



Agriculture in the News

Issues Affecting Caribbean Agriculture

27 August to 2 September 2018 Issue, compiled by CARDI

HQ/002/18

Contents

- **Corn: Breed Better-tasting Sweet Corn** pp. 1
- **Sweet Potato: managing breeding data** pp. 2
- **Rabbits** pp. 2
- **Livestock: liver fluke** pp. 3
- **Climate Change: pests** pp.3
- **Livestock and Climate Change** pp.4
- **Biological control of an invasive pest eases pressures on global commodity markets** pp.5
- **Groundwater-based Natural Infrastructure** pp.5
- **Agricultural Development: Barbados** pp.6
- **Agricultural Incentives** pp. 6
- **UPCOMING EVENTS** pp.7

Corn

UF Scientists Hope To Breed Better-tasting Sweet Corn by Brad Buck. Institute of Food and Agricultural Sciences and University of Florida, September 3rd, 2018

<http://blogs.ifas.ufl.edu/news/2018/09/04/uf-scientists-hope-to-breed-better-tasting-sweet-corn/>

Sweet Potato: managing breeding data

HIDAP and Sweetpotato base training in Burkina Faso by Jolien Swanckaert. Sweet Potato Knowledge Portal, August 31, 2018

<https://www.sweetpotatoknowledge.org/hidap-sweetpotatobase-training-burkina-faso/>

Databases have become an integral part of all aspects of biological research, including basic and applied plant biology. The importance of databases continues to increase as the volume of breeding data and genomics approaches expands.

Improving Lives Through Agricultural Research

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[Antigua and Barbuda](#) | [Bahamas](#) | [Barbados](#) | [Belize](#) | [Cayman Islands](#) | [Dominica](#) | [Grenada](#) | [Guyana](#) | [Jamaica](#) | [Montserrat](#) | [St Kitts and Nevis](#) |
[St Lucia](#) | [St Vincent and the Grenadines](#) | [Trinidad and Tobago](#)

International Potato Center (CIP) held a HIDAP and Sweetpotatobase training at the Institut de l'Environnement et Recherches Agricoles (INERA) in Burkina Faso. HIDAP is a free system developed CIP as part of on-going in-house efforts to unify best practices in breeding data management, data analysis and reporting in clonal crops breeding. HIDAP is available both online and as a standalone software that can be used without the internet. Sweetpotatobase is a free online system developed by the Solgenomics team from Boyce Thompson Institute at Cornell University for managing sweetpotato breeding data. It provides a comprehensive suite of search, management, and analysis tools for different breeding activities. The Fieldbook app has been integrated with the Sweetpotatobase and HIDAP tools to allow for easy creation of electronic field books and uploading of data to these platforms.....

HIDAP - Highly Interactive Data Analysis Platform <https://research.cip.cgiar.org/gtdms/hidap/>
Sweetpotatobase <https://sweetpotatobase.org/>

Rabbits

Ministry Pushing Rabbit Meat For Local Consumption by Melissa Rollock. Barbados Government Information Service (BGIS), August 29, 2018

<http://gisbarbados.gov.bb/blog/ministry-pushing-rabbit-meat-for-local-consumption/>

The Ministry of Agriculture and Food Security is hoping to change the attitudes and palates of Barbadians when it comes to the consumption of rabbit meat.

To this end, it held a workshop on Rabbit Production this morning at the CARDI building, located on the Ministry's compound at Graeme Hall, Christ Church, which was well attended by both experienced rabbit farmers and those looking to break into the industry.

Chief Agricultural Officer, Lennox Chandler, who delivered brief remarks, said that traditionally, Barbadians were not avid consumers of rabbit meat. However, he added that he was hoping the current economic climate would encourage more persons to start rearing rabbits for meat production.

"From my own observations, I don't think rabbit meat is a popular meat for Barbados. What I know, is that adversity causes a change in habits; it causes a change in eating habits and tastes as well. So, we may have to turn to the rabbit as a source of meat.

"I note that the rabbit compares favourably with most other meats, especially with pork, beef and lamb, which are considered poor [health] choices as far as meats are concerned, and it holds its own against chicken as well," he remarked.

The Chief Agricultural Officer also lamented that some new housing developments had covenants which restricted home owners from rearing any kind of livestock. He noted that this was one of the challenges facing the industry.

"Again, the issues of economic adversity may cause us to make [changes] to all of these covenants and allow people to keep a few chickens and a few rabbits in their backyards for their own consumption. That is something we wish to see," Mr. Chandler emphasised.

