nyyw/201904/t20190419_6376997.htm

9. 畜禽粪污资源化利用高峰论坛在南宁举办

【中华人民共和国农业农村部】4月17日，2019畜禽粪污资源化利用高峰论坛在广西南宁举办，农业农村部副部长于康震出席论坛并作主旨报告。他强调，要认真贯彻习近平总书记重要讲话精神，以更加扎实有力有效的行动，坚决完成畜禽粪污资源化利用硬任务，为农业农村现代化和美丽中国建设提供有力支撑。目前全国畜禽粪污综合利用率达到70%，规模养殖场粪污处理设施装备配套率达到63%，实现了“一年试点、两年铺开、三年大见成效”的阶段性目标任务。今年，农业农村部将深入贯彻党中央、国务院关于改善农村人居环境决策部署，督促规模养殖场落实主体责任，压实地方政府属地管理责任，组织实施好整县推进项目，完成大型规模养殖场粪污处理设施装备配套率达到100%的任务。聚焦种养结合，完善粪污资源化利用路径。加快转变畜牧业发展方式，走绿色、高效、优质的现代畜牧业发展之路。发挥部省创新联盟的人员、技术、组织优势，加强粪污资源化利用技术支撑和服务。

链接:

http://www.moa.gov.cn/xw/zwdt/201904/t20190418_6186311.htm

10. Why researchers are mapping the world's manure

【EurekAlert!】As phosphorus supply and demand shift, Stevens Institute of Technology is leading the hunt for solutions to recapture this vital nutrient and sustain global agricultural production. (Hoboken, N.J. - April 16, 2019) - Farmers rely on phosphorus fertilizers to enrich the soil and ensure bountiful harvests, but the world's recoverable reserves of phosphate rocks, from which such fertilizers are produced, are finite and unevenly distributed. Stevens Institute of Technology is spearheading an international effort to map the global flow of phosphorus -- from soil to crops, and from there to livestock and humans, and eventually into sewers and landfills - and jump-start efforts to recapture and recycle the vital nutrient. In the April 2019 issue of Earth's Future, David Vaccari, director of the Stevens Institute's department of civil, environmental and ocean engineering, and his team map that process globally for the first time, and identify regional "hot spots" where there's both significant demand for fertilizers, and significant potential for recapturing phosphorus from

animal and human waste.

链接:

https://www.eurekalert.org/pub_releases/2019-04/siot-wra041719.php

【文献速递】

1. 农业生态环境污染现状及治理对策

作者: 汪名富

文献源: 现代农业科技,2019

摘要: 本文从大量化学物质投入使用、规模化畜禽养殖业、农村生活源等方面阐述了农业生态环境的污染现状,提出了治理对策,包括加强农业基础设施建设、开展畜禽场畜粪治理工作、降低化肥与农药的投入、改善农村生态环境、发展循环农业和生态农业等方面内容,以期为农业生态环境的保护提供参考。

链接:

http://agri.ckcest.cn/file1/M00/06/6A/Csgk0FzCv4iAZtIOAAu8ti3RU_Y123.pdf

2. 推进乡村生态振兴与农业绿色发展的思考

作者: 王农; 熊伟; 孙琦,等.

文献源: 天津农业科学,2019

摘要: 为了进一步探讨农业绿色发展推进乡村生态振兴,从生态环境污染、农业农村"生态、生产、生活"融合、产业与市场接口等方面分析了当前推进乡村生态振兴与农业绿色发展面临的主要问题,从推进科技创新提高支撑生态振兴和农业绿色发展的能力、加强农业农村生态资源价值核算和生态环境标准体系建设、科学规划产业布局支撑乡村生态振兴和农业绿色发展、探索乡村生态振兴与农业绿色发展的社会化经营与服务机制、大力提升生态环境保护意识和绿色消费等方面,提出了措施建议,以期推进乡村生态振兴与农业绿色发展。

链接:

<http://agri.ckcest.cn/file1/M00/06/6A/Csgk0FzCvtyAXtqzAAMHqwZerRw760.pdf>

3. 以食用菌为链条的农业生态循环模式初探

作者: 党帅

文献源: 南方农机,2019

摘要: 在社会迅猛发展的背景下,我国农业得到全面的发展。虽然我国农业领域发展已经取得一定的成就,但是农业生态环境的问题也逐渐凸显出来,如出现效益低下、资源浪

费的现象。因此,如何有效解决农业生态问题已经成为各级农业管理部门的首要任务。基于此,本文就食用菌为链条的农业生态循环模式展开探讨,供有关人员参考。

链接:

