

《农业水土资源监控研究》专题快报

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中国工程科技知识中心农业分中心

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【动态资讯】

1 . Eat less meat: UN climate change report calls for change to human diet——The report on global land use and agriculture from the Intergovernmental Panel on Climate Change comes amid accelerating deforestation in the Amazon.

【Nature】 Efforts to curb greenhouse gas-emissions and the impacts of global warming will fall significantly short without drastic changes in global land use, agriculture and human diets, leading researchers warn in a high-level report commissioned by the United Nations. The special report on climate and land by the Intergovernmental Panel on Climate Change (IPCC) describes plant-based diets as a major opportunity for mitigating and adapting to climate change — and includes a policy recommendation to reduce meat consumption.

链接:

<https://www.nature.com/articles/d41586-019-02409-7>

2 . The future of groundwater in sub-Saharan Africa

【Nature】 The population of sub-Saharan Africa is currently about 1 billion, and is predicted to double by 2050 ([go.nature.com/2zj9kca](https://www.nature.com/2zj9kca)), whereas the region's climate is predicted to become drier during the same period¹. Clearly, the demand for fresh water will increase. Whether groundwater can satisfy this demand is a looming question. Little is known about the rates at which water is replenished to groundwater aquifers^{2,3} in that region, and thus the rate of sustainable withdrawal. Writing in Nature, Cuthbert et al.⁴ identify the processes involved, and examine the long-term trends of aquifer replenishment in sub-Saharan Africa. The authors conclude that future drying climatic trends could affect surface-water supplies, but might not decrease groundwater supplies.

链接:

<https://www.nature.com/articles/d41586-019-02337-6>

3. “归零日”到来？报告显示：全球1/4人口面临严重缺水危机

【环球网】世界资源研究所6日发布报告称，全球1/4人口面临极大的水资源短缺压力，濒临水源枯竭，也就是无水可用的“归零日（day zero）”。据法国费加罗网站报道，8月5日，世界资源研究所发布《输水道水源风险地图》报告，就世界各国面临的水资源短缺、干旱以及河流泛滥的风险进行评级排名。其中，17个国家面临“极大的水资源压力”，这些国家的农业、工业与城市用水超过其地表及地下可用水资源总量的80%。

链接:

<http://world.huanqiu.com/exclusive/2019-08/15264374.html>

4. 科技部战略性国际科技创新合作专项：支持农业能源等14领域

【澎湃新闻】近日，科技部发布战略性国际科技创新合作重点专项2019年度联合研发与示范项目申报指南，拟支持农业，新农村、城镇化及城市发展，信息技术等14大重点领域，项目数共计30项左右，国拨经费总概算2.4亿元人民币。指南指出，2019年度项目以落实“一带一路”科技创新行动计划为重点，按照《“十三五”国际科技创新合作专项规划》和《推进“一带一路”建设科技创新合作专项规划》等任务部署，通过开展国际科技创新合作支撑国家重大战略实施。指南给出了联合研发与示范项目重点领域和优先方向，涉及农业，新农村、城镇化及城市发展，信息技术，能源，地球观测与导航，新材料，先进制造，交通运输，资源，环境，生物技术，海洋与极地，人口与健康，公共安全共14大重点领域，部署30个优先研究方向。其中，在农业领域，指南支持开放海域养殖设施高海况潜降关键技术与核心装备联合研发和环境胁迫下粮油保质减损关键技术和装备联合研发与示范作为优先方向。

链接:

https://www.thepaper.cn/newsDetail_forward_4100894

5. 构建多层次农村生态环境风险防范体系

【中国水运网】当前，我国一些农村地区生态环境问题较为突出，生态环境风险防范形势比较严峻。因此，亟须把生态环境风险纳入常态化管理，建立以生态系统良性循环和环境风险有效防控为重点的多层次农村生态环境风险防范体系。农村生态安全压力持续加大。我国农村生态系统破坏情况较为突出，农村耕地资源紧缺且呈逐渐减少的趋势，人均耕地面积占比不到世界平均水平的1/3。我国城镇化率从1978年的17.9%上升至2018

年的59.6%，农村城镇化过程中占用农村生态环境，对资源和能源的消耗也不断增加，在一定程度上打破了原有农村生态系统的平衡性。农村生态系统服务功能退化，尤其是耕地生态环境退化趋势加重。近年来，我国耕地资源退化面积超过40%，受污染的耕地面积占耕地总面积的10%以上，导致农村生态安全压力日趋严重。