Officer in Charge of Extension Services, Barney Callender, said the Ministry of Agriculture was planning to sensitise the public to get them to eat and produce more rabbit meat.

"Rabbit meat production is down but getting the meat sold is not an issue. We want to go hand-in-hand with the farmers and support them with getting the rabbit industry where it is supposed to be. The challenge over

the years was always in terms of cost, in terms of producing housing and in relation to feeding. We have always supported farmers by providing a lot of incentives,” he pointed out.

He added that overall, farming in Barbados was doing well, with more and more Barbadians turning to the industry to support their families. And, a lot of younger persons were also becoming involved in agriculture, Mr. Callender noted, adding that the country was “pretty self-sufficient” when it came to poultry and egg production.

Some of the topics covered during the workshop included **Breed Selection; Rabbit Nutrition; Rabbit Diseases and The Nutritional Value of Rabbit Meat.**

Livestock: liver fluke

Climate change increasing the prevalence of harmful parasite, warn scientists. University of Bristol. Press Release 29 August 2018

<http://www.bristol.ac.uk/biology/news/2018/climate-change-increasing-the-prevalence-of-harmful-parasite.html>

A rise in a parasite called liver fluke, which can significantly impact livestock production in farms in the UK and across the world, could now be helped by a new predictive model of the disease aimed at farmers. The tool, developed by University of Bristol scientists, aims to help reduce prevalence of the disease.

Cattle or sheep grazing on pastures where the parasite is present can become infected with liver fluke, which develops in the liver of infected animals, leading to a disease called fascioliasis. Current estimates suggest liver fluke contributes to around £300 million annually in lost productivity across UK farms and \$3 billion globally.

Until now, risk predictions have been based on rainfall estimates and temperature, without considering the life-cycle of the parasite and how it is controlled by levels of soil moisture. This, combined with shifts in disease timing and distribution attributed to climate change, has made liver fluke control increasingly challenging.

A new tool for farmers has now been developed by the Bristol team to help them mitigate the risk to their livestock. The model, which works by explicitly linking liver fluke prevalence with key environmental drivers, especially soil moisture, will help farmers decide whether they avoid grazing livestock on certain pastures where liver fluke is more prevalent, or treat animals based on when risk of infection will be at its peak. Importantly, the model can be used to assess the impact of potential future climate conditions on infection levels and guide interventions to reduce future disease risk....

Paper '[A mechanistic hydro-epidemiological model of liver fluke risk](#)' by L Beltrame et al is published in the Journal of the Royal Society Interface.

Climate Change: pests

Pests to eat more crops in warmer world by Lucy R Green, Science reporter. BBC, 30 August 2018

<https://www.bbc.co.uk/news/science-environment-45358643>

Climate change projected to boost insect activity and crop loss, researchers say by [James Urton](#) .

UW News, University of Washington, 30 August 2018

<https://www.washington.edu/news/2018/08/30/climate-change-insects-crops/>

EXCERPT

Scientists have already warned that climate change likely will impact the food we grow. From rising global temperatures to more frequent “extreme” weather events like droughts and floods, climate change is expected to negatively affect our ability to produce food for a growing human population.

But new research is showing that climate change is expected to accelerate rates of crop loss due to the activity of another group of hungry creatures — insects. In a [paper](#) published Aug. 31 in the journal [Science](#), a team led by scientists at the University of Washington reports that insect activity in today's temperate, crop-growing regions will rise along with temperatures. Researchers project that this activity, in turn, will boost worldwide losses of rice, corn and wheat by 10-25 percent for each degree Celsius that global mean surface temperatures rise. Just a 2-degree Celsius rise in surface temperatures will push the total losses of these three crops each year to approximately 213 million tons.

"We expect to see increasing crop losses due to insect activity for two basic reasons," said co-lead and corresponding author [Curtis Deutsch](#), a UW associate professor of oceanography. "First, warmer temperatures increase insect metabolic rates exponentially. Second, with the exception of the tropics, warmer temperatures will increase the reproductive rates of insects. You have more insects, and they're eating more."

In 2016, the United Nations estimated that at least 815 million people worldwide don't get enough to eat. Corn, rice and wheat are staple crops for about 4 billion people, and account for about two-thirds of the food energy intake, [according to](#) the UN Food and Agriculture Organization.

