



# **Report On**

**Caribbean Regional Youth Congress  
Youth and Employment/Wealth Creation: Opportunities in Agriculture  
Science and Technology**

**17<sup>th</sup>-19<sup>th</sup> July 2006  
Grand Barbados Beach Resort  
Barbados**

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**Note: For full appendices, please contact CCST at [ccst@niherst.gov.tt](mailto:ccst@niherst.gov.tt)**

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## **1.0 Introduction**

The **Caribbean Regional Youth Congress** on “*Youth and Employment/Wealth Creation: Opportunities in Agriculture, Science, Technology*” was a collaborative effort sponsored by the Technical Centre for Agricultural and Rural Cooperation (CTA) and executed with the assistance of the Caribbean Council for Science and Technology (CCST). This Congress brought together youth leaders and representatives from national, regional and international institutions and civil society who are committed to the promotion and application of Agriculture, Science, Technology and Innovation in meeting social and economic development goals in the Caribbean and more specifically in tapping the potential of science, technology and innovations in agri-food chains thereby creating wealth and employment for youths in the Caribbean. The Congress benefited from the imagination, creativity and innovativeness of youth dovetailed with the experience, guidance and mentorship of the resource persons in seeking solutions to the persistent challenges of employment and wealth creation in the Caribbean.

### **Congress Objectives:**

The overall objective of the Congress was to create awareness among the Caribbean youth on alternative employment opportunities in agriculture, science and technology and sensitize them to possible strategies that can be used to exploit such opportunities.

The Congress had four specific objectives:

- To share experiences in harnessing opportunities in the areas of agriculture, science and technology for employment and wealth creation and build self-reliance of Caribbean youths to innovate and adopt strategies that can be used to exploit opportunities.
- To expose the youth to practical applications of science, technology and innovations that are being used to transform agri-food production, processing and marketing chains.
- To create opportunities for peer-to-peer networking among the Caribbean youth and use this network to popularize science, technology and innovation for socio-economic development in the Caribbean, focusing on the agri-food chain.
- To expose the youth to the Science, Technology and Innovation (ST&I) policy making processes and determine the possible roles and opportunities for ensuring

their involvement so that they can play a greater advocacy role and their concerns can be advanced and adopted.

**The Expected Outcomes were as follows:**

- i. Caribbean youth exposed to wealth creation opportunities in the agricultural sector through greater application of science, technology and innovation.
- ii. Caribbean youth encouraged to tap into existing and emerging technologies for wealth and employment creation through exposure to successes gained from case studies presented on the Caribbean and newly industrialized countries (NICs).
- iii. Caribbean youth committed to promoting the relevance of Science, Technology and Innovation and lobbying for governments, non-governmental organizations and the private sector to be more responsive to supporting youth and their quest to expand opportunities for wealth creation in agriculture through greater application of science, technology and innovation.
- iv. Caribbean youth and youth organizations linked into existing networks such as CCST and NIHERST with the aim of strengthening the youth lobby for more participatory ST&I policy formulation and support for programmes that promote ST&I for socio-economic development in the Caribbean that also benefit youth.
- v. A workshop communiqué that captures all the key resolutions for dissemination in the national media throughout the Caribbean and submission to the relevant government agencies and authorities and representatives of the international community.

The Congress afforded an overview of the outcomes of the regional essay competition based on the topic “Tapping the Potential of Science, Technology and Innovation in Agri-food Chains – Creating Employment & Wealth for Youths in the Caribbean”. It also offered an opportunity to present awards to the competition winners.

The essay competition was designed to explore the following areas:

- critical obstacles facing the youth in the quest for employment and wealth creation in the Caribbean;
- how agriculture, science, technology and innovation can be employed to overcome these obstacles; and
- practical proposals/suggestions on how to tap the potential of agriculture, science, technology and innovation in agri-food chains in the Caribbean.

A number of Caribbean presenters and facilitators were identified and invited to make presentations based on the recommendations of each country’s CCST focal point. Working group sessions were also included for participants to assess real applications.

## **2.0 Day One – 17<sup>th</sup> July 2006**

### **2.1 Opening Ceremony**

Close to 50 persons attended the Opening Ceremony, which was covered by the local media. In his welcome address, Dr. James De Vere Pitt, Vice Chairman of CCST and Director of the National Science and Technology Council (NSTC), expressed pleasure in CCST once again collaborating with the CTA on issues of critical concern to regional development.

