



## CASSAVA

**MoA holds cassava development workshop.** Dominica Government Information Service (GIS), 2 July 2017. <http://news.gov.dm/index.php/news/4452-moa-holds-cassava-development-workshop>

### Full article

The Ministry of Agriculture and Forestry in collaboration with the Food and Agriculture Organization and the Caribbean Development Bank (CDB), have joined forces to help Dominica benefit from the opportunities available in the regional cassava industry.

Last Wednesday, a project launch and inception workshop on the Cassava Industry Development and Sustainable Approaches to Agribusiness was held with key industry including farmers and exporters.

Permanent Secretary in the Ministry of Agriculture, Harold Guiste explained that this is a result of a “grant agreement signed with the FAO and the Caribbean Development Bank (CDB) for execution of projects geared at addressing the huge import substitution market opportunity that the development of the cassava industry provides to the Caribbean for food, flour, feed, beer and possibly energy.”

Plant production and protection officer with the FAO, Vyjayanthi Lopez detailed the benefits of the growth of the cassava industry which can be used to reduce the food and import bill.

“Cassava already has a production base in almost all the countries of the region. According to recent estimates CARICOM countries import, on an annual basis, 900,000 metric tons of wheat for flour and 400,000 metric tons of corn mainly for poultry feed. The beer industry imports almost 100,000 tons of malt annually. Many of these industries recognize the substitution possibilities and have expressed interest in using locally produced cassava in their production systems.”

To supply these potential markets, she noted however, “requires improvements at various levels along the value chain starting with improved varieties and production technologies, more efficient marketing and processing systems and closer business relationships between the value chain actors from production to consumption.”

She also identified competitive prices for raw materials as a key factor to the success of the industry. The crop has been prioritized by several CARICOM countries, including Dominica, for development as a food and commodity crop.

A multipurpose crop, cassava is a climate smart crop adaptive to a wide range of soil and environments however the low production and productivity levels must be addressed if cassava is to become a commercially viable crop.

The Hon. Minister for Agriculture, Johnson Drigo says his ministry has already begun to address the key issues surrounding cassava production.

He said, a stakeholder's consultation was held in Castle Bruce and a survey of producers, processors, consumers and input suppliers was also conducted.

“The analysis of information collected from the actors along the value chain reveal the need for increased production of cassava tubers, improved knowledge sharing among stakeholders, conduct cost of production exercises, improved production and processing facilities, improved production to meet food safety and consumer demands,” Hon Drigo explained.

He further detailed that action to address some of these limiting factors was initiated in 2015 under component two of the agricultural policy programme funded by the European Union.

The three-year project, valued at US\$1.2 million is expected to introduce new improved varieties of cassava into the region as well as link farmers with new markets.

The Minister assured that the Government will continue to support the cassava industry here.

## **RICE**

**Guyana-Mexico rice export deal sets sail – as first shipment loaded.** By Zanneel Williams, Guyana Department of Public Information (dpi), 30 June 2017.

<http://gina.gov.gy/guyana-mexico-rice-export-deal-sets-sail-as-first-shipment-loaded/>

### **Full article**

The Guyana Rice Development Board (GRDB), this afternoon, officially began loading the first batch of paddy that will be shipped to Mexico at the John Fernandez Wharf.

The shipment is part of the US\$17.7m (G3.8B) Guyana-Mexico rice export agreement inked in March 2017. The Mexico-Guyana Rice agreement was brokered by Prime Minister Moses Nagamootoo and Minister of Agriculture Noel Holder.

Head of the Guyana Rice Development Board (GRDB) Allison Peters explained that this first vessel is “taking 17,000” of the 60,000 tonnes of paddy that will be shipped to Mexico, over the next two months. The vessel will leave for Mexico in four days’ time Peters said, “Once there is good weather.”

The Government has been upping efforts, through the diplomatic processes to find new international markets for rice. Following a visit to Mexico by Prime Minister Moses Nagamootoo in 2015, GRBD sent a team to the Central American country earlier this year as part of government’s efforts to expand exports. Another trip is planned shortly.

Minister of Agriculture Noel Holder in an earlier interview had noted that the government is, “not only seeking to secure new markets, but markets that will offer premium price for the local

grain.” The minister had noted that the Guyana-Mexico rice agreement represents the first new destination for Guyana’s rice.

Guyana’s rice industry has recorded a paddy production of half a million metric tonnes for the first crop in 2017. Rice and paddy consumption in Mexico exceeds one million tons per year and the Central American country imports more than 80 per cent of its grains.

## **BANANA**

**QUT develops golden bananas high in pro-vitamin A.** Queensland University of Technology (QUT), 7 July 2017

<https://www.qut.edu.au/news/news?news-id=119796>

### **Full article**

Key points:

- QUT has produced Ugandan bananas high in pro-vitamin A
- Cooking bananas are the staple food in rural Uganda
- Worldwide 650 000 - 750 000 children die from vitamin A deficiency
- Ugandan farmers will be growing pro-vitamin A rich bananas in 2021
- A humanitarian project backed by the Bill & Melinda Gates Foundation

World-first QUT research that has produced a golden-orange fleshed banana, rich in pro-vitamin A, has been published today in the prestigious [Plant Biotechnology Journal](#).

The decade-long research, led by Distinguished Professor James Dale, involved extensive laboratory tests at QUT as well as field trials in north Queensland.

Professor Dale said the genetic modification process had resulted in the identification and selection of banana genes that could be used to enhance pro-vitamin A in banana fruit.

The research backed with close to \$10 million from the Bill & Melinda Gates Foundation, ultimately aims to improve the nutritional content of bananas in Uganda, where the fruit is the major staple food in their daily diet.

Professor Dale describes the development of the biofortified banana as a significant humanitarian project.

"The East African Highland cooking banana is an excellent source of starch. It is harvested green then chopped and steamed," Professor Dale said.

“But it has low levels of micronutrients particularly pro-vitamin A and iron. The consequences of vitamin A deficiency are severe.”

He said it had been estimated that 650,000-700,000 children world-wide die from pro-vitamin A deficiency each year with a further several hundred thousand going blind.

“What we’ve done is take a gene from a banana that originated in Papua New Guinea and is naturally very high in pro-vitamin A but has small bunches, and inserted it into a Cavendish banana,” Professor Dale said.

