## In This Issue Mar 9 - 15, 2014

<table>
<thead>
<tr>
<th>Number</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sweet Potato</td>
</tr>
<tr>
<td>2.</td>
<td>Fruits and Vegetables</td>
</tr>
<tr>
<td>3.</td>
<td>Germplasm</td>
</tr>
<tr>
<td>5.</td>
<td>Biotechnology</td>
</tr>
<tr>
<td>6.</td>
<td>Climate Change</td>
</tr>
<tr>
<td>9.</td>
<td>Soil and water manage-</td>
</tr>
<tr>
<td>10.</td>
<td>Agriculture Development</td>
</tr>
<tr>
<td>14.</td>
<td>Information Technology</td>
</tr>
<tr>
<td>17.</td>
<td>Upcoming Events</td>
</tr>
</tbody>
</table>

### Technology coming to help fight Praedial Larceny

By Chris Patterson, Jamaica Information Service, 14 March, 2014


Through the use of technology, the Government will soon be in a better position to combat the problem of praedial larceny, which has for several years plagued the island’s agricultural sector. The new praedial larceny software, developed by a group of Fellows under the Code for the Caribbean Fellowship Programme, will assist police officers in confirming information provided by persons found with agricultural produce during routine stop and search operations.

For more information see page 14

### AGRICULTURE IN THE NEWS

*AGRICULTURE IN THE NEWS* is a monthly newsletter which provides a compilation of selected news articles on issues affecting agriculture in the Caribbean region. Articles from Newspapers, Online News Service Agencies, Newsletters and Press Releases are featured.

For copies of documents cited, visit the web address or source of the information provided.
Our Vision

To be the centre of excellence in the Caribbean for the provision and application of research and development in agriculture and rural enhancement.

Our Mission

To contribute to the sustainable economic well being of Caribbean people by the generation and transfer of appropriate technology through research and development within the agricultural value chain.

www.cardi.org
Sweet Potato

Enhancing sweetpotato production for better income and nutrition in Odisha, India. International Potato Center, 13 March 2014

Full Article

After a pilot project with sweetpotatoes quickly showed great promise in 2013, the Government of Odisha, India decided to strengthen its partnership with the International Potato Center (CIP) for four more years with a mega-project called GAINS (Generating Advances in Incomes and Nutrition through Sweetpotato).

The State of Odisha, located on the east coast of India, is the country’s biggest sweetpotato producer. The root crop is grown both during Kharif (wet, southwest monsoon, June-October) and Rabi (dry, post-monsoon, November-April); however its productivity is low, with yields of 9.1 t/ha compared to the Asian average of 15t/ha. The orange-fleshed sweetpotato (OFSP) rich in beta-carotene, the precursor of Vitamin A, is also of limited availability in Odisha, a state with high malnutrition and poverty rates.

In collaboration with the Department of Agriculture and Horticulture of Odisha and the Central Tuber Crops Research Institute (CTCRI), CIP initiated a one-year program in November 2012, involving farmers in participatory trials with the objective of popularizing improved sweetpotato varieties and technologies for better income and nutrition in the Ganjam, Koraput and Dhenkanal districts of Odisha. This sweetpotato pilot project kicked off on January 18, 2013 with a launching workshop and planning meeting in Bhubaneswar, the state capital. The one-day event, which was attended by 50 participants representing various organizations and institutions, was also covered by the media with the launching program being broadcast on several television channels and featured in newspapers.

The pilot project covered an area of 360 hectares in three districts over two seasons. The objective was to technically train farmers and technicians in sweetpotato cultivation, including pre-planting, and to provide knowledge on sweetpotato utilization for improved income and nutrition. Because of a high demand for sweetpotato planting material, efforts were made to ensure the availability of varieties preferred by farmers. Some of these, for example the white to yellow-fleshed varieties Kanjan Gad (Denkhanal) and Jajpur local, are popular and have been commercially successful in the past two decades.

The project received a good response from farming communities in all three districts during the first season, because farmers were directly involved in the evaluation process. It was an opportunity for them to experiment with many varieties, both locally popular sweetpotatoes and improved varieties, including OFSPs, in their localities.

The farmers’ results were highly encouraging, prompting them to shift from local variety cultivation to improved variety cultivation, since 20% to 50% yield increase was observed in all three districts. The OFSP variety ‘CIP- 440127’ has attracted large numbers and many have chosen to assess its
cultivation under local conditions, because it has become popular thanks to its nutritional advantage and taste.

After the successful evaluation of the pilot project, the Government of Odisha decided to approve a CIP-led mega-project, with a main proposal grant approved for US$1.5mln. A Memorandum of Understanding (MoU) was signed between CIP and the Government of Odisha on December 10, 2013 at the ICRISAT headquarters in Hyderabad, India. ICRISAT, another CGIAR research center, also hosted the project’s inaugural workshop. “The objective is to cover 1,325 hectares in four districts (Ganjam, Koraput, Sundergarh and Dhenkanal) with varieties that mainly include OFSP,” explained Dr. Sreekanth Attaluri, CIP’s Program Director for Odisha.