He stated that over the last two years, most of CCST's activities focussed on what would be considered the more pressing priority areas for building S&T capability, such as policy development, teacher training for the use of IT in schools, Integrated Water Resources Management, and indicators of S&T capacity and development. The CCST also focused on cross-cutting development issues, through science education, science popularization and public awareness programmes, which put the spotlight on innovation, the preservation of the environment, disaster prevention and mitigation, and cutting-edge technologies like biotechnology.

Dr. Pitt expressed that CCST biggest challenge remains to persuade the region's political leaders to truly give Science, Technology and Innovation their rightful place on the regional planning and development agenda, to ensure the long-term impact for sustainable development.

Ms. Judith Ann Francis, Senior Programme Coordinator, Science and Technology Strategies, of the Technical Centre for Agricultural and Rural Cooperation ACP-EU (CTA), in The Netherlands, on behalf, of CTA Director, Dr. Hansjörg Neun and the management and staff of CTA, signalled that the Centre had very high expectations of this Caribbean wide Regional Youth Congress on "Youth and Employment / Wealth Creation: Opportunities in Agriculture, Science and Technology".

Ms. Francis emphasized that the CTA was pleased to be associated with the Youth Congress, having played a role in bringing policy makers, scientists and engineers, farmers and other agri-entrepreneurs, education experts and other interest groups to deliberate on ST&I issues which can set the stage for ensuring greater involvement of the youth in realizing their own potential.

Senator The Honourable Lynette Eastmond, Minister of Commerce, Consumer Affairs and Business Development, in Barbados in her feature address, challenged the Congress to develop an action plan for pursuing the next great mission for creating wealth in the Caribbean through the application of science and technology.

Mrs. Maureen Manchouck, President of NIHERST and Secretary of the CCST in her vote of thanks, highlighted the vital importance of collaboration and partnerships for accomplishing regional goals, given the severe constraint of limited resources. In addition

to expressing her gratitude, she announced that the Congress should be a concrete reminder that collaboration is the only way that events on a large scale are ever successfully staged.

## **2.2 Keynote Presentation: The Role of Science and Technology in Agricultural Development & Employment Creation.**

Mr. Lennox Chandler, Director of the National Council for Science and Technology of Barbados expressed delight in making his presentation noting his strong background in Agriculture.

Among the discussion points were:

- Commercial agriculture may disappear in the Caribbean as the people are losing interest in this area. Caribbean people prefer imported fruits and vegetables. If food is not imported in Barbados, the people will suffer, as there are few agricultural resources to sustain food security.
- Youth may not want to pursue agricultural sciences due to the stigma that; “Students who usually chose agriculture were people who were not academically inclined to other sciences such as chemistry and physics but were still interested in sciences”.
- The Government of Barbados has not paid much attention to developing youth in agriculture. It used to be a priority area in the past, with provision of scholarships, etc. now it is being neglected for other areas such as tourism. With the boom of the tourism industry resources such as land, which is required for implementation and practice of agriculture were reallocated.
- Barbados and other countries in the region are faced with the same problems. Government has not played a vital role in educating communities on the important role of agriculture in the development of a country. This has allowed indigenous crops to die out. There is a need for youth to come together, be proactive and voice their opinions to country leaders. There is also a need to capitalise on concerns and careers involved in agriculture. Youth need to come up with an action plan.
- In Grenada, poultry farmers import a high percentage of chicks. This has implications for the importation of diseases e.g. bird flu. Pharmaceuticals companies and universities can consider focusing their research on using indigenous species to find cures or reduce risks. For example, ‘yard fowl’ is suitable for both high meat productivity and high resistance to diseases. Grenada could look into breeding this species. Caribbean citizens need to come together to educate and innovate in agriculture. There are however insufficient qualified specialists dedicated to educating youth on science and technology related issues.
- People in developed countries have their own concerns and while they are willing to assist, Caribbean people need to act in their own interest. We need to open our minds and move beyond thinking ‘agriculture is a secondary science’. Agriculture takes place in even the most developed countries.
- Within the Caribbean, people who have pursued further education in agriculture and science in general have problems obtaining jobs in their home countries. New

programmes need to be created to provide employment for trained nationals. Platforms should be made available for youth leaders and interested individuals to lobby for agricultural policies.

