

INTERNATIONAL DAY FOR BIOLOGICAL DIVERSITY 2015
BARBADOS



INTRODUCTION

International Day for Biological Diversity was observed on May 22, 2015 with the theme “***Biodiversity for Sustainable Development***” being the focus. The theme “***Biodiversity for Sustainable Development***” was chosen to reflect the importance of efforts made at all levels to establish a set of Sustainable Development Goals (SDGs) as part of the United Nations Post-2015 Development Agenda for the period of 2015-2030 and the relevance of biodiversity for the achievement of sustainable development.

ACTIVITIES



Fig 1: Students of the Wesley Hall Infants School listening to the presentation by Dr. Anthony Kennedy

In an effort to highlight the theme and its significance for Barbados, activities were chosen to highlight diversity within island's primary agriculture export, sugar cane, and efforts to improve its contribution to Barbados' sustainable development. In addition to this, other agricultural crops that contribute towards Barbados goals of sustainable development were highlighted, along with methods of increasing their productivity.

The Biodiversity Conservation and Management Section continued its work with the section's adopted schools, Wesley Hall Infants School, Ellerton Primary School, St. Bartholomew Primary School and St. Christopher Primary School.

On each day of tours, students were collected from their schools and transported to the West Indies Central Sugar Cane Breeding Station, where they met with its director, Dr. Anthony Kennedy. Dr. Kennedy conducted tours of the facility, starting with a brief presentation on the history of the breeding station and its purpose. It was explained that the Sugar Cane Breeding Station is over 100 years old and was established under the directorship of John Redman Bovell. He went on to explain that the facility provides its services to a number of countries within the Caribbean, South America, Africa and the Pacific as well as Australia and New Zealand.



Fig 2: Dr. Kennedy presenting to the Students of Wesley Hall Infants School.

Dr. Kennedy took the opportunity to explain the biology of the sugar cane, which is grown on multiple plantations across the island. For many of the students it was the first time that they saw Sugar Cane seeds, which is commonly referred to as 'fuzz' due to its appearance. It was explained that while sugar canes in the field are allowed to 'ratoon', which is the process by which a new crop will regrow from a previously harvest one, sugar cane could also be grown from these seeds. This discovered was made in the late 1800s in the island of Barbados. Prior to this discovered, sugar cane was cultivated from the cuttings of mature plans.

Dr. Kennedy then went on to give the students a very accessible explanation of the basic genetics behind his work. He explained that the breeding station's primary purpose was to collect varieties of sugar cane with different characteristics, from all over the world. The researchers than created new varieties, through breeding, that combined the most desirable traits from different pre-existing varieties. The students were educated on some of the desirable traits, such as resistance to disease, that would be bred into new varieties and undesirable traits such as susceptibility to drought that they selected against in new generations of sugar cane.



Fig 3: Students and teachers of the Wesley Hall Infant School at the Sugar Cane nursery.

The students were then taken down to the plant nursery where they could observe the thousands of new varieties of sugar cane that had been bred by combining the genes of pre-existing strains.



Fig 4: Press coverage of the tours to the Soil Conservation Unit to commemorate the International Day for Biological Diversity.

Next the students were taken to the Soil Conservation Unit, where they were educated on the process of 'grafting'; whereby different varieties of a single species of plant, or even two species within the same genus, could be combined to create a hybrid crop. There, Mr. Leslie Skeete of the Soil Conservation Unit went through the process of grafting one locally grown variety of mango onto the root-stock of another. It was explained that similar to the sugar cane breeding process, grafting is an alternate method of combining the traits from different varieties of the same crop. Mr. Skeete demonstrated this by grafting the 'bud-stock' of a local variety of mango with a highly favorable taste onto the 'root-stock' of a variety with a characteristically robust and resistant root system.

Students were allowed to observe the entire process from the point of gathering the bud-stock right up to the grafting of this bud-stock onto the root-stock. Afterwards, they were shown grafted plants in various stages of development and educated on the correct method for carrying for these plans.

As an added bonus, the students were then shown grafted specimens from two different species of fruit bearing trees. In this case, they were shown grafted trees created from the combination of the local plum and golden apple trees. The students marveled at the trees which were shown to bare two different types of fruit and different times of the year.



Fig 5: One section of the plant propagation facilities of the Soil Conservation Area.

The students were next given a tour of the Soil Conservation Unit's own nursery, where they were introduced to various other crops grown on the compound.

Upon completion of the tours, the students were taken to Farley Hill National Park for lunch and were allowed to enjoy the facility under the supervision of their teachers.

The Activity received coverage on the CBC Evening News which is broadcasted nationwide.