

# THE BLUE HOLE

The BAMSI Bulletin

September 2016



## 'PLANTING SEEDS OF GREATNESS'

### BAMSI Begins a New School Year

President of BAMSI Godfrey Eneas, Bahamas Ambassador to the FAO, addresses the student body.



Executive Director Dr. Raveenia Roberts-Hanna (centre) and her team during orientation. Joining them is Island Administrator Ivan Ferguson (front row, blue suit).

### Orientation offers Students an overview of life at BAMSI

**U**nder the theme, "Planting Seeds of Greatness," students, faculty and staff of BAMSI assembled at the BARTAD building on Monday, August 22<sup>nd</sup>- 26<sup>th</sup>, 2016 for a week of Orientation.

The commencement ceremony featured the singing of the national anthem and the pledge of allegiance, the opening prayer by Bishop Caleb Evans, District Overseer of the Church of God of Prophecy and President of the Associated Farmers group, with welcome remarks by the Administrator for North Andros and the Berry Islands, Mr. Ivan Ferguson and trainee Mr. Dames.

All systems were a 'go' as faculty and staff introductions occurred before the keynote address to students was given by Dr. Raveenia Roberts-Hanna, Executive Director of BAMSI.

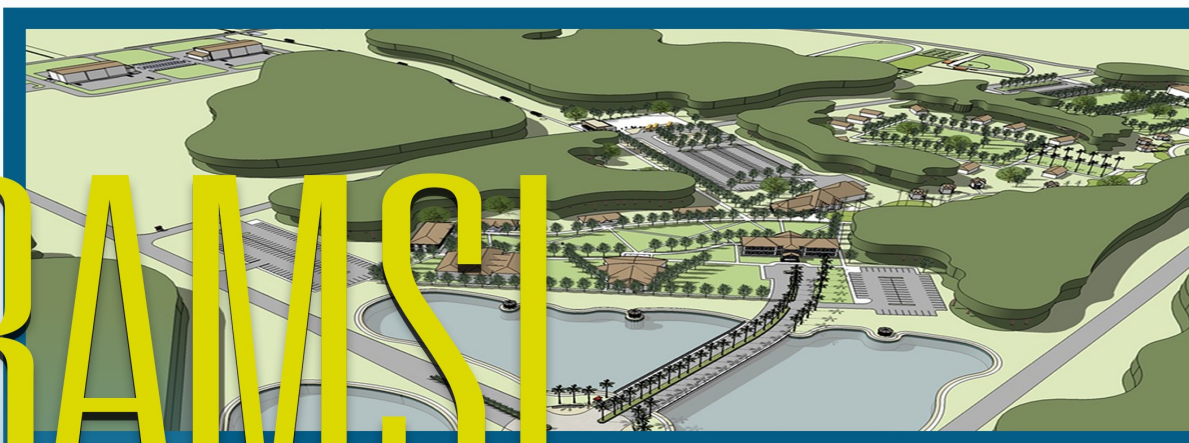
The remainder of the session was dedicated to registration and student advisement with the end of the day presenting a tour of BAMSI's school facilities, greenhouse and farm.

Article by Ms. Jarenda Rahming,  
Student Affairs Officer

Continued on page 4.

# BAMSI

Bahamas Agriculture & Marine Science Institute



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# BAMSI UPGRADES TECH PLATFORM

Whether on their laptops in the dorms or in BAMSI's computer lab, students are able to access the EBSCO portal and also take advantage of courses offered online.

With the launch of two web-based platforms aimed at strengthening the Institute's position as a centre for research, and supporting its mission to increase community engagement through distance learning, Executive Director Dr. Raveenia Roberts Hanna said the Bahamas Agriculture & Marine Science Institute (BAMSI) has experienced an exponential surge to its technology platform with the start of the 2016 Fall semester.

The addition of a web portfolio that supports online courses and distance learning, and the increased holdings of the Institute's Library and Information Services through EBSCOhost Research Database has far reaching implications for the Institute, now entering its third year of

operation.

Dr Hanna said the technology upgrade advances the mission of the Institute to infiltrate the furthest corners of the archipelago, sharing knowledge, bridging the gap and building a community of educated farmers. "The Flexi-Choice Program [the distance learning application] and EBSCO together represent the future of learning – students are no longer tied to the classroom, physical books, even pens and paper – and also point to BAMSI's ability to enlarge the wealth of knowledge students have access to."

According to Dr. Hanna, the Flexi-Choice Program has both an online and on-campus component. Students complete the theoretical portion of the course online and then visit the

campus for a short period over the summer to complete the practical component. "This gives students the right amount of freedom, motivation and support to fit relevant BAMSI courses such as backyard farming, introduction to horticulture and introduction to aquaculture, into their schedules."

An equally important addition to the Institute's arsenal is the presence of EBSCO, an online reference system that gives students, faculty and administration access to some 12,000 academic and scientific journals related to agriculture, marine science and aquaculture. With EBSCO coming onstream, it now means that research completed by educators, scientists and professionals at the top of their field globally

Cont'd on page 6.

