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

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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.

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## Cereals and Grain Legumes

**Hybrid rice for Latin America** by Neil Palmer. International Center for Tropical Agriculture (CIAT), 23 April, 2013

<http://www.ciatnews.cgiar.org/2013/04/23/hybrid-rice-for-latin-america/>

### Full Article

A new public-private partnership across Latin America promises to boost rice productivity and could help bolster the region as an emerging food basket for the world.

Launched in 2012, the Hybrid Rice Consortium for Latin America (HIAAL, by its Spanish acronym) brings CIAT researchers together with other rice scientists, traders, millers, and farmer organizations in 13 countries to develop high-yielding rice hybrids specifically adapted to the region. The move reflects the high importance given to hybrid rice by the CGIAR Research Program on Rice, also known as the Global Rice Science Partnership (GRiSP), whose research aims to help meet the ever-growing world demand for rice.

Hybrid rice involves crossing two distinct inbred rice lines to obtain genetically superior offspring that are up to 20% more productive. While well-established in Asia – over half of China’s rice comes from hybrids – and to a lesser extent in Africa, hybrid rice accounts for less than 2% of Latin America’s rice area.

### *More vigorous rice*

Rice is self-pollinating, containing both male and female parts that produce offspring genetically identical to the parent plant. While this ensures the passage of particular characteristics from one generation to the next, it limits the options for crop improvement. To produce superior, hybrid rice that combines the beneficial traits of distinct rice varieties and takes advantage of “heterosis” – the tendency of crossbred varieties to outperform the parent plants – scientists first have to develop rice varieties with male sterility so that cross-pollination can occur.

As well as higher yields, the hybrid rice varieties developed by the Consortium will combine multiple additional traits that target some of the most critical constraints in the region. These include resistance to diseases, such as rice blast and rice hoja blanca virus, and the need for high grain quality – essential for rice traders and processors. The varieties will also be developed to be better suited to the practice of direct seeding – the machine planting of rice seed straight into the ground, rather than the manual transplanting of seedlings common in Asia and Africa. Direct-seeded rice needs to have deep roots to avoid lodging – the windblown toppling of plants – and strong stems to bear the weight of heavy panicles.

HIAAL’s hybrid rice research could combine all of these traits into single “super varieties.”

### *Building on the best*

In the newly established Consortium, CIAT will make the initial test crosses based on rice varieties in its own collection, those of the International Rice Research Institute (IRRI) in the Philippines, and the top-performing commercial rice varieties and experimental “elite lines” developed by participating

institutions in Latin America. After initial testing, CIAT will distribute the hybrids to Consortium partners for subsequent testing and further improvement.

A system of royalties has been established to reward participating institutions when their rice varieties are used as parents of the new hybrid plants. The payments help ensure that participating institutions provide the breeding program with their best varieties and partners receive a steady stream of funds for continued investment in the initiative. "It's high-risk, expensive research, but the benefits are potentially huge," said Edgar Torres, leader of CIAT's Rice Program. "But by forming a public-private partnership of this kind, we have two main advantages: access to the best germplasm – a lot of which is well adapted to the region – plus a strong, extensive testing network to test the varieties in different regions and environmental conditions. This is extremely expensive for private companies to do."

One potential issue is that the benefits of the hybrid varieties only last one generation, before yields begin to drop and variability in the traits begins to creep in. For this reason, farmers will need to buy hybrid seed each year, instead of keeping a portion of their harvested seed for planting. For Torres, this is actually one of the advantages of hybrid rice in the region:

"It means that farmers will have high-quality, certified seed each season, which will help to ensure consistently high yields and limit the spread of diseases and problems such as red rice. It also means that a seed market can be established, enabling us to reach many more farmers.

"With the deeper roots associated with lodging tolerance, we expect the hybrids to be able to access nutrients deeper in the soil, so the cost of buying the seeds will be partially offset by reduced expenditure on fertilizer."

The first varieties to result from the partnership are expected to be formally released in 2016, with the establishment of a robust seed system to supply farmers with seed on a large scale, in around 5 years.

## Climate Change

**Climate change may reduce crop output by 18% in 2020: Sharad Pawar.** Times of India, 26 April 2013

<http://timesofindia.indiatimes.com/india/Climate-change-may-reduce-crop-output-by-18-in-2020-Sharad-Pawar/articleshow/19742207.cms>

### Full Article

NEW DELHI: [Climate change](#) is likely to bring down the production of key [foodgrain](#) crops like wheat and rice in the country by up to 18 per cent in 2020, agriculture minister [Sharad Pawar](#) said on Friday.

"Climate change is projected to reduce timely sown irrigated wheat production by about 6 per cent in 2020. In case of late sown wheat, the projected levels are to the extent of 18 per cent," Pawar said in the Rajya Sabha.

Further reduction by up to 25 per cent in crop yields are projected in 2080, he noted.

Similarly, a 4 per cent fall in crop yield of irrigated rice and 6 per cent in rain-fed rice is seen due to climate changes by 2020.