For the whole of India, not only Odisha, sweetpotatoes have another advantage, namely that root and tuber crops have proven to be resilient in the event of natural disasters. They resisted well during and after cyclone Phailin, which struck Odisha in October 2013. After floods caused by the cyclone seriously damaged staple cereals and pulses, CIP and India’s Central Tuber Crops Research Institute (CTCRI) quickly advised government officials and farmers to harvest root and tuber crops, which were consumed by more than a quarter million people in the district after the cyclone.

“Crops such as sweetpotato should be better recognized by authorities for their resilience to damage caused by cyclones, when immediate food is needed,” said Julian Parr, CIP Director for Asia. He added: “I am glad that the Government of Odisha, in collaboration with CIP through the GAINS project, gave support to resource-poor farmers when this was needed to meet the food and nutrition demand.”

**Fruits and Vegetables**

**Spanish researchers develop antioxidant-rich oranges.** Freshfruit Portal, 28 February, 2014

[Full Article](http://www.freshfruitportal.com/2014/02/28/spanish-researchers-develop-antioxidant-rich-oranges/?country=trinidad%20and%20tobago)

Scientists in Spain have created an orange cultivar with a variety of potentially beneficial traits, including higher beta-Carotene in the pulp and a flowering period of just four months.

The Spanish National Research Council (CSIC) conducted a lab study to develop the oranges, in conjunction with the Valencian Institute of Agricultural Research and technological company CSIC Biopolis, with results published in the *Plant Biotechnology Journal*.

In essence, laboratory processes created a plant that takes less time to produce fruits that obtain a higher content of beta-Carotene.

From a technical standpoint, this development involved transforming sweet orange plants to block the expression of beta-carotene 3-hydroxylase, which is an enzyme involved in converting beta-Cartone to xanthophylls; a trait responsible for giving an orange color.
Meanwhile, the scientists overexpressed gene regulator CsFT, which is key in speeding up flowering.

A CSIC release said the oranges obtained had an intense golden color, and had up to 36 times more beta-Carotene in the pulp – a precursor to Vitamin A – than traditional varieties. Experiments then showed that the antioxidant effect of juices from these oranges was 20% higher than in a control group of oranges.

A CSIC spokesperson confirmed that while the process involved is classified as genetic modification (GM), no new genes have been inserted.

“We have just incorporated a fragment of DNA that blocks the synthesis of determined carotenoids so that others are accumulated,” he told www.freshfruitportal.com.

**Germplasm**

**Governments complete preparations for the entry into force of Nagoya Protocol on Access and Benefit-sharing.** CCCCC, 15 March, 2014

http://caribbeanclimateblog.com/2014/03/17/governments-complete-preparations-for-the-entry-into-force-of-nagoya-protocol-on-access-and-benefit-sharing/

**Full Article**

Governments have established firm foundations for the operation of the Nagoya Protocol on Access and Benefit-sharing of Genetic Resources, contributing to the momentum towards entry into force and setting the agenda for the first meeting of its governing body, expected to take place in October 2014.

The third meeting of the Ad Hoc Open-ended Intergovernmental Committee for the Nagoya Protocol on Access and Benefit-sharing (ICNP 3) successfully concluded last month in PyeongChang, Republic of Korea.

The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) to the Convention on Biological Diversity is a supplementary agreement to the Convention on Biological Diversity. It provides a transparent legal framework for the effective implementation of one of the three objectives of the CBD: the fair and equitable sharing of benefits arising out of the utilization of genetic resources.

Braulio Ferreira De Souza Dias, Executive Secretary to the Convention on Biological Diversity, said “As the entry into force of the Nagoya Protocol approaches, laying the groundwork for a solid and strong foundation has never been more important. This very successful meeting has adopted recommendations that are at the core of this foundation. I want to congratulate Parties to the CBD for their hard work, spirit of compromise, and willingness to move towards entry into force of the Nagoya Protocol. Let us sustain all of this in the lead up to entry into force of the Protocol, and the first meeting of the COP MOP.”
He said, “When the Nagoya Protocol enters into force, it will represent achievement of Aichi Biodiversity Target 16, the first target to be achieved under the Strategic Plan for Biodiversity 2011-2020. It will also represent an important enabling framework that contributes to the green economy, sustainable development and “creative economy.” It is a central part of global efforts to build a future of life in harmony with nature, the future we want.”

The Nagoya Protocol on ABS was adopted on 29 October 2010 in Nagoya, Japan and will enter into force 90 days after the fiftieth instrument of ratification. As of today, 29 countries have ratified the Protocol.

Among the most important outcomes of the meeting:

Compliance - At ICNP 3, governments made major progress on issues relating to compliance procedures and mechanisms. This will greatly facilitate the task of the first meeting of the COP-MOP to the Nagoya Protocol to resolve the remaining differences and approve the compliance procedures and mechanisms as required under Article 30 of the Protocol.