"Global warming impacts on pest infestations will aggravate the problems of food insecurity and environmental damages from agriculture worldwide," said co-author [Rosamond Naylor](#), a professor in the Department of Earth System Science at Stanford University and founding director of the Center on Food Security and the Environment. "Increased pesticide applications, the use of GMOs, and agronomic practices such as crop rotations will help control losses from insects. But it still appears that under virtually all climate change scenarios, pest populations will be the winners, particularly in highly productive temperate regions, causing real food prices to rise and food-insecure families to suffer."....

Increase in crop losses to insect pests in a warming climate By Curtis A. Deutsch, Joshua J. Tewksbury, Michelle Tigchelaar, David S. Battisti, Scott C. Merrill, Raymond B. Huey, Rosamond L. Naylor. *Science* 31 Aug 2018 : 916-919 <http://science.sciencemag.org/content/361/6405/916>

Livestock and Climate Change

Livestock sector in Latin America and the Caribbean has great potential to mitigate its greenhouse gas emissions. FAO Regional Office for Latin America and the Caribbean NEWS, August 27, 2018

<http://www.fao.org/americas/noticias/ver/vn/c/1150594/>

... Event: Innovaciones en Producción cárnica con bajas emisiones de carbono: experiencias y desafíos en América Latina y el Caribe, Colombia. 28-08-18 - 29-08-18

<http://www.fao.org/americas/eventos/ver/en/c/1143349/>

- [Low-emissions development of the beef cattle sector in Argentina](#)
- [Low emissions development of the beef cattle sector in Uruguay](#)

Biological control of an invasive pest eases pressures on global commodity markets

Biological control of an invasive pest eases pressures on global commodity markets by K A G Wyckhuys, W Zhang, S D Prager, D B Kramer, E Delaquis, C E Gonzalez and W van der Werf. 2018.

[Environmental Research Letters, Volume 13, Number 9](#)

<http://iopscience.iop.org/article/10.1088/1748-9326/aad8f0/meta>

Abstract

In an increasingly globalized world, invasive species cause major human, financial, and environmental costs. A cosmopolitan pest of great concern is the cassava mealybug *Phenacoccus manihoti* (Hemiptera: Pseudococcidae), which invaded Asia in 2008. Following its arrival, *P. manihoti* inflicted measurable yield losses and a 27% drop in aggregate cassava production in Thailand. As Thailand is a vital exporter of cassava-derived commodities to China and supplies 36% of the world's internationally-traded starch, yield shocks triggered price surges and structural changes in global starch trade. In 2009 a biological control agent was introduced in Asia—the host-specific parasitoid, *Anagyrus lopezi* (Hymenoptera: Encyrtidae). This parasitoid had previously controlled the cassava mealybug in Africa, and its introduction in Asia restored yield levels at a continent-wide scale. Trade network and price time-series analyses reveal how both mealybug-induced production loss and subsequent parasitoid-mediated yield recovery coincided with price fluctuations in futures and spot markets, with important cascading effects on globe-spanning trade networks of (cassava) starch and commodity substitutes. While our analyses may not imply causality, especially given the concurrent 2007–2011 food crises, our results do illuminate the important interconnections among subcomponents of the global commodity system. Our work underlines how ecologically-based tactics support resilience and safeguard primary productivity in (tropical) agro-ecosystems, which in turn help stabilize commodity markets in a similar way as pesticide-centered approaches. Yet, more importantly, (judiciously-implemented) biological control can deliver ample 'hidden' environmental and human-health benefits that are not captured by the prices of globally-traded commodities.

Tiny pest-killing wasps for Asia's cassava crop eases anxieties on the Chicago Mercantile Exchange

by Kris Wyckhuys. IFPRI, August 31, 2018

<http://www.ifpri.org/blog/tiny-pest-killing-wasps-asias-cassava-crop-ease-anxieties-chicago-mercantile-exchange>

Groundwater-based Natural Infrastructure

Groundwater-based Natural Infrastructure (GBNI) webpage. Groundwater Solutions Initiative for Policy and Practice (GRIPP)

<http://gripp.iwmi.org/natural-infrastructure/>

.. Based on the considerable knowledge, experience and technical expertise of its many partners, GRIPP has assembled here a portfolio of solutions that makes it possible, through improved management, to derive greater benefits from groundwater-based natural infrastructure, or GBNI. The solutions are grouped below according to four primary but somewhat overlapping functions. Follow the links to learn more about how each solution works, and what GRIPP partners and many other institutions have learned from their experience.