# **BAMSI's New School Year Begins cont'd from pg. 1.**

Other highlights of the week included a special address from the valedictorian of the first BAMSI graduating class of 2016, Ms. Gimel Morley who encouraged the new entrants to be focused on their goal of education, make friends, seek help from their lecturers and have fun in their experience here.

Mrs. Velinda Rolle, senior student, gave a thorough and excellent power point presentation covering the many aspects of her summer internship at Caribbean Council of Higher Education in Agriculture (CACHE) in Trinidad and Tobago. It was well received by all in attendance.

Ms. Jarenda Rahming, Office of Student Affairs, made its presentation to the new students educating them on the purpose, role, function and services offered by the department.

Superintendent Bruce Arnett, of the Royal Bahamas Police Force gave an address on law and order, with specific emphasis on 'non-bilable' offenses.

Representatives from Scotia Bank, Nichol's Town Mrs. Hanna and Mr. Miller

were also on hand to promote the importance of saving and money management along with explaining the process involved with opening a bank account.

Mrs. Dianne Brown, senior lecturer, gave a pep-talk on the topic, "Attitude towards Education." While student Ian Hepburn gave a report on his internship, also at CACHE in Trinidad and Tobago, over the summer.

Dean of Academic Affairs Dr. Joseph Lindsay supplied students with an overview of the department before the front office staff spoke briefly about the various student and library services available.

Ensuring that the seedlings blossom into greatness, Mrs. Neketha Miller, a teacher at the North Andros High School came armed with the

motivational nourishments for our male and female students. Dr. Vallierre Deleveaux separately addressed the mature and married students on the theme, "A Sage Sound: Advice to Mature and Married Students."

Ms. Rahming gave a talk on "Scholarships and Grants" available to graduating students before the students boarded the bus to the tutorial farm for the Farm Skills presentation by Ms. Zakita Bethel.



Students, staff and faculty came together to worship at Wesley Methodist Church

Nurses Simmons and Smith from the Nichol's Town clinic conducted an informational session covering what to do in a medical emergency, the operating hours of the clinic, emergency contact, sexual responsibility, and health and wellness.

The Department of Social Services in Andros too made an impact on students, speaking to the needs within the local community and the types of services they provide. Mrs. Gabriel Romer availed herself to a question and answer session that went very well.

Club presentations were made by the BAMSI Eco-warriors' (Bahamas National Trust) Nigel Sands, Circle K's Aaron John and representative for BAMSI's United Voices

**T**HE top graduating student in the Bahamas Agriculture & Marine Science Institute's (BAMSI) aquaculture associate degree programme Gimel Morley has been awarded a Chinese Government Scholarship to pursue a master's degree in aquaculture. She is currently attending Ningbo University in the Jiangbei District, Ningbo, Zhejiang, China.

Ms. Morley, who received numerous awards during the Institute's inaugural summer commencement exercise including the Prime Minister's Award for Overall Academic Achievement and Excellence, initially discovered the science of aquaculture during her first semester at BAMSI. Enrolled as a marine science student she quickly realised this subfield of agriculture was more in line with her vision for her future.

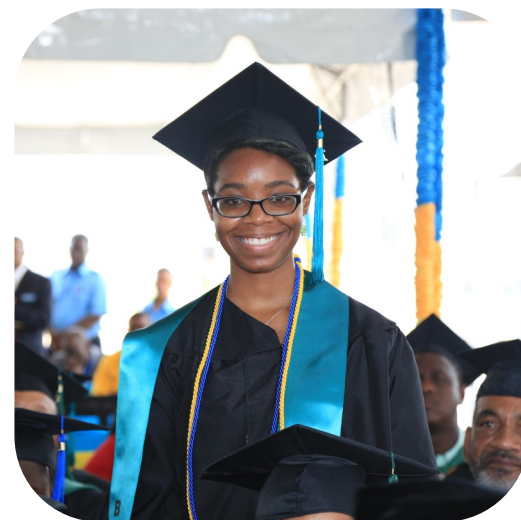
"In the beginning I didn't realise there was a difference between marine science and the aquaculture programme, but as the semester went on I noticed I wanted to do the aquaculture, I was more into growing things instead of studying the scientific aspect of marine life," she said.

With the support of a number of talented lecturers, Erin Cash-Povey, Cameron Lightbourne and Dr. Vallierre Deleveaux who heads BAMSI's marine and aquatic sciences division - Ms. Morley excelled in the area and emerged as a front runner and class leader.

"The course work with interesting. I got to spend more time on the farm and I also had the option of doing some practical work that the marine students did; fish health, fish nutrition and pond tank management," she said.

As she looks back over her two-year stint in the heart of North Andros, Ms. Morley admits that there is no experience in the world like the BAMSI experience. "It's a way to get a feel for college and even if students don't like it there they will know what going to an institute of higher education feels like."

