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ABSTRACTS

(Student Submissions)

Factors Affecting the Utilization and Awareness of Local Foods in the Bahamas

Latrell Russell, Cyrilia Thompson, Ashleigh Culmer, Marcelite Smith, Iesha Carey, Danielle Hutchison, Krischa Mather, James Seymour and Wantinese Smith

The University of the Bahamas

In most Caribbean countries the need for an increase in the utilization of local foods is prevalent. Due to modernization, the rates at which goods are imported to developing countries are rapidly increasing and are expected to continue that trend in the future. The objective of this study is to investigate the mindset of the public which most commonly leads to low utilization, accessibility and identification of locally produced fruits, vegetables and foodstuff in the Caribbean with a focus on the island of New Providence, Bahamas. This study reveals the Bahamian public's positive attitude toward purchasing locally grown fruits and vegetables and attempts to raise awareness on the importance of supporting local produce and agriculture to reduce the negative trade balance in The Bahamas.

Export/import rates and current agricultural structure and norms are analyzed and investigations are made on various factors that can be a reason for possible successes and failures in regards to the utilization of local foods. Two surveys of convenience were made and issued anonymously amongst 246 surveyors (survey set one) and 256 surveyors (survey set two) to aid in the investigation. It was found that various factors such as transportation, convenience, ignorance/unawareness of the availability of local foods, education and land were the primary obstacles hindering local produce expenditure. Suggestions were then made to achieve the objective of improving Caribbean food and nutrition through increased utilization of local foods.

***Keywords**: Local Produce, Nutrition, Import, Export, Agriculture, Economics*

The Effects of Hurricanes on Farm Productivity and Food Security in the Bahamas

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Environmental challenges are major threats to a country's ability to produce enough food. With hurricanes being a major environmental challenge for The Bahamas (Komolafe, 2016), this paper examined the effects of past hurricanes on farm productivity in The Bahamas, and how they can threaten the country's ability to achieve food security. It was hypothesized that hurricane Matthew would have affected most farmers, reducing crop yield, and damaging essential farm resources, but despite the damages, repair would be possible. Through the employment of a questionnaire, a list of farmers was gathered from the islands of New Providence, Cat Island, Grand Bahama, Long Island, and Eleuthera. Participants in the study were chosen based on the types of crops they grew (i.e. tomatoes and tubers) for an easier recall of crop yield, and willingness to participate in the study. 17 farmers were willing to participate and were interviewed based on demographics, farming experience, hurricane effects, land degradation, and food security.

Based on the responses, 100% of farmers suffered from at least one of the previous hurricanes, mostly hurricane Matthew, and the majority of the damages were categorized as structural, wind, and water damage, and crop and livestock loss. 82.4% of farmers were unable to provide protection for their crops, and 94.1% believed hurricanes reduce the country's capability of securing sufficient food. In relation to food security, 100% of farmers were willing to assist The Bahamas in producing enough food under specified conditions. All farmers suggested the need for alternative farming methods (e.g. greenhouse, aquaponics, hydroponics, etc.) to control and adapt to the effects of hurricanes on farms. A collaborative effort of large-scale alternative farming methods, an available market for locally produce foods, and a control on import are potential avenues for The Bahamas' ability to produce enough food to feed the country.

Keywords: *Hurricanes; Bahamas; Land Degradation; Environmental Challenges; Food Security*

How to Enhance the Availability of Local Fruits and Vegetables in New Providence

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Locally grown refers to food and other agricultural products that are grown or produced, processed and then sold within a certain area (Chait, 2017). For the purpose of this project, local produce shall refer to fruits and vegetables grown within the expanse of The Bahama Islands encompassing all 5,382 sq. miles of land. The main focus of this study was to investigate the factors, which most commonly lead to low accessibility and identification of locally grown fruits and vegetables in New Providence and to reveal the Bahamian public's attitude towards purchasing locally grown fruits and vegetables. Convenient selections of 246 people were surveyed with questions about their fruit and vegetable purchases and selection.

Sixty-three percent of the surveyed said they were willing to pay more for local fruits and vegetables rather than imported, while 100% of the respondents said they wanted a local fruit and vegetable market in their neighborhoods. When asked why they did not purchase fruits and vegetables from local producers, 70% responded with answers related to the convenience of such fruits and vegetables. Convenience and availability are two significant factors that determine whether or not people will purchase local fruits and vegetables.

Awareness also plays a role, being that, most food stores do not clearly label which fruits and vegetables are local grown, leaving consumers uninformed of whether they are purchasing imported fruits and vegetables or those locally grown. Based on the results, local produce markets should be placed in more areas to improve ease of access for Bahamians, as well as, food stores should clearly label those produce that are grown locally.

