IMPROVING LIVES THROUGH AGRICULTURAL RESEARCH

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Agriculture in the News

Issues Affecting Caribbean Agriculture

In This Issue 20-26 AUGUST 2017

System screens out deadly citrus greening-carrying insect by Brad Buck, University of Florida Institute of Food and Agricultural Sciences, August 24, 2017 http://blogs.ifas.ufl.edu/news/2017/08/24/system-screens-deadly-citrus-greening-carrying-insect/

Imagine camping in the deep woods. You'd want a tent with mesh that prevents bugs – even those as small as gnats – from entering into your wildlife hangout. That's the idea behind "Citrus Under Protective Screens," or CUPS, which helps keep away a pin-head-sized insect that causes citrus greening, University of Florida scientists say....

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Agriculture in the News is a weekly 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.

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IMPROVING LIVES THROUGH AGRICULTURAL RESEARCH

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AVOCADO

Smashing the avocado production bottleneck. University of Queensland, Australia, 23 August 2017
https://www.uq.edu.au/news/article/2017/08/smashing-avocado-production-bottleneck

Full article

A method of supplying 500 times more avocado plants to industry than is currently possible has been invented by University of Queensland researchers.

The new stem cell multiplication method could double avocado production in Queensland, as well as reducing the time it takes for new avocado varieties to reach commercial orchards from 10 years to three years or less.

Professor Neena Mitter from the Queensland Alliance for Agriculture and Food Innovation, a UQ research institute supported by the Queensland Government, is leading the project.

"At present, to supply new trees, the avocado industry follows the same process they have for the last 40 years, which is to take cuttings from high quality trees and root them," Professor Mitter said.

"However, this is a cumbersome, labour and resource intensive process, as it takes about 18 months from the cutting stage to having a plant for sale, which creates a huge bottleneck for nurseries across the globe in the number of trees that they can supply trees to growers."

Queensland produces 50 per cent of Australia's high-value avocado crop, worth $460 million a year.

However, the industry is hampered by a shortage of high-quality planting material and there is a backlog of plant orders until 2020.

With funding from the avocado industry and Department of Agriculture and Fisheries, Professor Mitter's team successfully developed a stem cell tissue-culture system that can supply 500 times more plants.

The technology is non-GM and environmentally-friendly, requiring less land, water, fertilisers and pesticides.

"Ten-thousand plants can be generated in a 10 square-meter room on a soil-less media," Professor Mitter said.

"This is a potential game changer for the avocado industry across the globe."

The Queensland-owned technology involves a secret recipe of media, light, temperature and other factors to grow and root multiple avocado plants from the shoot tip of an existing plant.

Professor Mitter's team is now working with banana growers in Lakeland who are seeking heat-adapted avocado trees to grow alongside bananas, as a way of diversifying their income.

Avocado growers in Central Queensland, New South Wales and Western Australia are also collaborating on the project.

With new funding from the Queensland Government's Advance Queensland Innovation Partnerships, and in collaboration with Anderson Horticulture and other industry partners more than 600 avocado plants developed by the new method will be tested in regions across Australia.

Growers will capture performance data on the growth, flowering and fruiting of the trees.

"From an initial investment of less than $2 million from government, universities and industry, we should see an annual return of $335 million, with benefits flowing across the production and supply chain in Queensland," Professor Mitter said.

The project also involves collaboration with the University of Southern Queensland and Central Queensland University.

Professor Mitter said the avocado multiplication technology would establish Queensland as a world leader in avocado clonal propagation.

"It would substantially boost exports, and create growth and jobs in the regions."

World-first technique to double Queensland's avocado production and ease global shortage. University of Queensland, Australia, Queensland Alliance for Agriculture and Food Innovation (QAAFI), 21 August 2017
https://qaafi.uq.edu.au/article/2017/08/world-first-technique-double-queenslands-avocado-production-and-ease-global-shortage

Full article

A world-first innovative plant growing technique that is set to double Queensland's avocado production and smash the global shortage of avocado trees has received a $636,000 grant through the second round of the Palaszczuk Government's Advance Queensland Innovation Partnerships program. Innovation Minister Leeanne Enoch today (Sunday) predicted the initial 'matched' investment of less than $1.5 million could return $335 million a year for the state's economy across the production and supply chain.