Global multilateral benefits-sharing mechanism - A major issue under discussion was the need for and modalities of a global multilateral benefits-sharing mechanism (GMBSM). If and when agreed, the mechanism is intended to address instances of benefit sharing, including the use of traditional knowledge associated with genetic resources, that occur in transboundary situations or for which it is not possible to grant or obtain prior informed consent. ICNP agreed on a road map that will allow Parties to unravel the complexities of a GMBSM.

Access and Benefit-sharing Clearing House (ABSCH) – During the meeting, the pilot phase of the ABSCH was launched, and training sessions were held. In the formal discussions, governments underscored the critical importance of a fully functional ABSCH for the implementation of the Nagoya Protocol, and requested that all efforts were made to ensure that the ABSCH is fully functional by the time of entry into force of the NP.

Monitoring and reporting – COP-MOP 1 is expected to invite Parties to submit an interim national report on the implementation of their obligations under the Nagoya Protocol. This report will contribute to the first evaluation of the effectiveness of the Protocol. With a view to facilitate this, ICNP-3 requested the Secretariat to develop a draft format for the submission of the report and to consolidate the information contained in the reports and information published in the ABS-CH.

Capacity building – ICNP3 recommended to the COP-MOP the adoption of a strategic framework to assist developing countries to build capacity to implement the Nagoya Protocol. This framework provides a capacity-building strategy that will be the cornerstone of implementation on the ground and play a pivotal role for making the Nagoya Protocol a reality at national level.
Biotechnology

Steady increase in incidents of low levels of GM crops in traded food and feed. FAO, 13 March, 2014

Full Article

FAO survey shows 25 countries blocked imports after finding traces of GMOs.

The increased production of genetically modified crops around the globe has led to a higher number of incidents of low levels of GMOs being detected in traded food and feed, FAO said today.

The incidents have led to trade disruptions between countries with shipments of grain, cereal and other crops being blocked by importing countries and destroyed or returned to the country of origin.

The trace amounts of GM crops become mixed with non-GM food and feed crops by accident during field production (for example, a field trial of a GM crop grown near a field of a non-GM crop), processing, packing, storage and transportation.

There is no international agreement defining or quantifying "low level", therefore the interpretation varies from country to country. In many countries it is interpreted as any level at which detection is possible i.e. very low trace levels while in other countries case-by-case decisions are taken on what level is acceptable.

The GM crop in question may be authorized for commercial use or sale in one or more countries but not yet authorized in an importing country. Therefore, if the importing country detects the unauthorized crop, it may be legally obliged to reject the shipment.

In the first survey of its kind, 75 out of 193 FAO member countries responded to questions on low levels of GM crops in international food and animal feed trade.

The survey results will be discussed at a technical consultation organized by FAO to be held in Rome on 20 and 21 March to review the extent and pattern of trade disruptions caused by the contaminated shipments. The meeting will discuss trade issues related to low levels of GM crops, but will not debate pros and cons of GM crops.

The survey reveals:

- respondents reported 198 incidents of low levels of GM crops mixed into non-GM crops between 2002 and 2012;
- there was a jump in cases between 2009 and 2012, when 138 out of the 198 incidents were reported;
- shipments with low levels of GM crops originated mainly from the US, Canada and China, although other countries also accidentally shipped such crops;
- once detected, most shipments were destroyed or returned to the exporting country;
- the highest number of incidents involved linseed, rice, maize and papaya;
"The numbers of incidents are small relative to the millions of tonnes of food and feed traded every day," said Renata Clarke, FAO Senior Food Safety Officer in charge of the survey. "But because trade disruptions may be very costly and given the reported increase in the occurrence of these disruptions, FAO conducted this survey and is holding a technical consultation to try to start a dialogue between countries on the issue."

"We were surprised to see incidents from every region," she said. "It seems the more testing and more monitoring they do, the more incidents they find."

"Although testing technology is more sensitive now, I would note that 37 out of 75 countries responded that they have little or no capacity to detect GMOs, that is, they don't have the laboratories, technicians, and equipment to do so," she added. "Many countries have asked FAO to help improve their capacity to detect GMOs."

"In the survey, countries also asked us to help them assess whether GM crops are safe to eat and we would like to see countries sharing any scientific findings they have on the subject," she said. "For this purpose, FAO established FAO GM Foods Platform, a web page for countries to share information on safety assessment." The platform can be accessed at http://fao.org/gm-platform/.

Other survey findings include:

- 30 countries produce GM crops, either for research or commercial production or both, and more GM crops are being developed;
- 17 countries do not have any food safety, feed safety or environmental regulations on GM crops;
- 55 countries have zero-tolerance policy for unauthorized GM crops;
- 38 countries consider the different policies on GMOs existing between trading partners is an important factor in contributing to the trade risk posed by the presence of low levels of GM crops in some traded foods;

In most countries, there are no generally applicable low-level GMO policies, legislation or regulations yet in place. Different options have been used when setting such policy, including a zero tolerance policy, a low threshold policy and a case-by-case policy.