The forecast are made by the government's agricultural research body ICAR using crop simulation models incorporating future projections for 2020, 2050 and 2080, he added.

In case of maize and sorghum, Pawar said yields are projected to dip by about 18 per cent and 2.5 per cent in 2020.

To a separate query on development of quality seeds, the minister said, "A total of 157 varieties/hybrids of rice, wheat and pulses have been notified during last three years."

These varieties of seeds are developed by National Agricultural Research System comprising of centre and state agricultural research institutes, he added.

On the likely demand of foodgrains by the end of 12th Five-Year-Plan (2012-17), Pawar said a working group of the Planning Commission has pegged domestic demand of wheat and rice at 89 million tonnes and 110 million tonnes in 2016-17 fiscal.

Whereas production of rice is expected to be 98-106 million tonnes, wheat is expected to be at 93-104 million tonnes in 2016-17, he said.

At present, the production of rice and wheat is sufficient to meet the domestic demand, he added.

Rice output is estimated to be 101.80 million tonnes and wheat at 92.30 million tonnes in 2012-13 crop year (July- June), as per the government forecast.

## **Agricultural Development**

**Saint Lucia Economic and Social Review 2012.** Government of Saint Lucia. Ministry of Finance, Economic Affairs, Planning and Social Security, 2013

<http://www.govt.lc/sites/default/files/documents/files/Economic%20and%20Social%20Review%202012%20%283%29.pdf>

### **Excerpt Agriculture, pp.22-25**

During the review period, the agriculture sector registered strong growth of 8.4 percent, primarily mirroring post-hurricane Tomas recovery in the banana industry and other crops. Value added in the banana sub-sector expanded by 52.8 percent in 2012, while declines were recorded in the livestock and other crops sub-sectors. Government's subsidy on critical inputs and its intervention in disease control contributed positively to the performance of the sector. Consequently, the sector's contribution to GDP inched up from 2.9 percent to 3.2 percent in 2012. The number of persons employed in the sector however declined in the review period to 7,451 from 7,684.

### *Bananas*

Reflecting the gains from the replanting efforts following the passage of hurricane Tomas, banana production grew by 25.2 percent to 14,984 tonnes. Of this, banana exports to the United Kingdom increased by 85.0 percent to 12,126 tonnes, generating revenue of \$21.1 million compared to \$13.2 million in 2011.

Notwithstanding ongoing challenges, this performance was supported by government's assistance to farmers. In an attempt to restore farmers' confidence in the sector and to boost production, the government subsidized the price of spray oils, fungicides and fertilizers to farmers at a total cost of \$2.2 million in 2012. In addition, production was less affected by the black sigatoka disease which was better controlled with the establishment of the Management Unit in 2012. It is estimated that 950 banana farmers traded in 2012 down from 1,290 in 2011 while the number of acres under banana cultivation is estimated at 4,000 down from 4,500 in the previous year.

Supermarket purchases of bananas grew by 2.2 percent to 963 tonnes while the revenue generated increased by 5.5 percent to \$2.0 million.

### *Other Crops*

Preliminary data indicate that in the review period supermarkets purchases of non-banana crops grew by 4.2 percent to 2,925.2 tonnes. This increase in supply led to a reduction in unit prices of most crops purchased resulting in revenue generated inching up by 2.1 percent to \$9.2 million from \$9.0 million in 2011. Building on the recovery underway, there were 219 additional farmers who supplied produce to the supermarkets reflecting the expansion of the CFL certification programme. Increases were recorded in the purchases of fruit and tree crops (21.0 percent), condiments (19.0 percent), vegetables (15.0 percent), roots and tubers (7.0 percent).

### *Fisheries*

Available data on fish landings indicate an increase in the volume of fish landings by 1.0 percent to 1,709.0 tonnes compared to a decline of 5.9 percent in the previous year. Accordingly, the estimated value of receipts generated grew by 2.0 percent to \$25.3 million .....

### *Livestock*

Preliminary estimates show a contraction of 7.0 percent in the livestock sub-sector in 2012. Amidst increasing costs of production, the sector recorded mixed performances as growth in the broiler and pork industries was offset by a decline in egg production.

Chicken production increased by 2.9 percent to 1,449 tonnes attributable to the establishment of an additional processing plant as well as improved organization by broiler producers. During the year, the government guaranteed market share for local poultry increased to 25.0 percent in October from 20.0 percent, and this expected to impact positively on output in 2013.

Pork production expanded by 2.9 percent to 181.6 tonnes while revenue grew by 1.6 percent to \$2.3 million. This outturn was driven by new initiatives undertaken by the Ministry of Agriculture to increase the stock of pigs and blood line of swine. Building on these initiatives, CFL increased purchase of pork from local farmers.

