



Agriculture in the News

Issues Affecting Caribbean Agriculture

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Improving Lives Through Agricultural Research

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Sweet Potato

Yield and Nitrogen Use Efficiency of Sweet Potato in Response to Cover Crop and Nitrogen Management.

Fernandes, A. M., L. G. Campos, M. S. Senna, C. L. da Silva, and N. S. Assunção. 2018. **Yield and Nitrogen Use Efficiency of Sweet Potato in Response to Cover Crop and Nitrogen Management.** *Agron. J.* 110:2004-2015. doi:10.2134/agronj2017.12.0721

<https://dl.sciencesocieties.org/publications/aj/abstracts/110/5/2004>

Abstract

Selected cover crops can provide N to sweet potato (*Ipomoea batatas* [L.] Lam) crops cultivated in succession and reduce the need for mineral N application. This study was conducted to determine the growth, leaf N concentration, N uptake, N removal, storage root yield, and N-use efficiency of sweet potato crop in response to different cover crop sources and mineral N fertilizer rates. A field experiment was performed over 2 agricultural yr using a randomized complete block design with split-plots and four replications. Whole plots consisted of four cover crops: One control (spontaneous weeds), two legumes (*Crotalaria spectabilis* and *Mucuna aterrima*), and one cereal (*Pennisetum glaucum*). Subplots consisted of four N rates (0, 50, 100, and 200 kg ha⁻¹) applied to the sweet potato. When no N was applied, *M. aterrima* supplied more N to sweet potato grown in succession but had the same effect as *C. spectabilis* on root yield. *P. glaucum* and spontaneous weeds had the same effect on the N supply and performance of sweet potato. The N rates for the optimum root yield of sweet potato were 49.6 and 76.6 kg N ha⁻¹ when grown after legume and non-legume species. In tropical conditions, the use of legumes as cover crops reduced the need for mineral N fertilizers by up to 35.2% for sweet potato. The cultivation history of a field should be an important consideration when determining the N fertilization for sweet potato because a high N supply favored the growth of vegetative plant parts.

Climate Smart Agriculture delivers nutritious food and income opportunities across the developing world. CIP International Potato Centre. September 25th, 2018

<https://cipotato.org/blog/climate-smart-agriculture-opportunities-developing-world/>

By the end of 2017, an International Potato Center (CIP) research-for-development initiative to expand the availability of quality seed potatoes in sub-Saharan Africa had improved the lives of more than 480,000 small-scale potato farmers. CIP and partners had also reached more than 4.5 million households in Africa, Asia and Haiti with nutritious orange-fleshed sweetpotato (OFSP). These are just two of the milestones covered in CIP's [Annual Report 2017: Harnessing Potato and Sweetpotato's Power for Food Security, Nutrition and Climate Resilience](#).

International Potato Center (CIP). [Annual Report 2017: Harnessing Potato and Sweetpotato's Power for Food Security, Nutrition and Climate Resilience](https://cipotato.org/annualreport2017/). <https://cipotato.org/annualreport2017/>

Rice Straw

IRRI and partners enhance farmer livelihood through new rice straw composting technique.

International Rice Research Institute (IRRI), 2 October 2018

<http://news.irri.org/2018/10/irri-and-partners-enhance-farmer.html>

Rice straw is a natural byproduct of rice production. Each kilogram of milled rice produces around 0.7-1.4 kilos of rice straw, a potential additional income for smallholder farmers that usually end up being burnt due to convenience and lack of awareness on other rice straw management options.

With support from the Federal Ministry of Economic Cooperation and Development (BMZ), IRRI and its partners are developing and piloting technologies to facilitate the use of rice straw as an additional opportunity to enhance farmer income and improve sustainability of rice production.

Through the project “Scalable straw management options for improved farmer livelihoods, sustainability, and low environmental footprint in rice-based production systems”, IRRI conducted a demonstration of a locally adapted compost turner in Vietnam last September 19.

“The compost turner is a technology developed by the project to provide farmers with alternative uses for rice straw that are left on the field after harvest, rather than burn it. It can also make land preparation easier for the next cropping season”, says IRRI postharvest scientist and project leader, Dr. Nguyen Van Hung. “The composting process makes use of rice straw waste from mushroom production and low quality rice straw from the field, hence, it does not compete with the rice straw being used for the production of ruminant feed,” Dr. Hung adds.