For her, there are absolutely no regrets – BAMSI opened up the world of agriculture for Ms Morley and exposed her to the wonders of the natural world around her. "Getting to see Andros which I probably never would have done if I hadn't come to BAMSI and being involved with the Bahamas National Trust."



Gimel Morley, recipient of the Prime Minister's Award for Academic Excellence

Continued on page 10.

## The Blue Hole

Brought to you by BAMSI's Office of Communications

For more information email Blue Hole Editor Yolanda Deleveaux at [bamsipr.2014@gmail.com](mailto:bamsipr.2014@gmail.com) or call (242) 376.6905 or (242) 329.1700

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can now be accessed by students and staff. BAMSI also intends to share its new platform with communities where it has an office. Residents, students and farmers can visit BAMSI in Long Island, Eleuthera, Andros and Grand Bahama to complete research assignments, and build their knowledge base on a particular subject.

Agribusiness and economics lecturer Jeri Kelly, who hosts the Institute's first online course – agribusiness management and entrepreneurship, said the online portal broadens the scope of BAMSI's reach - opening the door for the Institute to tap into a wider audience for its courses, increasing its footprint in the education, agriculture and marine science sectors and establishing its brand on a global scale.

The adoption of the new system will allow BAMSI to conduct online courses which, in practical terms, means "continued growth, continued expansion, gives the Institute the ability to reach out to new markets, new islands, and it is our hope to see international students utilising our course offerings and the online program allows that," Ms. Kelly noted.

In a practical sense, the learning platform, allows educators to "provide recorded lectures; you can also interact with students through chat/

discussion forums," Ms. Kelly said. "It also allows students to work together to complete assignments, which in turn assists with team building - all from the comfort of your home or on the go".

The institute currently has two courses in session, post harvest management and agribusiness management and entrepreneurship – with three students participating in the initial trial. Going forward the agribusiness course will be offered online exclusively. For the January term, BAMSI's agrotourism course is also expected to be offered online, as well as a number of short courses for public consumption.

The new platform also allows BAMSI to bring the Institute's resources to Family Island communities. "Our location can be a challenge, persons may want additional information or to participate in one of our short courses, but may not be able to relocate. This allows them to receive the necessary information because it acts as an educational bridge for the Bahamas and for BAMSI," Ms. Kelly said.

Second year agriculture student O'Kendo Armbrister, who hails from Exuma, is currently taking principles of agribusiness. "The course is quite simple. There is no face



Agribusiness lecturer Jeri Kelly shows Agriculture student O'Kendo Armbrister how to utilise the online software.

to face interaction, but I do not miss that because the information is straightforward and simple. There is no need for a conversation, but if there was a need I could send her a message to discuss my concerns.

"The course is really good, really simple. And I actually prefer the online process more than the in-class setting because I can do it at my own pace. I can schedule my own time to do the assignments within the week."

One aspect of distance learning however that many students grapple with is the ability to be disciplined without the physical presence of a lecturer. Based on his own experience Mr. Armbrister said, "You have to discipline yourself. You have to know that this is what you want and this is what you have to do. You only need about an hour to read the pdf and then write your comments or answer the question – it's not very time consuming."

## BAMSI LAUNCHES NEW BREEDING PROGRAMME



ALMOST 300 animals were flown into the country last week by the Bahamas Agriculture and Marine Science Institute (BAMSI) in a move that, with time, will serve as a major strike against this nation's billion-dollar food import bill. Veterinarian specialist Dr Keith Cox, who heads BAMSI's livestock division, said while a mix of sheep and goats were brought in, the goats in particular will be used to facilitate the development of a national breeding programme that over the long term looks to improve the quality of the country's livestock. The addition of the new animals, he said, supports the Institute's push to become the multiplication centre of the Bahamas, enabling it to provide the best suitable breeds for the region. Along with the expansion of its livestock herd, BAMSI is also expected to increase its animal holdings with the introduction of a swine unit and a poultry division as early 2017. Bringing BAMSI's livestock

count to 615, the new animals were flown in from a quarantine centre in Columbus, Ohio, where they were housed for some 90 days. While under quarantine the animals were tested for a number of diseases including tuberculosis, leptospirosis, brucellosis and scrapie. The



The animals being off-loaded at the San Andros Airport in North Andros.

animals – 52 Doppler sheep and the rest goats, were originally brought in from four states - Texas, Missouri, Ohio and Kentucky. Before the shipment took place Dr Cox visited the quarantine site at the end of July to inspect the animals and also to see the feed and mill sites. Along with the animals, BAMSI brought in sufficient feed to help the new imports make a smooth digestive transition before

being introduced to locally grown fare. "We had feed brought in from Ohio to help with their stabilization and acclimation process. They will eventually be fed the locally grown forage and fodder - the same as the other animals," he noted. BAMSI's breeding programme, which will be launched through its Livestock Associated Farmers division, is expected to start next year May with offspring emerging around the Fall. Bahamian farmers should be able to receive the new breed by February 2018.