<http://agri.ckcest.cn/file1/M00/06/6A/Csgk0FzCv9GAb2ukAADfXbDFvAg706.pdf>

4. Will the urban agricultural revolution be vertical and soilless? A case study of controlled environment agriculture in New York City

作者: Wylie Goodman; Jennifer Minner

文献源: Land Use Policy,2019

摘要: Controlled environment agriculture (CEA) is an emerging form of farming increasingly found in cities worldwide. Advocates promote CEA as the future of food production, arguing for its potential to address challenges ranging from climate change to food insecurity. Detractors state that CEA's narrow focus on high-end produce, along with its intensive capital and energy needs, limit its meaningful contribution to the urban food system. Over the last seven years, New York City has become an epicenter for urban CEA, offering planners an in-situ setting in which to evaluate its impact. The following case study examines the current state of CEA in New York City, its composition, requirements, and future. The authors identify CEA's relative contributions, which include providing a small number of green-sector jobs and increasing access to produce in low-income communities. In parallel, they question if CEA provides sufficient benefits to warrant public-sector support. Recommendations for cities considering CEA include critically analyzing its purported benefits; evaluating the environmental, economic and social potential of projects located on publicly-owned rooftops and land; and focusing incentives on nonprofit and institutional production that show clear community benefits.

链接:

<http://agri.ckcest.cn/file1/M00/06/6A/Csgk0FzCwlKAaxziAA-cGu2HtKs614.pdf>

5. 特色农业的绿色发展实践——“洛川苹果”产业发展成效与挑战

作者: 尚旭东; 韩洁

文献源: 农业农村部管理干部学院学报,2019

摘要: 借助发展特色产业实现农业绿色发展是深入践行农业供给侧结构性改革的重要途径之一。陕西省洛川县依靠当地苹果资源产地优势,走出一条特色鲜明、主业突出、环境友好的果业绿色发展之路,不仅实现了农业产业振兴、农民生活富裕,而且改善了农业

产地环境、农民生活环境、农村生态环境。产业发展取得成效同时,也应看到,基础设施建设不足、自然灾害频发广发、社会化服务量贫质乏、二三产业融合发展不够、品牌发展面临内外冲击等"内生问题"与"外在挑战",亟需当地政府拿出切实可行且能长效兼顾产业振兴与农业绿色发展的"合意"政策。

链接:

<http://agri.ckcest.cn/file1/M00/06/6A/Csgk0FzCvzKAOpHuAAKF6udUmXo553.pdf>

6. Geological resources and environmental carrying capacity evaluation review, theory, and practice in China

作者: Rui-min Li; Zhi-qiang Yin; Yi Wang, et al.

文献源: China Geology,2019

摘要: Evaluations of resources and environmental carrying capacities (GRECC) are the premise of land space planning and use control. Resource allocations and environmental capacity are the basic conditions that restrict development in a region. In this paper, based on a systematic review of China's geological environment, groundwater resources, mineral resources, other geological resources and the environmental carrying capacity research status, the relationship between the natural resource environmental system and the socio-economic system is studied. Then a "coordination theory of resources and environmental carrying" is proposed. Next, on the basis of an evaluation experiment performed at different scales and for different types of regions, the technical methods for an evaluation of the geological resources and environmental carrying capacity at the regional (inter-provincial) and provincial scales in China are established for the first time. This paper presents a standardized method based on technical ideas, evaluation methods, and index systems for geological resource and environmental carrying capacity evaluation. Finally, an evaluation of the groundwater resource carrying capacity in China is used as an example for the demonstration of the groundwater resource background and use of state evaluation methods.

链接:

http://agri.ckcest.cn/file1/M00/06/6A/Csgk0FzCw_WAMaJfAG5yZp5a43w114.pdf

7. Utilizations of agricultural waste as adsorbent for the removal of contaminants: A review

作者: Yingjie Dai; Qiya Sun; Wensi Wang, et al.

文献源: Chemosphere,2019

摘要： In recent years, various industrial activities have caused serious pollution to the environment. Due to the low operating costs and high flexibility, adsorption is considered as one of the most effective technologies for pollutant management. Agricultural waste has loose and porous structures, and contains functional groups such as the carboxyl group and hydroxyl group, so it can be invoked as biological adsorption material. Agricultural waste gets the advantages of a wide range of sources, low cost, and renewable. It has a good prospect for the comprehensive utilization of resources when used for environmental pollution control. This article summarized the current research status of agricultural waste in adsorbing pollutants, which pointed out the influencing factors of adsorption, expounded the adsorption mechanism of biological adsorption and introduced the related parameters of adsorption, proposed the application of adsorbents in engineering including adsorption in liquid and gas phases, at the same time it gave the future development prospect of agricultural waste as adsorbent.