New Groundwater Based Natural Infrastructure page launched! Groundwater Solutions Initiative for Policy and Practice (GRIPP), 23 August 2018

<http://gripp.iwmi.org/2018/08/23/new-groundwater-based-natural-infrastructure-page-launched/>

Agricultural Development

Barbados To Learn From Chinese Techniques In Agriculture by Melissa Rollock. Barbados Government Information Service (BGIS), August 24, 2018

<http://gisbarbados.gov.bb/blog/barbados-to-learn-from-chinese-techniques-in-agriculture/>

The Ministry of Agriculture and Food Security is looking to take a delegation to China to learn modern techniques employed in agriculture there to benefit farmers in Barbados.

Minister Indar Weir made the disclosure during a recent courtesy call with that country's Ambassador to Barbados, Yan Xiusheng, at the Ministry's headquarters at Graeme Hall, Christ Church

Mr. Weir said he would take up an invitation offered by Ambassador Yan to visit the People's Republic of China to see how they used technology to feed their 1.4 billion citizens.

He told the Ambassador that Barbados was planning to develop fish farming and grow foods that were in demand, as opposed to importing them, in order to reduce the country's food import bill. He added that his Ministry was currently developing programmes in aquaponics, hydroponics and the area of small ruminants, where they were exploring the "value chain" of Blackbelly sheep skin to generate foreign currency.

Additionally, Mr. Weir revealed that the Ministry was also planning to develop its goat production programme to create cheeses, ice cream and other items that would drive economic growth. He also suggested that agriculture could help boost the cruise industry, by using local produce to create indigenous dishes that cruise passengers could enjoy when they disembarked the ships.

Ambassador Yan said that at one time, China had a problem feeding some of its people but it had reached a point where it could do so comfortably. He added that Barbados had a lot of land which could be cultivated for agricultural use and that his country was willing to cooperate further with Barbados to develop its agricultural sector by assisting in the area of modern technology.

The Ambassador noted that China had to date invested BDS \$48 million towards the construction of the Hope Agricultural Training Institute in St. Lucy and the University of the West Indies' Centre for Food Security and Entrepreneurship through the Ministry of Education, Technological and Vocational Training.

Stating that the two projects had his full support and that of the Ministry, Mr. Weir suggested to Ambassador Yan that the Chinese Embassy could include the field of agriculture during its annual award of scholarships, since Barbados was also interested in developing the scientific aspect of agriculture.

Agricultural Incentives

Global trends in agricultural incentives affecting producers, consumers by Simla Tokgoz and Sara Gustafson. International Food Policy Research Institute, August 30, 2018

https://www.ifpri.org/blog/global-trends-agricultural-incentives-affecting-producers-consumers?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+BlogWorldHunger+%28IFPRI+Blog%29

The recent surge in protectionist trade measures around the world has revived debates about who benefits in the end from tariffs on, say, steel or soybeans. Tariffs are just one of a much broader range of policies that affect incentives for domestic producers and consumers. For example, in agriculture, tariffs on soybean

imports may coexist with input subsidies or direct income support to grain farmers, or subsidies on milk prices to protect consumers. What is the net effect of these multifaceted policies on producers and consumers?

The [Agricultural Incentives \(Ag-Incentives\) Consortium](#) provides a database with common and well-defined indicators to identify how this array of policies—their incentives and disincentives—adds up to affect suppliers and consumers of agricultural products. The data show how governments have enacted policies in reaction to changes in world market conditions and food price crises.

Figure 1 shows average global Nominal Rates of Protection (NRPs)—a measure of the difference between the farm gate price and a reference “free market” price that would exist without government protections—for the agricultural sector. This reference price is computed by adjusting the border price, assumed to be free from domestic agricultural policy distortions, for distribution, storage, transport, and other marketing costs to make it comparable to the farm gate price. This difference offers a measurement of the degree to which policies act as incentives to farmers. For comparison, the graph also shows the FAO Food Price Index.

Worldwide, NRPs for the agricultural sector show some annual fluctuation, but overall have been on the rise since 2008....

UPCOMING EVENTS

September

International conference on agricultural emissions and food security: Connecting research to policy and practice

Date: 10-13 September 2018

Location: Berlin, Germany

Website: <https://www.agrighg-2018.org/>

<https://ccafs.cgiar.org/international-conference-agricultural-emissions-and-food-security-connecting-research-policy-and#.W2xeCbgpCM8>

October

Asia Water Forum 2018

Date: 2-4 October, 2018

Location: Manila, Philippines

Theme: “Information, Innovation, and Technology”.

Website: <https://www.adb.org/news/events/asia-water-forum-2018-information-innovation-and-technology>

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/>

International Rice Congress (IRC 2018)

Date: 14-17 October, 2018

Location: Singapore

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

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/>

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/>