农业与资源环境信息工程专题

本期导读

➤ 前沿资讯

1. 埃及求助FAO进行农业数字化转型

2. 为作物和气候监测地球表面温度

➤ 学术文献

1. 美国水数据的差距-对州级水数据平台进行调研以此显示国家水资源门户的发展

2. 数字农业技术政策：综述

➤ 科技报告

1. E-农业在行动：农业大数据

更多资讯 尽在农业专业知识服务系统:http://agri.ckcest.cn/

➤ 前沿资讯

1．Egypt turns to FAO for digital transformation in agriculture（埃及求助FAO进行农业数字化转型）

简介：The Food and Agriculture organization of the UN has launched in Egypt a digital model of agricultural extension to enhance agricultural productivity. The move comes within the programme signed between FAO and the Egyptian Government to boost information exchange and technology transfer in agriculture for the period 2018　2022.

来源：FAO

发布日期：2019-07-23

全文链接：http://www.fao.org/e-agriculture/news/egypt-turns-fao-digital-transformation-agriculture

2．Monitoring Earth's skin heat for crops and climate（为作物和气候监测地球表面温度）

简介：A bright red twin-engined aircraft, equipped with ultra-high-resolution thermal imaging technology has been scouring the agricultural heartlands of Europe this summer. It was no search and rescue exercise, but an initial step towards building a proposed new satellite system capable of recording the temperature of Earth's skin in intricate detail. The objective is to work towards increasing the resilience of agriculture to future water scarcity and variability, but it will also deepen our understanding of Earth's climate system.

来源：欧洲宇航局(ESA)

发布日期：2019-07-22

全文链接：http://www.esa.int/Our_Activities/Observing_the_Earth/Monitoring_Earth_s_skin_heat_for_crops_and_climate

➤ 学术文献

1．The U.S. Water Data Gap—A Survey of State-Level Water Data Platforms to Inform the Development of a National Water Portal（美国水数据的差距-对州级水数据平台进行调研以此显示国家水资源门户的发展）

简介：Water data play a crucial role in the development and assessment of sustainable water management strategies. Water resource assessments are needed for the planning, management, and the evaluation of current practices. They require environmental, climatic, hydrologic, hydrogeologic, industrial, agricultural, energy, and socioeconomic data to assess and accurately project the supply of and demand for water services. Given this context, we provide a review of the current state of publicly available water data in the United States. While considerable progress has been made in data science and model development in recent years, data limitations continue to hamper analytics. A brief overview of the water

data sets available at the federal level is used to highlight the gaps in readily accessible water data in the United States. Then, we present a systematic review of 275 websites that provide water information collected at the state level. Data platforms are evaluated based on content (ground and surface water, water quality, and water use information) along with the analytical and exploratory tools that are offered. Wev discuss the degree to which existing state-level data sets could enrich the data available from federal sources and review some recent technological developments and initiatives that may modernize water data. We argue that a national water data portal, more comprehensive than the U.S. Energy Information Administration, addressing the significant gaps and centralizing water data is critical. It would serve to quantify the risks emerging from growing water stress and aging infrastructure and to better inform water management and investment decisions.

来源：Earth's Future

发布日期：2019-03-01

全文链接：<u>http://agri.ckcest.cn/file1/M00/06/8D/Csgk0F1CuqqAT0G9ABwP1iFipd4560.pdf</u>

2．The Politics of Digital Agricultural Technologies: A Preliminary Review（数字农业技术政策：综述）

简介：Digital technologies are being developed and adopted across the agro-food system, from farm to fork. Within decision-making spaces, however, little attention is being paid to political factors arising from such technological developments. This review draws from critical social sciences to examine emerging technologies and big data systems in agriculture and assesses some key issues arising in the field. We begin with an introduction and review of the so-called 'digital revolution' and then briefly outline how political economy is effective for understanding major challenges for governing technologies and data systems in agriculture. These challenges include: (1) data ownership and control, (2) the production of technologies and data development, and (3) data security. We then use literature and examples to consider the extent to which the political and economic landscape can be shifted to support greater equity in agriculture, while reflecting on structural challenges and limits. In doing so, we emphasise that while there are significant systemic tensions between digital ag-tech development and agroecological approaches, we do not see them as mutually exclusive per se. This article intends to provide decision-makers, practitioners and scholars from a wide range of disciplines with a timely assessment of agro-food digitalisation that attends to political economic factors. In doing so, this article contributes to policy and decision-making discussions, which, from our perspective, continue to be rather technocentric in nature while paying little attention to how digital technologies can support agroecological systems specifically.

来源：Sociologia Ruralis

发布日期：2019-02-12

全文链接：<u>http://agri.ckcest.cn/file1/M00/06/8D/Csgk0F1Cuw0AMg8fAAM2hsh1QUA549.pdf</u>

➤ 科技报告

1．FAO-ITU E-agriculture In Action: Big Data for Agriculture（E-农业在行动：农业大数据）

简介：这份关于农业大数据的报告是E-农业系列出版物中的第四本。该报告分为两部分：第一部分侧重介绍数据驱动型农业，并探讨了农业中数据遇到的挑战和机遇，如数据隐私、结构化数据、数据技术设施和处理数据的能力；第二部分侧重于数字农业的转型以及大数据如何为农业带来更多的发展机会，如如何帮助农作物提高产量，减少粮食损失以及提高农业供应链的效率。

来源：FAO

发布日期：2019-07-29

全文链接：http://agri.ckcest.cn/file1/M00/06/8D/CsgkOF1CuLiAdQNPADn4n5ZR6PQ700.pdf

更多资讯 尽在农业专业知识服务系统：http://agri.ckcest.cn/