- Have we explored what we can do for ourselves? We need to combine science and technology to combat problems we face.
- We should not rely on external resources all the time.
- The leaders need to be empowered and empower the region to act. Those involved in agriculture need to be more assertive.
- Innovation cannot be taught. We are all innovators or can be. It is suggested that a note be made of every idea that may pass through your mind or solutions to any problem that you may come across. Innovations stem from creative ideas to improve something. Youth need to develop confidence for developing and promoting their ideas.
- Several Barbadian youth have innovations but prefer to keep them secret, for the fear of being ridiculed. Innovative projects should be incorporated into the school curriculum instead of all the theoretical work.
- The Organisation of the American States (OAS) in conjunction with the National Institute of Higher Education Research, Science, and Technology (NIHERST) is conducting a regional “Go Creative” project over the next two years, which will entail a final regional innovation competition.
- Each country needs to develop its human potential to focus on the main problems and development issues. It is difficult to compare one country with another. We need to develop our own innovations in agriculture, science and technology.

### **2.3 Agriculture, Science Technology and Innovation for Employment and Wealth Creation**

This session was chaired by Ms. Judith Ephraim who invited presentations from Dominica, Jamaica and Cuba before breaking up the Congress into working groups. Ms. Aminah Mason of the National Association of Youth in Agriculture in Dominica led the country presentations on the Opportunities for Youth in Agriculture. She reported that Dominica is historically known for its agricultural production and that the average age of farmers is approximately 55 years and over. The need for injection of youthful talents led to initiation of two specific projects by Ministry of Agriculture (i) National Association of Youth in Agriculture (NAYA) and (ii) Dominica Youth Environment Organization. (See appendix 3 for more details).

Participants were curious if after the introduction of these programmes, there was an increase in the number of people going into agriculture. Ms. Mason responded that there are presently 92 members and Dominica is seeking to get more people involved.

A discussion began on agriculture being compulsory in schools. Participants gave the following views:

- If not compulsory, then it should be interwoven into the school curriculum. This would encourage youth to consider it an official science and later consider it for tertiary education.

- It may not be compulsory but at least, it should be made mainstream.
- Agriculture is being lost in part due to the stigma that it is a dirty profession because it requires working with soil and the perception that it is laborious. Making it compulsory on the secondary school curriculum would allow people to view its different aspects.
- We should focus on de-stigmatising agriculture. Making it compulsory is not the answer. For instance, mathematics is a compulsory subject with a very high failure rate.
- Making it compulsory is a big step. Instead we should put the focus on agriculture as a mainstream science subject or introduce it as an after school project for students to partake.
- In Bahamas, before 1992, agriculture used to be taught at the primary, secondary and tertiary level. It was removed and now its importance is being realized. Its reintegration into parts of the school curriculum is now being encouraged.
- A more acceptable way of integrating it into the schools is by incorporating it into sciences such as biology and chemistry.

Dr. Lois Morgan of the Natural Preservation Foundation and Jamaica Young Scientists Forum presented on Plant Diversity in Jamaica: Sustainability, Conservation and Preservation. (See appendix 4 for more details).

Ms. Dayamy Gonzalez Cruz, the Official for Human Resources, of the Ministry of Science, Technology and Environment, in Cuba delivered her presentation on Youth and Employment: Opportunities in Agriculture, Science, Technology and Innovation in Cuba. In Cuba, young scientists in the agricultural field can find employment opportunities in 22 research and development centres and 11 networks located throughout the country, whose main mission are focused on Agriculture.

Participants were divided into three groups and each group had to answer questions on “Predict the Future of Agriculture and Agricultural Education in Caribbean Countries/ Matching Demand and Expectations” based on a list of set questions (see appendix 6 for template). Each group had to select a chairman and rapporteur to discuss and complete the answers to the questions. The groups worked for a little less than three hours on their assignments, which were reported in Congress session the next day.

### **3.0 Day Two – 18<sup>th</sup> July 2006**

#### **3.1 Agricultural Science, Technology & Innovation – Youth Programmes in the Caribbean**

Mr. Orane Savage of the Scientific Research Council, Jamaica was this session chair, which started with the working group reports. Each group had fifteen minutes to report and five minutes to answer questions. Group one reported that the role of youth in agriculture should be informed of the developments in agriculture and use this knowledge to influence innovative approaches to agriculture. The group also reported on the importance of youth to youth education, organizing groups that can lobby for effective agriculture policies, and devising creative ways of information sharing.