### Climate Change

**Forging a climate resilient development pathway in the Caribbean.** CCCCC, 13 March, 2014


**Full Article**

The Small Island Developing States (SIDS) of the Caribbean have made significant strides in responding to a changing and variable climate. However, the dissonance between climate change time horizons and immediate development needs and priorities as articulated by public policymakers pose a primary challenge to the region’s efforts to achieve low emissions, build resilience...
and promote development simultaneously. Specifically, climate change projections are often expressed in timeframes (5 years, 50 years, 100 years) that have little or no relation to the routine development planning timeframes (5 years, 10 years, 30 years) used by the public policy-makers and the expectations of the general public.

This challenge exists alongside the peculiarities associated with multi-country policy-making, hazards of our small size, geography, and limited resources that often impedes ambitious and decisive action. Given this mix of challenges, it’s crucial that the region frames climate change responses such that they’re viewed as urgent and integral for development imperatives such as poverty reduction, debt-servicing, and growth.

The efficacy of this approach is typified by Prime Minister of Saint Vincent and the Grenadines Dr Ralph Gonsalves’ strong commitment to make climate change a priority during his chairmanship of the Caribbean Community (CARICOM) immediately after the unprecedented weather event that ravaged the Eastern Caribbean in December 2013. In declaring climate change as a key focus of his six month chairmanship of the regional block, Dr Gonsalves noted “we are having systems affecting us outside of the normal rainy season and the normal hurricane season,” which underscores the importance of showing the link between existing weather events and climate projections across time-horizons. Dr Gonsalves’s realisation of this link will allow him to bring a sense of urgency to the XXV Intersessional Meeting of the Heads of Government where climate change will feature prominently in the discussions.

In our quest to forge a climate resilient development pathway, the Caribbean has been tackling the primary challenge of aligning the comparatively distant time horizons of climate projections with more immediate development objectives and political considerations in a multi-country policy-making context. The Heads of Government of CARICOM endorsed the Liliendaal Declaration on Climate Change and Development in 2009, which defines the positions of Member States, and approved “A Regional Framework for Achieving Development Resilient to Climate Change”. The Regional Framework and its associated Implementation Plan (approved in March 2012), both of which were prepared by the Caribbean Community Climate Change Centre with support from CDKN, specifies actions and timeframes that complements some of the political time horizons and specific development objectives.

The development of the Caribbean Climate Risk Management Framework and its associated Caribbean Climate Online Risk Assessment Tool (CCORAL) is a direct response to one of the actions defined in the Regional Framework. Climate risk management tools like CCORAL with cross-sectorial applicability are crucial elements of the region’s emerging strong early action framework for building climate resilience and advancing our development objectives.
President Donald Ramotar lauded the work of the Caribbean Community Climate Change Center (CCCCC) during his presentation today, to CARICOM Heads of Government during their 25th Inter-Sessional Meeting at the Buccament Bay Resort, Kingstown, St Vincent and the Grenadines.

The Leaders agreed to establish a CARICOM Climate Change Task Force to provide guidance to Caribbean climate change negotiators, their Ministers and the region’s political leaders. The CCCCC, along with the CARICOM Secretariat has been tasked with setting up the task force and facilitating its work.

Guyana has been playing a lead role with regards to climate change, and priority projects on adaptation are outlined within its visionary Low Carbon Development Strategy (LCDS), which seeks to address the effects of climate change while simultaneously encouraging economic development.

The CARICOM Heads also reaffirmed the mandate of the CCCCC, to develop in partnership with member states, a portfolio of bankable projects eligible for climate financing and which is to be presented to the donor community for support.

The Centre is recognised by the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Environment Programme (UNEP), and other international agencies as the focal point for climate change issues in the Caribbean.

“This is a critical decision by Heads at a time when efforts are underway through the UN (United Nations) to have a global climate change agreement by the end of 2015. We need to ensure that as a region, our voices are being heard on this important issue, and not only from our technical people, but from the collective political leadership in the region,” President Ramotar noted.

He re-emphasised the need for there to be a globally binding agreement on climate change.

“We have to ensure that we push for a climate change agreement by 2015 which is ambitious in terms of emission reduction targets and providing climate financing,” the Head of State said.

He also stressed that, despite the difficulties faced with climate financing and support for adaptation and climate resilience, the region needs to aggressively tap into opportunities that exist now, while it organises for future possibilities.

The President noted that the CCCCC and Guyana have been working closely since its establishment and closer ties are being developed as part of the LCDS implementation.

The CCCCC coordinates the Caribbean region’s response to climate change. Officially opened in August 2005, the Centre is the key node for information on climate change issues and on the region’s response to managing and adapting to climate change in the Caribbean, its website states.

On June 8, 2009 former President Bharrat Jagdeo launched the LCDS that outlines Guyana’s vision to promote economic development, while at the same time combating climate change. A revised
version was published on May 24, 2010 and subsequently the LCDS update was launched in March 2013.

Major efforts have been taken to build the country’s capacity to adapt to the anticipated impacts of climate, including extreme weather patterns and sea-level rise leading to flooding.

The LCDS will support the upgrading of infrastructure and assets to protect against flooding through urgent, near-term measures. Specifically, the LCDS update, identified the project area “Climate Resilience, Adaptation and Water Management Initiatives” for which up to US$100 million will be allocated to improve Guyana’s capacity to address climate change.