Egg production fell by 7.0 percent to 1.2 million dozen eggs. This was partly attributed to the increase in the price of chicks and feed. The average price of chicks increased to \$3.50 in 2012 from \$2.85 in 2011 due to the high air freight associated with the transportation of the hatchlings. The price of feed continued to increase, reaching \$48.00 per 50 pound bag at the end of the year compared to \$40.00 in December 2011. In response to the rising prices, the government subsidized the price of every bag of

feed purchased by farmers in the last quarter of 2012 by \$5.00, costing approximately \$0.5 million. Notwithstanding these subsidies, the retail price of egg increased to \$7.50 per dozen from \$7.00 at the supermarkets.

**BNPA plants the first community orchard in Tall Pines constituency** by Gena Gibbs, Bahamas Information Services, 27 April 2013  
<http://news.caribseek.com/index.php/caribbean-islands-news/bahamas-news/item/45736-bnpa-plants-the-first-community-orchard-in-tall-pines-constituency>

### Full Article

Nassau (BIS) -- Changing behaviors and attitudes through ownership in environmental pride one community at a time is a purpose of the Bahamas National Pride Association (BNPA). The Tall Pines Constituency became the first community to have a BNPA Community Orchard that would foster sharing the responsibility of "taking care of the vineyard", so the soil that yields fruits and vegetables is not wasted and cursed. "The Bahamas National Pride Association really ought to be commended for this programme," said Minister of the Environment and Housing, the Hon. Kenred Dorsett during the April 24 Community Orchard Grand Opening in the Tall Pines Constituency in front of Victoria Gardens on Gladstone Road.

He promised that his constituency, Southern Shores, will be the next one to get the BNPA's blessing of a community orchard. "The Community Orchards Project is one that I wholeheartedly support for a number of reasons. We live in a time when not enough of our citizens are familiar with having a backyard garden, much less a community garden. Some of our children don't know what it is to pick a guinea, guava, dilly, or sugar apple from a tree and sit underneath the tree to eat it. Some adults don't know what it's like to prepare a salad or a meal from things you grow in your garden," he said.

Minister Dorsett said there are many needs for gardens, whether in backyards or on a larger scale, as proposed by the BNPA, to exist in communities throughout not just New Providence, but the chain of islands. He said gardens don't just add beauty to the surroundings, but consists of trees which are important to the environment. "Trees absorb carbon dioxide from the atmosphere and returns oxygen.

The same oxygen that we breathe. This process is in the lessening of our carbon footprint where the more trees that we have, they help to keep us alive," said Minister Dorsett. He said trees keep the planet better, which is very important in understanding climate change, sea level rise, and all the issues faced in the low shallow waters called The Bahamas for us to protect our environment. "Tall Pines MP Leslie Miller also commended the BNPA for showcasing the importance of keeping an orchard clean, which also promotes the right Christian values for a solid foundation of spiritual alchemy through community service.

Mr Miller commended the BNPA for all the organization's efforts over the last 20 years in putting out garbage cans and attracting sustainable donations for promoting pride in keeping communities clean. He thanked the organizers and for assertively pursuing the interests of the community to be recognized as environmental leaders. "I want to say that the Bahamas National Pride Association is one of those organisations that has done so much for the uplifting of our country. [BNPA] Has done so much over the years," said Mr. Miller. "Thank you so much for looking at an area such as ours, so we can advance ourselves and assist our people. Most of our fruits, you don't find them anymore. We are becoming a lost people and we are losing our magnificent trees that we used to have in the country.

We want to get trees from every island in The Bahamas before they become extinct. Our surroundings is what makes us who we are," said the Tall Pines MP. Joann Johnson, BNPA's Director said the Bain and Grants Town Constituency had the opportunity to be the first, however last year, the community's religious/political agents, claiming to represent the sentiments of the community, officially denied the people of Bain and Grants Town to be counted the first amongst equals. "We started this project one year ago on Earth Day, we went into the community [Bain and Grants Town] and they protested it and said we were trying to take over," said Ms. Johnson. BNPA's Chairman, Olvin Rees said the organization expects the indigenous Orchards will galvanize communities to bond in keeping the neighbourhoods clean, secure evidence of indigenous cultural produce, as well as promote environmental well being.

**The agriculture sector to receive more attention** by Rosemarie Harris. Government of Saint Lucia, 26 April 2013  
<http://www.stlucia.gov.lc/press-release/agriculture-sector-receive-more-attention>

### **Full Article**

The fledging banana industry showed some resilience in this year's estimates of expenditure with an increase in revenue of 8% totaling EC\$21,464,523.

Minister for Agriculture, Food Production, Fisheries and Rural Development Honourable Moses Jn. Baptiste in his presentation during the Estimates of Revenue and Expenditure for 2013/2014 lauded the increases in production in all agricultural sectors except egg production.

Banana production in particular increased in the last fiscal year by 85 per cent despite competition from Latin American countries and the damaging effects of the Black Sigatoka disease. Honourable Moses Jn. Baptiste mentioned a new focus and emphasis in the fight against the disease.

"With the allocation of estimates we are going to do something new apart from re-organizing our Black Sigatoka Management Unit. We are going to ensure that we follow the advice of the scientists and we are going to ensure that we have a programme that is tailored to our situation in Saint Lucia because the fight against diseases like black Sigatoka sometimes is country specific."