Group one identified agricultural scholarships, job availability, highlighting innovations and the technological view of agriculture as interventions to attract students to science and agriculture.

Participants found that a major issue that is commonly over-looked is the manual procedures in which fruits and vegetables are handled. Bruising of fruits and vegetables is a factor in degrading the quality of the product by changes in texture and taste. This could be prevented by careful post-harvest procedures. Improvements in agriculture are sometimes compounded by politics. Youth need to ensure that their voices are heard and their groups and networks are kept strong. Exchange programmes e.g. a forestry programme based in Guyana due to its large area of forest, may be a viable idea.

Group two strongly believed that there is a need to improve the quality and relevance of agriculture and science education. Strategies that they proposed were:

- Revise curriculum for school
- Make Agriculture Science more attractive – more ICT approach
- De-stigmatize ‘Traditional’ mind-set toward agriculture through public awareness programmes.
- Mount public awareness campaigns - Fairs, festivals, competitions

Group three stated that the perception of agriculture was the major change needed in the Caribbean agricultural sector. Other changes needed include consistency in quality and supply, standards and production of by-products instead of exporting raw commodities. When individuals hear the word ‘agriculture’ they get the preconceived idea that it only involves use of rudimentary tools and equipment - fork, hoe, dirt and labour work with low pay. Much is needed to remove the stigma surrounding this science. Technical changes are needed as well, which would reduce manual work and interest younger individuals.

Most trade agreements are based on consistency; non-consistency would result in loss of this agreement. Consistency could be rectified by the introduction of greenhouses; this

enables a farmer to more closely monitor a crop and maintain a steady environment for a constant crop production. Standards and government certification can boost product production and export benefits.

Production of by-products from exported products; raw material can be utilized in local manufacturing by establishing facilities, instead of exporting. Local value added products can be produced thus increasing export value and income. Examples were given from the sugar and banana industry and Black Belly sheep.

Black belly sheep's skin is worth approximately 150% the value of the meat from the same animal. Rugs, sheets and coats can be manufactured from the skin for export and local benefit. Sugar cane by-products can be used to produce ethanol, sweets, confectionary products, etc. Banana shoe polish is also being researched as well.

Group three considered that youth have the biggest role in sustaining agriculture. In a few years they would be the ones leading Caribbean countries. Their role is to come up with or conceptualise new methods of cultivating the land and of rearing livestock. They can also be pioneers in carrying out changes mentioned previously. Youth are also more inclined to change as opposed to older individuals who are a bit reluctant to accepting new methods and ideas.

Mr. Dwayne Mitchell, an Entrepreneur from Grenada, began the day's presentations with "Agriculture, Youth and Grenada's Development". He defined agriculture as a business venture. Mr. Mitchell then proceeded to answer five questions - what, why, who, when and how. Mr. Mitchell stated that the youth not getting involved in agriculture was Grenada's major problem.

In Who?, he examined whether the young farmers /entrepreneur has the drive and talent needed for success in this chosen field. Careful scrutinizing of the characteristics needed to succeed, the level of articulation, and hands on and technical proficiency are needed. The How identified how the problem can be solved (See appendix 9 for more details).

Ms. Margarita Samsoukar, representing the Ministry of Agriculture, delivered a presentation on the Youth Programs in Agriculture in Trinidad and Tobago. A review of agriculture in Trinidad showed that the farming population was aging; few youth were attracted to agriculture. Recognizing this need, the Ministry of Agriculture conducted two agriculture-based youth programmes – 4H / Young Farmers' Club Programme and Youth Apprenticeship Programme in Agriculture (YAPA). After graduating from these programmes many youth who were employed by farmers, have become farmers of either livestock or crop production, manage farms for relatives, earn income by doing food preservation projects, are employed in landscape management or are pursuing further studies in agriculture.