链接:

<http://www.zgsyb.com/news.html?aid=508566>

6 . 统计局：我国农业生产技术和科技水平显著提高

【中国青年网】中国青年网北京8月5日电 今日统计局发布新中国成立70周年经济社会发展成就系列报告之十二——农业生产跃上新台阶 现代农业擘画新蓝图。报告指出我国农业基础设施明显改善，农业生产技术和科技水平显著提高。

链接:

http://finance.youth.cn/finance_cyxfrdij/201908/t20190805_12031141.htm

7 . 土壤里跑出“数据” 促农业生产节能增效

【中国信息产业网】“近半年来，这片试验田共节约灌溉用水近千吨，但庄稼长势比往年都要好，高科技就是高科技，节能又增效！”发出上述感叹的是睢宁县耕地质量保护站的工作人员，他口中提到的“高科技”就是徐州移动为睢宁县耕地质量保护站打造的土壤墒情自动监测平台。

链接:

http://www.cnii.com.cn/city/2019-07/31/content_2181823.htm

8 . To feed its 1.4 billion, China bets big on genome editing of crops

【Science】EIJING AND DURHAM, NORTH CAROLINA—If Gao Caixia were a farmer, she might be spread a little thin. Down the hall from her office at a branch of the Chinese Academy of Sciences (CAS) here in Beijing, seeds from a strain of unusually soft rice and a variety of wheat with especially fat grains and resistance to a common fungus sprout in a tissue culture room. A short stroll away, wild tomato plants far hardier than domestic varieties but bearing the same sweet fruit crowd a greenhouse, along with herbicide-resistant corn and potatoes that are slow to brown when cut. In other lab rooms Gao grows new varieties of lettuce, bananas, ryegrass, and strawberries. But Gao isn't a farmer, and that cornucopia isn't meant for the table—not yet, anyway. She is a plant scientist working at the leading edge of crop improvement. Every one of those diverse crops

has been a target for conventional plant breeders, who have slowly and painstakingly worked to endow them with traits to make them more productive, nutritious, or hardy. But Gao is improving them at startling speeds by using the genome editor CRISPR.

链接:

<https://www.sciencemag.org/news/2019/07/feed-its-14-billion-china-bets-big-genome-editing-crops>

9 . 《中国农村发展报告（2019）》聚焦坚持农业农村优先发展

【人民网】6月24日,《中国农村发展报告(2019)》在京发布。该报告以农业农村优先发展为主题,共包括1个主报告和17个专题报告。主报告分析了农业农村优先发展的提出背景;论述了农业农村优先发展的科学内涵和重要意义;提出了落实优先发展的总体思路与基本原则,以及农业农村优先发展的新型体制机制和政策体系。17个分报告涵盖了农村经济和社会发展,以及农业农村生态环境等领域,对农村发展进程、脱贫攻坚、农业支持政策、新型经营主体、乡村治理、绿色农业等内容进行了研究,分析了当前的发展状况与挑战,提出了相应的对策建议。

链接:

<http://world.people.com.cn/n1/2019/0724/c190967-31254036.html>

10 . 2019年全球十大新兴技术榜单发布

【环球科学】《科学美国人》与世界经济论坛联合发布了2019年全球十大新兴技术。这份榜单由《科学美国人》、《科学美国人》全球顾问委员会、世界经济论坛全球专家网络、世界未来委员会共同选出,涵盖了生物医疗、农业、物理、人工智能等领域的最新技术。这些技术尽管仍处于发展早期,但它们吸引了众多研究团队的关注,并且广受投资者青睐。在未来3~5年间,它们可能会对社会与经济产生重要影响。

链接:

https://huanqiukexue.com/a/qianyan/xinxi_nenyuan/2019/0704/28502.html

【文献速递】

1 . Effects of climate and land-use change scenarios on fire probability during the 21st century in the Brazilian Amazon

