

《“一带一路”战略背景下中国农业国际合作发展战略研究》 专题快报

2019年第25期（总第39期）

中国工程科技知识中心农业分中心

中国农业科学院农业信息研究所

2019年1月5日

【动态资讯】

1. Reclaiming lost calories: Tweaking photosynthesis boosts crop yields

【the conversation】 What if your ability to feed yourself was dependent on a process that made a mistake 20 percent of the time? We face this situation every day. That’s because the plants that produce the food we eat evolved to solve a chemistry problem that arose billions of years ago. Plants evolved to use carbon dioxide to make our food and the oxygen we breathe a process called photosynthesis. But they grew so well and produced so much oxygen that this gas began to dominate the atmosphere. To plants, carbon dioxide and oxygen look very similar, and sometimes, plants use an oxygen instead of carbon dioxide. When this happens, toxic compounds are created, which lowers crop yields and costs us 148 trillion calories per year in unrealized wheat and soybean yield or enough calories to feed an additional 200 million people for a whole year.

链接:

<https://theconversation.com/reclaiming-lost-calories-tweaking-photosynthesis-boosts-crop-yields-109283>

2. Microbial aromas might save crops from drought

【the conversation】 In her book Silent Spring, Rachel Carson writes: “The sense of smell, almost more than any other, has the power to recall memories….” You might wonder how this relates to microorganisms. In fact, they produce most of the odours that we perceive. If you’ve ever walked in a forest following the first rainfall after a dry spell, you would recall a sweet, fresh and powerfully evocative smell. This earthy-smelling substance is

geosmin, a chemical released into the air by a soil-dwelling bacteria called actinomycetes. You may also recall the tangy scent of the sea, evoking memories of crashing waves, sandy beaches and the cry of seagulls. This smell is thanks to dimethyl sulfide, a rather stinky sulfurous compound produced by bloom-forming algae.

链接:

<https://theconversation.com/microbial-aromas-might-save-crops-from-drought-103960>

3. 艾哈代布项目成“中东合作样本” 为伊拉克增收100亿美

【中国一带一路网】从伊拉克首都巴格达乘车向南，穿过一个个村镇，约3个小时后出现一片绿洲。这里生机盎然，艾哈代布油田展现在眼前。位于瓦西特省库特镇的艾哈代布油田，发现于1979年，距首都巴格达约160公里。艾哈代布油田是伊拉克战后中国企业参与的第一个对外石油合作项目，也是中国石油中东合作区建设的起点。10年来，中方投资30多亿美元，将其打造成“中东标志性项目”。

链接:

<https://www.yidaiyilu.gov.cn/xwzx/hwxw/75952.htm>

4. 中非合作办农场 种地赔钱变成了种地致富

【中国一带一路网】湛蓝的天空下，一块块水田倒映着蓝天延伸到远方。脚下的黑土极富黏性。这里是莫桑比克中非农业合作项目的西贡巴里农场。来自中国的农业技术正在改变当地民众的生活和生产方式。翻地机平整量田后，当地民众在农场队长万丛新的指导下在田埂排成一排播撒稻种。村民达尼埃尔年纪轻轻，却已是个“老把式”。他告诉本报记者，在农场工作，不仅有稳定收入，还能向中国师傅学到种田的方法。万丛新说：“这里土壤非常肥沃。种水稻分为直播和插秧两种方式，现在我们采用的是直播的方法，便于当地村民学习操作。”

链接:

<https://www.yidaiyilu.gov.cn/xwzx/hwxw/75922.htm>

5. Amid Food Shortages, Venezuela's Grain Production to Fall

【GRO】Venezuelans have endured food shortages and hyperinflation. Forecasts for production and imports of basic foodstuffs for the 2018/19 marketing year don't inspire hope for improvements in the near term. Corn production is forecast at 700,000 tonnes, an increase from last year's 600,000 tonnes because of favorable growing conditions, but well below the 1 million tonnes produced in 2016/17, a USDA report shows. Area harvested in

corn has shrunk significantly, as producers switch to other crops that aren't subject to government price controls, such as soybeans. And with corn imports shrinking, total supply of the staple grain will be lower this year than last. Rice supplies also will be down this year—to 697,000 tonnes from 717,000 tonnes last year—as both production and imports decline. And total sorghum supplies will be less than half that of last year, at 35,000 tonnes.