### **3.2 Creating the Environment for Science, Technology & Innovation for Employment and Wealth Creation**

Ms. Gitanjali Chandarpal of the Institute of Applied Science & Technology in Guyana chaired this session. Mr. Thomas Jackson, Department of Agriculture, St. Kitts-Nevis delivered his presentation on Alternative Opportunities in Agriculture in St. Kitts-Nevis. He pointed out that the contribution of the agricultural sector in St. Kitts and Nevis to GDP during the period 2000 to 2004 increased from 2.74% to 3.15%. This has mainly resulted from an increase in non-sugar agriculture. However, the federation has continued to import over 75% of its annual food consumption with importation during 2003 estimated at EC \$72.3 M. The Department of Agriculture is responsible for the development of non-sugar agriculture in St. Kitts and provides a wide range of services as well as technical support to the agricultural sector.

The “**Project Strong**” commenced in 2000. The objectives of the project are to provide entrepreneurial skills to students who fail to finish secondary school. The long-term objective is to make young people self-employed. From the project students were able to benefit from a wide range of courses. The Project continues to be financed by grants from the government and by private enterprises. This project also has a job attachment programme. (For more details see appendix 11)

Ms. Cindy Eugene of St. Lucia provided an insight into the Employment Opportunities for Youth in Agriculture in St. Lucia. She stated that the youth in Agriculture Programme is an initiative to the Ministry of Agriculture, Forestry and Fisheries under the auspices of the Extension and Advisory Services. It seeks to encourage students and youth to establish and maintain agro-based programmes through packing agriculture as an attractive avenue to provide viable income generating opportunities thus creating and promoting awareness of the importance of agriculture to the economic and developmental facets of St. Lucia.

The opportunities to create wealth in agriculture are always available in St. Lucia. However, one of the fundamental hurdles is accessibility. Below are some of the new initiatives that have been identified as potential remedies if suitably implemented:

- Land Bank Concept – lands will be leased to young farmers through a suitable mechanism. Accessibility to suitable lands for agricultural production is a critical facet in attracting Youth in Agriculture.
- Bio-safety Framework – would require an administrative system, along with persons qualified in certain or related fields, such as Genetic Engineering, Biotechnology etc.
- National Skills Development Centre (NSDC) – the center will develop a certification programme for persons who may not have gained entry at a high school, or persons who may need basic guidance through Agriculture.
- Young Fishers Programme – is designed to encourage young persons to the fishing industry. During a three (3) week training persons are exposed to the various fishing tools, equipment and methods. The training programme entails navigation and safety at

sea along with fish handling and processing techniques. Persons from this training sometimes turn to the hotel industry to gain employment in Water Sports.

Ms. Judith Ann Francis, Senior Programme Coordinator of S&T Strategies, Technical Centre for Agricultural and Rural Cooperation (CTA), The Netherlands, delivered a presentation “*Sharing Knowledge Improving Rural Livelihoods*”. She gave the Congress an insight on the CTA Management Team, the CTA Mandate and Objectives. The Congress also became more aware of the CTA’s role in bridging the knowledge divide and building capacity through producing and disseminating information and promoting dialogue, alliances and organisational strengthening. Youth is a cross cutting issue for the CTA and they are given a voice in charting their course. The CTA continues to overcome many challenges throughout the ACP countries but the youth must show interest in agriculture, science and technology and demonstrate that they are willing to participate in and lead the change process. CTA can then be an equal partner to support their ambitions. (See appendix 13 for more details).

Participants were curious to know what were the criteria to become a CTA partner. Ms. Francis informed the Congress that partners usually comprise public partners, NGOs, consultant firms, etc. To become a partner through a consultant firm, you may visit the website and full out the form. Enquires were made on the existence of a database of scientists and institutions. For institutions, Ms. Francis advised that the youth to visit the CTA S&T web portal – <http://knowledge.cta.int/> but a directory of scientists did not exist. However, links from the various websites to the scientists can be investigated.

### **3.3 Agriculture, Science Technology and Innovation –Generating Wealth**

Mr. Armando Rodriguez Batista, the Advisor to the Minister of Science, Technology and the Environment of Cuba, chaired the following session.

Ms. Maxine Brown of the Caribbean Agricultural Research & Development Institute (CARDI) in Jamaica, delivered her presentation on Farmer Experimentation & Innovation in Jamaica. She also brought to the attention of the Congress, the CTA sponsored project in Jamaica “Enhancing the Science and Technology and Innovation policy dialogue in Jamaica and the wider Caribbean”. The objective was (i) to identify and analyze farmers’ innovations and build partnerships to strengthen the ASTI system in Jamaica, and (ii) to improve the interface between scientists/researchers and farmers and between them and other actors in the ASTI system through the improvement of information exchange and knowledge sharing.