New resistant varieties to the disease have been developed and will be dispersed throughout the island to reduce the inoculum pressure of the Black Sigatoka virus.

The Minister also spoke of plans to expand the marketing strategy of the industry and to promote the production of diversified crops. Special emphasis in the coming year will be placed on market festivals to sensitize and promote local agricultural consumption.

A total sum of EC \$256,000 has been allocated from funds derived from the Taiwanese Government to fulfil that mandate with particular focus on the coconut industry for which research shows an increasing demand throughout the region.

In addition EC 5.884 million dollars has been allocated for an agricultural transformation program through a banana accompanying measure to sustain and promote the industry

"It is really through the BAM, the European Commission proposes to support adjustment to the most favourite nation's tariffs of ACP countries that have supplied over 10 thousand tons over the last 10

years. Hoping it will reduce poverty, foster sustainable growth and ensure banana farmers can be trained in adaptation strategies that will help boost the sectors competitiveness, promote economic diversification to adapt unemployment education and healthcare and use the environment in a more sustainable way”

The Minister paid special thanks to the staff and all Saint Lucians involved in the agricultural sector stating that the future of the industry is promising. He also assured the public that the sector will also bring some economic relief to the island.

**RADA to improve operations** by Athaliah Reynolds-Baker. Jamaica Information Service, 25 April 2013  
<http://www.jis.gov.jm/news/list/33660>

### **Full Article**

The Board of the Rural Agricultural Development Authority (RADA) is looking to implement a number of measures, to improve the agency’s capacity to contribute to the revitalisation of the local agricultural sector.

This was disclosed by Agriculture and Fisheries Minister, Hon. Roger Clarke, during a press briefing on Wednesday, April 24, at his Hope Gardens offices in St. Andrew.

Mr. Clarke said the development of the authority and the advancement of the agricultural industry will play a key role in the Government’s growth strategy.

“Having come to some agreement with the International Monetary Fund (IMF), agriculture is going to have to play a very critical role as we go forth, because production and productivity will be the hallmarks if we are going to take ourselves out of the present predicament that we are in,” he stated.

Mr. Clarke said, in this regard, the Ministry has decided to put RADA in a position, so “that it can deliver on the promises that we are going to make, as far as the advancement of the agricultural sector is concerned”.

Chairman of the RADA National Board, Dr. Densil Williams informed that the restructuring will be based on four key principles.

The first, he said, will involve a re-imagining of the authority, which will see a stronger focus on women and youth in agriculture, as well as stronger marketing and promotion of the core functions of the organisation.

Another key element is greater focus on organisational realignment, which will centre on increasing staff morale, succession planning and workforce management.

“If you do not have motivated staff you are not going to get the level of output that you need, so that is an important (element) that we will have to deliver,” he said.

Dr. Williams said the Board will also place greater emphasis on expanding income-funding opportunities through building alliances with the private sector and NGOs.

Additionally, focus will be placed on training and greater collaboration with tertiary education institutions, with an emphasis on research and development.

**New technology in agriculture needed to move sector forward** by Aisha Reid. Barbados Government Information Service, 24 April 2013  
[http://www.gisbarbados.gov.bb/index.php?categoryid=13&p2\\_articleid=10500](http://www.gisbarbados.gov.bb/index.php?categoryid=13&p2_articleid=10500)

### **Full Article**

The management and the development of new technologies in Agriculture were some of the issues discussed last Friday, April 19, when the non-resident Ambassador of Israel, Amiram Magid, paid a courtesy call on Minister of Agriculture, Food, Fisheries and Water Resource Management, Dr. David Estwick.

During the talks, Minister Estwick said that he would like to see more people trained in new agricultural technology as a way to help move the sector forward.

Meanwhile, Ambassador Magid said that there was scope to have more Barbadians trained in this field. He also mentioned some of the training opportunities for Barbadians in Israel in such short courses as agriculture, natural and environmental disaster management, waste water treatment and tourism.

Ambassador Amiram Magid, is based in New York.

**Embrace modern agriculture agenda- Minister Baksh tells Crabwood Creek farmers** by The Ministry of Agriculture Guyana, 23April 2013  
<http://agriculture.gov.gy/embrace-modern-agriculture-agenda-minister-baksh-tells-crabwood-creek-farmers/>

### **Full Article**

With the set goal of improving food security, the Ministers of Agriculture have been meeting with the different categories of farmers, advocating increased agriculture production, diversity and sustainable agriculture growth and development.

This was the underlining theme of the message that Minister in the Ministry Alli Baksh delivered today, during a forum with cash crop farmers in Crabwood Creek, Region Six.

Minister Baksh in the company of PPP/C Member of Parliament (MP) Faizal Jaffarally held the meeting with the farmers, to not only discuss moving the industry forward, but also the constraints and the support mechanisms that must be put in place towards this end.

During the meeting Minister Baksh sought to reinforce to the farmers the need to move beyond thinking of agriculture on a small-scale. "Agriculture is really a serious business. Sometimes our farmers fail to see agriculture as a business, but we have got to move out from the old traditional

concept of this sector, and embrace the new modern agriculture agenda that is being set in this country.”

