

## COVID-19 brings on online classes and free tuition at BAMSI



Free tuition for full-time Bahamian students at The Bahamas Agriculture and Marine Science Institute (BAMSI) will begin in the Fall 2020 semester, the Minister of Agriculture and Marine Resources Michael Pintard announced during his contribution to the 2020/2021 budget debate in the House of Assembly.

"BAMSI is now able to offer to its incoming students the identical arrangements made available to UB and BTVI students in free tuition" he said. Students will have to register for full time credits and maintain a minimum GPA to retain their grant. Minister Pintard said, "The Bahamas Agriculture and Marine Science Institute will continue to produce

outstanding graduates in Agriculture,
Marine and Life Sciences, to conduct
important studies that will assist farmers
in making decisions based on science
and that new and badly needed courses
are being offered unilaterally or in
partnership with our educational
institutions internationally or NGOs and
private entities."



Michael Pintard- Minister of Agriculture and Marine Resources

This further solidifies the Government's commitment to the development of the agriculture and marine science sectors by providing free tuition to those who are eager to take up the mantle to make a difference and chart new economic and entrepreneurial pathways.



Dr. Raveenia Hanna Executive Director of BAMSI

Executive Director of BAMSI, Dr Raveenia Roberts Hanna said that she is excited. The Institute is now included in the national tertiary education grant program, and she underscored the vital role BAMSI plays in providing a technically skilled and trained workforce to tap into the many partnerships and opportunities that will be unveiled in the economy. "We are poised for this role as we have been intentional and strategic in our program offerings to ensure that we build capacity and meet national needs.

We are proud that our students will benefit from the education grant and will continue to make the positive impacts that our graduates are known for."

This major initiative will increase access to tertiary education for qualified Bahamian citizens and fulfill the Government's mandate of free tuition for its citizens. Further, with the economic impact of COVID-19 on the country and the world, this initiative is timely and-crucial to the development of the Bahamian people and to the agriculture and marine resource sectors. Students will be able to enroll in one of several

The Institute has also recently launched five new courses to join its core programs -business management, art and environment, animal science, agronomy and general agriculture. Students are immersed in hands-on training and experiential learning that is reinforced with current academic trends and scientific research.

The education grant will fund tuition, compulsory course fees, and textbooks for full-time students of BAMSI.

Compulsory course fees covered under the grant are technology, student activities, library, course lab and studio fees, and course external examination fees as applicable. The grant does not cover non-instructional fees like the security deposit, application, graduation and drop/add. It also does not include payments for courses taken during the summer, nor the cost of repeating a course.

## BAMSI Launches Roots and Tubers Distribution program

The Ministry of Agriculture and Marine Resources' Food Substitution initiative received a 'shot in the arm' recently as farmers across the Bahamas, beginning in Abaco, Grand Bahama and Ragged Island, received bundles of cassava sticks and sweet potato slips as part of the Bahamas Agriculture and Marine Science Institute's (BAMSI) Roots and Tubers Distribution program. The program, which launched in May, is expected to continue till early 2021.

Stephen Adderley, a member of BAMSI's Board of Directors and the Institute's Farm Coordinator, said BAMSI's program aligns with the Ministry of Agriculture's food substitution/security initiative which focuses on encouraging more Bahamians to grow roots and tubers as part of the push to enhance this nation's food security levels.

Mr Adderley also noted the plant material being sha red with farmers was grown on BAMSI's North Andros farm. He said that while there are at least six different varieties of cassava grown in the Bahamas, BAMSI is focusing on two local varieties, the BAH1 and BAH2 which have been grown here for more than 60 years. BAMSI does grow a few Cuban varieties, he said, but more research data has to be gathered before the Institute will consider distributing them to the farming community.

In terms of the program, each farmer receives approximately 300 sticks and is expected to start with at least a tenth of an acre of plants with an expected yield of some 3,000 pounds of cassava in eight to nine months.



The program will continue in two ways, with BAMSI distributing the cassava sticks and sweet potato slips on a regular basis over the course of the upcoming months.

The program will also move forward as each farmer invests in his/her own community. As the produce is harvested, it will increase the capacity of the farmer to plant cassava because a medium size tree can produce up to 100 sticks. Farmers will also be able to share plant material with others in their farming community.