“Over the years, we’ve been able to develop a banana that has achieved excellent pro-vitamin A levels, hence the golden-orange rather than cream-coloured flesh.

“Achieving these scientific results along with their publication, is a major milestone in our quest to deliver a more nutritional diet to some of the poorest subsistence communities in Africa.

"Our science works," Professor Dale said, "and it's technology that was developed here at QUT.

"We tried and tested hundreds of different genetic variations here in our lab and in field trials in Queensland until we got the best results.

"These elite genes have been sent to Uganda in test tubes where they have been inserted into Ugandan bananas for field trials there."

Professor Dale said another really pleasing aspect of the project was the fact that young Ugandan students, who came to QUT to undertake their studies, had now completed their PhDs and were overseeing the research and field trials in Uganda.

The article, *Golden bananas in the field: elevated fruit pro-vitamin A from the expression of a single banana transgene*, can be accessed here: <http://onlinelibrary.wiley.com/doi/10.1111/pbi.12650/full>

## **PLANT BREEDING MANAGEMENT SYSTEM / DATABASE**

**Hands-on training for modernizing crop breeding programs.** International Crop Research Institute for the Semi-Arid Tropics (ICRISAT), 7 July 2017. <http://www.icrisat.org/hands-on-training-for-modernizing-crop-breeding-programs/>

### **Full article**

As part of ICRISAT's initiative to modernize databases, introduce digital data collection tools and barcoding techniques, a data management workshop was conducted in collaboration with the National Agricultural Research System (NARS) in Kenya for the HOPE II project.

The workshop was specially designed for the project's research technicians of the national breeding programs. Participants were trained in the use of Breeding Management System (BMS) including creation of lists of germplasm, new trials (both single and multi-locational), and

uploading data on existing trials. New breeding locations were added to the existing database. Participants were also trained to use handheld devices for data collection.

“Data migration is absolutely necessary. As an international research organization, we need to move germplasm, data and tools around corporately to accelerate genetic gains. Donors expect this of us and we should expect it of ourselves and colleagues,” said an email from Dr David Bergvinson, Director General, ICRISAT, addressing the workshop participants.

Dr Moses Siambi, Research Program Director – Eastern & Southern Africa and Country Representative, Kenya and Dr Hamado Taposoba, HOPE II Project Coordinator, West and Central Africa Program, emphasized the need for modern data management tools to improve breeding program efficiencies in the project and the spillover effect it would have in modernizing other breeding program activities of the participating institutions.

The workshop involving Breeding Management System (BMS) of Integrated Breeding Platform (IBP) and Kansas State University (KSU) Fieldbook was organized by the Statistics, Bioinformatics and Data Management (SBDM) Unit, ICRISAT, from 26-30 June in Nairobi, Kenya. The sessions were led by Dr Abhishek Rathore, Theme Leader, SBDM. The workshop was attended by 15 technicians (2 women and 13 men) representing Nigeria, Ethiopia, Tanzania, Uganda and Burkina Faso.

## CLIMATE CHANGE

**Government improves climate change monitoring.** Government of Saint Lucia, 4 July 2017. <http://www.govt.lc/news/government-improves-climate-change-monitoring>

### Full article

The Department of Sustainable Development in collaboration with the Caribbean Community Climate Change Centre (5Cs), last week hosted a national training workshop on the Caribbean Weather Impacts Group (CARIWIG) Portal.

The workshop assisted participants in developing tools that will be used to create scenarios for hazard management, evaluating drought, and generating weather scenarios for impact studies.

Small Island Developing States (SIDS) like Saint Lucia, are particularly threatened by climate change, and face the prospect of partial or total inundation by sea-level rise, more frequent and intense tropical storms, increased coastal erosion and saline intrusion, higher air and sea temperatures, and more erratic rainfall conditions. These, and other potential impacts, exacerbate current vulnerabilities and pose serious challenges to ecosystems, livelihoods, and economies.

Some factors, including a high population density and infrastructure in coastal regions, poor land use, and ongoing land and natural resource degradation processes, high levels of unemployment and the country’s reliance on imported food and fuel, exacerbate Saint Lucia’s vulnerability to climate change. As these changes have implications for the country’s population, natural resources and economy, monitoring the effects of climate change is necessary for assisting the

generation of scientific information, and in analysis to make informed decisions for policy formulation and implementation.

Upon completion of the training, groups were formed and tasked to use one of the tools to conduct a scientific assessment and develop a policy brief on a practical event in the country over a six-month period. The groups will subsequently present the outputs to relevant line ministries and departments.

The CARIWIG training workshop at the Bay Gardens Inn was held from June 19 to June 30.

**CCCCC conducts CCORAL Training for Officers at the OECS.** Caribbean Climate, 4 July 2017.  
<https://caribbeanclimateblog.com/2017/07/04/ccccc-conducts-ccoral-training-for-officers-at-the-oecs/>

### **Full article**

The Caribbean Community Climate Change Centre (CCCCC) is conducting the Caribbean Climate Online Risk and Adaptation tool (CCORAL) training for officers at the Organisation of Eastern Caribbean States (OECS) Commission this week, July 3 to 7 in Castries, St. Lucia. The training is being carried out by the CCCCC and the United States Agency for International Development/ Eastern and Southern Caribbean (USAID/ESC) under the USAID Climate Change Adaptation Program (USAID CCAP).

CCORAL aims to build climate resiliency in decision-making by embedding climate change risk assessment and adaptation into development planning across the region. This climate risk management tool provides users a platform for identifying appropriate responses to the impacts of short and long term climate conditions.

The training workshop is targeting key government, private sector and NGO agencies/institutions as part of a national capacity-building exercise aimed at inculcating a risk management ethos in decision-making. Through use of this online application tool, participants will evaluate national developmental issues and present their findings to senior policy and decision makers on completion of these evaluation exercises.

The USAID CCAP being implemented by the CCCCC commits US\$25.6 million over four (4) years to boost climate resilient development and reduce climate change induced risks to human and natural assets in ten (10) countries. The beneficiary countries are Antigua and Barbuda, Dominica, Grenada, Guyana, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Barbados, Trinidad and Tobago, and Suriname.