Minister Baksh referred to the Government’s now enhanced emphasis on complementing the performance of the traditional sectors with the production and exportation of non-traditional crops and enterprises like aquaculture farming, bee rearing and spice production. “What we are doing right now is we have embraced, and are encouraging farmers not to only plant rice, but to also extend into non traditional crops, where there is a possibility,” he said.

The Ministry, committed to advancing this agenda, and as well to tap into the increased demand for these agricultural products regionally and internationally, has been investing heavily in addressing the constraints hindering the growth and development of the different agricultural enterprises. And annually, significant amounts of resources are allocated to the various industries under the National Budget, in support of infrastructure such as drainage and irrigation systems and capacity building training for the farmers.

There is also investment in applied science and research to assist the farmers with knowledge to counter issues pertaining to climate change and pest and diseases, Minister Baksh said.

Government has also been fittingly securing export markets for its local produce. “We are now exporting 90 commodities to 90 countries in the world. Boats, planes are coming into this country and we are exporting on a daily basis regionally and internationally. Take the Pomeroun, for example, we never had markets for water coconut, now we having water coconut sold to Caribbean countries at \$30 and today we have a Barbadian company in the Pomeroun, which is bottling this water coconut with a six-month life-span and we are exporting it to Caribbean and outside the Caribbean,” he said.

“We started at a great extent to help farmers in many areas, but sometimes when the farmers do not immediately get the support they need, you hear grumbles. We cannot give help to everyone at the same time; our resources do not permit us to. We must prioritise and in time address all the needs of all,” he said.

Minister Baksh also outlined some of the support mechanisms, which in 2013, will be introduced to the benefit of farmers in Region Six, like the soon to be commissioned seed facility at Number 56 Village, the completion of the two-door sluice at Bengal, Black Bush Polder and new pump stations for the Canje and Port Mourant areas.

Minister Baksh advised that some of these interventions are subject to the National Assembly passing the ministry’s 2013 budget.

Even as Government through the ministry will continue its support to the industry, clearly recognising that a very successful industry can only augur well for the Gross Domestic Product (GDP) of Guyana, Minister Baksh also advocated that the farmers apply the cooperative principle at the level of the community to give support to the drive to develop the industries in the sector.

“Set up small cottage industries...form yourselves into collectives. If you are a registered body you can get loan, you can get grant and you can use that loan and grants to do small things to develop your enterprises,” he said.

The Government of Guyana has always been conscious of engaging the local stakeholders in the different fields about issues that pertain to the sector’s development and has therefore sought to reach-out continuously to get the understanding of those persons, at the ground level, like the local farmers, who have vital first-hand knowledge critical to the development of the industry.

**Backyard and Home Gardening Project team leaders trained.** Official Website for the Government of Antigua and Barbuda, 22 April 2013

[http://www.ab.gov.ag/article\\_details.php?id=4069&category=38](http://www.ab.gov.ag/article_details.php?id=4069&category=38)

### **Full Article**

Six individuals were trained as facilitators for the Backyard and Home Gardening Project, which forms part of Zero Hunger Challenge.

The facilitators participated in a five-day training workshop at the Multipurpose Centre, last week, during which time they were instructed in both theory and practice of various technologies to be used in backyard and home gardening.

They were joined by extension officers and householders who will operate Training Demonstration Centres where on-going training will take place for home gardeners in targeted communities.

The workshop agenda included the importance of home gardening, planning a garden, water harvesting, drip irrigation, soil, seeds and caring for the garden.

Participants were engaged in practical sessions, such as building a table from pallets and preparing old tyres to be used for growing vegetables.

The team visited the Greencastle Agricultural Station where they prepared seed trays, planted seeds and started a compost heap. Other field trips took them to sites for the training centres and a home where they were exposed to various backyard gardening technologies.

The facilitators will work in selected vulnerable communities to assist householders in setting up backyard gardens. In addition to providing technical assistance, the Backyard Gardening Project will also supply seedlings, fertilisers and other inputs to participants.

The target communities are Piggotts/Potters; Gray's-Green; Urlings/Old Road; Villa/Point, Ebenezer/Jennings/Bolans; Bendals; Ottos/Whenner Road and Barbuda.

Coordinator of the Backyard Gardening Project Owolabi Elabanjo said people who have already registered can expect to see the facilitators in their communities in the coming weeks, at which time group training sessions will be organised.

Vera Boerger of Panama and Deanne Ramroop of Trinidad, both Food and Agriculture Organization (FAO) consultants, provided technical assistance for the workshop along with Elabanjo, who, in addition to coordinating this special project, manages the National Backyard Garden Programme.

“Given the high food import bill and the ever-rising food prices, backyard gardens can help to increase food availability at the household level, improve food consumption patterns, as well as provide a source of income for the family from any surplus,” Elabanjo said.

Individuals may call or visit the Extension Division. It is located on Valley Church Road, in the former PDO building. The phone number is 462-1065.