Farmers’ innovations were collected during field visits, reviewed, evaluated and documented. The innovations fell into five categories: tools and equipment, agronomic practices, soil and water conservation, apiculture and other.

The Caribbean Agricultural Research & Development Institute of Jamaica identified the way forward through:

- Intervention of policy makers
- Popularization of farmer experimentation and innovation
  - Publish findings
  - Create network of farmer innovators
- Continuity and sustainability
  - Wider promotion of programme
  - Foster communication among relevant stakeholders

Ms. Gitanjali Chandarpal, Institute of Applied Science & Technology, presented on Applying Science and Technology for Agricultural Growth, Employment and Income Generation in Guyana. Ms. Chandarpal informed participants that the Agricultural Sector is the backbone of Guyana's economy contributing approximately 30 % of GDP. It is also the source of subsistence income for a significant percentage of the population.

The challenge is how to use S&T to develop new opportunities in agriculture through examining success stories from other countries, especially in the region, and modifying them to fit the particular socio-economic-geographic conditions in Guyana.

Key considerations for agricultural development in Guyana were seen as reducing dependence on high cost fuel, improving competitiveness by improving quality and reducing cost of production, and streamlining agriculture to contribute to poverty reduction.

Youth Involvement in Agriculture was foreseen in the following areas:

- Caribbean Exchange Programmes- Creation of regional centers of learning
- Refocus on Science Courses and Programmes in schools and institutions
- Career planning
- Formation of science committees
- Students involvement in R&D for national and private projects
- Make science more interactive and fun
- Students serving as advisers to companies/private sector
- Creation of a Science and Technology Ministry
- Regional journals
- Link economics, science and project management
- Science focus groups

Participants were divided into three groups and each group had to answer questions on "Harnessing Agriculture, Science, Technology and Innovation for Wealth and Employment Creation: Options and Elements of an Action Plan" and "Youth Empowerment and Participation in Policy Making Processes: Elements of an Action Plan" based on a list of set questions (see appendix 16 for template). Each group had to select a chairman and rapporteur to discuss and complete the answers to the list of

questions. The groups worked for a little less than three hours on their assignments, which would be reported in Congress session the next day.

#### **4.0 Day 3 –19<sup>th</sup> July 2006**

##### **4.1 Agricultural Science, Technology & Innovation – The Way Forward for Caribbean Youth**

Ms. Mary Thompson, the Chief Judge, gave an overview of the essay competition. She commended the Youth for taking part in the competition. There were good ideas for furthering the development of agriculture. The methods mentioned for improving productivity were good e.g. cultivation of crops using the greenhouse methods.

However some of the downfalls noted were that some youth did not correctly address the topic. Key words in the title were not clearly defined. There was no mention of the Sea Island cotton in any of the Barbados essays. This is considered the best cotton in the world and utilizing this resource to its maximum potential should have been stressed. The perception of agriculture's impact on the Caribbean was not accurate in some instances. The economic benefits of agriculture should have been stressed despite the history of agriculture being viewed synonymously with slavery. The challenges of allowing agriculture to reach a profitable venture should have been highlighted. Ways of overcoming these challenges such as government subsidies, should have been mentioned

Points were deducted for not abiding by the guidelines; falling under 1,500 words, and not following the theme of the topic.

The Essay Winners were:

- 3<sup>rd</sup> place: Chelsea Fernandez, Bahamas
- 2<sup>nd</sup> place: Mc. Garret Vitalis, St. Lucia
- 1<sup>st</sup> place: Silda James, Antigua & Barbuda

Mr. Orane Savage, Mr. Rolle Roosevelt and Mr. Garret Vitalis Magloire, entrants in the competition were present at the Congress and had the opportunity to read their essays. Mr. Garret Vitalis Magloire in his essay stated that agricultural development could play a critical role in wealth creation, poverty mitigation, and employment generation and also reduce on the rural-urban divide. Caribbean countries need to build on the fact and take note that agriculture is a mainstay and a vital solution in the fight against the plagues of modern society. Development is an ongoing process and to assure sustainability, agriculture must adopt new technologies, science, and innovations.

Mr. John Ronal Darville, the National Youth Ambassador to the Commonwealth of Bahamas, delivered his presentation on Empowering Youth for Job Opportunities in Agriculture, Science and Technology, The Bahamian Way!