"The project between The University of Queensland and industry partners to develop this Queensland-owned world-first technology to tackle the global shortage of avocado trees is a terrific example of the powerful and profitable outcomes achieved when researchers, industry players and entrepreneurs come together with a common purpose," Ms Enoch said.

"It has the potential to generate new jobs, from the number of people growing and picking the fruit right through the line to those transporting, packing and processing the fruit.

"This world-leading, Queensland-owned technology will overcome the bottleneck of a shortage of high-quality planting material that is currently crippling industry expansion, and conservative estimates predict Queensland avocado farmers will be able to double production to 70,000 tonnes a year creating industry growth and jobs in the region."

Ms Enoch said Queensland produces 50 per cent of Australia's high-value avocado crop, which is worth $460 million a year to the state.

Professor Neena Mitter, from the Queensland Alliance for Agriculture and Food Innovation at the University of Queensland, said the grant would enable the researchers and industry partners to launch field trials early next year.

"There are Queensland farmers who want to expand their avocado orchards, and entrepreneurs who want to enter the avocado farming industry, but they cannot get source plants to grow because of a global shortage of trees," Professor Mitter said.

"Our Queensland-owned, trade-secret tissue-culture system takes a single cutting and can create 500 new plants in eight to ten months, compared to the current system that typically takes up to 12-18 months to produce one plant from a cutting.

"Receiving the Advance Queensland Innovation Partnerships grant, and working together with our industry partners, we will be able to take our innovation to the next stage of field trials in areas including Tully and Bundaberg," she said.

Ms Enoch said the Innovation Partnerships program had allocated $17.73 million in the past two years to collaborative programs between research organisations and industry partners that would have major outcomes for Queenslanders.

She said the Palaszczuk Government allocated $7.82 million in this round of the grants to nine collaborative partnerships, with the industry project partners co-investing a further $8.36 million.

Advance Queensland is the Palaszczuk Government's $420 million whole-of-government initiative, supporting jobs across a range of industry sectors.

Source: Queensland Government

CITRUS GREENING DISEASE

System screens out deadly citrus greening-carrying insect by Brad Buck, University of Florida Institute of Food and Agricultural Sciences, August 24, 2017
http://blogs.ifas.ufl.edu/news/2017/08/24/system-screens-deadly-citrus-greening-carrying-insect/

Full article

Imagine camping in the deep woods. You'd want a tent with mesh that prevents bugs – even those as small as gnats – from entering into your wildlife hangout. That's the idea behind "Citrus Under Protective Screens," or CUPS, which helps keep away a pin-head-sized insect that causes citrus greening, University of Florida scientists say.

Citrus greening threatens to destroy the state's multibillion-a-year citrus industry, according to UF/IFAS researchers.

CUPS, as scientists call the screening system, is not brand new.

Three Florida growers are operating 50 acres of commercial CUPS, said Arnold Schumann, a UF/IFAS soil and water sciences professor at the UF/IFAS Citrus Research and Education Center, which celebrates its 100th anniversary this year. Another 120 acres of CUPS citrus production are under construction for planting in 2018, Schumann said.

CUPS prevent the Asian citrus psyllid from reaching citrus trees and infecting them with greening, or Huanglongbing (HLB), Schumann said. He co-authored a recently published Extension document that summarizes UF/IFAS research into CUPS and explains the economics of the system.

The structure and mesh account for most of the $1 per square foot cost of the CUPS system, said Ariel Singerman, a UF/IFAS assistant professor of food and resource economics at CREC and a co-author of the document. Using preliminary data available from Schumann's pilot CUPS program, UF/IFAS researchers made projections for the remaining years of the investment and found that a price of $24.15 per box of fruit results in a grower breaking even.

"Given that current prices of specialty fruit are above that level, CUPS is profitable under current market conditions for growing those varieties," Singerman said.

UF/IFAS researchers are working with growers to reduce the cost of screen house structures from $1 to 50 cents or less per square foot, Schumann said. They might import the screen or modify the pole-and-cable architecture to reduce the cost of materials, he said.

"We are developing CUPS for growing high quality HLB-free fresh citrus fruit, which sells at much higher prices than processed fruit," said Schumann. "We consider CUPS as a medium-term solution for growing fresh fruit in HLB-endemic regions like Florida, where currently no other viable solutions exist."