**Address issues in agriculture** by Patricia Thangaraj. Barbados Advocate, 22 April 2013  
<http://www.barbadosadvocate.com/newsitem.asp?more=local&NewsID=30212>

### **Full Article**

Agriculture is an industry that can carry this country forward by helping to increase our GDP and foreign exchange.

This is according to Acting Chief Agricultural Officer in the Ministry of Agriculture, Food, Fisheries and Water Resource Management, Ralph Farnum, who spoke at the AgroFest 2013 Awards Ceremony on Saturday night at Divi Southwinds Beach Resort.

However, according to him, before this can happen, there are a number of critical issues that must be addressed before this country can reach this juncture.

One of these issues is that in some parts of the island, water is not readily available and persons need to get assistance in this area.

Another issue that has impacted strongly on this sector is the supply of food to local hotels. He stated that some places import some of their food and as a result, the tourists who come to this island taste the food that comes from overseas instead of the produce that is grown locally. This has a significant impact on the country's ability to increase its foreign exchange earnings, he opined.

He also pointed to the steady increase in the costs of energy. With these costs spiraling out of control, he stated, the costs of operating farms also goes up.

It is also imperative to get farmers to develop an entrepreneurial spirit in order to go forward with this industry. This involves showing them how they can increase their holdings from producing one crop to several. He said steps like this one would help this island to improve its food security.

It is also important that in going forward, an assessment is made of how farmers and other stakeholders in this industry can develop new technologies and new techniques in agriculture, new management systems and other innovative ideas that would generate new developments in this sector.

Farnum said that once these persons have developed these new and innovative ideas, they can then look to acquire intellectual property rights to patent these ideas and showcase them at AgroFest. He believes that this is the direction that this annual agricultural festival needs to move towards.

The acting Chief Agricultural Officer would also like to see the young people develop a greater appreciation for agriculture and become more involved in its development. He noted they can start doing this by having their own school gardens and greenhouses.

According to him, if children in schools begin to see the value in this sector both for themselves and for the country as a whole, this would be moving forward in the right direction.

Getting more schools to participate in AgroFest would also auger well for the future development of this industry considering that many of the persons who are actively involved in agriculture are aging and therefore, it is imperative to get more young people involved in this sector.

Other important steps that need to be taken are to link agriculture to other sectors as this would augur

well for the development of this sector. Equally important is sharing the success stories in this industry so that up and coming farmers have persons that they can relate to and be inspired by, added Farnum.

**Call for expansion of agriculture facilities** by Marsha Gittens. Barbados Advocate, 19 April 2013

<http://www.barbadosadvocate.com/newsitem.asp?more=local&NewsID=30163>

### **Full Article**

Agriculture Instructor, Alicia Clarke would like to see an expansion of the facilities for the Agriculture programme at the Samuel Jackman Prescod Polytechnic (SJPP). She spoke to The Barbados Advocate this week during the Open Day held at the St. Michael institution.

“I would like to see a facility where we can actually keep livestock because right now, because of the location where we are located, we do have an area where we grow crops in the back but we don’t have any area where we can keep livestock. So that is one of the areas where we would like to go,” she pointed out. “We want to develop the programme so that we have green houses and we can do more agriculture undercover because that is the way technology is going in the 21st century.”

She also said that there is a steady intake of students into the programme annually.

“I think it is fairly steady. We do get lot of students who are in the agriculture programme at their school so we find that there is a definite relationship between people who have done agriculture at secondary school and they do come in here enthusiastic and knowing what the programme is about.”

During Wednesday’s Open Day, members of the public, staff and students seized the opportunity to purchase fresh produce and learn more about programmes on offer at SJPP. Individuals visiting the section manned by students of the Agriculture and Landscaping & Horticulture programmes, quickly made purchases of vegetables, plants, sweet treats made by students and natural juices that were on sale.

## **Agricultural Technology**

**Precision agriculture improves farming efficiency, has important implications on food security.**

Wiley Press Release, 24 April 2013

<http://www.wiley.com/WileyCDA/PressRelease/pressReleaseId-108217.html>

### **Full Article**

Precision agriculture promises to make farming more efficient and should have an important impact on the serious issue of food security, according to a new study published in *Significance*, the magazine of the Royal Statistical Society and the American Statistical Association. In an article about the study in the magazine’s May issue, University of Reading Professor Margaret A. Oliver, BSc, PhD, assesses how there is potential to manage land more effectively to improve the farming economy and crop quality, and to ensure food security.

Spatial variation is at the core of precision agriculture and geostatistics. All aspects of the environment – soil, rocks, weather, vegetation, water, etc. – vary from place to place over the Earth. The soil, landform, drainage, and so on all affect crop growth, and these factors generally vary within agricultural fields. Farmers have always been aware of this situation, but have not been able to measure and map it in a quantitative way.

Measurement is now possible with the tools provided by geostatistics, which describes how properties vary within fields. This information is then used to predict values at places where there is no information for eventual mapping.