"In order for farmers to get animals they have to join BAMSI's Livestock Associated Farmers Programme (LAFP) which is currently being organised. The programme will teach farmers how to properly manage their livestock operation," said Dr Cox.

The breed of goats that were brought in include the Savannah, the Kiko and the Boer. The



Forklifts were used to place the animals on the back of a truck which would then transport them to the farm.

## NEW STUDENTS TOUR BAMSI'S FACILITIES: TUTORIAL FARM, AQUAPONICS SHADE HOUSE AND MORE...

Choir Velinda Rolle, who taught the new students the school's alma mater and song.

The role of the Office of Student Affairs was the theme Ms. Rahming spoke on before addressing the returning students on behaviour, attitude, scholarships, seminars, valid documents essential for travel, and various opportunities for students.

Mr. Granville Murphy, Bus Driver, talked to the students about the rules and operations of the BAMSI shuttle as the final presenter.

The executive director, administrative team, faculty, staff and students culminated the week of activities and began the new school year in praise and thanksgiving at the Wesley Methodist Church of The Bahamas Conference of Methodist Churches in North Mastic Point, North Andros. The homily was given by Reverend Gregory Rolle.

Orientation week was excellent! Special thank you to Dr. Raveenia Roberts-Hanna,

Ms Delsanea Thompson, Candice Roberts, Jeri Kelly, Lovan Christie and all others who participated in planting seeds of greatness for a bountiful harvest in this new academic year.

B



Dr. Vallierre Deleveaux, head of BAMSI's Marine and Aquatic Sciences division, explains the importance of BAMSI's aquaponics shadehouse in growing a healthy supply of lettuce and other micro greens for the Bahamian market. The shadehouse also has a tutorial aspect where students will be given the opportunity to grow their own food.



Ms. Zakita Bethel, head of BAMSI's Associated Farmers Programme (pictured standing above) introduces new students to BAMSI's tutorial farm. She explained that Farm Skills will provide each of them with an opportunity to learn about the practical work of an agriculture major.

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## MAKING A DIFFERENCE ON COURT AND OFF

### BAMSI STAFF RECOGNIZED

### FOR ACHIEVEMENT AND COMMUNITY CONTRIBUTION



Delsanea Thompson, Front Office Assistant for The Bahamas Agriculture and Marine Science Institute, is coming off a successful first term with the University of the West Indies where she is studying for her Associate of Science in Business Management. Opting to study through correspondence Ms. Thompson can appreciate the comforts of home, but still possesses the hard work and self-discipline required for independent studies.

#### *'Her Say'*

"What we do with our time will determine our success."  
D. Thompson

Proving that hard work pays off she concluded her first semester with a GPA of 3.13 and is looking forward to completing spring 2016 with similar or better results. "While being a working mother presents its own challenges, I always remind myself that success is not a limited commodity and the decisions I make today are investments in my future. I can definitely relate to students here at BAMSI and my advice to them is *'time management'*. We all have 24 hours in each day and what we do with our time will determine our success or result in our failure."



#### *Living The Example*

Moving beyond the campus and engaging with the wider community, Student Affairs Officer Ms. Jarenda B. Rahming was honoured during a special ceremony held by the National Social Outreach Ministry of the Church of God of Prophecy (COGOP) on February 20<sup>th</sup>, 2016, for her vibrant community work over the years, having received The Bahamas Ministry of Youth, Sports and Culture 2006 Pacesetter Award in Religion and her most recent recognition, being made a Justice of the Peace for the Commonwealth of the Bahamas in late 2015. Pictured presenting the award to Ms. Rahming (centre) are Bishop Rudolph Bowe, District Overseer, COGOP (left) and Minister Jacqueline Rahming, COGOP.

# THE BAMSI STORE

**I**n response to the public's outcry for whole foods grown in Bahamian soil at an affordable price point, the Bahamas Agriculture and Marine Science Institute (BAMSI) has opened a store front where savvy consumers can purchase fresh produce at competitive prices. Located in the Levy Building on East Bay Street, the BAMSI store (formerly the offices of the Bahamas Agriculture and Industrial Corporation - BAIC) stocks all BAMSI produce and those from its Associated Farmers Program. The store also provides shelf space for items manufactured by Bahamian entrepreneurs such as jams, sauces and spices.

With a soft opening in late 2015, the long term plan for the store is to create a location with the feel of an indoor farmer's market – where shoppers can casually browse a wealthy array of fruits and vegetables all grown right here in the Commonwealth of the Bahamas. Leslie Minns, Marketing Manager/Market Analyst, said what they would like to see happen in the store is for BAMSI to carry every single [food] item produced in the Bahamas – “What I envision is a farmer's market where everything is there for customers to feel and touch. I want it to be set up so as persons walk inside, they can comfortably walk around and select from produce that is affordable for every person.”

Underscoring the government's mission to stabilize and increase the nation's food security levels, the BAMSI store plays a pivotal role in that endeavor. It provides support to local entrepreneurs who want to bring manufactured goods to the market place, and



Marketing Associate Kendra Mitchell holds one of BAMSI's famous papayas!