Mr. Darville stated that the way forward for the Bahamas was to increase the nation's productive capacity and efficiency. The issues related to achieving sustainable development should be addressed. The ingenuity of the people should be stimulated to devise and implement solutions to technical problems, such as localized flooding and traffic congestion. Certain types of social ills need to be alleviated, and the effects of poverty minimized.

Participants were curious to know what crops were actually grown on the islands of the Bahamas. Mr. Darville pointed out that each island's focus is on different systems of agricultural production. He gave the examples of: Abaco which produces citrus and coffee; Runkey which relies heavily on fishing; mutton farming which is mainly done on Long island; Andros concentrates on cotton production and Nassau on poultry production.

Participants inquired about sponge fishing in the Bahamas Islands. The agricultural sector relied on this industry when Bahamas' economic position was low. It was a major export earner at the time. Sponge fishing occurs in areas on certain islands with sponge beds. They are grown and reared on those areas, refined (sand taken out) and then exported. They may be eaten.

In the case of hurricanes there are areas where seed stocks are stored and farmers may have insurance for crops. The Bahamas is also able to take advantage of an early warning system due to its proximity to Florida state.

The government engaged in an initiative to subsidize and provide land in some cases to promising young farmers. The focus is to tap into the resources of young people and educate them on the advantages of farming.

Ms. Judith Ann Francis, Senior Programme Coordinator, CTA, brought participants up to date on the ACP Biotechnology and Biodiversity Policy Briefs / Influencing Policy Change. She also shared information on the CTA S&T Strategies Programme, which has three foci: facilitating the ACP & ACP/EU S&T policy dialogue, including supporting the Advisory Committee on S&T for ACP Agricultural and Rural Development; Information Dissemination through the knowledge for development website; and Capacity Development by building on indigenous knowledge systems.

The CDB (1992 & 2005) defined biotechnology as; "Any technological application that uses biological systems, living organisms or derivatives thereof, to make or modify products and processes for specific use". Biodiversity was also defined, as" The variability among living organisms from all sources - diversity within species, between species and of ecosystems". ACP experts have accepted both definitions.

ACP experts agreed that: "Biotechnology promises to make a significant contribution in enabling the development of, for example, better health care, enhanced food security, improved supplies of potable water, more efficient industrial development, processes for transforming raw materials, support for sustainable methods of afforestation and

reforestation and detoxification of hazardous waste. It offers new opportunities for global partnerships”. (Agenda 21, chapter 16).

Biodiversity offers new opportunities for income generation if the rich diversity and traditional knowledge that exist in the ACP regions are harnessed

Biotechnology in its broadest sense must be promoted and not only advanced biotechnologies to gain public confidence. Biotechnology and biodiversity must be harnessed for wealth creation (new products / commercial uses) and meeting societal needs such as health, food security and environmental sustainability. National, regional strategies must be identified and implemented at political and organizational level for bridging the biotechnology divide and sustainable use of biodiversity.

The region will need to address issues of sovereignty, markets, scientific capacity and capability building, entrepreneurship / business, public support. Transversal issues also need to be addressed these include, biosafety legislation, IPR, public awareness, private / public partnerships, information and knowledge flows, national and regional cooperation, priority clusters.

The process of how scientists could get the briefs approved was discussed. ACP scientists need to understand the complex international issues and the implications for the region. In preparing similar briefs, there is need to research and consult with other scientists and other stakeholders, ask questions and provide answers, make the briefs easy to understand and gain attention of policymakers. Revise, edit, publish and disseminate the briefs.

The ACP Biotechnology and Biodiversity Policy Briefs were approved by the Advisory Committee on S&T for ACP Agricultural and Rural Development in November 2006 and disseminated throughout the ACP region and internationally. The ACP region has identified the way forward but there is need to step up on actions as biotechnology will advance further and biodiversity will continue to be lost at a rapid pace. Many international agreements have already been endorsed by ACP governments.

## **4.2 Presentation of Group Reports**

Each group had fifteen minutes to report and five minutes to answer questions. Group one reported, that the need for more refined agricultural produce, increases the specialization needed in the area, if Caribbean youth are to gain revenue from agriculture.

Science and Technology is included in all practical aspects of every day life. There is always a constant need for advancement and a more efficient way of completing a task. S&T can assist in economic development whether it is from a scientific, harvester, producer or market perspective. It is beneficial for innovations to generate new breeds in plants and the growth of disease resistant crops.