About 90 percent of the citrus produced by Florida growers goes to make juice, while the rest, referred to by the industry as fresh citrus fruit, is consumed as food, UF/IFAS researchers say.

In some states like California, fresh fruit production accounts for nearly all the consumption, Schumann said. UF/IFAS researchers and growers won't know for certain whether citrus farmers can maintain a profit by using the screening system to keep out the psyllid for another seven to 10 years, he said. Every year that we spend researching the CUPS system rapidly improves our forecasting ability, and further refinements bring us closer to the reality of a sustainable, profitable solution, Schumann said.

Many factors also play a large role in the effectiveness of CUPS, said Schumann. Those include optimizing fertigation – when growers inject fertilizers and other water-soluble products into an irrigation system. CUPS success also hinges on improved planting density to produce high, early yields and choosing varieties with the best consumer preference – for example, those that are seedless, easy peeling, and with the legendary "fresh from Florida" taste.

"Meanwhile our research strives to optimize those factors affecting profitability that we can control," Schumann said. For example, growers have little control over fruit price, he said. But by planting early maturing varieties picked before competitors' fruit in other regions like California, growers in the Sunshine State can get better market prices, he said.

ORANGES: Fibre For Clothing; Fat-Free Flour

How Sicilian oranges are being made into clothes by Francesca Marchese Business reporter, BBC, 24 August 2017
http://www.bbc.com/news/business-40946159

Full article

From fashion to energy - the rind and seeds of Sicily's most famous citrus fruit, the humble orange, are being used in a range of greener, healthier business initiatives.

In 2011, Adriana Santonocito was a design student in Milan when she first had the idea of making sustainable textiles from what was naturally abundant, and widely wasted, in her native Sicilian city of Catania.

Her challenge was to find a way for the rinds of hundreds of thousands of tonnes of oranges to be put to good use.

Now, thanks to her creative thinking, it is possible to make whole items of clothing using fibre that originated from the fruit.

Chemical process

Ms Santonocito's concept was inspired by a question posed in her university dissertation. Could a luxurious silk foulard be made from citrus by-products, that would otherwise be thrown away or fed to cattle?

The question was particularly relevant in Sicily, where many thousands of tonnes of citrus fruit are juiced every year, leaving massive amounts of waste.

The 39-year-old found her answer in the university's labs, and it earned her a patent.

It was already known that cellulose could be extracted from orange rinds. But Ms Santonocito discovered that, using chemical reagents, it could then be turned into yarn, which could be dyed and blended with other textiles, such as cotton or polyester.

Together with her university colleague Enrica Arena, she founded Orange Fiber in 2014, and set about selling the silk-like material to clothes-makers.

This year, the famous Italian fashion label Salvatore Ferragamo used it in its spring-summer collection. The aim was to make its high-end shirts, dresses and foulards more sustainable.

Orange Fiber, which now has a team of 12 people, operates from a local juice-processing plant, where it gets its waste material for free.

The business is partially seasonal, operating during the months of the year when the juice-maker works. But once the orange rind has been transformed into cellulose, it can be put in storage for use later.

Antonio Perdichizzi, an early investor in Orange Fiber, says the firm stood out to him because, unlike most innovative start-ups in Italy, it isn't digital.

"Italy doesn't invest much in innovation, but brilliant ideas and skills win despite a lack of resources," he adds.

Rosario Faraci, a professor of business, economics and management at the University of Catania, says the firm is an example of how "creativity and entrepreneurial spirit" is creating new jobs and businesses in the region.

Fibre - not fat

Oranges could also make baked goods healthier, and stay fresher, thanks to a new procedure which transforms them into an innovative fat-free flour.

The new technique is currently being tested at the University of Catania and results are encouraging.

At the moment, almost all bakers use fat, such as butter or margarine in their cooking.

But according to the research, half of this fat could be replaced by using flour obtained from orange rinds, seeds, and part of the pulp not used in juice-making.

Like Orange Fiber, the researchers obtain the raw materials they need from local juice makers. They wash the rinds to remove the bitter flavour, then dry, process and whiten what remains.

Salvatore Barbagallo, a professor of agriculture at the University of Catania, says the flour is "perfectly sustainable" and costs almost nothing to produce. It also has "no impact" on the taste and fragrance of food that contains it.