Bahamian produced guava jam using Bahamian grown guavas.

it also positions locally grown food items front and centre for the retail buyer. With produce coming from both BAMSI's farm and the Associated Farmers Program the long term goal is to reduce the nation's food import bill by 50 percent, support the push to have Bahamians



The BAMSI Store is located in the Levy Building, East Bay Street.

adopt a healthy lifestyle by providing low cost fruits and vegetables, and also support the launch of Bahamian manufacturing and entrepreneurial ventures in the food industry.

Run by a small team of five persons, the BAMSI store is currently sourced by some 20 Bahamian farmers from Andros, Abaco and Grand Bahama, with farmers from other islands set to come on stream shortly. On the shelves on a regular basis are bananas, locally produced jams, jellies, peppers and pepper sauces. Also available for sale are tomatoes, cantaloupe and papayas.

Beyond the retail space, the BAMSI store acts

**Continued on page 14.**

**“There are absolutely no regrets – BAMSI opened up the world of agriculture for me.”**

**G. Morley**

And what of her future? After successful completion of her studies in China Ms Morley expects to return to BAMSI. “I want to give back from what I’ve learnt. I’m looking forward to designing programmes for the marine students and assisting in a number of environmental projects in Andros.”

Ms. Morley, who also has a bachelor of science degree in biology, encouraged new students to the Institute to work hard, stay focused on their studies and not allow themselves to become distracted. “Be selfish and put yourself first with your studies. There’s a time for playing, but you really need to put in the hard work if you want to succeed.”

Along with Ms Morley, BAMSI’s first graduating class is filled with success stories. Some 15 members of the graduating class were absorbed into BAMSI following a two-week intensive training session in extension and outreach practices. They now work as assistant extension officers for the Institute and have been placed in a number of islands – Eleuthera, Long Island, Andros and New Providence.

Another outstanding graduate and recipient of the Eneas Agricultural Policy Award Romeo Josey will be following in Ms Morley’s footsteps and is set to further his education at South Dakota State University in January. Mr Josey

plans to study resource management and forestry business. “I see myself owning a logging company, not so much large scale lumber, but more furniture and custom made cabinets and not just pine trees, but mahogany, horseflesh and lignum vitae.”

Mr Josey describes his BAMSI experience as one that was absolutely needed because it has prepared him for a more rigorous academic experience as he looks to pursue studies leading to master’s degree. It also helped him discover more about himself. “The challenges that I faced academically and socially, in terms of living with person who are not like-minded to some degree, helped me to find myself and broaden my horizons on how I see not only people, but college life in general.”

Among the high points of his school career, Mr Josey said, was achieving a 3.79 GPA during his first semester, a visit by officials from the United Nation’s Food and Agriculture Organisation, and the opportunity to address a town meeting in Nassau on climate change.

“The BAMSI experience is hard to compare. It showed me what life with a degree would be like.”

And what advice would he give new students coming in? “Come and do what you came to do. Don’t get hung up on friends, don’t get hung up on the work load or whatever situation is at hand. Your main goal is to succeed in your academic endeavours, and take advantage of every opportunity available because opportunities can lead to long term achievement.

“My advice to students considering BAMSI, it’s a great opportunity in your own backyard because it brings the world to you. Instead of you having to go out there to get exposure, the exposure comes to you through the Institute.”



Romeo Josey,  
recipient of the Eneas Agricultural Policy Award.

## PERSONAL SUCCESS AND PROFESSIONAL DEVELOPMENT SERIES



Students, staff and members of the North Andros community came out to hear Visiting Professor William Zou, Director of Translations at Oceans University.

EXPANDING on its memorandum of understanding with Oceans University of China (OUC), the Bahamas Agriculture and Marine Science Institute (BAMSI) engaged

schools, both at the senior and primary levels, in North and Central Andros. He said the students were curious about his culture and had a lot of questions for him

ic journey in China and for many of them, it's the first glimpse of a world beyond the Bahamas, beyond the Americas, beyond the West."

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### CONNECTING CULTURES: BAMSI HOSTS SEMINAR ON CHINSE CULTURE

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in a series of lectures focused on the language, rich culture and historical legacies that capture the spirit and essence of China. Series presenter Professor William Zou, director of Translation for Ocean University, said the seminar was the first of many joint ventures the two institutes plan to participate in.

The lecture series sought to broaden the vision of the world BAMSI students live in by exposing them to a culture that dates back some 5,000 years ago. "I want them to know more about China, and in Ambassador Godfrey Eneas' [President of BAMSI] words – to broaden their vision, to know what's happening in places outside the Bahamas. And at the same time to introduce Chinese culture, language, which is about 5,000 years old."

Professor Zou also had the opportunity to meet with senior government and community officials, as well as visit a number of

about life in China.