Soil and water management

**New wireless network to revolutionise soil testing.** University of Southampton, News release Ref: 14/39, 12 March 2014

**Full Article**

University of Southampton researcher has helped to develop a wireless network of sensors that is set to revolutionise soil-based salinity measuring.

Dr Nick Harris, from Electronics and Electrical Engineering, worked with a group of professors from the University of Western Australia (UWA) to produce the revolutionary sensor that can carry out non-destructive testing of soil samples.

The sensor is capable of measuring the chloride (salt) in the soil moisture and linking up with other sensors to create a wireless network that can collate and relay the measurement readings. The network can also control the time intervals at which measurements are taken.

The sensor is placed in the soil and measures the chloride levels in the soil moisture in a non-destructive way. These chloride levels make up a high proportion of the overall soil salinity.

Dr Harris says: “Traditionally, soil-based measurements involve taking samples and transporting them to the laboratory for analysis. This is very labour and cost intensive and therefore it usually means spot checks only with samples being taken every two to three months. It also doesn’t differentiate between chloride in crystallised form and chloride in dissolved form. This can be an important difference as plants only ‘see’ chloride in the soil moisture.

“The removal of a soil sample from its natural environment also means that the same sample can only be measured once, so the traditional (destructive) method is not suited to measuring changes at a point over a period of time.”

The new sensors are connected to a small unit and can be ‘planted’ in the ground and left to their own devices. The limiting factor for lifetime is usually the sensor. However, these sensors are expected to have a lifetime in excess of one year. The battery-powered unit can transmit data and information by short range radio, Bluetooth, satellite or mobile phone network, as well as allowing data to be logged to a memory card to be collected later.
The novel device allows up to seven sensors to be connected at a time to a single transmitter allowing multi-point measurements to be simply taken.

Dr Harris adds: “These soil-based chloride sensors can benefit a wide range of applications. Large parts of the world have problems with salt causing agricultural land to be unusable, but the new sensors allow the level of salt to be measured in real time, rather than once every few months as was previously the case.

“At plant level, probes can be positioned at continuous levels of depth to determine the salt concentration to which roots are exposed and whether this concentration changes with the depth of the soil or in different weather conditions. We can also measure how well a plant performs at a particular concentration and change the salt content for a few days and observe the effects.

“On a bigger scale, sensors could be placed at different locations at catchment scale to observe any changes in the level of salinity within a field over time, having a direct impact on irrigation strategies. We have already been able to make some interesting observations on real world chloride concentration changes over just 24 hour periods, illustrating the dangers of relying on single point, single time measurements.”

Dr Harris’s sabbatical at UWA was supported with £2,000 of funding from the World University Network (WUN) with the sensor development work supported by the Biotechnology and Biological Sciences Research Council (BBSRC).

He worked on the research project with Dr Andy Cranny from Electronics and Computer Science at the University of Southampton and Professors Keith Smettem, Neil Coles, Ed Barrett-Lennard and Mark Rivers from UWA.

Agriculture Development

Celebrating smallholder farmers and rural women - DG Dialogues. Biodiversity International, 10 March, 2014

Full Article

M. Ann Tutwiler, Director General, Bioversity International, takes the opportunity of International Women’s Day to draw attention to the role of women's farmers in her latest blog post.

The 2 billion smallholder farmers who live in developing countries – often women – produce the majority of the world’s food, yet most live in extreme poverty.

Female farmers often produce less than their male counterparts because of less access to or ownership of land, fewer inputs and less access to extension services. Women also provide nutrition to their children and families, putting agricultural resources on their tables every day.

Recognizing the contribution of women to agriculture is critical to achieve global food security. Many smallholder farmer women are also the custodians of biodiversity, conserving and using their
agricultural resources. Paragraph 13 of the Preamble of the Convention on Biological Diversity recognizes “the vital role that women play in the conservation and sustainable use of biological diversity and affirming the need for the full participation of women at all levels of policy making and implementation for biological diversity conservation.”

These are some of the many reasons Bioversity International has been highlighting the role of women in agriculture as part of International Women’s Day celebrations this weekend.

Women make up a substantial part of the rural workforce. They produce 80% of staple food in Africa and up to 60% in some parts of Asia — yet are often the last to benefit from economic development. Women smallholders, who on average account for about 55% of the labour force and carry out about 70% of farm work in Africa, represent just 8% of land ownership.

Imagine how different our world could be...

... if women had the same access to productive resources as men they could increase yields on their farms by 20-30%. This could raise total agricultural output in developing countries by 2.5-4%, which could in turn reduce the number of hungry people in the world by 12-17%.

Bioversity and our CGIAR partners include gender as a cross-cutting theme in all of our work. In particular, Bioversity explores the roles that women and men have in our agricultural and food systems, and in conserving and using diversity in our fields, farms, gardens and forests.