In addition, there is also an increasing demand for compost from rice straw. This is being sold at US\$1.5-3.0 per 100 kg or USD150-300 per ton of industrial compost. Farmers would normally make soil compost manually through different farming implements or by mixing farm and animal wastes using a bulldozer. “This process is energy intensive and costly as the rental fee for bulldozer is about US\$100 for an 8-hour operation,” says Dr. Hung. By having a good mixture of rice straw and animal manure, compost material is made available in forty five (45) days. A few farmers in Vietnam have tried mixing the compost in a pomelo farm and found the results promising.

The original design and prototype of the compost turner machine was developed by the scientists from Hohenheim University in Germany. This was later adapted to fit the smaller fields in Vietnam in collaboration with Nong Lam University, Tien Giang University and IRRI. The locally adapted compost turner has a capacity of 30 tons per hour and is operated by connecting it to a 32HP 4WD tractor.

The field demonstration was attended by researchers and experts from IRRI, CGIAR Challenge Program on Water and Food (CPWF), Philippine Rice Research Institute (PhilRice), Philippine Carabao Center (PCC), University of the Philippines-Los Baños (UPLB), Nong Lam University (NLU), Loc Troi, Cuu Long Delta Rice Research Institute (CLRRI), Vietnam National University of Agriculture, Vietnam Academy of Agricultural Sciences (VAAS), and Tien Giang University. It took place at Hung Thanh Commune, Tan Phuoc District, Tien Giang Province and was followed by a writeshop to outline the book on Rice Straw Management which was facilitated by Dr. Boru Douthwaite, former Impact Director of CPWF.

The compost turner machine will also be piloted and disseminated in other countries involved in the implementation of the rice straw management project, particularly the Rice Straw PH project in the Philippines funded by DA-BAR.

Wheat

Wheat that pumps iron naturally by Kaine Korzekwa, Crop Science Society of America (CSSA), 3 October 2018

<https://www.crops.org/science-news/wheat-that-pumps-iron-naturally>

New Studies Highlight Potential of Zinc-Biofortified Wheat. CGIAR - News Consultative Group on International Agricultural Research, 2 October, 2018

http://a4nh.cgiar.org/2018/10/02/new-studies-highlight-potential-of-zinc-biofortified-wheat/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+cgiar-a4nh+%28Agriculture+for+Nutrition+and+Health%29

Pigeonpeas

Modernizing India's pigeonpea breeding program to enhance genetic gains. ICRISAT, 14 September 2018

<https://www.icrisat.org/modernizing-indias-pigeonpea-breeding-program-to-enhance-genetic-gains/>

Strategies to revolutionize the pigeonpea breeding program in India, including delivering new varieties with market-friendly traits, was the main focus of a recent workshop, 'Pigeonpea Product Design and Management' conducted at ICRISAT India. A multidisciplinary team of scientists representing five agro-ecological zones of India brainstormed to update the Indian pigeonpea breeding program.

India accounts for more than 80% of the world's pigeonpea area and production; yet, it remains a major importer of pigeonpea. In order to boost yields that have stagnated over the last six decades, new varieties with preferred market traits need to be developed.

At the workshop, supported by the Excellence in Breeding (EiB) platform, Dr Kiran Sharma, Deputy Director General (Acting), ICRISAT, highlighted the importance of product design and value chain marketing for scalable returns.

Dr George Kotch, CGIAR Excellence in Breeding Module #1 Leader, provided technical advice on how to develop efficient product profiles, prioritize traits and create strategies to develop new varieties rapidly.

For example, as part of a strategy to replace existing pigeonpea varieties in many parts of India, a product profile contract was crafted and the design tailored for multiple disease resistance, photo-insensitivity, and nutritive traits, among others.

Emerging production risks due to climate change, and developing product profiles with the help of integrated modern breeding techniques were also debated.

This initiative set the stage for a cross-function team from CGIAR and National Agriculture Research System (NARS) to collaborate from the product planning stage to the product delivery stage, giving accountability to all stakeholders.

