



2019年第35期总202期

## 农业与资源环境信息工程专题

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## ▶ 前沿资讯

### 1 . Harvesting sugar cane more efficiently with AI and IoT (利用人工智能和物联网更有效地收获甘蔗)

简介: Harvesting and transportation accounts for one third of the total production costs of sugar from sugar cane. To be more efficient, Bevap brought artificial intelligence and the Internet of Things into this process. This resulted in 8% increased efficiency representing € 150 million. Sugar cane production in Brazil amounts to 769 million tonnes per year. A typical factory processes 2 million tonnes. Companies are challenged every day to reduce costs, with harvest and transport being responsible for more than 30% of the total. Bevap understood that it could reduce costs by optimising the harvest. It identified points that could be automated to reach the expected return. To be even more efficient, Bevap brought artificial intelligence (AI) and the Internet of Things (IoT) into the process.

来源: 以色列Taranis农业公司

发布日期:2019-08-19

全文链接:[http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1bseuAFTOPAASON0Uh\\_GI959.pdf](http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1bseuAFTOPAASON0Uh_GI959.pdf)

### 2 .Artificial intelligence helps banana growers protect the world's most favorite fruit (人工智能技术帮助香蕉种植者保护这种世界最受欢迎的水果)

简介: 人工智能工具正在全球范围内,甚至偏远地区迅速推广。农民可以使用人工智能手持设备更高效的经营农场,将农民与市场、推广人员、卫星图像和气候信息串联起来。该技术正在成为防治作物虫害的第一道防线。为香蕉种植者开发的新智能手机可以对植物主要的五种疾病和一种常见害虫的迹象进行扫描。在哥伦比亚、刚果民主共和国、印度、贝宁、中国和乌干达的测试中,该工具的成功检测率为90%。开发人员说,这项工作迈向建立卫星驱动的全球网络控制疾病和虫害发生的第一步。

来源: EurekAlert

发布日期:2019-08-12

全文链接:[https://www.eurekalert.org/pub\\_releases/2019-08/icft-aih081219.php](https://www.eurekalert.org/pub_releases/2019-08/icft-aih081219.php)

### 3 . ScoutPro Partners with Farmers Edge to Boost Crop Monitoring Capabilities with Daily Satellite Imagery (ScoutPro公司与Farmers Edge公司合作,利用每日卫星图像提高作物监测能力)

简介: ScoutPro Inc. has partnered with Farmers Edge, a global leader in digital agriculture, to deliver the best-in-class imagery solution available for crop monitoring to their customers. Daily satellite imagery, state-of-the-art processing technology, and unique map layers are now integrated into the ScoutPro scouting app. Highly rated among retailers and other agricultural service providers, ScoutPro offers top-of-the-line field observation software and solutions built on high-quality information. Farmers Edge integrated approach to scouting delivers previously unavailable intelligence on crop development to ScoutPro users through

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a unique map set that shows variabilities in the field beginning immediately after seeding.

来源: 加拿大Farmers Edge公司

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全文链接:<https://www.farmersedge.ca/scoutpro-partners-with-farmers-edge-to-boost-crop-monitoring-capabilities-with-daily-satellite-imagery/>

## ➤ 学术文献

### 1 . Big data for agri-food 4.0: Application to sustainability management for by-products supply chain (农业食品4.0的大数据: 应用于副产品供应链的可持续性管理)

简介: The bioconversion of lignocellulosic biomass is a promising method for the production of bio-energy, biomolecules and biomaterials. Pretreatment of the lignocellulosic biomass is an essential step in this process. The choice of pretreatment process is a difficult one, and there are currently no clear criteria on which to base this choice. This project, with its sustainability and agri-food perspective, used environmental impacts to assess the various processes and their panels of technologies. The approach developed integrates big data, to improve sustainability management in supply chain design, with the aim of valorising agricultural waste. In five main steps, this approach combines concepts from industry 4.0, sustainability and the agri-food industry. We apply this approach to a case study in the domain of agricultural waste valorisation: the pretreatment of lignocellulosic biomass in the rice supply chain.

来源: Computers in Industry

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全文链接:<http://agri.ckcest.cn/file1/M00/0E/7F/Csgk0F1btCyAcJesACQnhhBZw1c368.pdf>

## ➤ 科技报告

### 1 . Digital AgroMet advisory platform for resilient agriculture in Ethiopia (埃萨俄比亚Agromet advisory农业数字化平台)

简介: The Ethiopian AgroMetPlatform offers great potential to improve farmers' management of climate-induced risks, facilitate technology adoption and thereby improve their livelihoods.The AgroMetplatform incorporates location specific climate-information, soil and crop specific best-bet agronomic management recommendations for farmers, development agents and extension officers; with the integration and automation of crop-climate modeling with ICTs as a dissemination mechanism.

来源: 国际农业研究磋商组织 (CGIAR)

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