During the transformation, Caribbean Youth would serve as facilitators, implementers and educators to ensure the future development of the agricultural product.

Negative feed back, the lack of financial support, the fear of ideas being stolen, ignorance, and rejection were cited as the major factors that hinder innovation in agriculture and other sectors of the economy.

Collaboration between the Departments / Ministries of Agriculture and Youth for a Youth Agricultural Programme is needed to promote science, technology and innovation for socio-economic development in the Caribbean. The formulation of an agricultural grant scheme and programmes that encourage value adding for agricultural products was also seen as important for getting youth involved.

Group two foresaw the role of Caribbean youth in linking traditional applications/knowledge with new ones. They will create awareness through new and existing mediums e.g. the Internet. Youth can serve as a conduit between funding agencies and community projects and secure political will through Youth Ambassadors. More incentives are needed for youth to produce innovations. Youth need to be aware of innovations to capitalize on the new technologies and maximize the potential for technological advancement to support the development of agriculture.

Group three suggested that the existence of ample opportunities and the wide scope for the creation of new ones could allow youth to earn revenue through agriculture. The need to identify them and take advantage of these opportunities in a business-like approach is critical. They suggested that the increased use of information technology in agriculture-monitoring, analyzing, predicting, commerce, financial management – is an example of how science and technology can be utilized in increasing revenues.

High costs of living, the need to reduce production cost and improve efficiency and productivity were seen as the major drivers of innovation. The need for improved quality, conditions on the global scene, e.g. trade agreements, markets, standards, competition, also showed the importance of innovation. Declining interest in the agricultural sector because of the emergence and concentration on new fields of employment e.g. tourism, off shore banking, were seen as factors that hinder innovation. The general absence of an appropriate enabling environment such as support systems, collaboration amongst key players in the sector also contributed to the lack of innovation.

Group three noted that a regional STI policy was necessary to provide overall guidance to STI at national level, to promote the use of STI in all sectors of development and to ensure support for STI e.g. financing, human resources, institutions. They pointed out that the youth are not sufficiently engaged in STI policy. More involvement was needed because youth are leaders of tomorrow and therefore the implementers of policy formulated today.

More involvement was needed through the facilitation of greater dialogue amongst youth and between youth and policy makers. Stimulating interest in STI and empowerment of youth to contribute to the policy making process is essential.

The youth discussed how they could be empowered to be more actively involved in agricultural development.

- Groups can develop proposals and formulate solutions to agricultural problems and bring them forward to the higher authorities in CARICOM through Youth Ambassadors. Youth Ambassadors are responsible for taking information from CARICOM to the youth and from the youth to CARICOM. This will allow these issues to be addressed at not only a national level but a regional level as well.
- Encourage extra-curricular agricultural activity in schools and set up an e-group for discussions and updates on agricultural topics.
- Get involved in groups to have a larger voice that can be heard. A Caribbean Youth for Science Congress can be formed with a representative from each country in the region.

Youth need to come together as one. Each individual has something to offer and can capitalise on each other's strengths with a common goal.

The youth came up with suggested priorities for policy makers. They inquired about currently existent programmes in respective communities and finding ways of improving them. The youth could serve as the action makers and the adults could be the supporters. Incentives should be customised to target the varying categories of youth.

- Age groups 20 years and up can be encouraged by good job opportunities.
- The younger youth categories can be encouraged by competitions that would require them to conduct research, analyses, etc. on the topic of agriculture or unique innovations that can benefit their countries. It was noted that youth like competitions because of the challenge, and the opportunity to shine and the prizes.
- Scholarships and improvements in educational systems and other institutions.

### **4.3 Closing Remarks**

A Communiqué was drafted and discussed. An interim working group for the Caribbean Youth Scientists forum was also set up. (See appendix 27 for more details) Maxine Brown of Jamaica and Cindy Eugene of St. Lucia volunteered to coordinate the e forum and lead the e group. The e group will be owned by the youths of the Caribbean but will be supported by the CCST and other regional and international agencies.

The youth were mandated on their return to their countries to mobilize others to be an active part of the Caribbean Youth Scientists forum (informing policy makers etc). They were also challenged to ensure that the Communiqué was published in their local paper and to share their success with their partners in the region.