Geostatistics can also be used to design sampling of the soil and crops to determine what the soil needs to improve crop growth, in terms of crop nutrients, lime and irrigation, for example. This sample information is used for geostatistical prediction and mapping. Such maps can then be used by farmers for decision-making. Examples include where to apply lime in a field, where more water or drainage is needed, and what amounts of nutrients are required in different parts of a field. Precision agriculture will reduce the amount of fertilizers and pesticides used by applying inputs only where they are needed and in appropriate quantities.

“Precision agriculture will aid efforts to improve food security and also crop quality,” Professor Oliver notes in the article. “It will also have a major effect on reducing adverse effects on the environment from agriculture.”

## **Agricultural Innovation Systems**

**Agricultural Innovation Systems: what do they mean to the work we do?** by Barbora Nemcova

CIMMYT's Blog, 25 April, 2013

<http://blog.cimmyt.org/?p=10302>

### **Full Article**

On daily basis, we interact with farmers, extension workers, researchers, seed companies, government officials, and many others. Our work would not be possible without these actors, many of whom focus on bringing new products, new processes, new policies, and new forms of organization into economic use. In their attempts to bring about change in agriculture, these multiple stakeholders are all part of what may be seen as agricultural innovation systems (AIS). However, CIMMYT's engagement with AIS and its role within innovation platforms was not discussed more closely until recently. To review CIMMYT's role and current approach to the AIS framework, summarize what has been done, and touch upon future plans, CRP MAIZE, the Global Conservation Agriculture Program (GCAP), and the Royal Tropical Institute (KIT) organized a workshop on “Agricultural Innovation Systems: what does it mean to the work we do?” The day-long event took place at CIMMYT-El Batán on 11 April 2013; it was attended by over 30 participants from several CIMMYT departments, programs, and regional offices, and facilitated by Remco Mur and Mariana Wongtschowski from KIT.

What led to this cooperation between KIT and CRP MAIZE? When presented with the challenges of CRP MAIZE, such as lifting 10 million people out of extreme poverty in 10 years, David Watson, CRP MAIZE program manager, realized that innovations systems and innovation platforms are often seen as key in achieving these high-aiming goals. “I looked on the ground, but there was no explicit

agricultural innovation expertise,” Watson said, explaining why CRP MAIZE contacted KIT to take stock of innovation platform structures and operation processes in CRP MAIZE projects, and suggest ways to strengthen the AIS approach and multi-stakeholder interaction structures.

Wongtschowski presented some of the KIT report findings. Addressing the strong technology focus of CIMMYT, she stressed that innovation is not only about developing technology, but also about setting up mechanisms that would put the technology into practice. “Innovation emerges from interaction,” Wongtschowski added, casting more light on the potential role of CIMMYT, “and while researchers may play a role, their role isn’t the most important one.” Jens Andersson, CIMMYT innovation systems scientist based in Zimbabwe, provided a reflection on the KIT report focusing on the implications of adopting an AIS framework for CIMMYT’s organization of research and its partnerships. “At CIMMYT, we look at innovation platforms as a means to reach impact at scale, or as a vehicle for technology transfer,” he said; but, as the report states, feedback loops from farmers and other stakeholders back to the researchers are often missing. At the same time, innovation platforms play a key role in articulating demand for research within the AIS framework. Yet, as Andersson pointed out, there are a number of problematic assumptions about how stakeholders interact within such platforms. For example, it is generally assumed that once an innovation platform has been established, stakeholders can voice their demands. “We have to be wary of those who talk very little,” Andersson said, alluding to the often silent majority of women farmers in meetings. “They might talk little because they can’t express their ideas,” he explained, pointing to the continued role of research in identifying demand. Then he followed with a photograph from first-year on-farm trial plots under conventional ridge and- tillage and conservation agriculture in southern Africa. Against all expectation, the maize on the conservation agriculture plot was significantly taller than the conventionally grown maize, despite the same fertilizer regime and the absence of soil cover and nitrogen-mineralizing soil tillage in the conservation agriculture treatment. Behind this mystery lies another assumption about stakeholder participation: are farmers participating in researchers’ field trials because of their keen interest in a technology package, or do they have other reasons? In this case, the trialhosting farmer ‘helped’ the researcher by deliberately planting the conventional treatment late so that the researcher’s treatment would look better. The farmer sought to secure the farm inputs supplied to him also for next season. In this area, farmers’ biggest struggle is to source expensive inputs, notably fertilizer, and the input-supported trials of the researcher provided an opportunity. Farmer participation was thus motivated by a constraint beyond the field scale. “If we don’t research and understand how the wider system works, we can’t effectively introduce new technologies,” Andersson concluded his argument for a system-oriented research.

The workshop’s morning section was wrapped up with a group discussion on the changes necessary for successful innovation. Participants discussed and presented their ideas on what could be improved in our daily work regarding AIS. One question recurred several times during the lively discussions: is it our role to always be the facilitator within innovation platforms, or should this role be carried out by farmers’ associations or other actors?