Due to the presence of an extensive pigeonpea fraternity, this workshop became an excellent platform to brainstorm for trait prioritization of pigeonpea to deliver new varieties according to farmer requirements and consumer preferences.

About 35 scientists from ICRISAT, NARS and the private sector, along with officers from seed certification agencies, traders, millers and market experts attended the workshop conducted on 14 August 2018. Apart from Dr Kotch, Dr Jan Debaene, Global Head – Breeding, ICRISAT, and Dr Anupama Hingane, Scientist-Pigeonpea Breeding, ICRISAT, moderated the workshop. This workshop was conducted with support from the Excellence in Breeding (EiB) Platform funded by CGIAR and the Bill & Melinda Gates Foundation.

Citrus Greening Disease

Citrus tree covers keep deadly Psyllids Away by Brad Buck. Institute of Food and Agricultural Sciences, University of Florida, September 20, 2018

<https://blogs.ifas.ufl.edu/news/2018/09/20/uf-ifas-research-citrus-tree-covers-keep-deadly-psyllids-away/>

GAINESVILLE, Fla. — University of Florida scientists are finding that by covering new citrus trees with mesh, they can keep disease-carrying insects from harming the plants. That could be a big step toward stemming the deadly citrus greening disease, UF Institute of Food and Agricultural Sciences researchers say.

Asian citrus psyllids can infect the fruit trees with greening, also known as Huanglongbing, or HLB. But the psyllids cannot penetrate the bags because the diameter of their openings is smaller than the insects, said Fernando Alferez, a UF/IFAS assistant professor of horticultural sciences.

Researchers call the system “individual protective covers,” or IPCs.....

Field evaluation of individual protective covers (IPC) for young citrus trees by Jim Graham, UF-CREC, Fernando Alferez, UF-SWFREC, Mike Irey, Southern Gardens Citrus. August 15, 2018, Citrus Expo 2018, Ft. Myers

<https://bit.ly/2QoDdNB>

Invasive Species

CABI Americas and Caribbean consultation focuses on the impact of invasive species on food security and trade. CABI, September 20, 2018

<https://www.cabi.org/news-and-media/2018/cabi-americas-and-caribbean-consultation-focuses-on-the-impact-of-invasive-species-on-food-security-and-trade/>

Food Safety

New index to tackle food safety scourge and threat to African health and trade. CTA - Technical Centre of Agricultural and Rural Cooperation, 2 October, 2018

<https://www.cta.int/en/article/new-index-to-tackle-food-safety-scurge-and-threat-to-african-health-and-trade-sid0b8239027-f128-4420-99f4-d3af89adf21f>

The African Food Safety Index (AFSI) launched today will help to tackle the burden of foodborne diseases that a recent global assessment found to be comparable to that of malaria, HIV/AIDs or tuberculosis.

CTA is partnering with the [African Union Commission](#), [CGIAR A4NH](#), [FAO](#) and [WHO](#) to launch the [AFSI](#) which will provide the evidence necessary for African countries to prioritise food safety, reduce foodborne illnesses and improve trade and income.....

African Food Safety Index (AFSI) <https://www.cta.int/en/project/building-capacity-for-institutionalising-food-safety-tracking-in-african-union-member-states-sid0f794090d-f947-47e2-b58a-e7ef511d15f9>

Agricultural Development

Transforming agriculture and food systems to nourish people and to nurture the planet. FAO News, 1 October 2018

<http://www.fao.org/news/story/en/item/1155122/icode/>

1 October 2018, Rome - Achieving sustainable development means shifting away from high-input and resource-intensive farming and food systems, FAO Director-General José Graziano da Silva said today.

Addressing ministers, government, private sector and civil society representatives attending the biennial meeting of FAO's Committee on Agriculture ([COAG](#), 1-5 October), the Director-General noted how current farming practices have contributed to deforestation, water scarcity, soil depletion and high levels of greenhouse gas emissions.

"Today, it is fundamental to produce food in a way that preserves the environment and biodiversity," Graziano da Silva said, adding: "We have to implement sustainable practices that provide healthy and nutritious food, ecosystem services and climate-change resilience."

To do so requires reducing the use of pesticides and chemicals, increasing crop diversification, and improving land conservation practices, amongst other measures, the FAO Director-General stressed....