文献源: Global Change Biology,2019

摘要: The joint and relative effects of future land-use and climate change on fire occurrence in the Amazon, as well its seasonal variation, are still poorly understood, despite its

recognized importance. Using the maximum entropy method (MaxEnt), we combined regional land-use projections and climatic data from the CMIP5 multimodel ensemble to investigate the monthly probability of fire occurrence in the mid (20412070) and late (20712100) 21st century in the Brazilian Amazon. We found striking spatial variation in the fire relative probability (FRP) change along the months, with October showing the highest overall change. Considering climate only, the area with $FRP \geq 0.3$ (a threshold chosen based on the literature) in October increases 6.9% by 20712100 compared to the baseline period under the representative concentration pathway (RCP) 4.5 and 27.7% under the RCP 8.5. The best-case land-use scenario ("Sustainability") alone causes a 10.6% increase in the area with $FRP \geq 0.3$, while the worse-case land-use scenario ("Fragmentation") causes a 73.2% increase. The optimistic climate-land-use projection (Sustainability and RCP 4.5) causes a 21.3% increase in the area with $FRP \geq 0.3$ in October by 20712100 compared to the baseline period. In contrast, the most pessimistic climate-land-use projection (Fragmentation and RCP 8.5) causes a widespread increase in FRP (113.5% increase in the area with $FRP \geq 0.3$), and prolongs the fire season, displacing its peak. Combining the Sustainability land-use and RCP 8.5 scenarios causes a 39.1% increase in the area with $FRP \geq 0.3$. We conclude that avoiding the regress on land-use governance in the Brazilian Amazon (i.e., decrease in the extension and level of conservation of the protected areas, reduced environmental laws enforcement, extensive road paving, and increased deforestation) would substantially mitigate the effects of climate change on fire probability, even under the most pessimistic RCP 8.5 scenario.

链接:

<http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1aybyAS2yYAB2BjqCBT5Y949.pdf>

2 . Key determinants of global land-use projections

文献源 : Nature Communications,2019

摘要 : Land use is at the core of various sustainable development goals. Long-term climate foresight studies have structured their recent analyses around five socio-economic pathways (SSPs), with consistent storylines of future macroeconomic and societal developments; however, model quantification of these scenarios shows substantial heterogeneity in land-use projections. Here we build on a recently developed sensitivity approach to identify how future land use depends on six distinct socio-economic drivers (population, wealth, consumption preferences, agricultural productivity, land-use regulation,

and trade) and their interactions. Spread across models arises mostly from diverging sensitivities to long-term drivers and from various representations of land-use regulation and trade, calling for reconciliation efforts and more empirical research. Most influential determinants for future cropland and pasture extent are population and agricultural efficiency. Furthermore, land-use regulation and consumption changes can play a key role in reducing both land use and food-security risks, and need to be central elements in sustainable development strategies.

链接:

<http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1ayEiAPhv3ABCW99t7zeo040.pdf>

3 . 中国耕地集约化利用评价2010—2016

文献源：中国人口·资源与环境,2019

摘要：针对现有研究未明确集约和粗放的具体界限、初始依赖性强和横向可比性差、未区分耕地初级利用和次级利用等缺陷，本文综合采用增长核算方法和集约化度测算方法，开展针对动态过程的耕地集约化利用评价。在对农业生产增长来源进行核算分解的基础上，构建了耕地利用的初级、次级和综合集约化度测算模型，实证评价了全国2010—2016年的耕地集约化利用情况。研究指出，集约化度等于0.5是耕地集约化利用与粗放化利用的具体界限，依据集约化度大小可将耕地利用归属为完全粗放化、高度粗放化、粗放化优势、集约化优势、高度集约化、完全集约化等不同模式。研究发现:2010—2016年整体而言，全国耕地利用综合集约化度大小为1.11，初级集约化度(0.35)小于次级集约化度(0.76)，表明全国农业产出(粮食产量)的增长整体上是在耕地投入数量下降情况下完全依靠耕地复种生产率提高而实现，且是以耕地单种生产率提高为主要途径、以耕地复种指数提高为次要途径。分年度来看，全国耕地利用综合集约化度大小基本呈现出连续下降态势，初级和次级集约化度都存在较大幅度年际波动，反映出全国耕地利用综合集约化动力在持续减弱，初级和次级集约化进程都不够稳定。横向比较来说，浙江、上海和北京的耕地综合利用均属于粗放化模式，而青海、贵州、宁夏和甘肃的耕地综合利用都处于完全集约化进程，表明发达地区的耕地集约化利用程度并不一定高，不发达地区的耕地集约化利用程度并不一定低。

链接:

<http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1ayjeAQRkXABZ51wJZPhw556.pdf>