Keywords: *Local, Fruits, Vegetables, The Bahamas, Agriculture*

Case Study: The Potential Use and Substitution of Locally Grown Produce into Meals Prepared By Lunch Vendors of a High School in New Providence

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In The Bahamas, the farming industry has been and continues to be a source of employment for many residents. Currently, The Bahamas possesses an active import and export system, which constitutes the major means of securing goods and products for public consumption. While import restrictions are essentially non-existent, exports consist mainly of grapefruits, limes, okra, papaya, pineapples, and avocado (TheBahamasGuide, 2017). In the Bahamas, like many other places in the world, school students rarely have their lunches prepared at home. Instead, lunches are purchased from contracted lunch vendors, who typically prepare meals using imported goods. Hence, it was hypothesized that, by utilizing or substituting locally grown produce, rather than imported goods, in meals prepared for student consumption; agricultural development will be enhanced indirectly, by increasing student health, through the production of meals saturated with locally grown vegetables; obtained from local school agricultural programs.

This study encompasses information obtained from interviews of individuals such as lunch vendors and school agricultural program teachers, who deal directly with students. The interviews gave rise to pertinent information, which allowed for a cost analysis to be completed, to determine the costs needed by each party to either produce crops or purchase crops. The cost analyses, collectively indicated the many advantages, for lunch vendors to use local produce to prepare lunches from the school's agricultural program. This research found that by utilizing the crops produced by the schools and including more vegetables in meals, students received more balanced meals and increased their overall daily vegetable consumption by at least (50%) fifty percent. In addition, lunch vendors would be able to reduce the number of funds spent on food items, which would cut the cost of food items for meal preparation. Alternatively, profits would also increase for vendors, while ensuring more balanced meals for students.

Keywords: *The Bahamas, Agriculture, Lunch-Vendors, Case Study.*

Implication of Marketing Strategies to Increase Local Agriculture Support in the Bahamian College Community

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Agriculture is an industry that is becoming more prominent, noted by the rise in agricultural programs in schools and the attention and funding contributed to partakers of this industry (The Bahamas Guide). Although efforts are being made by the Bahamian government and various schools to promote local food production, based on interactions with other colleagues it was hypothesized that a vast number of students are unaware of the available sources of locally grown foods in The Bahamas. Hence, this study seeks to research the various marketing strategies currently employed by local farmers, discover the crux of the seemingly low interest in local food consumption within the college community, and to employ other strategies to determine the most effective means of attracting college students to consume local foods. An initial survey was conducted which discovered the prior knowledge students had of local food production and to obtain opinions on various marketing strategies (i.e. internet/social media advertisements, visual media (flyers and banners), word of mouth, live/physical displays).

This survey confirmed the initial hypothesis, for approximately 63% of the 150 students surveyed were unaware of specific outlets for local foods. Furthermore, the survey unveiled an outstanding preference for advertisements which were posted via the internet or social media, for a total of 82% of the 150 students surveyed preferred electronic advertisements, with physical media only obtaining 16%. However when these marketing strategies were employed at an exhibition, students responded the most to the live display of samples and visual media, for 20.87% of students visited the display for the brightly colored banners whilst 20% of the students visited because of available samples of prepared dishes. Based on the research performed, it can be concluded that physical representation along with attractive displays are the best means to market local foods within the Bahamian college community.

***Keywords**: The Bahamas, Marketing, Local Food, Agriculture, College*

The Evolution in Banana Farming in Regards to Innovations in Production and Marketing on The Islands of Abaco, Eleuthera, and Grand Bahama

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The purpose of this paper is to trace the evolution in domestic banana farming in regards to innovations in production and marketing on the islands of Abaco, Eleuthera, and Grand Bahama. The origin of bananas based on Mr. John Soluri's research on banana culture, is Malaysia then it was transported to India, the Philippines, Africa, The Americas and then the New World by European voyagers in 1492. This study encompasses extensive literature about innovations in banana farming and informal discussions with experienced banana farmers. The introduction of pesticides on banana crops is an example of an innovation that was created to reduce the loss of crops due to insects. Products such as beans, maize, wheat, barley, vegetables and fruits, especially bananas, are known to have rigorous amounts of pesticides applied to them; producers apply 85 % of the global consumption of pesticides on these crops (Ekström and Ekbom 2011).

All three farmers were asked to participate in a survey based on their personal knowledge of banana farming, production, marketing and personal innovations on the islands of Wood Cay, Abaco, Harbour Island, Eleuthera and Eight Mile Rock, Grand Bahama. All the farmers stated that no form of pesticides were used on their banana crops. Whereas, many of the production techniques and innovations used today, were passed down through generation to generation. During hurricane season, all the farmers would cut several long pieces of wood to hold the banana trees up as support. One farmer had a unique innovation of cutting the roots from a banana tree once it had fallen and then replanting the roots 18 inches deep to minimize crop lost due to natural disasters. The banana market according to all the farmers has decreased over the years due to consumers believing that the consumption of bananas on a regular basis could affect their health.

***Keywords**: Innovations, Banana, Agriculture, Production, Marketing*