Here are several examples of women inspiring change from our research initiatives:

Seeds for Needs: Bioversity International’s ‘Seeds for Needs’ initiative works with farmers to research how agricultural biodiversity can help minimize the risks associated with climate change. The idea is that if farmers have more access to an array of crops and varieties, they are more likely to cope with unpredictable weather. Mamta Kumari is one of the farmers we work with in Bihar, a fertile but relatively poor state in India. She is the leader of the women’s group, and is a former teacher who is participating in our research by serving as a ‘citizen scientist’ to report back on the crop performance of different varieties. Watch a short video.

African Leafy Vegetables: In the early 1990s, scientists in Kenya noticed that traditional African leafy vegetables were rapidly disappearing from farmers’ fields and people’s tables. Bioversity and its partners in Kenya set out to reverse this trend and conserve the traditional vegetables. As a result, the area under cultivation increased by 69 percent. An impact assessment study in 2007 showed that nearly two-thirds of households surveyed growing African leafy vegetables increased their income, with women being the main beneficiaries. In almost 80 per cent of households surveyed, it was the women exclusively who kept the income from sales of African leafy vegetables. Watch a short video.

Minor millets: Millet, one of the world’s oldest and most versatile grains, has been part of the food culture of India and Nepal for millennia. Yet in spite of its traditional importance, it has been marginalized in recent decades, with farmers encouraged to grow commercial crops such as rice and wheat to sell rather than grow their traditional crops for family subsistence and barter. In India, Bioversity International and partners worked with 200 farming families to revive the cultivation of minor millets. As a result, Indian minor millet growers increased their yields by 70% and their income by 30%. Women farmers integrated millets into innovative snack foods, which have reached urban markets and are now consumed in schools. Watch a short video.
Gender and trees resources: Bioversity International coordinates a Gender Research Fellowship Programme as part of the CGIAR Research Program on Forests, Trees and Agroforestry. Through this programme, research fellows in sub-Saharan Africa, Central Asia, and South and Southeast Asia are studying the differences in women's and men's knowledge, skills and management practices regarding tree resources. The Fellows study distinctions in women’s and men’s ecological knowledge, access to forest resources, and access to markets for non-timber forest products, among other themes, across regional contexts. The knowledge generated will help develop more effective and equitable resource conservation and management opportunities.

Dominica Receives 240 Tonnes of Fertilizer from the Kingdom of Morocco. GIS Dominica 12 March 2014.

Full Article

The Government of Dominica has received a shipment of fertilizer from the Government of the Kingdom of Morocco totaling 240 tonnes (ten twenty-foot containers) with a value of about 300,000 EC Dollars. The fertilizer will greatly impact the agriculture sector as the availability and cost of inputs, in particular fertilizer, has been a major challenge for farmers over the past year. The shipment of fertilizer represents a further deepening of cooperation between Dominica and the Kingdom of Morocco.

In December 2013, a five member Agricultural Technical Team from the Kingdom of Morocco held discussions with local Agriculture Officials for the implementation of a project, “Soil Fertility Mapping for Agricultural Development in Dominica and other Eastern Caribbean Islands.” This was the first step towards the reinforcement of scientific and technical partnerships in the agricultural sector between the Kingdom of Morocco and Dominica. This was implemented through projects in integrated management of irrigation, water resources and fertilizers for increased productivity and quality of agricultural products.

The two countries established diplomatic relations in 2010 and since then have enjoyed fruitful and meaningful friendship. Dominica and the Kingdom of Morocco signed a Roadmap for Cooperation for the period 2013-2015, in February 2013. The cooperation agreement focuses on South-South cooperation; food security; energy; governance; environment and climate change; the fight against terrorism, drug and peoples’ trafficking and illegal immigration.

The Dominica Labour Party Government has pursued a foreign policy that must support our national interest and Dominica is now an active member of the regional and international communities.
Agri Ministry diversifying its research and learning institutions - incorporates growing of more non-traditional crops. GINA, 13 March, 2014

Full Article

Agri Ministry diversifying its research and learning institutions-incorporates growing of more non-traditional crops

Traditional sectors have long been the backbone of Guyana’s agriculture sector, with rice being the star performer. However, to ensure that the sector continues to thrive, the Ministry of Agriculture is now pushing for farmers to incorporate the use of non-traditionally grown crops and spices.

This far, demonstration plots of garlic, carrots, broccoli, cauliflower, turmeric, black pepper, ginger and chick pea are now successfully being grown at the National Agricultural Research and Extension Institute (NAREI), and the Guyana School of Agriculture (GSA).

Agriculture Minister Dr. Leslie Ramsammy accompanied by Chief Executive Officers, NAREI and GSA Dr. Oudho Homenauth and Mr. Brian Greenidge respectively, and Senior staff paid a visit to the farm to get a hands on approach to some of the integrated techniques used to successfully grow the crops.

While some of the techniques involved the use of hydroponics, others were grown the traditional way of using cultivation under shade house and an open system through the grow box.

Minister Ramsammy spoke of the investment by Government into NAREI to ensure that the institution not only evolves into one of the lead research institutions of its kind, but as a more elite one in CARICOM.

NAREI and GSA are also open to farmers who are interested in getting hands on approach to agriculture.