链接:

https://gro-intelligence.com/blog/amid-food-shortages-venezuela-grain-production-to-fall?utm_campaign=December%20Newsletters&utm_source=hs_email&utm_medium=email&utm_content=68636714&hsenc=p2ANqtz-90nqUJHHW1IdEdWe_Vc8SRNmzj0_Lz27JepAHctBAQTSHkxSjUbEtWHu_MsuoZnH50OHw_C4yl2s0HgDSbQyEN8xVhg&hsmi=68636714

6. 中国对菲投资同比增长8364%! 菲官员: 希望中菲友谊长存

【中国一带一路网】菲媒称, 菲律宾投资委员会12月23日表示, 2018年, 菲律宾投资委员会批准的投资比去年增加47%, 达到9070亿比索(1菲律宾比索约合0.13元人民币), 也超过了此前该机构承诺的6800亿比索的目标。据菲律宾《马尼拉时报》网站12月24日报道, 菲律宾贸易和工业部长拉蒙·洛佩斯在一份声明中说: “我们打破了投资委员会51年历史以来的投资纪录, 大幅超过了2017年6170亿比索的投资额。”他还说道: “我们起初预计今年至少能实现6800亿比索的投资目标, 结果竟在2016年4420亿比索的投资额基础上翻了一番以上。”

链接:

<https://www.yidaiyilu.gov.cn/xwzx/hwxw/75834.htm>

7. 坦桑尼亚荒原变良田 村民感慨“日子好了起来”

【中国一带一路网】从坦桑尼亚港口城市达累斯萨拉姆驱车向西出发, 经过300多公里的路程, 在莫罗戈罗省的原野之中, 一片广阔的剑麻田映入眼帘, 这便是中非农业投资有限公司坦桑尼亚公司剑麻农场。在过去的18年里, 来自中国企业的农业技术让这里曾经的千顷荒原变成良田。剑麻农场促进了当地经济发展和民生改善, 书写着中非农业现代化合作的精彩故事。

链接:

<https://www.yidaiyilu.gov.cn/xwzx/hwxw/75606.htm>

8. Brazil Strengthens Position as Top Coffee Producer

【GRO】Brazil had its largest coffee harvest ever in 2018—61.7 million bags, equivalent to

3.7 million tonnes—surpassing its previous record for an on-year crop in 2016 by about 20 percent, a report by CONAB shows. The harvest also topped 2017's off-year crop by 37 percent. Coffee, especially the arabica variety, has alternating years of heavy and light crops. Arabica is Brazil's dominant coffee type, and production of this variety was 47.5 million bags, equal to 2.85 million tonnes. Production of the robusta variety, also called conilon, was 14.2 million bags, or 852,000 tonnes. Bountiful flowering, helped by favorable weather, and the expanded use of more productive, cloned varieties, contributed to the bumper crop, according to CONAB, which provides Brazilian subnational agricultural commodities data.

链接:

https://gro-intelligence.com/blog/brazil-strengthens-position-as-top-coffee-producer?utm_campaign=December%20Newsletters&utm_source=hs_email&utm_medium=email&utm_content=68636714&hsenc=p2ANqtz-90nqUJHHW1IdEdWe_Vc8SRNmzj0_Lz27JepAHctBAQTSHkxSjUbEtWHu_MsuoZnH500Hw_C4yl2s0HgDSbQyEN8xVhg&hsmi=68636714

9. 报告显示中企在肯尼亚创造超5万个就业岗位 员工本土化率达96%

【中国一带一路网】肯尼亚中国经贸协会（简称肯中经贸协会）日前发布的《2018年肯尼亚中资企业社会责任报告》显示，在肯尼亚的中国公司员工本土化率达96%，2018年为当地创造了超过5万个就业岗位，并为约6.7万当地员工提供了职业培训。报告分析称，中国与肯尼亚的合作在许多领域都取得丰硕成果，除了莫伊国际体育中心、蒙内铁路等100多个重大项目，两国在扶贫、公共卫生、文化交流等领域也开展了广泛合作。中国企业与肯尼亚合作伙伴共同规划，为肯尼亚建设了珠江经济特区、蒙巴萨经济特区、奈瓦沙工业园区等多个园区。报告指出，“这些项目的建设将大大加快肯尼亚的工业化进程并创造大量就业机会。”

链接:

<https://www.yidaiyilu.gov.cn/xwzx/hwxw/75510.htm>

10. Cover crops may increase winter temperatures in North America

【Science Daily】Cover crops grown in fields during winter may be warming temperatures in the northern United States and southern Canada, according to a new study by scientists at the National Center for Atmospheric Research. The crops, a land management strategy farmers use between growing seasons, create a darker surface than a snow-covered field, absorbing more heat from the Sun and producing a local warming effect.