Due to the challenges being experience with climate extremes and the COVID 19 pandemic, the Institute is even more aware of the need for the country and its citizens to make changes to become less dependent on imported food. Part of the response must be that in addition to existing commercial farmers, backyard operations also play a significant role in the campaign for food security.

"It took the Corona virus to wake the country up regarding food security in the Bahamas," Mr Adderley said. "Agricultural practices that involve root crops and grains would lend towards greater food security as compared to vegetables because you can readily store these items for weeks and even months with very little advance preparation."



BAMSI Graduates get a lesson in planting cassava.. From left to right; Ashley Albury, Jerchoyae Moxey and Aaron Francis.

One of the long-term goals of the cassava project is to tap into the growing interest in backyard farming in the country and support Bahamians who want to start the practice. Sooner or later some may discontinue, but many will continue with the backyard farming when they realise how easy it is to grow [the cassava] and will continue with it over their lifetime.



Once you see the rewards it excites you and it can become a hobby. BAMSI's hope is that backyard farming will catch on in Nassau because it's already done to a great extent in the Family Islands, particularly those in the southern Bahamas," Mr Adderley said.





For more information on growing cassava, visit our youtube page for a tutorial.

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# BAMSI donates to Frontline Workers in the fight against COVID-19.



FIRST responders in North Andros received a special token of thanks recently as faculty of the Bahamas Agriculture and Marine Science Institute (BAMSI) met with essential service workers to make a donation of freshly harvested lettuce. The hefty, leafy vibrant green Romain lettuce were the result of hard work done by BAMSI students, many of who are learning to become agriculturalists. The students grew the lettuce, and other produce, on a student farm plot as part of their Farm Skills course.

Healthcare officials and law enforcement officers in North Andros and throughout the Commonwealth of the Bahamas have been presented with unprecedented workloads with no end in sight as they work to contain Covid-19 and minimize its effects on Bahamians, while caring for those

who have received a positive

diagnosis.

It is BAMSI's hope that the donation will inspire, support the nutritional intake and encourage those who remain on the front line during these challenging times, Deandra Deveaux, a lecturer in plant and soil sciences, and a member of the farm skills lecturer team, explained.





A skeleton crew of farm skills faculty, led by Said Ponder, senior plant and soil science lecturer, has continued with the upkeep of the student plot, watering and taking care of the plants since the school closed due to the Corona virus. As it was still mid-semester when students left the campus, a significant amount of produce had started to develop. The lettuce, which would have typically been donated to the cafeteria or the students themselves for personal consumption, needed to be donated as quickly as possible to avoid food wastage.

Along with the lettuce, the students are also growing goat pepper, sweet peper, pumpkin, onions, Red Russian Kale, eggplants and beets.

The students were also in the midst of two special research projects, one that concentrated on sweet potatoes, while the other looked at sunflowers and the production of sunflower seeds.

As a tertiary level institution that focuses on agriculture, marine science and related sectors, all BAMSI students are required to participate in the farm skills course during their first year. Agriculture majors continue their training with an additional semester of farm skills.

The class is designed to give students hands-on experience in the areas of farming, aquaponics and marine science. The theoretical aspect is covered in a traditional classroom, while students venture onto the farm, the ocean and other aquatic areas allowing them to practice what they have learnt.

During the initial agriculture phase, students learn basic farming practices, including preparing seed beds, how to identify the various deficiencies that can appear in plants and seeds and the best environment to plant seeds. They also learn about land preparation in general and are exposed to the machinery and technological advances that have modernise the industry.

Senior agriculture majors turn their focus onto farm management practices. Each student is given two full rows to plant crops of their choice and they are graded on the management and upkeep of their mini farm. They raise them from seedlings, transplant the items to the farm and then rear them. If the plants produce, they are graded on that as well.



#### BAMSI takes on fine dining



THE BAHAMAS AGRICULTURE and Marine Science Institute BAMSI) has partnered with one of Nassau's fine dining establishments in a move to showcase the versatility and unique flavor profile of its Andros-grown produce.

Offering these specialty items as part of their Thanksgiving feast, and now incorporating them into the regular menu, the culinary staff at the Poop Deck Restaurant at Sandyport, West Bay Street, provides diners with a distinctive experience focused on fresh, quality ingredients, bold flavours and textures, and creative concepts.

