

## **GUYANA INNOVATION PRIZE: 2019-20 VENTURE FELLOWS**

### **Medeba Uzzi**

University of Guyana

Faculty, Natural Sciences, 1999

Research Idea (still in the lab)

#### **Additional Team Members**

Jason Herbert

#### **Research Area: Materials Science**

#### **Research Title: Production of a Low-cost Textured Finish for Buildings in Guyana**

Local production of textured finishes for the protection of buildings. Most products of this nature are imported and therefore are quite expensive. It is possible to produce this product locally and therefore sell at a lower market price. Many property owners are turning towards the use of this product for the finishing of their buildings due to its longevity. The components in textured finishes are more resistant to fading and to the growth of mold than the components of paint. The product is easy to clean and provides a more aesthetic finish.

### **Ottey Moore**

University of Guyana

Alumni, Agriculture and Forestry, 2018

Research Idea (still in the lab)

#### **Research Area: Technology**

#### **Research Title: Screening botanical extracts for the management of red palm mites**

This research aids to identify botanical extracts that can be used to control red palm since there is little research specifically for red palm mite published. With this technology, farmers can adopt it and move away from using chemicals. The present chemicals that are being used to control red palm mite pose many health risks.

### **Lawrence Lewis**

#### **On behalf of the University of Guyana, School of Agriculture and Forestry Faculty**

Research Idea: Startup (incorporated but no or limited revenue)

Research Area: Technology

#### **Research Name: Potting Soil Production**

Initial production of biochar from various feedstocks, followed by incorporation of different soil textures to produce various grades of potting soil. These combinations will then be assessed to determine seedling performance in the individual mixtures. At the completion of the research phase the product(s) will be offered for sale.

**Tandika Harry**

University of Guyana

Alumni, Agriculture and Forestry, 2017

Research Idea (still in the lab)

**Additional Team Members:**

Donna Morrison

**Research Area: Agro-processing****Research Title: Application of Beeswax and Cassava Starch to Extend the Postharvest life of Mangoes**

Guyana produces an abundance of fruits and vegetables for both the local and export markets. Although there has been no study to determine postharvest loss in Guyana, anecdotal evidence suggests that it is high. According to Lashley (1983), worldwide, approximately 30-50% fruits go wasted during postharvest handling, storage, and ripening. Fruits, especially climacteric fruits, with increased respiration during ripening, are highly perishable after harvest with potential high postharvest losses. Losses in terms of quality and quantity of fruits occur at all stages in the postharvest system from harvesting to consumption. There is need to find safe methods to extend the shelf life. Beeswax and Cassava starch are produced in Guyana and are both used to extend the shelf life of fruits and vegetables. Beeswax and Cassava starch composite can extend the postharvest life of mangoes, and, therefore, has potential with other crops.

**Tricia Noble**

University of Guyana

Alumni, Natural Sciences, 2017

Research Idea (still in the lab)

**Research Area: Agro-Processing****Research Title: Natural Flora Perfumes**

Creating perfume using the essential oils from local flora. It involves the extraction and blending of four essential oils to produce a product. The project can be applied in developing the perfume industry in Guyana, which has the potential to become a growing sector.

**Sharlene Roberts**

University of Guyana

Faculty, Natural Sciences, 2006

Startup (incorporated but no or limited revenue)

**Research Area: Agro-Processing****Product Name: Nysha's Homemade No Sugar Ice Cream**

This Research will be based on formulating a Homemade Ice cream with low/No sugar. The Idea is to provide an ice cream that contains an alternative form/source of sugar that can replace cane sugar. Or an ice cream with the same organoleptic properties as regular ice cream that has no added sugar.

## **Lawrence Crawford**

Guyana School of Agriculture  
Alumni, Agriculture and Forestry, 2018  
Startup (incorporated but no or limited revenue)

**Research Area: Agro-Processing**

**Company Name: Nutritive Value Inc.**

"Multi Mix Protein Powder Shake" is, essentially, the extraction of every protein used to make an organic powder for person's looking to go all natural, whether they're in the gym or at home. It's made up of cassava, sweet potato, plantain, eddoes, peanuts, milk, cinnamon spice, and sugar to add taste. All of the ingredients mentioned, except the sugar, were converted to their powder form before deriving the end product.

## **Stacia Mc Donald**

University of Guyana  
Student, Agriculture and Forestry, 2020  
Research Idea (still in the lab)

**Research Area: Agro-Processing**

**Research Name: To Investigate the Potential of a Composite Sweet Potato- Breadfruit Flour Pasta**

The gluten-free products market size was estimated at US\$17.59 billion in 2018 and is anticipated to expand by 9.1% from 2019 to 2025. The aim of this project is to develop a nutritious pasta product using breadfruit and sweet potato flour, and to determine the sensory qualities and nutritional value of composite breadfruit- sweet potato flour pasta. Traditional foods like Cassava, breadfruit and sweet potato have been surpassed by wheat flour. Guyanese are being encouraged to consume more locally produced food crop and decrease dependency on food imports. Two potential crops are breadfruit (*Artocarpus altilis*. L of the Moraceae family) and sweet potato (*Ipomoea batatas* of the Convolvulaceae family). Breadfruit and sweet potato are bulky perishable commodities grown throughout the tropics. Hence value addition and processing will provide a means to expand their use. The breadfruit and sweet potato will be ground into flour, combined with other ingredients kneaded into a dough and placed through a pasta Machine. The pasta will be dehydrated, the sensory qualities and nutritional composition in comparison to wheat brands present on the market. The methodology and ingredients will be flexible until the researcher develop a satisfactory consistency.

## **Stacia Mc Donald**

**On behalf of the Guyana School of Agriculture Agro-Processing Facility**

Research Idea (Operating)  
Research Area: Agro-Processing

**Research Name: Gluten free composite Flours/ GSA FOODS**

The Guyana School of Agriculture has embarked on the production of gluten-free composite flours that is highly nutritious compared to wheat products for the local and export market. These flours will help address the growing issue of wheat intolerance and allergies, as well as provide greater nutritional value compared to wheat. The market share for the product has gradually increased by 2% in 2018 to 5 % thus far in 2019. It is expected to increase to 7% in 2020. The root vegetables that make up the flours are Plantain, Cassava, Eddoe and Sweet Potato.