Agriculture Sector Gets \$100 Million in Productivity Support By [Barbara Ellington](#). Jamaica Information Service, October 7, 2018

<https://jis.gov.jm/agriculture-sector-gets-100-million-in-productivity-support/>

Minister of Industry, Commerce, Agriculture and Fisheries Hon. Audley Shaw says some \$100 million has been approved to provide productivity support for several crops including Irish Potato and Onion.

The Minister made the disclosure while addressing stakeholders at the launch of the 2018/2019 Irish Potato Programme at Christ Church, Christiana, Manchester, on October 4.

The programme is part of Government's overall strategy to enhance Jamaica's food and nutrition capacity with the target of achieving full self-sufficiency.

Mr. Shaw noted that the demand for table Irish potatoes in Jamaica was 34 million pounds per year.,.,.,

Agricultural Integrated Survey Programme (AGRISurvey)

Agricultural Integrated Survey Programme (AGRISurvey) <http://gsars.org/en/tag/agris/>

[Handbook on the Agricultural Integrated Survey \(AGRIS\)](#)

The AGRIS handbook presents the rationale of the system, focusing on the new needs and challenges in surveying farms in the 21st century. In this handbook, the link with SDGs is acknowledged, as the proposed AGRIS Generic Questionnaires will generate basic data for monitoring directly four SDG indicators and provide essential information for another 15 SDG indicators.

Global Strategy to Improve Agricultural and Rural Statistics (GSARS)

Global Strategy to improve agricultural and rural statistics (GSARS) <http://gsars.org/en/>

The initiative to develop the [Global Strategy to improve agricultural and rural statistics \(GSARS\)](#) came as a response to address developing countries' lack of capacity to provide reliable statistical data on food and agriculture and to provide a blueprint for long-term sustainable agricultural statistical systems.

Agricultural Research: economic impact

Why it is more profitable to invest money in agricultural R&D, roads and irrigation than on subsidies. ICRISAT, 21 September 2018

<https://www.icrisat.org/why-it-is-more-profitable-to-invest-money-in-agricultural-rd-roads-and-irrigation-than-on-subsidies/>

A book titled [Supporting Indian Farms: the Smart Way](#) that brings out the advantages of investing money in agriculture and infrastructure and not on subsidies was released by Mr Arun Jaitley, Finance Minister of India, on 18 September 2018. The book was co-authored and edited by Dr Marco Ferroni, CGIAR System Management Board Chair; Dr Ashok Gulati, Infosys Chair Professor at Indian Council for Research on International Economic Relations (ICRIER); and Dr Yuan Zhou, Head of Research and Policy Analysis, Syngenta Foundation of Sustainable Agriculture.

The book talks of a modeling exercise that reveals that the marginal returns in terms of number of people brought out of income poverty or higher agri-GDP growth are almost 5 to 10 times more if the public money is spent through investments in agri-R&D, roads, irrigation etc., compared to the same money spent as subsidies on fertilizers and power....

Supporting Indian Farms the Smart Way http://icrier.org/pdf/Supporting_Indian_Farms_the_smart_way.pdf

Agricultural Extension

Designing for gender inclusivity in video-enabled agriculture extension by Jorn Van Campenhout. International Food Policy Research Institute (IFPRI), September 20, 2018.

<http://www.ifpri.org/blog/designing-gender-inclusivity-video-enabled-agricultural-extension>

Mobile Apps: agricultural insurance scheme

Mobile phone app launched to strengthen new insurance scheme for India's farmers. International Water Management Institute (IWMI) Press Release, 20 September 2018

<http://www.iwmi.cgiar.org/2018/09/press-release-mobile-phone-app-launched-to-strengthen-new-insurance-scheme-for-indias-farmers/>

NEW DELHI, INDIA, 20 September 2018 – Against a backdrop of worsening vulnerability to climate-related risks in India's agriculture, the International Water Management Institute (IWMI) is launching a mobile app, called AgRISE, in support of a new national agricultural insurance scheme – Pradhan Mantri Fasal Bima Yojana (PMFBY). The scheme aims to provide more than half of Indian farmers with crop insurance within the next 2-3 years. Mr. Ashish Kumar Bhutani, Joint Secretary to the Government of India and CEO of PMFBY, Ministry of Agriculture, presented the new app today at the [5th Asia Agriculture Insurance Conference](#).