Initially featured as part of the Rotary Club of Nassau's annual Thanksgiving luncheon, the Poop Deck served up a warm puree of butternut squash, richly flavoured with the decadent spices of curry and coconut and aromatic herbs, such as ginger.

Accompanying the savoury dish was a salad of crisp, crunchy, vibrant greens, tossed with a burst of tangy red tomatoes, slivers of sweet carrots, cool curls of cucumber and the zestiest of onions, all caressed by a smooth vinaigrette of luscious Andros papaya.

This is dining the BAMSI way!

These two Andros-infused starters balanced out the entrées of roasted turkey with seafood stuffing and cranberry sauce, island style baked ham with sweet potatoes, and roasted vegetables.

Proprietor of the West Bay Street eatery Frederick Lightbourn was excited about the opportunity to have fresh produce on his menu. The addition of BAMSI's fare to his kitchen – lettuce, cucumber, butternut squash and papaya – means that he is able to say, like the fish he brings to the table on a daily basis, that his guests dine on the freshest fare available on the island.

"It's great produce! Anything picked fresh today as opposed to being picked weeks ago in another country to sit on a shelf then get on a truck and be driven to another location to sit on a boat before it arrives here, will be better. And because they are picked younger there's no time for them to develop full flavor. The produce comes in super fresh from BAMSI and it's a far better product."

BAMSI Chairman Stephen Turnquest said part of the Institute's focus is bringing to market the best quality

items possible not only for the Bahamian public to enjoy from a taste perspective, but that will also support a healthy lifestyle. He noted that produce coming out of BAMSI's research and tutorial farm, its aquaponics centre and through its agricultural partners in Andros, have been grown using best practices inclusive of planting methods, irrigation and fertilization and post-harvest procedures to ensure the produce arrives in the best condition offering the highest quality nutrients and vitamins for the consumer.country by enlarging the agricultural community.

"BAMSI's goal has always been, in addition to driving down food imports into the country by enlarging the agricultural community, the goal has always been to grow the right variety of produce under the right conditions to bring about the richest possible harvest. And as a result of this focus, we've been able to make inroads in the Bahamian market – partnering with the top wholesale and retail grocers and now making connections with the best restaurants in New Providence," Mr. Turnquest said.

# BAMSI Host Professional Developmental Workshop for Agriculture Teachers.



As part of its mandate to encourage an interest in the agriculture sector and to showcase entrepreneurial opportunities, BAMSI, along with the Ministry of Education, hosted a four-day Professional Development Workshop - 'STEM in Aquaponics' for agriculture teachers at Stapledon Primary School during the month of August.

Overseen by BAMSI's National Youth Development Officer Ezralee Rolle, the objective of the seminar was to showcase how aquaponics can be used as an educational tool in the classroom. The seminar took teachers from engineering an aquaponics unit to understanding the relationship between aquaponics and STEM to field trips where they saw theory put in to action.

Ms. Rolle was joined by BAMSI team members and Agricultural Development Officers
Travone Pinder, Keith Treco,
Montez Hopkins and Education Officer for the Ministry of
Education Patrice-White-Green.

While day one of the Professional Development Seminar was used to introduce participants to the BAMSI Institute and also the science of agriculture, day two had teachers getting a tour of Stapledon Primary School's aquaponics acility. The third day of BAMSI's Professional Development Workshop on STEM in gave participants the opportunity to review a sample aquaponics system before creating one of their own, including testing the pH of the soil. They also engaged in a 'funtivity' where they worked in groups to design their own aquaponics systems using Legos. This is an example of an activity that they can be use in the classroom to engage with students to pique their interest in agriculture.

Day four of the seminar included a visit to Tropic Seafoods. While there, they saw the processing plant and explained the grading system for imported seafoods. At the end of the Workshop the agriculture teachers received certificates of participation.

#### **Aquaponics Summer Programme**



Agriculture and Marine Resources
Minister Michael Pintard recently urged
participants in BAMSI's first
Ag-Quaponics Summer Discovery
Program to embrace the spirit of
enterprise they gained having
successful constructed a model
aquaponics system and to use that positive energy to facilitate their dreams and
aspirations whether they are related to
the field of agriculture or not.