Executive Director of BAMSI Dr. Raveenia Roberts-Hanna, agreed with Professor Zou's sentiment, that the seminar provides a good opportunity for students to understand the world around them and how their lives can be impacted by the actions of those they have never met. The seminar also builds an educational platform for the students to help them envision the next stage of their academic development taking place in China.

"With the signing of the memorandum of understanding with OUC, and other top tier institutions from around the world, graduates of BAMSI now have access to leading universities where they can continue their studies in agriculture, marine science and aquaculture. This seminar helps them to envision the continuation of their academ-

Dr Hanna also pointed out that Bahamians have already embraced Chinese culture to a great extent – from neighbourhood grocery stores to Chinese medicine, karate and the ever flavourful Chinese cuisine. She said further that since one in five persons in the world is Chinese it is likely that Bahamians will come into contact with the culture and the language in a variety of settings. As such, the seminar provides a place of understanding – how traditions were formed, why ancient practices emerged, how the language evolved, what the characters mean. "Chinese culture is already here, saturated and intertwined in Bahamian culture so it is important that we understand the evolution of this culture and familiarize ourselves with a language that already exists within our borders."

**Continued on page 15.**

## The BAMSI Store brings fresh produce closer to home

Cont'd from page 11.

as a distribution channel. The location currently has a holding room where produce can be stored while awaiting transportation to other vendors. In time the location will have a receiving dock which will allow goods to be shipped directly to the BAMSI store. Mr Minns, said they are also in the process of creating a ripening room for crops. Currently, produce grown as part of BAMSI's Associated Farmers Program, and also crops grown on the BAMSI farm itself, pass through the distribution centre and end up either as wholesale produce sold to major retailers or placed in the BAMSI store's retail space for walk-in customers to purchase. The ultimate goal is to develop a distribution site similar to what BAIC has in the form of the produce exchange.

At this stage in its development, the price of retail items sold through the BAMSI store is the same as or close to produce sold in other retail grocery stores. Major wholesale and retail operators such as Solomon's and Super Value however, are able to purchase Bahamian grown items at



Bahamian manufactures of processed food items have shelf space at the BAMSI store.

a competitive price.

"We still want to do business with all the local vendors," He stressed. "For example bananas retail at \$0.59 cents per pound, we would still sell at \$0.59 cents per pound, but we would sell to the wholesaler at \$0.49 cents.

Asked about the view five years down the line, it was said that BAMSI would grab about 75 percent of the market share for fruits and vegetables. Room was made available for other operators because BAMSI does not yet produce all the fruits



BAMSI lettuce and micro greens also make a regular appearance at the store.

and vegetables year around. "We don't produce the apples, and operators such as Lucayan Tropics, offer specialty products like the parsley and Bibb lettuce," he said.

And what of the difference between the BAMSI store and the produce exchange? Products coming out of the BAMSI store are regulated and of a higher standard. Members of the Associated Farmers Program have to maintain best practices and internationally recognized standards if they are to have their produce accepted by BAMSI and sold under its label.

Going forward, BAMSI intends to launch a standards and protocol regime for manufactured items that pass through its doors. Entrepreneurs will undergo training to ensure consistent standards are maintained throughout the production phase of locally processed fruits and vegetables, herbs, flora and medicinal plants, and that high quality end products are being brought to the public.

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Known for its sweet papayas, BAMSI supplies a significant percentage to the market.

## Chinese Cultural Exchange: Cont'd from pg. 13.



Professor Zou shared his vast knowledge of Chinese culture with BAMS students: from learning the language to an historical perspective, the students were provided a overview on a wide range of topics.

Ocean University of China is recognized as the driving force of that nation's marine research and application, and heads a number of research institutions at the national level. OUC offers a wide array of academic disciplines related to the study of marine and aquatic sciences and boasts ground breaking programmes in oceanography, fisheries science, marine biology and marine geoscience. Professor Zou said his goal is to see students take advantage of the partnership to study anywhere from one semester to several years to get a higher degree. "This provides BAMS students with an opportunity to pursue their chosen course of study." He further noted since the signing of the cooperative agreement between the two institutions, something needed to be done to continue the agreement, and the seminar fulfilled that role. "My coming here is the first step leading to more

collaborative programmes and I'm very much impressed by the interest BAMS students and people in Andros show in Chinese culture and language" he said.

As this nation looks to secure closer ties with China, a country of more than 1.3 billion people, Bahamians are being encouraged to visit the country as tourists, students, business persons and entrepreneurs. Professor Zou suggested that the seminar would help to promote greater people to people exchanges because the two countries have vastly different societies and environments which provide an opportunity for unique and memorable experiences.

According to Professor Zou, following the official visit to the Bahamas last summer by a delegation from Ocean University of China which met with Prime Minister Perry Christie and also visited the BAMS campus in North Andros, he

began searching for potential investors and business opportunities that might be explored in the Bahamas. He shared that before arriving in Andros in late February he spent one week in Nassau with associates from China who are interested in investing in the Bahamas.