4 . 耕地质量遥感综合评价方法及应用——以衡水市安平县为例

文献源：河北农业科学,2019

摘要：耕地是农业生产的重要生产资料,其质量关系到我国的粮食安全,以及社会经济稳定与可持续发展。将遥感技术引入到耕地质量评价中,可使耕地评价工作更加科学与客观。运用卫星遥感技术获取遥感影像,并获取研究区域内100个样本点的氮、磷、钾和有机质含量。通过对研究区域内耕地养分质量和耕地生产力质量进行评价,构建耕地综合遥感监测评价模型,实现耕地质量综合评价。运用该模型对衡水市安平县冬小麦-夏玉米轮作区的耕地质量进行了综合评价。评价结果表明:安平县一等和二等耕地数量较少,且分布零散,主要集中在研究区域的西南部、东北部和北部地区;三等和四等耕地数量较多,分布相对广泛,这些耕地土壤环境质量较差,中低产田仍然存在,在未开发利用的土地中存在一定面积的盐碱地。根据评价结果及研究区域的土壤特点,提出了完善灌溉系统建设、加强土壤培肥措施实施的建议,以提高土壤肥力,保证小麦生产的顺利进行。

链接:

<http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1aypiAN3xzACLUUt2aols565.pdf>

5 . 我国耕地休耕研究回顾与现状分析—基于可视化文献分析法

文献源：粮食科技与经济,2019

摘要：耕地休耕有助于耕地休养生息、恢复地力，实现真正的“藏粮于地”。随着耕地休耕制度的探索实行与休耕区域试点的进一步扩大，通过对耕地休耕文献进行整理统计，可以分析探索国内耕地休耕研究的发展趋势与研究现状。运用文献计量学方法对人工甄别后的共计199 篇有关耕地休耕的文献进行梳理，分别从发表时间、基金来源、关键词频、研究机构、文献内容5个方面进行统计分析。数据表明，耕地休耕问题研究逐渐成为热点，但就目前国内研究现状而言，研究内容与研究方法相对局限单一，研究成果的质量、规范化、内容多样性等方面亦有待提升。

链接:

<http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1ay2iAZU5bAB0vjip1Nvc681.pdf>

6 . Continuous monitoring of land disturbance based on Landsat time series

文献源：Remote Sensing of Environment,2019

摘要 :We developed a new algorithm for COntinuous monitoring of Land Disturbance (COLD) using Landsat time series. COLD can detect many kinds of land disturbance continuously as new images are collected and provide historical land disturbance maps retrospectively. To better detect land disturbance, we tested different kinds of input data and explored many time series analysis techniques. We have several major observations as follows. First, time series of surface reflectance provides much better detection results than time series of

Top-Of-Atmosphere (TOA) reflectance, and with some adjustments to the temporal density, time series from Landsat Analysis Ready Data (ARD) is better than it is from the same Landsat scene. Second, the combined use of spectral bands is always better than using a single spectral band or index, and if all the essential spectral bands have been employed, the inclusion of other indices does not further improve the algorithm performance. Third, the remaining outliers in the time series can be removed based on their deviation from model predicted values based on probability-based thresholds derived from normal or chi-squared distributions. Fourth, model initialization is pivotal for monitoring land disturbance, and a good initialization stability test can influence algorithm performance substantially. Fifth, time series model estimation with eight coefficients model, updated for every single observation, based on all available clear observations achieves the best result. Sixth, a change probability of 0.99 (chi-squared distribution) with six consecutive anomaly observations and a mean included angle $< 45^\circ$ to confirm a change provide the best results, and the combined use of temporally-adjusted Root Mean Square Error (RMSE) and minimum RMSE is recommended. Finally, spectral changes (or “breaks”) contributed from vegetation regrowth should be excluded from land disturbance maps. The COLD algorithm was developed and calibrated based on all these lessons learned above. The accuracy assessment shows that COLD results were accurate for detecting land disturbance, with an omission error of 27% and a commission error of 28%.

链接:

<http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1azZyAKeNJAICpZHhI2Bg881.pdf>

7 . An optimal modelling approach for managing agricultural water-energy-food nexus under uncertainty

文献源 : Science of The Total Environment,2019

摘要 : Agriculture is the largest user of freshwater which is essential for food production.