链接:

<https://www.sciencedaily.com/releases/2018/12/181219093855.htm>

【文献速递】

1. Prospects and challenges of fish for food security in Africa

作者: Chin YeeChan;;NhuongTran

文献源: Global Food Security,2019

摘要: Fish contribute to Africa's food and nutrition security, but future directions for the fish sector remain uncertain. Using a structural foresight modeling approach, this paper examines past, present, and future trends of fish supply and demand in Africa to highlight challenges and prospects of the fish sector's contribution to food security in the continent. If historical trends are maintained, growth of aquaculture and fisheries would be slow, resulting in declining per capita fish consumption. Alternative scenarios highlight the potential importance of African aquaculture development in addressing food security. Policies to promote sustainable aquaculture, reduce post-harvest losses, and facilitate fish trade are indispensable. Fish deserves more attention in food and nutrition policies due to its prominence in the African food basket.

链接:

<http://agri.ckcest.cn/file1/M00/06/5B/Csgk0FwwGA6AHlbtACln9u285Ts907.pdf>

2. “一带一路”倡议下中国对外农业政策变迁分析

作者: 韩振国;;于永达;;徐秀丽

文献源: 世界农业,2019

摘要: 对外农业合作是中国对外合作的重要组成部分,国家出台多项政策进行引导。本文系统梳理了“三农”类中央1号文件、“五年规划”以及《共同推进“一带一路”建设农业合作的愿景与行动》中的对外农业政策,并对变迁特点进行总结。研究发现,“一带一路”背景下的对外农业政策一方面保持了原有的一些传统,如强调企业的主体地位和农业“走出去”的公共性、关注两种资源和两个市场、鼓励“走出去”方式和途径的多样性;另一方面也增加了新的元素,如将对外农业合作拓展到“一带一路”经济走廊上、发展以基础设施为载体的农业合作园区、结合信息革命创建跨境电商和信息平台、强调绿色共享来落实可持续发展议程的粮农目标。最后,提出建立政策执行监督机制、建立政策自信传送机制以及培养专业的政策执行队伍,以保证中国对外农业政策的有效落实,推进中国与“一带一路”沿线国家农业的共同发展。

链接:

<http://agri.ckcest.cn/file1/M00/06/5A/Csgk0FwlwsqAO1ItACB99WCFbNo566.pdf>

3. 粮食减产影响我国粮食安全的分析与政策建议

作者: 杨东群;;王克军;;蒋和平

文献源: 经济学家,2019

摘要: 本文通过对多个省份的粮食生产和储备情况调研,对粮食减产影响我国粮食安全进行了系统地分析。认为今年夏粮减产虽受天气因素突发的影响,但也是多种因素叠加产生的必然结果,包括有效粮田面积与粮食播种面积的减少,种粮劳动力短缺,种粮成本上升和种粮利润降低,以及基层农业技术力量薄弱等原因。从宏观层面看,新时代我国粮食安全面临着挑战。为此作者提出了新时代应树立新的国家粮食生产安全观、从“以主攻粮食产量为重”的导向转变为“以保证粮食有效供给为重”的导向,以及保障粮食安全三个重点。最后,提出了新时代保障我国粮食安全,贯彻落实粮食提质保量增效的政策建议。

链接:

<http://agri.ckcest.cn/file1/M00/06/5A/Csgk0Fwl4vKACXVVABK3JOsiK7U376.pdf>

4. 贸易战背景下农业“走出去”保障农产品供给的路径研究

作者: 柏娜;;陈瑞剑

文献源: 国际经济合作,2019

摘要: 农产品供给安全关系国计民生。通过回运优质农产品、引进先进技术、提升国际农产品市场话语权、稳定国际农产品贸易等多元化路径,农业“走出去”可有效增加我国国内农产品供给。综合考虑国内需求、资源条件及贸易情况,本文提出了我国农业“走出去”的优先产业及重点区域。为保证“走出去”路径通畅,必须处理好国内农产品回运与国内实际需求、农业“走出去”与投机行为、企业稳定发展与技术引进、增量技术引进与提质技术引进之间的关系。在此过程中,政府可从政策、法律、机制等方面提供必要的引导、规范、保障和支撑。

链接:

<http://agri.ckcest.cn/file1/M00/06/5A/Csgk0FwlxmOAM122ABMolkr-Yal650.pdf>

5. 探索新增长点:“一带一路”背景下中德农业科技合作的现实困境与模式创新

作者: 俞建飞;;姜爱良

文献源: 科技管理研究,2019

摘要: 基于对中德农业科技合作运行机制和合作成效的全面梳理和综合分析,识别出中德农业科技合作的现实困境,也揭示出“欧洲展望2020计划”和“一带一路”倡议形势下中德农业科技合作的战略机遇。从合作机制和项目内容视角建议中国应创新合作机制,建

立中德农业科技研究联合实验室,务实深化合作内容,积极融入企业资本,健全中德农业科技项目管理运行机制,从而为“一带一路”沿线发展中国家农业科技提供破题机制。

链接:

<http://agri.ckcest.cn/file1/M00/06/5A/Csgk0FwIw3OAZluyAANEIb4nC9k621.pdf>

6. “一带一路”倡议下加快农业“走出去”的政策建议

作者: 周君璧

文献源: 价格月刊,2019

摘要: 当前,中国农业发展对外应以“一带一路”为契机,深化对外投资合作;对内应以供给侧结构性改革为主线,加强有效供给。在分析“一带一路”倡议下农业“走出去”的现状与战略意义基础上,提出了制定“走出去”顶层规划,加强农业资源优势互补;优化农产品生产布局,推进农业全产业链融合发展;适当增加进口配额,以支持中国“走出去”企业生产的农产品;做好风险预判,建立风险共担机制;努力提升中国农业国际贸易的话语权;充分利用互联网、大数据等技术,实施“互联网+农业”;加快国际化专业化农业人才建设等政策建议。

链接:

<http://agri.ckcest.cn/file1/M00/06/5A/Csgk0FwlxTiAHezOAAcOYrx3IOE382.pdf>

7. When food systems meet sustainability – Current narratives and implications for actions

作者: Christophe Béné;Peter Oosterveer

文献源: World Development,2019

摘要: The concept of food system has gained prominence in recent years amongst both scholars and policy-makers. Experts from diverse disciplines and backgrounds have in particular discussed the nature and origin of the “unsustainability” of our modern food systems. These efforts tend, however, to be framed within distinctive disciplinary narratives. In this paper we propose to explore these narratives and to shed light on the explicit -or implicit- epistemological assumptions, mental models, and disciplinary paradigms that underpin those. The analysis indicates that different views and interpretations prevail amongst experts about the nature of the “crisis”, and consequently about the research and priorities needed to “fix” the problem. We then explore how sustainability is included in these different narratives and the link to the question of healthy diets. The analysis reveals that the concept of sustainability, although widely used by all the different communities of

practice, remains poorly defined, and applied in different ways and usually based on a relatively narrow interpretation. In so doing we argue that current attempts to equate or subsume healthy diets within sustainability in the context of food system may be misleading and need to be challenged. We stress that trade-offs between different dimensions of food system sustainability are unavoidable and need to be navigated in an explicit manner when developing or implementing sustainable food system initiatives. Building on this overall analysis, a framework structured around several entry points including outcomes, core activities, trade-offs and feedbacks is then proposed, which allows to identify key elements necessary to support the transition toward sustainable food systems.

链接:

<http://agri.ckcest.cn/file1/M00/06/5B/Csgk0FwwFw6AI9HVAA5VITpRBOI915.pdf>

8. Plantain productivity: Insights from Cameroonian cropping systems

作者: Sylvain Dépigny;;Elodie Delrieu Wils

文献源: Agricultural Systems,2019

摘要: Understanding the components of plantain productivity is important for contributing to the food security challenge in West and Central Africa. The purpose of this study was to assess how production system and cropping system characteristics affect plantain productivity. Interviews with farmers, dynamic measurements of cropped diversity, recording of management practices and characterization of the harvested bunches were used to characterize 25 plantain fields in the form of 54 factors and 5 dependent variables. The average bunch weight measured was 11.6 kg. The within-field variability of the bunch weights measured was 4.2 kg. The calculated mean plantain yield was 6.8 t/ha/year and varied between 1.1 and 18.8 t/ha/year depending on the fields studied. Harvested bunches amounted to only 34% of the field potential. Segmentation analyses (CART) of the fields studied and analyses of variance identified 12 factors strongly linked to bunch sizes and plantain field lifetime. The highest bunch weights were measured in fields belonging to farmers who participated in training and also applied herbicide and nitrogen fertilizers more frequently and at higher rates. These practices also increased within-field variability for bunch weights. Lastly, the management practices recorded showed an intensification of chemical inputs in traditional plantain-based cropping systems. These results, especially the high within-field and between-field variability for bunch weights, call for better quantify the impact of planting material quality and varietal mixture on plantain productivity into

plantain-based cropping systems.