His researchers made 300kg of the flour and got local bakers in Acireale, near Catania, to try it out.

The cooks, known for being conservative about new ingredients, were all happy with the results and could taste no difference in their pastries.

The researchers say they have found other uses for the flour, too.

It is soluble and can be added to drinks to provide health benefits. It could also be used by nutritionists and in medicine.

Natural fuel

Sicilian farmers have always used orange rinds as animal feed or fertiliser. But oranges can be a precious source of energy as well.

In Mussomeli, an ancient town near Caltanissetta in the middle of Sicily, orange waste products are used to make biogas which is turned into electricity.

The farm Nuova Scala used about 16,430 tonnes of rinds last year to produce 24,000 kWh of electricity.

Output varies depending on the amount of oranges produced, and the firm expects to get through 22,000 tonnes of orange waste in 2017.

Of course, all of these projects depend on local fruit companies, which produce many thousands of tonnes of citrus by-products annually.

Salvatore Imbesi, who owns the producer AgrumiGel, says the rinds, seeds and other non-edible parts of the fruit are called "pastazzo", and he produces about 40,000 tonnes of it a year.

He says Sicily as a whole produces about 200,000 tonnes, although unofficial estimates suggest the real figure could be higher.

Producers have an incentive to re-use pastazzo, because disposal can be expensive. Mr Imbesi says that in Sicily the total cost of disposal can reach 16m euros every year, "six for the cost of the transport, and 10 for the disposal itself".

Some of Sicily's fruit is sold fresh, including its famous blood oranges, with the rest turned into juices.

In 2016, the amount juiced included some 140,000 tonnes of lemons, 100,000 tonnes of blonde oranges, 100,000 tonnes of blood oranges, 20,000 tonnes of green mandarins and 20,000 tonnes of matured mandarins.

Finally, thanks to the new crop of innovative solutions, the squeezed fruit are being turned from expensive waste into exciting products.

BARBADOS BLACK BELLY SHEEP

Still committed to Blackbelly sheep registry by Janelle Riley-Thornhill. Barbados Advocate, 23 August 2017
https://www.barbadosadvocate.com/news/still-committed-blackbelly-sheep-registry

Full article

Efforts are still on to register all the Barbados Black Belly Sheep on the island.

Word of this has come from James Paul, Chief Executive Officer of the Barbados Agricultural Society (BAS). Earlier this year, prior to the start of Agrofest 2017, Paul had noted that some 700 animals had already been accounted for as a result of the registration process which started in the last quarter of 2016, and in an interview with The Barbados Advocate yesterday, Paul said while resources are limited, they remain committed to identifying all the Barbados Blackbelly Sheep and keeping the registry up to date well into the future.

His comments came as he disclosed that a lack of resources is likely to slow down the process of registering the animals, but he is adamant that they do not intend to allow that fact to prevent the initiative from moving forward.

“Yes, we need more resources to follow up that initiative but in the meantime we are trying to use the resources we do have in the best possible way. But we are not stopping, we are continuing to register animals because we think it is important if we are to continue to identify those animals which demonstrate the characteristics of the breed,” he further told The Barbados Advocate.

With that in mind, Paul said that the creation of a registry would not only ensure that persons who want to purchase the pure bred Barbados Black Belly Sheep can actually do so, but it would help

to ensure the longevity of the local sheep population and by extension that aspect of the agricultural sector. He explained that by registering the animals they would not only know definitively which are pure bred, but as a consequence, they would be able to avoid any inbreeding, which he pointed out has been a problem in the past.

The BAS head explained that inbreeding has been known to happen because some farmers have not been keeping accurate records. In addition to improving their record keeping, he said it is important that farmers also improve their overall animal husbandry techniques.

Paul's remarks came as he took the opportunity to encourage persons to get involved in the rearing of the Barbados Blackbelly Sheep and in agriculture in general. He said that it is important that persons recognise that agriculture, whether crop or livestock farming, is a viable employment opportunity for them to pursue. (JRT)

ANIMAL FEED - Cassava Peels

New factories in Nigeria transform cassava peels into livestock feed, creating jobs and incomes for women by Ewen Le Borgne. International Livestock Research Institute (ILRI), 23 Aug 2017
https://news.ilri.org/2017/08/23/ifad-cassava-processing-site-visit/

Full article

Nigeria is the world's largest producer of cassava, with a yearly output of about 50 million tonnes and a production increase of about 3% yearly.