## SOIL AND WATER MANAGEMENT

**Global use of wastewater to irrigate agriculture at least 50% greater than previously thought, says new study.** Consultative Group for International Agricultural Research (CGIAR) Water, Land and Ecosystems website by International Water Management Institute, 5 July 2017.

<https://wle.cgiar.org/press-release-global-use-wastewater-irrigate-agriculture-least-50-greater-previously-thought-says>

### Full article

The use of untreated wastewater from cities to irrigate crops downstream is 50 percent more widespread than previously thought, according to [a new study](#) published this week in the journal *Environmental Research Letters*.

The study relies on advanced modeling methods to provide the first truly comprehensive estimate of the global extent to which farmers use urban wastewater on irrigated cropland. Researchers analyzed data with geographic information systems (GIS) rather than depending on case study results, as in previous studies.

The researchers also assessed for the first time ‘indirect reuse’, which occurs when wastewater gets diluted but still remains a dominant component of surface water flows. Such situations account for the majority of agricultural water reuse worldwide, but have been difficult to quantify on a global level due to different views of what constitutes diluted wastewater versus polluted water.

Considering consumer safety the foremost priority, study authors highlight the need to mitigate public health risks through measures taken along the entire food supply chain. This includes improved wastewater treatment, but also preventive steps on farms and in food handling, since capacity for water treatment is increasing only slowly in developing countries.

According to the study, farmers’ use of wastewater is most prevalent in regions where there is significant wastewater generation and water pollution. In these circumstances, and where safer water is in short supply, wastewater offers a consistent and reliable means of irrigating fields, including high-value crops, such as vegetables, which often require more water than staple foods. Where raw wastewater is available, farmers may tend to prefer it because of its high concentrations of nutrients, which can lessen the need to apply purchased fertilizers. In most cases, however, farmers’ use of this water is motivated by basic needs; they simply do not have alternatives.

“The de facto reuse of urban wastewater is understandable, given the combination of increasing water pollution and declining freshwater availability, as seen in many developing countries,” said Anne Thebo, a recent graduate at the University of California, Berkeley in the USA and lead author of the study. “As long as investment in wastewater treatment lags far behind population growth, large numbers of consumers eating raw produce will face heightened threats to food safety.”

Results show that 65 percent of all irrigated areas within 40 km downstream of urban centers – amounting to about 35.9 million hectares (the size of Germany) – are affected by wastewater

flows to a large degree. Of the total area of 35.9 million hectares, 29.3 million hectares are in countries with very limited wastewater treatment, exposing 885 million urban consumers as well as farmers and food vendors to serious health risks. Five countries – China, India, Pakistan, Mexico and Iran – account for most of this cropland. These new findings supersede a widely cited 2004 estimate, based on case studies in some 70 countries and expert opinion, which had put the cropland area irrigated with wastewater at a maximum of 20 million hectares.

“Gaining a better grasp of where, why and to what extent farmers use wastewater for irrigation is an important step toward addressing the problem,” said second author Pay Drechsel of the International Water Management Institute (IWMI), who leads the CGIAR Research Program on Water, Land and Ecosystems. “While actions aimed at protecting human health are the first priority, we can also limit the hazards through a variety of tested approaches aimed at safely recovering and reusing valuable resources from wastewater. These include the water itself but also energy, organic matter and nutrients, all of which agriculture needs. Through such approaches, we have been helping the World Health Organisation (WHO) respond to the wastewater challenge over the years.”

“We hope this new study will focus the attention of policy makers and sanitation experts on the need to fulfill Sustainable Development Goal 6, particularly target 3, which calls for halving the proportion of untreated wastewater, and increasing recycling and safe water reuse,” added Drechsel.

“One major challenge is to cultivate behavior change from farm to fork, especially where risk awareness is low. Another consists of larger scale efforts to put the recovery and reuse of resources from wastewater and other waste on a business footing to make its management more attractive for the public and private sectors. Safe resource recovery and reuse have significant potential to address the health and environmental risks, while at the same time making cities more resilient and agriculture more sustainable, contributing to more circular economies.”

**9 ways the private sector can use water more efficiently.** International Crop Research Institute for the Semi-Arid Tropics (ICRISAT), 7 July 2017.

<http://www.icrisat.org/9-ways-the-private-sector-can-use-water-more-efficiently/>

## Full article

Our [panel of experts](#) give their ideas of how thirsty industries such as textiles and agriculture can save water.

*1 | Don't rely solely on technology*

We need to fundamentally change how we relate with water. Mere technical improvements will not create conditions for the substantial change that is demanded by prevailing challenges, especially those that climate change precipitates. *Leo Saldanha, coordinator, [Environment Support Group](#), Bangalore, India, [@leofsaldanha](#), [@E\\_S](#)*

*2 | Re-use industrial water in agriculture*

We should not consider wastewater as a waste but as a source of value. This is the core idea of [Water4crops](#), one of the largest EU-India collaborative research projects. Industry effluents treated through specific biotechnological processes can provide water safe for reuse for irrigation, enriched in nutrients (what agronomists call irrigation water with high fertility value) that can boost yields. Water4crops' research showed that the reuse of treated wastewater to irrigate fields could increase yields of up to 40% in vegetables such as okra, aubergine and chillies compared with those irrigated by fresh water. *Suhas Pralhad Wani, research programme director, Asia, [International Crops Research Institute for the Semi-Arid Tropics](#), Hyderabad, India, [@ICRISAT](#)*

### *3 | Use data to show that environmental risks are business risks*

The private sector increasingly realises that environmental risks, such as water scarcity, translate into business risks. However, mitigating approaches may be challenging to operationalise. This is a gap that we can help close by providing better data and creating awareness of solutions that work. *Katharina Felgenhauer, public-private partnerships, [International Water Management Institute \(IWMI\)](#), Accra, Ghana, [@IWMI](#)*

### *4 | Enact stronger legislation*

Legislation in some countries, especially in Latin America, lag behind in what is needed. In Mexico there are a lot of restrictions to what you can do with treated water. For example, we treat 100% of our water, however, by law, we need to pour our water into contaminated water bodies, instead of being able to use it. There have been shifts in legislation around water in Latin America in the past 10 years that are interesting. These changes have [been studied by the UN's ECLAC \(Economic Commission for Latin America and the Caribbean\)](#). However, the study found that there is still a lot to do in bringing legislation up to date with current water issues such as climate change. Countries like the Netherlands are spearheading innovation around law development by working towards integrated water legislation. *Carlos Hurtado, sustainable development of water resources manager, [Femsa Foundation](#), Monterrey, Mexico, [@FEMSA](#)*