Water, energy and food are closely intertwined, as both water and energy are critical inputs for food production. Increasing pressure from shortages of resources and increasing demand for food reinforce the need for optimal management of the water, energy, and food nexus. Uncertainties caused by natural conditions and human activities complicate the optimal allocation. An integrated model, called AWEFSM, was developed for the sustainable management of limited water-energy-food resource in an agricultural system by incorporating multi-objective programming, nonlinear programming, and intuitionistic fuzzy

numbers into a general framework. The AWEFSM model is capable of identifying the tradeoffs of water, energy and land resources among various subareas and crops, generating high-profile and environment-friendly strategies and policies, and addressing parameter uncertainties associated with the fluctuations of natural resources and variation of socioeconomic activities. The AWEFSM model was solved, considering nonlinear membership and non-membership functions with both optimistic and pessimistic views of decision makers, and was demonstrated for a real-world case study in northwest China. The interrelationships and trade-offs among system components, including water supply-demand, energy supply-demand, land demand, food production, as well as water and energy footprints, were quantitatively analyzed under different scenarios. The AWEFSM model is applicable for similar regions dominated by agriculture with limited resource supplies to determine water-energy-food strategies under uncertainty.

链接:

<http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1az0SAFNt-ACR4VRX-ocA250.pdf>

8 . 北京市水资源生态安全与农业安全状态评价

文献源：中国农学通报,2019

摘要：水资源安全与农业安全密切相关。北京市是一个水资源严重匮乏的城市，受水资源约束，农业规模不断缩小，却又突显了农业安全问题。运用“压力—状态—响应”模型，对北京市水资源生态安全和农业安全进行双重评价，结果表明：近十年来北京农业安全水平不断下降，水资源的生态安全水平则呈波动上升趋势；农业安全的压力和状态呈下降趋势，但农业安全的响应水平却稳中有升；水资源生态安全的压力与状态呈现同步波动起伏，而水资源生态安全的响应能力却总体上升。为提高北京市水资源的生态安全水平和农业安全水平，除严格控制人口增长和用水总量外，还要开源节流，加大对雨水的收集利用和污水处理再利用；落实严格的耕地保护制度；减少化肥、农药对水资源造成污染；加大对农业的投入，提高农业的综合生产能力；大力发展高效节水农业、生态农业和循环农业。

链接:

<http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1ay9-ABU4oABR8vemqs3E185.pdf>

9 . 中国农业水贫困评价及时空特征分析

文献源：资源科学,2019

摘要：本文以提高农业用水有效性为指导思想，提出“农业水贫困”概念，基于农业水贫

困概念界定和评价指标体系构建的基础上，利用POME-两级模糊模式识别模型测度2000—2016年中国30个省（市）农业水贫困指数，借助探索性时空数据分析（ESTDA），从时空耦合视角分析其空间格局动态性。研究发现：中国虽然存在较严重的农业水贫困问题，但是大部分省（市）的农业水贫困程度呈缓解趋势；各省（市）大部分年份的农业水贫困具有显著的空间负相关性，空间差异呈逐渐扩大趋势；相对于西南地区，华南地区和华东地区具有更加动态的局部空间结构；东北地区和西北地区的时空依赖效应较弱；农业水贫困空间格局具有较强的空间整合性，协同高增长的省（市）主要分布在华东地区和华南地区，协同低增长的省（市）主要分布在北部地区；各省（市）农业水贫困的局部空间联动性较弱，空间集聚性存在相对较高的路径锁定特征。此外，提出了降低农业水贫困的对策建议，为中国农业水资源管理和可持续发展提供借鉴。

链接:

<http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1azFGAUkkXADjooFOF-oY611.pdf>

【研究报告】

1. 甘肃农业现代化发展研究报告（2019）

发布源：中国社会科学网

发布时间：2019-08-07

摘要：《甘肃农业现代化发展研究报告（2019）》面向甘肃“三农”及农业科技发展的重点、热点、难点问题，运用科学、权威、翔实的数据，呈现甘肃农业发展总体状况和变化趋势，发布事实充分、分析透彻、结论可靠、对策具体的权威性、综合性研究成果，为党政决策机构、学界、企业和媒体了解甘肃“三农”和农业科技的总体状况，把握全省农业发展趋势，开展理论研究和科学决策提供了重要参考。

链接:

http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1axfWAAMg8AADt3GpUi_Y910.jpg

2. 2018年度湖北省水资源公报

发布源：湖北省水利厅

发布时间：2019-07-26

摘要：湖北省水利厅日前发布2018年度《湖北省水资源公报》（下称《公报》）。公报显示，2018年属偏枯年份，湖北省水资源总量857.02亿立方米，比常年偏少17.3%。全省用水总量296.87亿立方米，其中，农业用水150.66亿立方米，占50.8%；工业用水87.40亿立方米，占29.4%；生活用水58.81亿立方米，占19.8%。

链接:

<http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1axdSAL3yQAIV7exey3hY886.pdf>