Presently, about 25 million tonnes of fresh cassava roots are used for *garri* (a popular West African food made out of cassava tubers), 6 million tonnes for local food products, 1.5 million tonnes for production of dried chips and 3.5 million tonnes are lost to wastage before or during peeling and processing the tuber. This annual amount of cassava production is projected to increase to up to 150 million tonnes by 2020.

Cassava processing generates cassava peels, stumps and undersized or damaged tubers, which together account for up to a third of processed whole-tuber weight. Cassava peels are perishable and are mostly disposed of by burning or allowing them to rot in heaps, causing pollution. In 2015, CGIAR scientists developed low-tech ways of rapidly transforming wet cassava peels into high-quality, safe and hygienic feed ingredients. The process is simple and can be carried out by small-scale processors, more than 80% of them women, to transform cassava waste into a valuable feed resource, generate new incomes, create jobs, improve livelihoods and clean up the environment around cassava processing centres.

Now, in collaboration with the International Livestock Research Institute (ILRI), the global non-governmental organization Synergos and the International Fund for Agricultural Development (IFAD) are implementing this innovative processing technology for converting fresh peels into high-quality cassava peel mash for use as livestock feed.

Synergos and IFAD obtained technical support from ILRI Nigeria's scientific team to train people in cassava processing procedures and to set up cassava processing factories in the country. In Jul 2017, representatives from these three organizations paid visits to two IFAD-Value Chain Development Programme (VCDP) cassava processing sites in Nigeria, one in Niger State (Lokogoma, Wushishi local government area) and the other in Benue State (Idogodo, Okpokwu local government area). The cassava peel factories, which were set up by IFAD-VCDP, are to be jointly owned by 10 producer organizations and 4 women processing groups.

In addition to Synergos, ILRI and IFAD-VCDP staff, Soko-nya-nyio Lokogoma women processors and Lokogoma and Idogodo community members took an active part in these visits and the discussions that ensued. The following were among the topics they discussed.

- Current uses of cassava peel in the Lokogoma community
- Source of raw materials for production of cassava peel animal feed
- How innovations in processing cassava peels for animal feed have impacted the livelihoods of women and farmers
- The viability and potential of utilizing cassava peel waste for livestock feed
- Possible markets for cassava-peel animal feeds in Niger State

Development of this cassava-peel-for-livestock-feed project is highly promising and its progress is being closely followed by crop and livestock specialists alike as well as by donor organizations, such as the United States Agency for International Development, which is also supporting this cassava processing potential.

AGRICULTURAL DEVELOPMENT

Agricultural land preservation of national concern by PO, GIS. Government of Saint Lucia, August 24, 2017
http://www.govt.lc/news/agricultural-land-preservation-of-national-concern

Full article

A pilot land bank project has been termed an issue of national concern.

Kwesi Goddard, Agricultural Engineer attached to the National Land Bank Project, said Saint Lucia's most valuable asset is its agricultural land.

"The land bank is fundamentally an agricultural land administration initiative by request of the Government of Saint Lucia, so it is an issue of national concern," he said. "Our agricultural areas are decreasing and yet our population is increasing, so we need to have a formula in place that will help us to improve production in Saint Lucia. In a developing country, the most valuable asset we have, and continue to have is land."

Currently, the Ministry of Agriculture does not have specifically-designated agricultural lands. The project aims to help the country achieve these stated goals.

"In Saint Lucia we have 616 square kilometers or 238 square miles, and out of that only 11,000 hectares were classified as agricultural land. Out of that some would be under permanent crops, and some 3000 hectares under annual crops, and out of that there are private lands and state or crown lands, and out of these lands you still have lands which are either very degraded, and lands which are optimum. So with a focus on land, the land bank project, and other similar land projects will help us to improve our database of land."

The project will also collate specifics such as the ownership, tenure, soil type, and quality of land available for agricultural use. It also seeks to preserve the quality and quantity of land for future generations.

"A national land bank is put in place to preserve the ability of the country to make available agricultural lands for people who want to get into agriculture but have no access to land," Mr Goddard explained. "So rather than having lands idle and abandoned, in an effort for the government to encourage the efficient use of agricultural land, a land bank is an appropriate mechanism.