The group has already identified clean energy as an area of interest and are looking at ways to decrease the nation's energy bill and facilitate the widespread use of solar power – as the Bahamas struggles with electricity costs that are some five times higher than what is found in the United States.

While much of his focus has been on highlighting Chinese culture and teaching participants survival Mandarin, Professor Zou acknowledged the best part



Visiting lecturer Professor Zou sits with the Institute's Executive Director Dr. Raveenia Robert-Hanna.

of being in Andros is the beautiful scenery and agreeable weather at this time of the year, especially as most of northern China is still experiencing cold weather. He also enjoyed the local fish, particularly the snapper and said that while they do have conch in China, they serve it sliced and stir fried – which leaves it a little chewier than the Bahamian style cracked conch.

## DIPLOMATIC CONTINGENT VISITS BAMSI

Foreign Affairs Minister Fred Mitchell accompanied Chinese Ambassador to the Bahamas Huang Qinguo



Pictured top left: Chinese Ambassador to the Bahamas Huang Qinguo (standing) and Foreign Affairs Minister Fred Mitchell.

Pictured top right: The diplomatic contingent toured all of BAMSI's facilities in North Andros, including the Aquaponics shade house. Shown is Dr. Vallierre Deleveaux, head of BAMSI's Marine and Aquatic Sciences division explaining how aquaponics works which allows the Institute to grow lettuce to bring to the Bahamian market. Also pictured are Minister Mitchell (green cap) and Ambassador Qinguo (white cap).

Pictured bottom left: President of BAMSI Godfrey Eneas, who also serves as the Bahamas Ambassador to the FAO (khaki pants) speaks with Minister Mitchell. The two are joined by Dr. Keith Cox, BAMSI's veterinarian (far left) and Dr. Deleveaux.

Pictured bottom right: BAMSI presented Minister Mitchell and Ambassador Qinguo, along with their contingents, with bananas.

## Chinese Ambassador Tours BAMSI



Pictured clockwise from top left: Foreign Affairs Minister Fred Mitchell addresses staff and faculty. Ambassador Qingguo looks on. 2. Ambassador Qingguo addresses the students. 3. Gimel Morley and Cameron Lightbourne (back row) are furthering their studies in China. They two are pictured with Minister of Foreign Affairs Fred Mitchell and Ambassador Qingguo. 4. Ayrett Lightbourne (far left) senior member of the Commercial farm team, explains to Minister Mitchell and Ambassador Qingguo how the farm is run.

### BAMSI hosts Chinese Ambassador and Bahamas Minister of Foreign Affairs

Minister of Foreign Affairs Fred Mitchell along with newly appointed Chinese Ambassador to the Bahamas Huang Qingguo made a courtesy call on the Bahamas Agriculture and Marine Science Institute's (BAMSI) Andros facilities this past August - meeting with students, staff and faculty.

Minister Mitchell surprised many by sharing that he began his career as an agricultural officer, noting that as he has developed and grown since that first role, so to will BAMSI who, even though still in its infancy stage having been in operation for some three years, has already achieved great strides towards its mission. He said that BAMSI has a rich future and a substantial heritage emerging from the dedicated efforts of Bahamian men and women who cared about the health and well being of the nation's citizens. He reminded the staff that they were the true spokespersons for the Institute and their ability to shine and accomplish their goals would reflect well on BAMSI.

During the visit Ambassador Qingguo acknowledged that he was impressed with what he saw and he committed to finding vendors to assist in the procurement of items for the Institute. He also indicated that he would work towards forming greater linkages with BAMSI.

Kiko is the smallest of the breeds and similar to the Bahama native. This segment of animals will eventually make their way to farmers in the southern Bahamas. The size of the breed makes it well adapted to the more rocky, hilly terrain found in that region. The Boer, which is a highly specialised breed, is larger than the average size goat, can be difficult to handle, and requires more attention and maintenance. "This particular breed of animal," he noted "will require a more observant farmer to see them thrive". Flying the animals into the country was an intense operation that involved the approval, partnership or support of more than a handful of government departments and agencies - Civil Aviation, Bahamas Customs, Department of Immigration, Department of Agriculture, Nassau Airport Develop-



Two DC3s made a total of five trips to bring the animals to Andros.

ment Company (NAD), Airport Authority and Nassau Flight Services, along with the United States Department of Agriculture (USDA), and Animal and Plant Health Inspection

Services.

Beyond the massive coordination of these agencies a 747 Jet that specialises in animal transportation was contracted to bring the cargo to the Bahamas. On September 20, the jet left Columbus, Ohio at 3:30am and landed at LPIA just before 5:55am.

The second leg of the journey, flying the animals into Andros, also required strategic manoeuvring. "We contracted another air carrier to fulfil the Nassau/Andros leg. We used two DC3s out of Miami to facilitate five flights. BAMSI employees Adrian Barr and Glenroy Barr came from Andros to support the movement of the animals. We needed to do some deconstruction and they did that and assisted with the movement of animals between crates," Dr Cox explained.