Relying on satellite and climate data, combined with field data on crop yields, AgRISE (Agricultural Remote Sensing-based Insurance for Security and Equity) delivers a crop health card, which enables insurers and government agencies to estimate crop damage and overall insured losses quickly and reliably for all of India's major crops. Based on the latest geospatial technology (Google Earth Engine and Open Data Kit for field data collection), the tool will strengthen the implementation of PMFBY, reducing costs and facilitating the whole process.....

Beekeeping

9th Caribbean Beekeeping Congress launched. Guyana. DPI, 8 October 2018

<http://dpi.gov.gy/9th-caribbean-beekeeping-congress-launched/>

The Ministry of Agriculture, in collaboration with Association of Caribbean Beekeepers' Organisation (ACBO) and Guyana Apicultural Society (GAS), on Monday, officially launch the 9th Caribbean Beekeeping Congress under the theme, "Natural Beekeeping for a Green Caribbean". The conference will cater to over 200 participants on November 19-23.

This biannual forum, which is geared to address the challenges and opportunities within the subsector, is the second congress convened in Guyana. It will also assist in boosting local beekeeping businesses and opportunities to develop export potential through the promotion of local Apiculture products to Caribbean visitors....

UPCOMING EVENTS

Caribbean Week of Agriculture

Date: 8-12 October 2018

Location: Barbados

Theme "Strengthening agriculture for a healthier future in the Region".

Website: <https://cwa2018.caricom.org/>

CARDI/ITC/EU/ACP Coconut Symposium at Caribbean Week of Agriculture 2018

Date: 8-9 October 2018

Location: Barbados

The Coconut Symposium is organized under the ITC/CARDI Coconut Industry Development for the Caribbean project.

Sessions:

- Market Systems for the Development of Coconut Sector in the Caribbean
- Coconut/Small Ruminant Mixed Farming Systems
- Trade and Investment
- Climate Change, Risk and Disaster Mitigation and Management
- Environment and Waste Management
- Value Chain Development
- ICT applications within the Coconut Industry
- Strategies for Coconut Industry

The Coconut Industry Development for the Caribbean Project is jointly implemented by CARDI and International Trade Center and funded by the European Union and the ACP Secretariat.

International Rice Congress (IRC 2018)

Date: 14-17 October, 2018

Location: Singapore

Website: <http://ricetoday.irri.org/the-international-rice-congress-2018/>

World Food Day 2018

Date: 16 October 2018

Theme: Our Actions are our Future. A #ZeroHunger world by 2030 is possible

Website: <http://www.fao.org/world-food-day/en/>

18th International Triennial Symposium of the ISTRC (International Society for Tropical Root Crops)

Date: 22 - 26th October 2018

Location: Cali, Colombia

Website: <http://www.istrc.org/194-18th-international-triennial-symposium-of-the-international-society-for-tropical-root-crops-istrc-cali-colombia-from-22nd-to-26th-october-2018>

November

2018 International Annual Meeting, "Enhancing Productivity in a Changing Climate," of The American Society of Agronomy, the Crop Science Society of America, and the Canadian Society of Agronomy

Date: 4-7 November, 2018

Location: Baltimore, Maryland, USA

Website: <https://www.acsmeetings.org/>

[Global Strategy to improve agricultural and rural statistics \(GSARS\)](#) Final Conference

The Global Strategy Final Conference

Date: 14-16 November 2018

Location: FAO Headquarters in Rome, Italy

Website: <http://gsars.org/en/final-conference-of-the-global-strategy-14-16-november-2018-in-rome-what-has-been-achieved-and-next-steps/#more-4299>

9th Caribbean Beekeeping Congress

Date: November 19-23, 2018

Location: Guyana

Website: <http://www.acboonline.com/>

FAO International Symposium on Agricultural Innovation for Family Farmers: Unlocking the potential of agricultural innovation to achieve the Sustainable Development Goals

Date: 21 to 23 November 2018

Location: Rome, Italy

Website: <http://www.fao.org/about/meetings/agricultural-innovation-family-farmers-symposium/en/>