2018年第50期总164期

粮食和食物安全专题

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1．区域范围内优化气候智慧型农业中的土地使用策略

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前沿资讯

1. 气候智慧型农业

简介：农业是最大的温室气体排放源之一，但也是气候变化的最大盟友之一。通过减少排放和避免储存在森林和土壤中的碳进一步流失，农业部门可以在减缓方面发挥重大作用。再者，保持土壤和森林的健康也有助于应对气候变化，因为这两者都扮演着“碳汇”的角色。最后，减少粮食损失和浪费以及提倡更好的粮食消费模式是农业可影响范围内的其它重要努力方向。世界上超过四分之三的贫困人口生活在农村地区，他们中的许多人以农业为生。受气候变化影响最大的正是这些农村人口，尤其是发展中国家的农村人口。我们的农业和粮食系统承受着高温、降水模式变化、海平面上升和极端天气事件频发的影响。“气候智能型”农业(CSA)是一种有助于改革和调整农业系统的方法，以确保气候变化影响下的粮食安全并支持农村发展。 这种方法重点关注对象是农民、渔民或者牧民。根据定义，CSA追求实现三个目标：以可持续方式提高农业生产率和农民收入；帮助农民建立应对气候变化的能力和找到适应气候变化的方法；减少温室气体(GHG)排放。

来源：FAO

发布日期:2018-12

全文链接:

http://www.fao.org/fao-stories/article/zh/c/1172480/

2. Climate change is making soils saltier, forcing many farmers to find new livelihoods(气候变化造成土壤盐碱化，促使更多农民另谋出路)

简介：Salt is essential for cooking, but too much salt in soil can ruin crops and render fields useless. According to legend, Roman general Scipio Aemilianus Africanus sowed the soils of Carthage with salt after conquering the city during the Punic Wars. And after defeating the Italian town of Palestrina in 1298, Pope Boniface VIII is said to have plowed its lands with salt, “so that nothing, neither man nor beast be called by that name.” oday it would be very expensive and logistically challenging to gather enough salt to render large swaths of land infertile. But that is precisely what climate change is doing in many parts of the world.

来源：The Conversation

发布日期:2018-11-29

全文链接:

https://theconversation.com/climate-change-is-making-soils-saltier-forcing-many-farmers-to-find-new-livelihoods-106048

3. Why is everyone talking about natural sequence farming?(为何人人都在讨论天然法务农)

简介：On the eve of the recent National Drought Summit, prime minister Scott Morrison and deputy prime minister Michael McCormack visited Mulloon Creek near Canberra, shown recently on the ABC’s Australian Story. They were there to see a creek that was still flowing, and green with vegetation, despite seven months of drought. Mulloon Creek was the legacy

of a long collaboration between prominent agriculturalist Peter Andrews, and Tony Coote, the owner of the property who died in August. For decades they have implemented Andrews' "natural sequence farming" system at Mulloon Creek.

来源：The Conversation

发布日期:2018-11-13

全文链接:

https://theconversation.com/why-is-everyone-talking-about-natural-sequence-farming-106232

4. Need a Cup of Sugar? Stocks Are at Record Highs(来杯糖？库存达到历史最高)

简介：Worldwide sugar stocks swelled this year, and the outlook is for more of the same in 2019, a trend that is expected to keep a lid on sugar prices for months to come. Building the global stockpile, in part, was No. 2 exporter Thailand, where excellent weather and expanded acreage resulted in record production. In India, the introduction of new cane varieties brought about strong gains in yield. The European Union, not normally a big player in global sugar markets, added to the oversupply as deregulation of Europe's sugar beet industry led to greater production and exports. Even a disappointing sugarcane harvest in industry-leader Brazil wasn't enough to halt a dramatic rise in supplies.

来源：GRO

发布日期:2018-11-27

全文链接:

https://gro-intelligence.com/insights/need-a-cup-of-sugar-stocks-are-at-record-highs?utm_campaign=November%20Newsletters&utm_source=hs_email&utm_medium=email&utm_content=67889821&_hsenc=p2ANqtz-_QkzTo-7cNgnDkTgv1xCe02o3-wLecKy6VTQGMNKqGrmfzHntNoJThWLTtEjE27EtqKDZpOJAVw-P05JemOZIhOOqIYQ&_hsmi=67889821

学术文献

1. Prioritizing climate-smart agricultural land use options at a regional scale(区域范围内优化气候智慧型农业中的土地使用策略)

简介：The promotion of climate-smart agriculture in different parts of the world requires a clear understanding of its relative suitability, costs and benefits, and the environmental implications of various technological interventions in a local context under current and future climates. Such data are generally difficult to obtain from the literature, field surveys and focused group discussions, or from biophysical experiments. This article describes a spreadsheet-based methodology that generates this information based on a region specific production function and 'target yield' approach in current and future climate scenarios. Target yields are identified for homogeneous agroecological spatial units using published crop yield datasets, crop models, expert judgement, biophysical land characterisations, assessment of yield gaps and future development strategies. Validated production/transfer

functions are used to establish relationships between inputs (water, seed, fertilizer, machinery, energy, labour, costs) and outputs (crop yields, residues, water and fertiliser use efficiencies, greenhouse gas emissions, financial returns). The process is repeated for all spatial units of the region, identified through detailed mapping of critical biophysical factors, and for all suitable current and potential agronomic production technologies and practices. The application of this approach is illustrated for prioritizing agronomic interventions that can enhance productivity and incomes, help farmers adapt to current risk, and decrease greenhouse gas emissions in current and future climates for the flood- and drought-prone state of Bihar in north-eastern India. In general, climate smartness increases with advanced technologies. Yield is the least limiting while emission is the most limiting factor across the entire crop-technology portfolio for climate smartness. Finally, we present a robust climate smart land use plan at district level in Bihar under current and future climate scenarios.

来源： Food Policy
发布日期: 2017-02
全文链接:
http://agri.ckcest.cn/file1/M00/00/00/CsgkOVwGdACAJe6dABVjqnGGZ4M216.pdf