During the visit, the Agriculture Minister also interacted and addressed students of GSA, where they were encouraged to embrace change and to work together to the benefit of not only themselves, but the school and the country as a whole.

“You have an opportunity to know the germplasm of Guyana and …take research and farming techniques to another level…these new crops we are embarking on today demonstrates the ability we have as students and as a country as a whole,” Dr. Ramsammy said.

NAREI is also working to advance large scale commercial levels of corn and soya production to supply the feed industry. This, according to the Agriculture Minister, will ensure that the spiralling price of livestock feed is reduced. (Agriculture Ministry)
Information Technology

Technology coming to help fight Praedial Larceny by Chris Patterson, Jamaica Information Service, 14 March, 2014

Full Article

Through the use of technology, the Government will soon be in a better position to combat the problem of praedial larceny, which has for several years plagued the island’s agricultural sector.

The new praedial larceny software, developed by a group of Fellows under the Code for the Caribbean Fellowship Programme, will assist police officers in confirming information provided by persons found with agricultural produce during routine stop and search operations.

With the application, law enforcers will be able to send text messages to an automated system to determine whether agricultural produce was purchased from farmers registered with the Rural Agricultural Development Authority (RADA) and Jamaica Agricultural Society (JAS).

The text message, consisting of the receipt number or farmer identification number is then sent to a server, which queries the database and immediately presents the information and confirm or deny what was provided in a follow up text.

Praedial Larceny is the theft of agricultural produce or livestock from a farm or estate. It continues to be one of the greatest deterrents to investments in agriculture and is believed to cost the sector between $5 billion and $6 billion, annually.

Providing information on how the application will work, Co-Founder, Slashroots and Engineering Residence, Code for the Caribbean, Varun Baker said the SMS application will provide agricultural information to law enforcers’ “at their fingertips”.

“There’s a vast amount of potential for this application but we narrowed it down to directly influence the praedial larceny space,” he said. He was addressing the Code for the Caribbean fellowship programme close out demonstration day at the Faculty of Law, University of the West Indies, Mona today (March 13).

During a detailed demonstration of the system, Developer Fellow, Code for the Caribbean, Rory Walker said the information provided to the officer upon sending the text message include the farmer’s name; the date the receipt book was sold; and the status of the receipt book.

Giving another scenario as to how it would impact farmers, Mr. Walker said it will inform officers about the type of crops farmers are registered to grow.

“And if there is currently any issue with that farmer, let’s say some form of suspicious activity, that information would also be sent to the police officer for him to act accordingly,” he said.

Mr. Baker also disclosed that much of the data was derived from lessons learnt in St. Thomas, which is showing a reduction in the incidences of praedial larceny through collaborative efforts with the police.
“The way they did this was through the receipt book system...what we really wanted to understand (was) what are the challenges in using this system (and what we found out) is that sometimes persons would call police control, or RADA directly to get information and so what we realised is that it would be great if we could give them an easier way to get information,” he said.

In addition to the praedial larceny application, Mr. Baker informed that HarvestAPI, which is an open-data platform for sharing of agriculture sector information, was also developed.

The HarvestAPI gives on demand access to the information that powers the agriculture industry such as producer information, weekly price data and agriculture production data.

It is envisaged to be used by farmers, supermarkets, start-ups, government agencies, academia, financial institutions, among others.

“I think RADA has been extremely innovative in pioneering this type of transparency and good governance and is in fact the first institution regionally to have created an agricultural API as a process of this fellowship programme,” he said.

Chief Executive Officer, RADA, Lenworth Fulton said the initiative is a positive step, which will ultimately increase the capacity of nation’s farmers.

He noted that the programmes will promote agriculture as a viable business option for new entrants particularly the youth, adding that this will assist in building a sustainable platform to support farmers throughout Jamaica.

“We encourage software developers, business operators and other interests both locally and internationally to use the opportunity to work with Code for the Caribbean to assist in improving the business decision making process and identifying investment opportunities,” he said.

Lauding the initiatives, State Minister in the Ministry of Science, Technology, Energy and Mining, Hon. Julian Robinson said the use of technology to solve problems in any sector is crucial.

Code for the Caribbean is a new initiative that partners with innovative government agencies in the Caribbean to help them become more agile, open and participatory.

Through Code for the Caribbean, teams of developers, designers and entrepreneurs work alongside government partners to leverage the power of the web to jointly develop new approaches to solving problems.

Demonstration Day (Demo Day) is the closeout event of the six month Code-for-the-Caribbean Fellowship Programme that implemented the Agricultural Open Data Initiative Project, which began in June 2013, through the signing of a Memorandum of Understanding between RADA, and the Mona School of Business and Management (MSBM).

The project which was executed using a multi-stakeholder participatory approach, involved RADA, MSBM, Slashroots, Ministry of Agriculture and Fisheries, Jamaica Agricultural Society, and the Jamaica Constabulary Force.
A National Micro Farmer Agricultural Marketing System (NAMFAMS) will be established at a cost of $10 million, to assist farmers with the marketing and sale of their produce.