"We have a rise in population, an increase in food prices and a decrease in production. Investing in agriculture can improve productivity on the island, and help in the reduction of local food prices. The land bank can help address some of these major problems."

Mr Goddard added the project can assist the country in achieving food security and sustaining livelihoods.

The land bank initiative will be piloted in Saint Lucia, Saint Vincent and Grenada.

Federation's Agriculture Ministers visit Agricultural Research Institute and Workforce Development Agency in Republic of China (Taiwan). Nevis Island Administration, August 23, 2017
http://www.nia.gov.kn/index.php/news-4/news-articles-3/3122-federation-s-agriculture-ministers-visit-agricultural-research-institute-and-workforce-development-agency-in-republic-of-china-taiwan

Full article

The following is a press release from the Ministry of Foreign Affairs dated August 22, 2017.

Minister of Agriculture in Saint Kitts, Honourable Eugene Hamilton and Minister of Agriculture in the Nevis Island Administration, Honourable Alexis Jeffers, had the opportunity to visit Taiwan's Agriculture Research Institute in Taichung, Taiwan, on August 22, 2017, during an official visit to that country.

The delegation, led by the Minister of Foreign Affairs, the Honourable Mark Brantley, met with Dr. Junne-Jih Chen, Director of the Institute who provided valuable information about the use of technology in the agricultural sector.

Saint Kitts and Nevis has benefited from the use of this technology through a Taiwanese project of soil mapping and whose findings were presented to the delegation by the specialist who visited the Federation.

The results of the soil mapping project is important, she acknowledged, because it gives valuable information on the chemical make-up of the soil and provides information to the government and farmers on the types of crops that are best suited to a specific land area.

The results stemming from the project will be forwarded to the agricultural ministries for review, analysis and necessary action.

Members of the delegation, also visited green houses and learned of the new technologies incorporated in new design styles of green houses that are functional and specifically constructed to shield crops from inclement weather.

Minister Brantley and the delegation, also toured one of Taiwan's Workforce Development Agencies and learned from its Director, the possibilities offered to the unemployed in Taiwan desirous of learning a new skill.

The Director also informed the delegation that through the ICDF, the Agency has been able to assist countries with vocational training for their citizens.

The very large facility, housed areas for learning skills such as carpentry, mechanics, plumbing, and baking among others and provides Employment and Entrepreneurship Services as well.

The Foreign Minister noted the thrust of St Kitts and Nevis into greater vocational training and certification and welcomed the opportunity and offer of partnership with Taiwan, in the ongoing efforts to ensure training for all Kittitians and Nevisians.

Government to improve production of seven major crops by PO, GIS. Government of Saint Lucia, August 21, 2017
http://www.govt.lc/news/government-to-improve-production-of-seven-major-crops

Full article

THE MINISTRY OF AGRICULTURE ASPIRES TO REDUCE THE FOOD IMPORT BILL.

The Ministry of Agriculture is revising its import substitution plan in order to reduce the food import bill and boost the income of local farmers.

Chief Extension Officer in the Extension and Advisory Services Unit, Kemuel Jn Baptiste, said seven major crops have been targeted for increased production.

"The current Minister of Agriculture is very adamant that we can, and we must, make a dent in terms of reducing imports. So you've heard him say that we've identified seven major crops of which we are still importing large quantities: pineapples, cabbages, tomatoes, bell peppers, lettuce, cantaloupes, and watermelons. With these crops we are looking at finding ways [to

increase production] and farmers to get involved. So we've started what we called a crop directory."

The crop directory lists the producers of certain crops, their quantities, and harvest periods.

"So what we have done is taken that information and we started a crop directory that lists the producers of certain crops, what quantities and what time of year. Now that we're almost nearing the completion of the data gathering stage, we will meet with those persons and find out whether there's potential for them to grow more than what they currently provide. We're also going to meet with the buyers.

"The plan also takes into account the maintenance of the islands 300 greenhouses. There was a 2009 greenhouse survey. We've viewed the results and are in the process of assessing the state of upkeep and use of the greenhouses, and what additions they might need because we have recognized that in order to effectively meet those demands, we need to be able to use those structures."