### *5 | Encourage textile factories to reduce water use*

Over the past six years [Stockholm International Water Institute](#) (SIWI) has worked with Swedish textile companies such as H&M, KhappAll and Indiska, which do not control their production chain. Most of them buy garments from privately owned factories in developing countries. If any one of them were to place pressure on one of these factory owners to improve water management practise the owner is likely to just to turn to the competition and supply them. SIWI convened the textile companies and the factory owners and could find out from the factory owners that their largest costs (after labour) were energy and chemicals. Then we could introduce ways of saving them energy and chemicals through improved manufacturing and increased recycling. This made the factory owners happy, but also led to reduced water use and less pollution. *Anton Earle, director, Africa regional centre, [SIWI](#), Pretoria, South Africa, [@siwi\\_water](#)*

## 6 | *Select water champions*

Senior level leadership/champions within companies can help drive improved performance on water resource management. For example, the [WBCSD WASH in the workplace pledge](#) has been signed by leading company CEOs such as Unilever and Diageo. This helps drive performance among peers and ultimately raises the bar. *Ruth Romer, private sector adviser, [WaterAid](#), London, UK, [@WaterAidUK](#)*

## 7 | *Help farmers to calculate the right amount of water for crops*

Farmers tend to overestimate crop water requirements, which leads to wastage. We developed a water impact calculator to advise farmers on the optimal irrigation needs depending on crops. This was supported by a consortium of well-known agribusiness companies (Danone, Unilever, Nestlé, Coca-Cola) that has formed the [Sustainable Agriculture Initiative](#). *Suhas Pralhad Wani*

## 8 | *Use smart metres for better water governance*

Smart remote-controlled tamper-proof metres are critical to ensure responsible water use in industry. This requires community surveillance of water demand, use, reuse and disposal. No regulation that works independent of community surveillance is effective. So, yes, metres are as good as the democratic quality of the surveillance. Else, as in India, there will be widespread fudging in industrial use of water, and worse, in the disposal of untreated effluents and sewage, a problem that is plaguing environmental regulatory agencies, civic bodies and the courts too. So really, it is about water governance. The more democratic, accountable and transparent decisions relating to water are, the wiser will be the use of such waters. *Leo Saldanha*

## 9 | *Follow a water management model*

The [WWF water stewardship framework](#) provides a great model for starting the journey towards more effective water resource management. Companies will be at different stages of progress along the stewardship journey and that is fine, the framework provides different entry points. The first step is awareness – companies should be aware of their water use and consumption and how this might impact the surrounding environment. *Ruth Romer*

**New \$30.3m Irrigation System Commissioned in new Forest- duff House.** By Barbara Ellington, Jamaica Information Service, 2 July 2017. <http://jis.gov.jm/new-30-3m-irrigation-system-commissioned-new-forrest-duff-house/>

### **Full article**

A total of 400 farmers who cultivate in the New Forest-Duff House Agro Park in Manchester now have improved irrigation access following the commissioning of a new \$30.3 million industrial pump that will serve the area, on June 29.

The facility was jointly funded by the World Bank, through its Rural Economic Development Initiative (REDI) being implemented by the Jamaica Social Investment Fund (JSIF), and the National Irrigation Commission (NIC), which contributed \$9 million of the cost.

Industry, Commerce, Agriculture and Fisheries Minister, Hon. Karl Samuda, thanked the stakeholder entities for assisting to facilitate improved irrigation for the farmers.

In a message read by Permanent Secretary, Donovan Stanberry, Mr. Samuda emphasized the importance of ensuring that farmers have adequate supplies of water. This, he said, in order to ensure that the agricultural sector is in a position to contribute meaningfully to economic growth.

“Without water we cannot hope to grow the agricultural sector in a meaningful and sustainable way. So, the commissioning of this pump and irrigation system will ensure that farmers in the area have greater access to a consistent supply of water,” Mr. Samuda added.

Meanwhile, Minister without Portfolio, Hon. J.C. Hutchinson, also welcomed the new facility’s commissioning, noting that South Manchester/South St Elizabeth region was a traditionally dry area.

In this regard, he said the new facility would contribute to increasing the volume of production 10-fold by bringing irrigation to the beneficiaries.

Noting that another facility serving the area supplies 50 percent of the water utilized, Mr. Hutchinson pointed out that “with this new pump, (this) will increase the volume to 75 percent. The 400 farmers will now be able to get water more regularly and we (will be) able to provide additional farmers, who need it, with water.”

Mr. Hutchinson also restated the availability of approximately 5,000 acres of arable land in sections of South Manchester which he said the Government would be allocating to farmers who need it.

He, however, noted the reluctance of farmers to cultivate on the land because of limited irrigation access and expressed the hope that this would be rectified soon.

“We also have coming on stream the Essex Valley Agricultural Development Project which will cost roughly \$5.7 billion, allowing farmers who are unable to get production going to generate the sort of profits that they want to make,” Mr. Hutchinson added.

Managing Director of JSIF, Omar Sweeney, who also spoke at the commissioning, said through the partnership, the NIC was now in a position to properly plan and distribute water to meet the farmers’ needs.

“The partnership between NIC and JSIF is really about the value that we can get out of the area in terms of production,” he emphasized.

## AGRICULTURAL DEVELOPMENT

**World hunger on the rise again, reversing years of progress.** Food and Agriculture Organization of the United Nations, 3 July 2017. <http://www.fao.org/news/story/en/item/902489/icode/>

### Full article

The number of hungry people in the world has increased since 2015, reversing years of progress, FAO Director-General José Graziano da Silva told member states today at the opening of the agency's biennial conference.

Graziano da Silva stressed that almost 60 percent of the people suffering from hunger in the world live in countries affected by conflict and climate change.

FAO currently identifies 19 countries in a protracted crisis situation, often also facing extreme climatic events such as droughts and floods.

FAO has signaled high risk of famine in northeast Nigeria, Somalia, South Sudan and Yemen with 20 million people severely affected.