3 . Emerging Science and Technology Trends: 2016-2045

发布源：Office of the Deputy Assistant Secretary of the Army

发布时间：2016-05-02

摘要：This is the third annual report on emerging trends in science and technology (S&T) published by the Deputy Assistant Secretary of the Army for Research and Technology (DASA R&T). As in prior years, the report has two primary objectives. First, it is intended to inform leaders across the U.S. Army and stakeholders in the joint, interagency, and international community about S&T trends that are likely to influence the future operating environment and shape warfighting capabilities over the next 30 years. Second, it is intended to spark strategic dialogue around the kind of S&T investments the Army should make to ensure that our Soldiers maintain overmatch in future operations. This 2016 version of the S&T Strategic Trends report synthesizes 32 S&T forecasts that have been published over the past five years by government agencies in the U.S. and abroad, industry leaders, international institutions, and think tanks. The objective was to identify trends that are most likely to generate revolutionary or disruptive change of interest to the Army over the next 30 years. By consolidating multiple trend analyses into a single reference document, this report aims to provide a ready reference for Army leadership as it considers the important role S&T will play in shaping the future of our Army. Analysis of the source documents produced 690 individual trends related to science and technology, as well as trends related to broader contextual factors that will shape the evolution of S&T over the coming decades. From this data set, 24 emerging science and technology trends were identified: In addition to these emerging S&T trends, this report discusses six broad contextual forces that are likely to shape the evolution of science and technology over the next 30 years: urbanization, climate change, resource constraints, shifting demographics, the globalization of innovation, and the rise of a global middle class.

链接:

<http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1awhKATS69AFBOn8fgTw0154.pdf>

【行业报告】

1 . IoT Signals

发布源：Microsoft

发布时间：2019-07-25

摘要：The goal of the IoT Signals report is to better serve our partners and customers, as well as help business leaders develop their own IoT strategies. Microsoft commissioned Hypothesis Group, an insights, design, and strategy agency, to execute the IoT Signals research. A 20-minute online survey was conducted with over 3,000 decision makers at enterprise companies across the US, UK, Germany, France, China, and Japan who were currently involved in IoT. The research included business decision makers (BDMs), IT decision makers (ITDMs), and developers from a range of industries such as manufacturing, retail/wholesale, government, transportation, healthcare, and more.

链接:

<http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1awwiAFKFzAKEP2RnOn-l686.pdf>

【统计数据】

1 . Gridded National Soil Survey Geographic Database (gNATSGO)

发布源：USDA

发布时间：2019-08-13

摘要：The gridded National Soil Survey Geographic Database (gNATSGO) is a USDA-NRCS Soil & Plant Science Division (SPSD) composite database that provides complete coverage of the best available soils information for all areas of the United States and Island Territories. It was created by combining data from the Soil Survey Geographic Database (SSURGO), State Soil Geographic Database (STATSGO2), and Raster Soil Survey Databases (RSS) into a single seamless ESRI file geodatabase. The gNATSGO database contains a 10-meter raster of the soil map units and 70 related tables of soil properties and interpretations. It is designed to work with the SPSP gSSURGO ArcTools. Users can create full coverage thematic maps and grids of soil properties and interpretations for large geographic areas, such as the extent of a State or the conterminous United States.

链接:

<https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=NRCSEPRD1464625>

2 .农村经济持续发展 乡村振兴迈出大步——新中国成立70周年经济社会发展成就系列报告之十三

发布源：国家统计局

发布时间：2019-08-07

摘要：新中国成立70年来，中国共产党立足我国国情农情，领导亿万农民谱写了农村改革发展的壮丽篇章。从开展土地改革到实行农业合作化，从建立家庭联产承包责任制到推进农村承包地“三权”分置，从打好脱贫攻坚战到实施乡村振兴战略，一系列“三农”改革建设的创举，推动了农村体制机制不断创新，促进了农业和农村二三产业生产力解放发展。党的十八大以来，以习近平同志为核心的党中央，坚持把解决好“三农”问题作为全党工作重中之重，持续加大强农惠农富农政策力度，建立健全城乡融合发展体制机制和政策体系，全面深化农村改革，稳步实施乡村振兴战略，精准扶贫成效举世瞩目，农业农村发展取得了历史性成就、发生了历史性变革，为党和国家开启全面建设社会主义现代化国家新征程提供了重要支撑。

链接：

http://www.stats.gov.cn/tjsj/zxfb/201908/t20190807_1689636.html

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