Mr Jn Baptiste said the department endeavors to lessen foreign spending, and provide farmers an opportunity to earn a portion of what is being spent on imports.

"In this revised import substitution plan, there are lots of crops that are available to be grown, but the ones we mentioned are the ones we are importing in significant quantities," he said. "We really want to take steps to try to give our farmers an opportunity to take a small share of what is being imported. We cannot force the local buyers to buy from us, but we can help them see the opportunity in sustaining livelihoods. This is about keeping money in people's pockets."

EDUCATION

Two more students receive scholarships for agriculture studies at Earth University in Costa Rica. Nevis Island Administration, August 21, 2017
http://www.nia.gov.kn/index.php/news-4/news-articles-3/3117-two-more-students-receive-scholarships-for-agriculture-studies-at-earth-university-in-costa-rica

Full article

NIA CHARLESTOWN NEVIS (AUGUST 21, 2017) -- Two more students, Ms. Hydeia Tyson and Ms. Jonieka Smithen are expected to leave Nevis in September to pursue studies in a degree programme in general agriculture at Earth University in Costa Rica. They will join four others already enrolled in the programme at various stages since 2014.

Mr. Eric Evelyn, Permanent Secretary in the Ministry of Agriculture, made the announcement on August 18, 2017, at a ceremony at his office in Prospect. He thanked donor Ann Bass for the scholarships through the Nevis Island Administration (NIA), at no cost the students.

The Permanent Secretary, who had visited the University some months ago, described the course of study as a rigid one. He said it augurs well for the students who, in the end, will be fluent in the Spanish language and be in better positions to become entrepreneurs and leaders.

The first set of Nevis graduates from the programme, are expected to complete their studies by mid-2018.

Mr. Evelyn urged Tyson and Smithen to work hard and to remember that they would be representing Nevis.

"Remember that you are not only representing yourselves in Costa Rica at Earth University but you are representing Nevis.

"Normally students who travel from Nevis overseas always tend to excel and I am expecting both of you to excel. So I want to wish you all the very best and keep the Nevis flag flying very high at Earth University," he said.

In response, both Ms. Tyson and Ms. Smithen thanked their families and all who are responsible for the opportunity to study at Earth University. They also pledged to do their best and to make Nevis proud in the process.

Also present at the ceremony was Mr. Huey Sargeant, Assistant Secretary in the Ministry of Agriculture, who introduced the students

UPCOMING EVENTS

September
Caribbean Wellness Day
Date: 9 September 2017
Description: Theme: "A Brighter Future for our Youth". Focus is on youth ages 15-29
Website: http://carpha.org/

Agribusiness Expo 2017
Date: 28 September- 1 October 2017
Location: Grenada
Description: Hosted by Ministry of Agriculture, Grenada. Theme: "Agribusiness generating wealth, wellness and employment"
Website: http://www.gov.gd/

October
World Food Day
Date: 16 October 2017
Description: Theme is "Change the future of migration. Invest in food security and rural development"**.**
Website: http://www.fao.org/world-food-day/2017/home/en/

November
Third Conference of the World Banana Forum
Date: 8 - 9 November 2017
Location: Geneva, Switzerland
Description: Will focus on global collaboration, gender, business and technical issues in banana production and trade. The conference will benefit everyone who has an interest in the banana sector - from producer and consumer organizations to governments, retailers, traders, NGOs and research institutions.
Website: http://www.fao.org/world-banana-forum/wbf3/wbf3/en/

Organic World Congress (OWC)
Date: 9-11 November, 2017
Location: India
Description: Theme of the 19th OWC is *'An Organic World through an Organic India.'*
Website: https://owc.ifoam.bio/2017

TropAg2017
Date: 20-22 November, 2017
Location: Brisbane, Australia
Description: Theme is "high impact science to nourish the world", reflecting the critical role of science, technology and innovation to the many challenges facing tropical and sub-tropical agriculture and food production globally.
Website: http://tropagconference.org/

December
CARDI Day
Date: 5 December 2017

2018

October 2018
18th International Triennial Symposium of the ISTRC (International Society for Tropical Root Crops) will be in Cali, Colombia from 22nd to 26th October 2018.
http://www.istrc.org/194-18th-international-triennial-symposium-of-the-international-society-for-tropical-root-crops-istrc-cali-colombia-from-22nd-to-26th-october-2018