He urged the students to use all of the knowledge they gained during the four-week program held at R.M. Bailey Senior High School, not just the technical aspects, but the ability to analyse, problem solve, create and work successfully within a team, to improve their surroundings and add value to whatever career path they choose.

Mr Pintard also pointed out the importance of networking and connecting with other professionals and experts to help them achieve their goals and entrepreneurial ventures.

The summer program, launched in a bid to to explore the link between STEM and agriculture, and awaken a spirit of curiosity and creativity

that often translates into a successful entrepreneurial venture, was an initiative that brought together the Bahamas Agriculture and Marine Science Institute (BAMSI), the Ministry of Agriculture and Marine Resources, the Department of Cooperatives and the Ministry of Education. The program was also held in Grand Bahama and Andros.

Ezralee Rolle, National Youth Development Officer for BAMSI and point person for the project, said "the aim of this program is to establish a wider reach with our country's young people. We want to spark their interests in the

agricultural and marine science fields in order to build the capacity we have for agriculture as a nation".



Ms Rolle also touched on the launch of the initiative, its impact for BAMSI, and its possible influence on sustainability in the Bahamas. She noted that as the need for a more educated workforce in the agriculture sector arises, and with more opportunities for agri-preneurs, the summer program aimed to introduce students to the new and emerging climate-smart agricultural technologies that are now available throughout the sector.



Some five New Providence Schools were represented during the four-week program; C. V. Bethel Senior High School, Anatol Rogers Senior High, C. I. Gibson Senior High School,

Government High School and Jordan Prince Williams Baptist School. In Andros, students from the Huntley Christie High School and recent graduates also participated, as well as students in Grand Bahama. In total, approximately 60 young people made the decision to sign up for the BAMSI's Summer Discovery program, which would prove to significantly impact their lives.

According to Ms Rolle, the long-term goal for BAMSI is to host the program on an annual basis, with the focus areas changing each year. For the pilot run, the focus was on aquaponics which is a technological system that supports integrated aquaculture and vegetable production by combining recirculating aquaculture systems (RAS) and hydroponics. Next year's area of specification is slated to be greenhouse technology.

#### University of OZARKS visits BAMSI



As part of its expanding relationship with the University of the Ozarks, the Bahamas Agriculture and Marine Science Institute (BAMSI) was pleased to have three professors from the Arkansas-based school visit the Bahamas to share their expertise through a week-long series of workshops at BAMSI's North Andros campus.

Stephen Turnquest, Chairman of BAMSI, said the partnership between the Institute and the University of the Ozarks is a reflection of BAMSI's commitment to providing the richest possible academic experience for its students, alumni, faculty and staff. "The three faculty workshops being put on are an incredible opportunity for our Bahamian students to be exposed to a wealth of information. They will have access to new research data and technologies, experience different teaching methods, and gain greater insight into what it might feel like to attend university abroad."

Mr. Turnquest said BAMSI's core objective is to be the college of choice for Bahamian and students across the region in the areas of agriculture and marine science.



By linking with universities and institutions of higher learning who offer specialized and advanced programs in the area of agriculture widens BAMSI's reach and solidifies its position in the academic arena.

The venture is in conjunction with the University's 2018 agreement with BAMSI that facilitates student and faculty exchange and other academic collaborations between the two institutions.

The trip is also supported by the Dr. Helen McElree Faculty
Enrichment Fund that was established in 2016 by McElree, an Ozarks alumna and longtime biology professor who is an honorary lifetime member of the University's Board of Trustees. The fund was created to enrich the academic culture at Ozarks and to support faculty scholarly and creative activities.

Dr. Raveenia RobertsHanna, executive director of BAMSI, visited Ozarks in November and met with University President Richard Dunsworth as well as faculty, staff and students to discuss possible teaching and learning opportunities for faculty and students from both places.

"University of the Ozarks has a strong relationship with BAMSI and the Bahamas and I am thrilled that our faculty from diverse disciplines will be presenting workshops and will be immersed in the unique island culture of Andros, said U of O Provost Dr. Alyson Gill. "I am grateful to Dr. Roberts-Hanna for offering this opportunity to our faculty for their students and the community, and am looking forward tocontinued shared projects as we grow our relationship with BAMSI."