The livelihoods of these mostly rural people have been disrupted and "many of them have found no option other than increasing the statistics of distress migration," Graziano da Silva said.

"Strong political commitment to eradicate hunger is fundamental, but it is not enough," he said. "Hunger will only be defeated if countries translate their pledges into action, especially at national and local levels."

"Peace is of course the key to ending these crises, but we cannot wait for peace to take action" and FAO, the World Food Program and the International Fund for Agricultural Development are all working hard to assist vulnerable people, he said. "It is extremely important to ensure that these people have the conditions to continue producing their own food. Vulnerable rural people cannot be left behind, especially youth and women."

He addressed the FAO Conference (3-8 July), the organization's highest governing body which reviews and votes on the program of work and budget and discusses priority areas related to food and agriculture. Some 1,100 participants will attend the meeting, including one head of state, one prime minister, 82 ministers and numerous representatives from international organizations, the private sector and civil society.

FAO's top priorities for the next two years include promoting sustainable agriculture, climate change mitigation and adaptation, poverty reduction, water scarcity, migration and the support of conflict-affected rural livelihoods as well as ongoing work on nutrition, fisheries, forestry and Antimicrobial Resistance.

## **Broad support and need for action**

The prospect of the worst food crisis since the Second World War - affecting northeastern Nigerian, Somalia, South Sudan and Yemen - means "we mustn't be resigned but make renewed and extraordinary efforts," said Italian Prime Minister Paolo Gentiloni delivering the keynote speech.

He described the UN's [Zero Hunger](#) objective as a way to achieve peace, justice and equality and preserve the world for the future.

Gentiloni appealed to all of Europe to share Italy's burden of large-scale arrivals in his country, in order to be "faithful to its own history, principles and civilization." But development efforts must go beyond responding to emergencies, he said.

"We cannot save people by putting them in camps," insisted Graizano da Silva. "To save lives, we have to save their livelihoods."

Pope Francis expressed strong support for FAO's agenda, emphasizing the need for solidarity and recognition of human rights. "We are all conscious that the intention to assure all their daily bread is not enough - it is imperative that we recognize that everyone has the right to food," the pontiff said in remarks delivered by Cardinal Pietro Parolin, the Vatican's Secretary of State.

The pontiff also announced he will visit FAO in person on the occasion of World Food Day on the 16<sup>th</sup> of October.

Achim Steiner, who headed the United Nations Environment Programme for a decade until 2016 and is currently Administrator of the United Nations Development Programme, gave the McDougall Memorial Lecture honouring the Australian economist who was an effective advocate for FAO's creation.

Agriculture may account for only 4 percent of global gross domestic product but its real role is far greater and spans "extraordinary narratives" about people, land and their cultures, Steiner said in a lecture focused on the future agricultural economy in the wake of the [Paris Agreement](#) on climate change. Inadequate policy and budgetary attention to a sector currently affected by high levels of waste and the erosion of natural resources, reflects a "high-risk strategy", he said.

**New Global Action Programme for SIDS countries addresses nutrition and climate change challenges.** Food and Agriculture Organization of the United Nations, 4 July 2017. <http://www.fao.org/news/story/en/item/902855/icode/>

## **Full article**

A new United Nations global action programme launched today at FAO seeks to address pressing challenges related to food security, nutrition and the impacts of climate change facing the world's Small Island Developing States (SIDS).

The [initiative](#) was developed jointly by FAO, the United Nations Department of Economic and Social Affairs (UNDESA) and the Office of the High Representative for Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (OHRLLS).

Because of their small size and isolation, SIDS are particularly threatened by natural disasters and the impacts of climate change. Many have limited arable agricultural land and are dependent on small-scale agriculture, ocean resources and high priced imports.

The [Global Action Programme](#) aims to achieve three objectives: i) create enabling environments for food security and nutrition; ii) promote sustainable, resilient nutrition-sensitive food systems; and, iii) empower people and communities for improved food security and nutrition.

### **A participatory process**

FAO Director-General José Graziano da Silva stressed that the Global Action Programme is the fruit of wide-ranging consultations in the SIDS regions where food security and nutrition must be addressed together with issues such as climate change, the health of oceans, land degradation, social inclusion education and gender equality.

"The impacts of climate change are particularly worrisome. They affect everything that we plan to do in the SIDS countries," the FAO Director-General said, referring to their vulnerability to rising ocean levels and the increase in extreme weather events such as tsunamis, storms, floods and droughts.

Regarding the nutrition situation, he said that "the triple burden of malnutrition is a reality among many SIDS countries. This means that undernourishment, micronutrient deficiency and obesity coexist within the same country, same communities and even the same households."

For his part, the President of the Republic of Palau, Tommy Remengesau Jr. pointed to the need to "curb the alarming trends" in the SIDS such as, in the case of the Pacific region, the high rate of mortality caused by non-communicable diseases including cancer and heart attacks, to which poor nutrition is a major contributor.

"In my view the Global Action Programme is an important mechanism to empower our communities and peoples," Remengesau said, underscoring the need to gradually shift people in the SIDS towards "wholesome nutrition and healthy lifestyles."

"I call on the international community, development partners, intergovernmental organizations and fellow SIDS to work together to help our communities and our people," he said.

UN General Assembly President Peter Thomson, who is also Fiji's Permanent Representative to the UN, said at the event that the launch of the programme "represents an important step towards implementation of the (SDG) Sustainable Development Goals targets as related to the SIDS for addressing poverty, health, water, sanitation, economic development, inequalities, climate change, and of course the oceans".

Thomson noted that the Global Action Programme stems from the [SIDS Accelerated Modalities Of Action \(S.A.M.O.A.\) Pathway](#) - the outcome of the Third International Conference on SIDS held in Apia, Samoa in 2014, where FAO was invited to develop a global framework for action.

### **Focus on the SIDS**

FAO has scaled up [its work with the SIDS](#) in recent years including in areas aimed at improving the management and use of natural resources; promoting integrated rural development; and building resilience to extreme weather events.

Last month during the Ocean Conference in New York, FAO presented a commitment to increase economic benefits to SIDS countries through the [Blue Growth Initiative](#). In particular, this will be done through three specific regional SIDS projects, with funding of some \$16 million from FAO's budget.