链接:

http://agri.ckcest.cn/file1/M00/06/6B/Csgk0FzCxXmAOuY_AB5XIH4rs0A807.pdf

8. Fungal strategies for dealing with environment- and agriculture-induced stresses

作者： Drauzio E.N. Rangel; Roger D. Finlay; John E. Hallsworth, et al.

文献源： Fungal Biology,2019

摘要： The Fungal Kingdom is responsible for many ecosystem services as well as many industrial and agricultural products. Nevertheless, how these fungal species function and carry out these services is dependent on their capacity to grow under different stress conditions caused by a variety of abiotic factors such as ionizing radiation, UV radiation, extremes of temperature, acidity and alkalinity, and environments of low nutritional status, low water activity, or polluted with, e.g. toxic metals or xenobiotics. This article reviews some natural or synthetic environments where fungi thrive under stress and have important impacts in agriculture and forestry.

链接:

http://agri.ckcest.cn/file1/M00/06/6A/Csgk0FzCw2yAH_akAAfDgNqg-j4527.pdf

9. 基于农户土地利用行为的农业生态安全评价——以奇台县为例

作者： 苏世燕; 杨俊孝

文献源： 中国农业资源与区划,2019

摘要: [目的]农户作为土地利用的微观主体既是农地保护的重要承担者,也是解决农业生态环境问题的基本单元。文章从农户土地利用行为角度出发,以期构建基于农户土地利用行为的农业生态安全评价指标体系,为农业生态保护提供对策建议。[方法]以昌吉州奇台县384户农户的调查数据分析为基础,采用熵权法确定各指标权重,运用综合评价法构建基于P-S-R模型对奇台县农业生态安全进行评价。[结果]奇台县农业生态安全综合指数为0.745,农业生态环境处于一般安全的状态。[结论]农业生态环境受翻耕深度、农药使用量、森林覆盖率、化肥使用量等的影响较大;农户土地利用行为对农业生态环境有重大影响。据此,该文提出拓宽耕地保护范畴、完善耕地保护制度、实施节水工程、调控水盐平衡、完善耕地保护补贴政策等建议。

链接:

<http://agri.ckcest.cn/file1/M00/06/6A/Csgk0FzCwB2AUHsDAApBSdXxcZg779.pdf>

10. Optimal Scheme Selection of Agricultural Production Structure Adjustment — Based on DEA Model; Punjab (Pakistan)

作者: Zeeshan Ahmad; Meng Jun; Muhammad Abdullah, et al.

文献源: Journal of Northeast Agricultural University (English Edition),2019

摘要: This paper used the modern evaluation method of DEA (Data Envelopment Analysis) to assess the comparative efficiency and then on the basis of this among multiple schemes chose the optimal scheme of agricultural production structure adjustment. Based on the results of DEA model, we dissected scale advantages of each discretionary scheme or plan. We examined scale advantages of each discretionary scheme, tested profoundly a definitive purpose behind not-DEA efficient, which elucidated the system and methodology to enhance these discretionary plans. At the end, another method had been proposed to rank and select the optimal scheme. The research was important to guide the practice if the modification of agricultural production industrial structure was carried on.

链接:

http://agri.ckcest.cn/file1/M00/06/6A/Csgk0FzCxMWAPr3yAAf9bIN_CgM881.pdf

【行业报告】

1. Creating a Sustainable Food Future

发布源: World Resources Reports

发布时间: 2018-12

摘要: By 2050, nearly 10 billion people will live on the planet. Can we produce enough food

sustainably? The synthesis report of the World Resources Report: Creating a Sustainable Food Future shows that it is possible but there is no silver bullet. This report offers a five-course menu of solutions to ensure we can feed everyone without increasing emissions, fueling deforestation or exacerbating poverty. Intensive research and modeling examining the nexus of the food system, economic development, and the environment show why each of the 22 items on the menu is important and quantifies how far each solution can get us.

链接:

<http://agri.ckcest.cn/file1/M00/06/6B/Csgk0FzCyTGAe8PyAJp7LHvZsqU077.pdf>

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