Dr. Warren Sconiers, assistant professor of biology; Dr. Allison Freed, assistant professor of education/science education and director of the Pat Walker Teacher Education Program; and Dr. Yassine Dguidegue, assistant professor of sociology; each presented a seven-day workshop in their respective disciplines at BAMSI, an academic institute and demonstration farm on the largest Bahamian island of Andros.

Sconiers presented workshops, Q&A sessions and lectures on agricultural pest management, biodiversity of insects and terrestrial arthropods and experimental design and application of biological research. "We explored careers in entomology, agricultural research and industry, and helped participants find resources to learn more," Sconiers said.





University of Ozarks officers meet with the Ministry of Education staff.



Freed worked with a number of audiences, including faculty and students at BAMSI, the local community, children and in-service teachers on the island of Andros. "The focus of my presentations were on effective teaching practices, science teaching and learning and environmental education," Freed said.



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#### **BAMSI Hosts Free Virtual Education Series**







AS BAHAMIANS began to navigate their way forward under the gaze of COVID-19, facing what was certain to be a new normal, many were looking to take advantage of the 'shelter-in-place' protocols by learning new skills both as a way of enjoying themselves and also as a potentially new source of income. Riding this wave of industriousness right alongside them, the Bahamas Agriculture and Marine Science Institute (BAMSI) rolled out a free lecture series that covered a diverse range of topics.

Throughout May and June, BAMSI's academic arm hosted its Free Virtual Educational Series to help people tap into their best, and most creative selves.

The virtual education series expanded on BAMSI's agriculture and marine-related focus, covering an eclectic array of topics including Art and the Environment, Food Security, Bush Tea DIY Activity Kits and Bahama Butterflies DIY Activity Kits and Aquaponics. The series was enjoyed by anyone with internet access, and participants were able to register for one or more classes.

Dr Raveenia Roberts-Hanna,
BAMSI's executive director, said the
decision to launch the series, which
included two sessions on job
readiness, was made to help
Bahamians begin to think about how
they can forge a better path for
themselves in a post COVID-19
environment. "This is one of the
ways BAMSI is giving back and
contributing to the positive wellbeing
of our community even as we face an
uncertain future.

Imagine taking an hour or two once a week to learn something that brings joy and educational empowerment, that strengthens your vision for a brighter future, and that helps you feel more enriched – that holds incredible value and BAMSI is excited to help participants begin that journey."

While the lecture series is an end in itself, the hope is also that individuals will be inspired to seek further training and education through the Institute's certificate and degree programs. BAMSI's Fall semester is slated to begin in September,

included two sessions on job readiness, was made to help Bahamians begin to think about how they can forge a better path for themselves in a post COVID-19 environment. "This is one of the ways BAMSI is giving back and contributing to the positive wellbeing of our community even as we face an uncertain future. Imagine taking an hour or two once a week to learn something that brings joy and educational empowerment, that strengthens your vision for a brighter future, and that helps you feel more enriched - that holds incredible value and BAMSI is excited to help participants begin that journey."

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While many companies are trying to find their footing in this new marketplace, BAMSI is poised to be a change agent for a country that is looking to shore up its food security at both the commercial and community levels. As the world grapples with the corona virus, and countries turn inward to protect their citizens, the question of food security has never been more foremost in the minds of Bahamians. Through its farm in North Andros and growing partnerships with farmers across the country, BAMSI is on the front line, helping to secure the supply of fresh produce to Bahamians

# BAMSI's new chairman hits the ground running



Mr. Stephen Turnquest

### CONGRATULATIONS

### **GRADUATING CLASS OF 2020!**



Oscar Riley



Leadership Award for BTC



Maleka Cleare
Leadership Award for Glee





**Hubert Fernander** 

Leadership Award for Athletics



**Paul Whymns** 



**Jewelene Missick** 



Angelique Rolle
Leadership Award for BTC

Pg 13 BAMSI Bluehole

# CONGRATULATIONS GRADUATING CLASS OF 2020!



Eliana Burrows
Leadership Award for Eco Warriors



**Deisha Johnson**Leadership Award for Circle K



**Desmond Theophilus** 



Tatyanna Lockhart
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