**Wheat and meat push FAO Food Price Index higher in June.** Food and Agriculture Organization of the United Nations, 6 July 2017. <http://www.fao.org/news/story/en/item/902838/icode/>

### **Full article**

Global food commodity prices rose in June, led by wheat and meat prices.

The FAO Food Price Index, a monthly trade-weighted index tracking international market prices of five major food commodity groups, released today, averaged 175.2 points in June, up 1.4 percent from May and 7.0 percent from a year earlier.

The FAO Cereal Price Index rose by 4.2 percent in the month, amid surging prices of high-protein wheat due to deteriorating crop conditions in the United States of America. Maize prices, by contrast, declined amid record harvests in South America.

FAO's price indices for meat and dairy products also rose, while those for vegetable oils and sugar dropped.

### **Cereal stocks on course to hit new record**

Despite tightening supply conditions for high-protein wheat, global cereal supplies are likely to remain abundant in the coming year, according to FAO's latest Cereal Supply and Demand Brief, also released today.

FAO revised down its June forecast for global wheat output in 2017, while raising those of maize and rice. Global cereal production this year is likely to total 2 593 million tonnes, some 0.6 percent below that of 2016.

World cereal stocks are expected to expand further to a new record high of around 704 million tonnes.

**Haiti takes a decisive step by creating its parliamentary front against hunger.** Food and Agriculture Organization of the United Nations (FAO) Regional Office for Latin America and the Caribbean, 6 July 2017. <http://www.fao.org/americas/noticias/ver/en/c/904227/>

### **Full article**

The creation of the Parliamentary Front against Haiti's hunger is a fundamental step towards implementing measures to ensure the right to adequate food, FAO said today.

On Tuesday, July 4, the House of Representatives of Haiti approved with the 69 deputies signatories, the resolution that officially creates said legislative space against hunger.

"The role of the legislature is indispensable because of its ability to formulate laws and allocate public resources for the implementation of agricultural, food security and food security policies, strategies and programs in the country," said Natanael Hishamunda, FAO Representative in Haiti.

With this great step forward, Haiti joins the group of 17 countries in the region that already have such groups of parliamentarians, and becomes the first French-speaking country in the world to do so.

"We are very happy, it is great news and we extend all our technical support. The front in Haiti will bring together all the visions and create consensus to reverse the current situation," said Luisa María Calderón, General Coordinator of the Parliamentary Front against Hunger in Latin America and the Caribbean.

According to the FAO, 5.7 million Haitians are currently undernourished, and 38.5 percent of their population are overweight.

"The Front will serve to facilitate the implementation of legal frameworks for prioritizing food security and nutrition in development programs linked to ending hunger," said Deputy Tanis Tertius, Chair of the Standing Committee on Agriculture and Security Food.

"This initiative will allow the allocation of adequate resources for the formulation and implementation of public policies and programs related to food and nutrition security, with the ultimate goal of facilitating access to adequate and nutritious food," said Deputy Yves Dupras.

### **Haiti without Hunger: a commitment of the whole region**

The resolution adopted is the result of collective work between national legislators, the Parliamentary Front against Hunger in Latin America and the Caribbean, the Latin American and Caribbean Parliament (PARLATINO) and FAO.

Both FAO's Zero Hunger Ambassador Guadalupe Valdez and the Minister of Agriculture of Saint Vincent and the Grenadines, Caesar Saboto, the subregional Coordinator of the Parliamentary Front against Caribbean Hunger, played an essential role in driving the Haitian front, and have pledged their support to strengthen this legislative space.

"It is also important that other fronts in the region, including that of the Dominican Republic and Saint Vincent and the Grenadines, exchange experiences with the Haitian front, so that they can organize quickly and become aware of the lessons learned," explained the Representative of FAO in Haiti.

### **FAO conference: zero hunger can only be achieved with strong support from parliaments**

Parliamentarians have a key role to play together with governments, civil society, the private sector, international agencies and donors "to enable a generation of Zero Hunger in the course of our lives," said the Director-General of FAO, José Graziano da Silva, at a meeting with legislators at the FAO World Conference.

"You are responsible for enacting laws and approving budgets, among other things," he said, urging them to increase funding in their national budgets for food security and nutrition.

Graziano da Silva emphasized the role of legislators in improving nutrition and food safety and praised them for being aware of "the need for specific constitutional and legislative provisions to ensure the enjoyment of the human right to adequate food".

FAO stands ready to continue to work with parliaments, said the Director-General, and provide technical advice and support to countries in the context of their development strategies.

## **AGRI-FOOD SYSTEMS INNOVATION**

**Dialogues on how transformational innovation can help the agri-food system meet SDGs.** International Crop Research Institute for the Semi-Arid Tropics (ICRISAT), 7 July 2017. <http://www.icrisat.org/dialogues-on-how-transformational-innovation-can-help-the-agri-food-system-meet-sdgs/>

### **Full article**

A workshop designed to engage key stakeholders in dialogues on how transformational innovation can help the agri-food system meet the Sustainable Development Goals (SDGs) and other challenges was held at ICRISAT recently. This is the third workshop in an ongoing series.

The purpose of the workshop on 'Agri-food systems innovation: Reframing the conversation' was not to arrive at answers to how agri-food systems innovation should proceed, but rather to discuss how core elements of the agri-food system are locking it into incremental and radical innovation rather than opening up transformational innovation opportunities. In other words, how can the meta-narrative on agri-food system innovation be changed so that new pathways of action, research, and policy can be opened up to advance a transformation agenda?

To achieve this, workshop delegates explored the following topics:

1. **Core elements required for transformational agri-food systems innovation**, in response to the global development agenda articulated in transformation terms (the SDGs), and the increasingly common feature and realistic possibility in the development context of the 21st century;

2. **Key findings, lessons and central propositions from case studies** that explored how innovation leads to impact at different scales;
3. **Possible adjustments in funding modalities** that could more effectively incentivize and enable research institutions to work in ways that contribute to transformational change; and
4. **Engaging in the dialogue process** with stakeholders or gatekeepers (e.g. missing actors) and gathering additional evidence.