链接:

<http://agri.ckcest.cn/file1/M00/06/5B/Csgk0FwvgG-AG1KaABpPRniC5x4294.pdf>

9. Trade-offs and synergies between livestock production and other ecosystem services

作者: Francesco Accatino;;Alberto Tonda

文献源: Agricultural Systems,2019

摘要: One of the biggest challenges today is to satisfy an increasing food demand while preserving ecosystem services. Farming systems have a huge impact on land cover and land use, it is therefore vital to understand how land cover and land use allocation can promote synergies between food production and other ecosystem services. Livestock production has multiple interactions with other ecosystem services and can promote synergies especially in grasslands. We investigated the interactions between livestock production and other ecosystem services and explored strategies to soften trade-offs and enhance synergies. We considered four ecosystem services (livestock production, crop production, carbon sequestration, and timber growth) in France. We considered 709 land units covering a wide range of farming systems where both food production and other ecosystem services are provided. For each land unit, we built ecological production functions that are models measuring the statistical influence of driving variables (i.e. land cover, land use, pesticide expense, and climate) on the provision of ecosystem services. Using an optimization procedure, we studied the extent to which livestock production could be increased without reducing other ecosystem services and without increasing total pesticide expense. We found that a 20% increase in livestock production could be achieved by all farming systems in France under those general constraints. The 709 land units could be grouped based on similar combinations of increases or decreases in specific ecosystem services during the optimization. 48% of land units were specialised on food production, 24% were specialised on other ecosystem services, 16% were specialised on the mixed provision of food production and other ecosystem services, whereas the remaining 12% showed decrease or no change in all ecosystem services. Livestock production was either in trade-off or in synergy with the other ecosystem services. The trade-offs could be softened through intensified use of cultivated land and spatial segregation of livestock production. The synergies could be enhanced only through major grassland expansion.

链接:

<http://agri.ckcest.cn/file1/M00/06/5B/Csgk0Fwvgt-AF8x-ACPXMT0TuTA214.pdf>

10. Rainfall shocks and agricultural productivity: Implication for rural household consumption

作者: Mulubrhan Amare;;Nathaniel D.Jensen

文献源: Agricultural Systems,2019

摘要: The paper investigates the impact of rainfall shocks on agricultural productivity and crop-specific agricultural land productivity. The paper also examines the impact of negative rainfall shocks on household consumption as well as its distributional impact by initial wealth and geographical zones. We use nationally representative panel datasets from Nigeria merged with georeferenced rainfall information. Negative rainfall shocks have heterogeneous effects on crop-specific agricultural productivity and based on geographical zones. We use an instrumental variables regression approach, where agricultural land productivity is instrumented with negative rainfall shocks. A negative rainfall shock decreases agricultural productivity and hence decreases household consumption by 37%. We also show considerable differential impacts of rainfall shocks on household consumption by initial values of wealth and geographical zones. Rainfall shocks have a negative, significant impact for asset-poor and nonpoor households, but has a higher impact on household consumption for asset-poor households. Similarly, it has higher impact for land-poor households and households in northern Nigeria.

链接:

<http://agri.ckcest.cn/file1/M00/06/5B/Csgk0FwvgZOA0cP0AA5IQsSa-UM215.pdf>

【行业报告】

1. Significant October to December rainfall deficits to result in below-average crop and livestock production

发布源: USAID

发布时间: 2018-12-07

摘要: Across the Horn of Africa, rainfall performance during the October to December Deyr/short rains season has been significantly below average and erratically distributed. Based on rainfall to date and the NOAA/CPC forecast through December 31, wide areas of Somalia, Kenya, and southern Ethiopia will accumulate large rainfall deficits (Figure 1). Crop production in Somalia and Kenya is expected to be at least 30 percent below average, and pasture and water availability is likely to be well below average throughout the region. As a

result, from February to April 2019, more areas will be in Crisis (IPC Phase 3) than originally projected. Humanitarians should prepare for an increase in need throughout 2019. Although impacts on food security are unlikely to be as severe as those following the failed 2016 Deyr, five out of the region's last six rainy seasons have been below average and close monitoring of the impacts on crop and livestock production is critical. Early forecasts also indicate an increased likelihood of a below-average 2019 Gu. If this forecast materializes, additional rapid deterioration in acute food insecurity would be likely.

链接:

<http://agri.ckcest.cn/file1/M00/06/5B/Csgk0FwwCVeAY-gmAARwLhbuI6E741.pdf>

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