In the months leading up to the relocation exercise, the ten-member livestock team was extremely busy preparing for the new animals and undergoing several training exercises that focused on quarantine conditions, quarantine maintenance, quarantine preparation and reasons to break quarantine. Among the changes made, a new housing structure was built for the animals



following special modifications made to the existing design to improve the efficiency of the flooring and roof.

Touching on the future of livestock in the Bahamas, and BAMSI's role in developing the area, Dr Cox said the Institute would shortly be creating a swine production unit where they will reproduce several types of animals: fatteners – which will be sold at the pre-fattening stage to farmers, who will in turn grow the animals to market stage. The unit will also reproduce breeding sows, which are females of superior genetic quality. The sows will go to farmers who want to start a breeding programme.

BAMSI is also looking to include poultry in its expanded farm initiative and will focus on layer birds as well as producing broilers. "The poultry unit will be just to supply meat and eggs to the school and will also serve as a demonstration process for the students. [The poultry unit] will operate as any other division at BAMSI, but all product will go into the school – with the excess being distributed to the local community," he said.

## BAMSI FACULTY HEADS TO CHINA FOR PHD STUDIES

**A**ssistant Aquaponics Manager Cameron Lightbourne is currently pursuing a doctorate degree in Agriculture from the College of Fisheries, Department of Aquaculture at Ocean University. He travelled to China earlier this month to begin his programme.

"I am very honoured and humbled being selected for the prestigious Chinese Government Scholarship to attend such a premier institution like Ocean University of China. For the study of aquaculture it is widely considered to be the best university in the world. The officials from Ocean University recognized the potential of BAMSI, and were equally eager to form a partnership that would benefit both institutions, and nations to a wider extent," Mr Lightbourne said.

Acknowledging the support received from BAMSI and the Ministry of Agriculture, Mr Lightbourne thanked them for their assistance. "This opportunity would not have been possible without the foresight and dedication to the development of agriculture and marine sciences from the Minister of Agriculture, the President, Executive Director, and Director of Marine Science at BAMSI, and of course, the support from the Government of the Bahamas. I am truly grateful for this opportunity to increase my knowledge, abilities and experience, and bring those skills and expertise back to the Bahamas to add to our national development."

Focusing on Fisheries Science with a concentration in Aquaculture, Mr Lightbourne's research will ultimately benefit the Bahamas as the nation continues to explore ways to feed itself and reduce its import bill. He noted that with global capture fisheries on the decline, aquaculture (the farming of marine species within a controlled environment) is replacing most food fish in the world, and with greater implementation of the science the Bahamas will be in a better position to meet the steadily increasing demand for marine protein.

"Faced with issues such as overfishing, poaching, climate change, and geopolitical factors, the Bahamas needs to be able to use alternative methods to supply fish and fishery products to our population if we are going to conserve the fare in our natural environment." He added "one of the highest costs in an aquaculture enterprise is feed



Cameron Lightbourne served as the Assistant Manager, Aquaponics. He is currently studying towards his PhD in Agriculture at Ocean University in China.

supply and any research that helps to reduce those costs makes the enterprise more feasible".

Mr. Lightbourne currently holds a Master of Science degree in Aquaculture from the University of Rhode Island and a Bachelor of Science degree in Animal Science from Tuskegee University. He has worked with BAMSI for nearly three years and has been instrumental in the construction of the Institute's commercial demonstration aquaponics unit, several backyard/tutorial aquaponics systems, and had oversight of the production of food, fish, and hydroponic produce, including herbs and leafy greens. Mr. Lightbourne's role as supervisor also saw him assisting with logistics on the farm.

While at BAMSI, Mr. Lightbourne had the opportunity to represent the Institute at a number of international, regional and national forums. He served as the Country facilitator for the Caribbean Regional Project's Intra-ACP Agriculture Policy Program (APP) Component 2: 'Improving Production and Value-Added Products among Women and Youth Groups in Agriculture'. He also participated in the Inter-American Institute for Cooperation on Agriculture (IICA) Train-the Trainers Workshop in Good Agriculture Practices and Good Manufacturing Practices (2015).



## 2016 ORIENTATION PHOTO GALLERY:

On hand during the Orientation Exercises were representatives from the Nicol's Town Scotia Bank branch, Nicol's Town Clinic, the Island Administrator and his deputy and North Andros High School. First Year students were the recipients of gift from SunTee and BTC.



## REGISTRATION FOR BAMSI'S ONLINE COURSES AND THE 2017 SPRING SEMESTER IS NOW OPEN

For more information: email [bamsiadmissions@gmail.com](mailto:bamsiadmissions@gmail.com)

To collect an application form:

- In New Providence: Visit BAMSI's offices in the Island Trader's Building on East Bay Street. Call 397.6580 for more information
- In Andros: Visit the campus in the BARTAD Building, Queen's Highway. Call 329.1700-3 or 376.6905 for more information.
- Family Island residents contact your Island Administrator's office.