The workshop posed as many questions as it offered answers. The overarching questions are *what is transformational change, what does it look like, and for whom?* Throughout the workshop, delegates raised a number of recurring themes for consideration. These were:

- **Open up conversations** e. find language and terms so that more people can understand;
- **Build capabilities for change**;
- **Use learnings to adapt and respond to changes** in the system. Monitoring Evaluation and Learning plays a critical role;
- **Examine how investment horizons can influence** transformational innovation
- **Consider the role of partnerships and networks** and a broader group of stakeholders (especially the private sector and civil society); and
- **Think of institutional change** along with technological change for transformation.

Taking into consideration these key messages and themes, along with activities initiated from previous workshops and the available resources within the CGIAR Independent Science & Partnership Council (ISPC) / Commonwealth Scientific and Industrial Research Organisation (CSIRO) partnership, the following actions have been proposed as priorities following the workshop:

1. New empirical evidence

- *A study on the different types of investment in innovation.* This study will explore the effectiveness of different investment modalities in supporting the different modes of innovation (incremental, radical and transformational). Examples of these funding modalities are challenge funds, agribusiness incubators, levy-funded research, and crowdsourcing, to name a few.
- *A study on the roles of different actors* (e.g. public and private sector) in supporting the long-term agenda of transformational innovation.
- *A study on the evaluation lock-in*, including but not limited to a landscape of the different actors and their roles, and an assessment of monitoring and learning tools in supporting the different modes of innovation (incremental, radical and transformational).

2. Ongoing dialogues with the community of interest, including the

- ISPC Council meeting in September 2018;
- CIAT@50 meeting in November 2017; and
- FAO Global Symposium of Agriculture Innovation in February 2018.

3. Consolidation of current case studies.

4. Continued development of the agri-food systems innovation common narrative.

Dr Peter Carberry, Deputy Director General-Research, ICRISAT, concluded the workshop sharing that the workshop had spurred new ideas that he plans to implement at ICRISAT. He spoke of

strengthening ICRISAT's role as a leading broker of scale-out programs in Asia and Africa. "To demonstrate quality research resulting from these close-to-development activities, ICRISAT needs to undertake cross-program analysis of the available large datasets, extract higher-level learnings and publish such in quality journals," he said. He followed this by challenging workshop delegates to think about what they can do.

The workshop hosted by ICRISAT was held from 27-29 June in Hyderabad, India.

## **KNOWLEDGE MANAGEMENT SYSTEM**

**Wider reach. BADMC seeking to expand its capacity to help farmers, reduce imports** By Janelle Husbands, Barbados Advocate, 3 July 2017.

<https://www.barbadosadvocate.com/news/wider-reach>

### **Full article**

MINISTER of Agriculture Dr. David Estwick has a vision for the agricultural sector, which will see increased crop production and reduced levels of importation of produce that are being grown locally.

In fact, during a recent launch of the new Integrated Knowledge Management System, the Minister revealed that on the heels of this new ICT project, steps are on the way to enhance the power of the Barbados Agricultural Development Marketing Corporation to achieve this goal.

"We will be asking the Cabinet to approve that a number of products that we now import into this country, that we have the capacity to produce locally, that those products be brought under the BADMC's management and BADMC becomes the sole importer of those products and they would only be imported when there are net deficits that cannot be produced locally." According to the Minister "...We don't want to distort the market, but we believe strongly that in order to help our domestic farmers to enhance their capacity to produce the product, we have to give them some breathing space to allow them to enhance that capacity and the operation by going to Cabinet and asking Cabinet to bring it under the BADMC a lot of products that we can produce locally."

These items include lettuce, carrots, tomatoes, onions, sweet peppers, pumpkins and squash, sweet potatoes to name a few, pointing out that some vegetables such as broccoli, which cannot be grown locally, would not be on the list.

In order to solidify linkages between the agricultural, manufacturing and hotel sectors, he said the island must reach the point where production capacity and marketing are enhanced. "We are confident our two systems under this Knowledge Management System are going to allow the agriculture sector to play a much more effective role in national development," he said, adding that the Cabinet paper has already been prepared.

This new ICT platform he said, would give planners, buyers and sellers in a web-based forum, an indication of available volumes of produce and provide forecasting for local production. "The

new system is intended to enhance the interconnectivity of the stakeholders in the area of agriculture so that the supply and demand side would be effectively integrated in a real-time ICT platform.”

The Minister also outlined plans to establish the capacity to grade products locally. “Once we have the capacity to grade products it allows the manufacturing sector, and hotel sector that require a sustained quality of product and quantity of product to be realised. That situation will allow for the farmer to have his particular product brought to the BADMC, for a nominal administrative fee and that would be graded and packaged to the particular consumer, whether hotel, supermarket chain or private house,” he explained. (JH)

**Modern approach to agriculture.** By Janelle Husbands, Barbados Advocate, 30 June 2017. <https://www.barbadosadvocate.com/news/modern-approach-agriculture-unveiled>

### **Full article**

A MODERN approach to Barbados’ agricultural platform is being developed, and is expected to fundamentally improve the relationship between consumers and suppliers of agricultural products, locally and abroad.

With just a tablet or even a smart phone, local producers, after registering with the Ministry of Agriculture, can advertise items for sale, while consumers large and small can check prices and purchase produce through the new platform which the Minister of Agriculture Dr. David Estwick believes can change the outlook on agriculture.

Speaking to the media at his Ministry’s Graeme Hall headquarters yesterday afternoon, the Minister explained that for a long time Barbados has been stuck with the agricultural sector contributing approximately 2.5 to 3 per cent of GDP. This, he said, was partly because of the size of production, but also as a result of the weakness in the relationships and institutional structures that allow the farmers and the market to interact in a timely manner.

“What would normally result is a situation where there is a disconnect between what is produced in Barbados and what is consumed in Barbados.

He revealed that this move to modernise had its origins approximately two years ago where the Ministry of Labour, working with the European Union, developed a Human Resource Development Strategy out of which the MOA’s input was to look to develop a modern agricultural platform, advancing two basic elements, namely agriprenurship and agribusiness.