The afternoon session was devoted to presentations by Bram Govaerts, leader of the Take it to the Farmer component of MasAgro, and Michael Misiko, GCAP innovation specialist, who focused on innovation platforms and their components within Take it to the Farmer and SIMLESA, respectively. While providing an overview of Take it to the Farmer, Govaerts stressed the importance, complexity, and history of farmer organizations as parts of agricultural innovation systems, reiterating Andersson’s previous statement on the importance of understanding the system. Misiko focused on the forms of and need for innovation platforms within SIMLESA. The foundations of SIMLESA lie on integration and partnerships of systems and institutions, sustainable innovation, and impact. However, the organizations operating within SIMLESA are often poorly clustered, sometimes completely detached from the commodities with which they work. According to Misiko, the next step towards further

efficiency of the project is a higher level of integration of institutions within SIMLESA's innovation platform systems.

Bruno Gerard, GCAP director, and Watson, concluded the workshop with reflections on AIS and their roles. "Innovation platforms and innovation approaches should not be taken as the next silver bullet to achieve impact scale," said Gerard. "They are a mean rather than an end. They are critical for better understanding of social processes within farming systems and for putting technical innovations in context as they can provide important missing knowledge for researchers, farmers, and other actors, including the private sector, in a co-learning fashion." Gerard pointed out some of the drawbacks as well; innovation platforms and approaches are often resource-intensive and difficult to scale out and scale up due to their context-specificity. "But they can generate valuable, more generic lessons on adoption, adoptability, and the way forward," he added. "As researchers we have to be careful to intervene more as a catalyst and honest broker and not be too central in order to achieve positive long-term changes. We have to think of a good exit strategy from the beginning. At GCAP, innovations approaches are one piece of the puzzle within our systems research framework and impact pathways," Gerard concluded.

## Upcoming Events

May 2013

### **Coherence in Information for Agricultural Research for Development (CIARD) Global Consultation Stocktaking for Regional and Sub-Regional Organizations**

**Date:** 6th - 9th May 2013,

**Location:** Addis Ababa, Ethiopia

**Information:** <http://www.ciard.net/news/global-ciard-consultation>

### **3<sup>rd</sup> Global Cassava Partnership for the 21st Century (GCP21) Strategic Meeting**

**Date:** 6- 10 May 2013

**Location:** Bellagio, Italy

**Description:** The 3<sup>rd</sup> GCP21 Strategic Meeting, which will take place in Bellagio, Italy, in May 2013, will be focused on a daunting question: *Is it possible to eradicate cassava viruses in Africa?* The select group of 32 scientists and developers from 24 institutions who attend that meeting will focus on the use of a range of technologies to efficiently control cassava viruses.

**Information:** <http://ciat.cgiar.org/gcp21/>

<http://ciat.cgiar.org/wp-content/uploads/2013/04/gic-Meeting-of-The-Global-Cassava-Partnership-for-the-21st-Century.pdf>

June 2013

### **10th International Mango Symposium**

**Date:** 3-7 June 2013

**Location:** Punta Cana, Dominican Republic

**Website:** [http://www.cedaf.org.do/eventos/xmango2013/en/index\\_en.html](http://www.cedaf.org.do/eventos/xmango2013/en/index_en.html)

**Global Cassava Partnership for the 21st Century (GCP21) second meeting on cassava landraces**

**Date:** June 2013

**Location:** Tanzania

**Description:** Global Cassava Partnership for the 21st Century (GCP21) second meeting on cassava landraces is scheduled in June 2013 at IITA offices in Tanzania. The meeting's goal is to deliver products such as draft standard operating procedures to collect, evaluate, preserve and identify these landraces and a roadmap to start the work in East and Central Africa.

**Information:** <http://www.rtb.cgiar.org/news-events/blog/setting-new-ambitious-objectives-for-the-global-cassava-partnership-in-africa>

**49th Annual Meeting Caribbean Food Crops Society (CFCS)**

**Date:** 30 June to 6 July 2013

**Location:** Port of Spain, Trinidad and Tobago

**Description:** The 49th Annual Meeting will be celebrated 30 June to 6 July in the Hyatt Regency Hotel in Trinidad. Joint meeting of the CFCS, Caribbean AgroEconomic Society (CAES) and the International Society for Horticultural Science (ISHS). Theme: Agribusiness Essential for Food Security: Empowering Youth and Enhancing Quality Products.

**Contact:** CFCS website <http://cfcs.eea.uprm.edu/>

July 2013

**International Conference on Tropical Roots and Tubers for Sustainable Livelihood under Changing Agro-climate**

**Date:** 9 -12 July 2013

**Location:** Thiruvananthapuram, Kerala, India

**Website:** <http://isrc.in/internationalconference2013/>

**Brochure** <http://isrc.in/internationalconference2013/Conference%20Brochure.pdf>

September 2013

**Science Forum 2013**

**Date:** 23-25 September 2013

**Location:** Bonn, Germany.

**Description:** Will focus on "Nutrition and health outcomes: targets for agricultural research"

**Website:** <http://www.scienceforum13.org/>