The system is being developed under a pilot phase with a grant from the Universal Services Fund (USF), and is being spearheaded by the Jamaica Agricultural Society Commercial Enterprises Limited (JASCEL).

Government Senator and President of the Jamaica Agricultural Society (JAS), Norman Grant, who made the announcement, said an important component of the initiative is the establishment of a Farmers’ Call Centre.

Making his contribution to the State of the Nation Debate in the Senate on March 14, Mr. Grant said the Farmers’ Call Centre will utilise an online marketing platform to capture and disseminate information on farmers’ production, market demand and prices.

“This platform will have the capacity to interface with the farming community, buyers, extension services, government agencies and other stakeholders in the agricultural sector,” he noted.

Mr. Grant said the programme will initially see the registration of 500 farmers as contract farmers, who will produce for the affiliated buyers of the central marketing system.

In the meantime, he informed that the JAS has received a donation of 270 computer systems from the Korean Government, valued at $8.6 million, to be distributed locally.

The computers will be used to enhance the Farmers’ Call Centre by establishing Community Access Point (CAP) sites in each JAS parish office, and in certain designated communities and institutions.

Mr. Grant said the NAMFAMS’ main focus will be on five non-traditional crops for marketing in 2014. These are: red peas, pumpkin, sweet potato, yellow yam, and carrots.

“These will be marketed through specific buyers with whom we will have a formal relationship,” he advised.

Senator Grant informed that the JASCEL has also signed a Memorandum of Understanding (MoU) with Nations Choice to supply high quality produce to its clientele, which include hotels, supermarkets and high value food stores.

JASCEL is also in talks with Salada Foods to supply 50,000 pounds of Grade Three carrots for 2014.

“We have just made the first delivery to Salada Foods on this order. This is just the beginning, as we are targeting both local and international buyers for these products,” he said.

The JASCEL was established in 1995 to implement and manage projects related to the commercial activities of the JAS.
Upcoming Events

2014 International Year of Family Farming (IYFF). FAO
Description
The 2014 International Year of Family Farming (IYFF) aims to raise the profile of family farming and smallholder farming by focusing world attention on its significant role in eradicating hunger and poverty, providing food security and nutrition, improving livelihoods, managing natural resources, protecting the environment, and achieving sustainable development, in particular in rural areas.

The goal of the 2014 IYFF is to reposition family farming at the centre of agricultural, environmental and social policies in the national agendas by identifying gaps and opportunities to promote a shift towards a more equal and balanced development. The 2014 IYFF will promote broad discussion and cooperation at the national, regional and global levels to increase awareness and understanding of the challenges faced by smallholders and help identify efficient ways to support family farmers

March 2014
The United Nations' (UN) World Water Day
Date: 22 March 2014
2014 World Water Day (WWD) theme is "Water and Energy" and aims to raise awareness of the inter-linkages between water and energy. 2014 World Water Day (WWD) theme is "Water and Energy" and aims to raise awareness of the inter-linkages between water and energy.

Global Water Partnership-Caribbean (GWP-C) activities

May 2014
Building Resilience for Food and Nutrition Security. IFPRI 2020 Conference
Date: 15-17 May 2014
Location: Addis Ababa, Ethiopia
Website: http://www.2020resilience.ifpri.info/

June 2014
The International Seed Testing Association (ISTA) Annual Meeting
Date: 16-19 June 2014
Location: Edinburgh, UK
Website: http://seedtest.org/en/annual-meeting-2014- content---1--1409.html

July 2014
50th Caribbean Food Crops society (CFCS) Annual Meeting, United States Virgin Islands.
Date: 5-12 July 2014
Website: http://cfcs.eea.uprm.edu/

XII World Congress of Computers in Agriculture and Natural Resources
Date: 27-30 July, 2014
Location: San Pedro, San José, Costa Rica
Description
This congress provides a forum for agriculture related professionals to exchange information on applications and developments in the use of Information Technologies. It covers a wide array of topics. These include new applications of well established and understood technologies to innovative and
entrepreneurial applications of emerging technologies, in addition to issues related to policy and knowledge dissemination. Contributions from various countries will allow a broadened perspective for all attending. This congress is sponsored by International Network for Information Technology in Agriculture and the University of Costa Rica (UCR).

Abstracts submission deadline: 15 February, 2014
Website: http://wcca2014.ucr.ac.cr/

Conference on Ecological and Ecosystem Restoration 2014
CEER is a Collaborative Effort of the leaders of the National Conference on Ecosystem Restoration (NCER) and the Society for Ecological Restoration (SER).
Date: 28 July - 1 August, 2014
Location: New Orleans, Louisiana, USA
Website: http://www.conference.ifas.ufl.edu/CEER2014/

August 2014
 XI International Congress on Management of Amazonian and Latin American Wildlife
St. Augustine, Trinidad and Tobago,
Date: 17 - 22 August 2014
Location: St. Augustine, Trinidad and Tobago,
Theme: “Alternative Sustainable Conservation & Utilization Methods for Neo-tropical Animals”
Website: http://xicimfauna.org/