He explained that the devised Knowledge Management System includes three features, including a farmers market. “A buyers’ and sellers’ market where producers of farm products would interact in real time feature very much like Amazon, eBay, where they would advertise their products, quantities, prices, not only to the local market but regional and international market and customers and consumers, whether individual or companies like hotels or restaurants or supermarkets can interact in real-time with the website and make offers to purchase what is advertised on that website,” he elaborated

The Market Information System (MIS) is the second element of the Knowledge Management System. “The MIS evaluates the agricultural market in Barbados, the products, how much is being produced, produced by whom and forecasting variables like when they will be harvested. And that information is arranged with respect to volume per price ... whether it is fish, potatoes... that MIS now works in an integrated way with the buyer/sellers forum.”

He said the third component will also include a Farm Management System, which is designed to allow the farmers to upgrade their management practices. “So that they essentially produce a product that is of accepted quality given that you are now selling a product for consumption. So it has to sit within the international framework of sanitary and phytosanitary measures as well as a framework with respect to food safety.”

The Minister stressed that once the farmer can manage to farm effectively, it is likely that the price will be driven down adding that, secondarily, there is now competition with regard to the products themselves on the system. “That in itself will help to drive prices down or stabilise prices where there are fluctuations. Those are major steps forward to help develop small- and medium-sized farming and I am looking forward to adding phase two and three, which will radically transform the agricultural sector in Barbados.”

The Buyers’ Forum is operational, the Management Information System would be operational in August, while consultants are awaiting feedback from three methodologies being evaluated in the field to determine which farmers’ management system will be implemented.

The Minister stressed that this new platform is simply a facilitatory tool. “One of the things I have learned is [that] the Ministry should not get engaged in market activity to distort market reality. That is at the level of the person selling and buying. What we do is facilitate,” he stressed. (JH)

## YOUTH

**Agriculture ministers urged to address African rural youth unemployment.** Food and Agriculture Organization of the United Nations, 2 July 2017. <http://www.fao.org/news/story/en/item/902345/icode/>

### Full article

Youth employment should be at the centre of any strategy to face economic and demographic challenges in Africa, the Director-General of the UN Food and Agriculture Organization José Graziano da Silva told a joint African Union-European Union meeting, hosted at FAO headquarters in Rome.

In 2014 alone, about 11 million young Africans entered the labour market. But many see few opportunities in the agriculture sector and are constrained by a lack of skills, low wages, and limited access to land and financial services. Combined, this makes them more prone to migrate from rural areas.

"Fostering sustainable agriculture and rural development is essential to absorb these millions of youth looking for a job," Graziano da Silva said. "A sustainable world can only be achieved with

the full engagement of young people. They must feel integrated and believe that a more peaceful and prosperous world is possible."

The one-day meeting was co-hosted by the African Union Commission, the European Commission and the Estonian Presidency of the EU Council and was attended by Ministers of Agriculture of the African Union and the European Union.

The aim was to build a common vision on how to generate sustainable, inclusive jobs for African youth in the rural sector.

### **Five step solution**

The Director-General outlined five steps to engage youth in agriculture and rural development. Firstly, enhance youth participation and leadership in producer organizations and other rural institutions to empower them to engage in policy dialogue.

Secondly, stimulate private sector investments to create a modern and dynamic agricultural sector and value chains, and to build infrastructure needed for agricultural investments. Thirdly, provide rural areas with better services such as electricity, education and health.

The fourth step is to strengthen the physical, economic, social and political links between small urban centres and their surrounding rural areas. Finally, invest more in Information and Communication Technologies (ICT) which has the potential to improve efficiency in some farm work and facilitate access to markets, information and business opportunities.

### **FAO's work to support youth**

FAO is supporting the implementation of many programmes that target youth in rural areas. Uganda, for example, has adopted FAO's Junior Farmer Field and Life Schools methodology, funded by Norway, Sweden and Belgium. This simple but efficient program teaches vulnerable children and young people about farming and management skills.

In Nigeria, FAO is supporting the design of the National Youth Employment in Agriculture Programme; and FAO and the New Partnership for Africa's Development (NEPAD) have joined forces to increase jobs and business opportunities for young people in rural areas of Benin, Cameroon, Malawi and Niger through a \$4 million grant made available by the Africa Solidarity Trust Fund.

The conference outcomes will be presented at the Africa-EU Summit in November and will guide future work of both the European Commission and the African Union Commission.

## UPCOMING EVENTS

July

### **Caribbean Food Crops Society (CFCS) Annual Meeting**

**Date:** July 16-22, 2017

**Location:** Puerto Rico

**Description:** The theme for the meeting is: The Role of the Caribbean as a Research Hub to Advance Global Agriculture and Food Security.

**Website:** <http://cfcs.eea.uprm.edu/article/annual-meeting-cfcs-puerto-rico-july-16-22-2017-call-submission-presentations-deadline-extern>

August

### **Denbigh Show, Jamaica**

**Date:** August 5-7

**Location:** Denbigh Showground, May Pen, Clarendon,

**Theme:** ‘Grow What You Eat... Eat What You Grow: A Salute to Our Farmers, Nation Builders’.

**Website:** <http://www.jas.gov.jm/Denbigh.html>

### **32<sup>nd</sup> West Indies Agricultural Economics Conference 2017**

**Date:** 6-11 August 2017

**Location:** Georgetown, Guyana

**Description:** Theme: Food & Nutrition Security: the pathway to sustainable agricultural development in the Caribbean. Organised by Caribbean Agro-Economic Society

**Website:** <http://www.caestt.com/home/32nd%20W.I.A.EConference.php>

September

### **Caribbean Wellness Day**

**Date:** 9 September 2017

**Description:** Theme: "A Brighter Future for our Youth". Focus is on youth ages 15-29

**Website:** <http://carpha.org/>

October

### **World Food Day**

**Date:** 16 October 2017

**Description:** Theme is “Change the future of migration. Invest in food security and rural development”.

**Website:** <http://www.fao.org/world-food-day/2017/home/en/>

November

### **TropAg2017**

**Date:** 20-22 November, 2017

**Location:** Brisbane, Australia

**Description:** Theme is “high impact science to nourish the world”, reflecting the critical role of science, technology and innovation to the many challenges facing tropical and sub-tropical agriculture and food production globally.

**Website:** <http://tropagconference.org/>

December

### **CARDI Day**

**Date:** 5 December 2017

**2018**

October 2018

**18th International Triennial Symposium of the ISTRC (International Society for Tropical Root Crops)** will be in Cali, Colombia from 22nd to 26th October 2018.

<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>