# Youth: Adding Value to Agriculture in the Caribbean

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#### INTRODUCTION

The average age of farmers in the region is estimated to be over 50 years with some countries averaging over 60 years. The drudgery, hard work and little financial rewards associated with agriculture seem to be the major deterrents to young persons entering the sector. This perception of the sector as not being profitable has been actively promoted by many successful farmers, who for reasons of tax evasion and concessionary treatment, proclaim a litany of woes and do all in their power to discourage new entrants. While several initiatives have been tried in the region to reverse this situation, the problem still persists and has now become more urgent.

We live in a changing world that has the ability to provide the youth of today a life incomparable to their ancestors. They have access to educational systems that prepare them to be forward thinkers, access to resources that can provide them a sense of financial security, and technology that puts the world at their fingertips. Despite this plethora of resources and access, many youth across the globe will never have a taste or a glimpse of this life. Their lives will be shaped by a more dismal side of life that plagues over three quarters of youth living in developing countries (Bennell 2007; World Bank 2006). These youth experience successes and failures due to the political frameworks and bureaucratic arrangements in society. There is however, the opportunity to challenge these conditions through policies and actions that deepen the context of living for youth, especially those who live in the rural bellies of society.

To a large extent, the successes and failures in rural communities across the globe are shaped by agriculture. Typically, one thinks of agriculture as the bread of life for rural communities because of its ability to provide and sustain individuals. Agriculture has multiple objectives such as creating employment opportunities, providing raw materials for agro-based industries, ensuring self-sufficiency in food production and food security, servicing of balance of payments, and contributing to the gross domestic product (GDP) (FAO 2002; Young et al. 2001). In some cases, it is the backbone of society and determines the standard of living for large segments of the population. Increasingly agriculture is being viewed through the climate change prism wherein there is significant support for its role in mitigation. For youth, especially those in rural areas, agriculture is a way of life. As such, development experts have suggested that training and programmes should be targeted towards them early in life so that these future farmers may develop critical skills related to new practices, and as adults, will generally be more receptive to the changing face of agriculture. Early exposure will provide youth valuable skills and help them acquire experiences in group processes that will enable them to easily step into adult leadership roles in their communities as part of peoples' participation in activities that contribute to sustainable agricultural and rural development.

This chapter is positioned from a context of change and empowerment for youth engagement in agriculture across the Caribbean region. We contend that in order for young people to be fully integrated in society, they must be given the resources to become fully empowered for productivity. Based on an analysis of rural youth agricultural programmes across the globe and the formal reports of Caribbean youth leaders, a model for engagement is proposed. Because of the diversity in the region, a flexible rather than a fixed model is suggested, with each country being able to choose from the essential components to make its own model. Using this approach, we believe that the face and more importantly, the productivity of agriculture can be changed. For this to happen however, young people within the Caribbean must be supported by appropriate, sustainable interventions that allow them to fully engage the sector.

#### AGRICULTURE IN THE NEW MILLENNIUM

The changing face of the twenty-first century must incorporate the new faces of the millennium. Policies and practices must speak to the immediate and long-term needs of youth. They are the future and must be given a template that challenges the status quo and converts theory into practice with a new-world twist. This systematic approach to programming will assist in developing the farming community and agriculture for the next generation. Of the nearly one billion youths between the ages of 15 and 24, approximately 85 percent are from low income countries (Bennell 2007; FAO 2005; ILO 2005), where numerous problems such as inadequate housing, sub-standard health care, pollution, food

deficits and deficiencies, rural to urban migration, and high unemployment rates plague the society (Deshingkar 2004). This current situation leads us to believe that it will be difficult to attain sustainable development under such conditions; however, a change is possible if policies and programmes are structured to systematically address these problems. For example, in Africa, nearly 200 million young people are waiting to be educated and prepared for employment. In the Caribbean, Asia, and the Pacific we find a similar situation, whereby youth, especially the rural population on the fringes of society, are last to receive the assistance and support from society. Among all these regions of the world, it has been estimated that the number of rural youth will continue to rise at exponential rates (ECLAC 2008). Unless addressed, today's problems will continue to plague the rural segments of society at ever increasing rates.

#### YOUTH AND AGRICULTURE

Youth, in one sense, can be seen as a collective group of people who have the potential to change the world. Despite their age, gender, and geographic location, they have a unique way of approaching life; from a fresh perspective and with zeal. However, due to financial and social barriers for example, many are not given the opportunity to create change or see change happen. For youth in the rural context, especially those in the agricultural sector of society, they are often left out of the equation for development and change. Young people find themselves sitting at the fringe of society looking on as others define their potential. Their lack of access to educational opportunities and limited voice in society are roadblocks to success.

## **RURAL AGRICULTURE AND YOUTH**

The United Nations Economic Commission for Latin America and the Caribbean (ECLAC) estimates that roughly 30 percent of Latin America's populations are located in rural areas (ECLAC 2008). This astonishingly low figure, translates into an awareness of the needs of this vulnerable population, and rural squatter camps and slums found within the region support a life of hardship for its inhabitants. Rural people, especially the rural poor in developing countries, depend heavily on agriculture as a means of subsistence. Research has shown that between 75 and 85 percent of the rural population in Asian and African countries is engaged in agricultural production (Godfrey 2005). Although these numbers are slightly higher than one would find throughout the Caribbean and Latin America (nearly 50 percent throughout the region), the agricultural sector makes an important contribution to the GDP in many countries in this region. Even more important, is the impact of agriculture on the quality of life of individuals who live in these communities, including rural youth.

The ability to keep rural youth interested in living and working to sustain a quality of life is non-negotiable in today's world, and involves the creation of a blueprint of policies to improve inmpoverished conditions. Funding must be provided, and the level of resources available must be improved to deliver a higher quality of life. Policies regarding rural youth must be specific with clear strategies and guidelines to keep them from remaining on the fringes. In addition, in situations of limited resources, as is the case with most Caribbean countries, the funding made available to meet their needs and solve their problems must be used in an efficient manner. While these issues are significant, what is even more important to the development of rural youth, is addressing the changing face of agriculture and farming that confronts this present generation.

#### **RURAL YOUTH IN THE CARIBBEAN CONTEXT**

In the Caribbean as in many other developing countries, while the population of farmers is becoming smaller, the average age of farmers in increasing, and the rate of replacement of older farmers by younger ones is not the same as in the past. Moreover, many countries have dwindling extension services to support farmers, both young and old, while simultaneously budgets are being redirected to support other programmes deemed more important. Youth in agriculture programmes are therefore not given the attention that is required. Under the circumstances with these challenges a decrease has been observed in the size of local and national economies, something which impacts the quality of inputs, agricultural production, staff and particularly extension and training for farming communities. Rural youth agricultural programmes that focus on building leadership skills and agriculture knowledge, and reinforcing critical thinking and moral development suffer curriculum and staff cutbacks. There has also been a discontinuation of financial incentives to stimulate and support youth involvement.

Moreover, the non-formal educational component which has been a staple component in rural agricultural learning is often not given the adequate attention it deserves in order to meet the needs of rural youth. The lack of staff, resources, training, and funding hinders the total growth and development for rural youth, and while these issues may be seen as formidable challenges for governments to overcome, they can be improved in the short to medium term. In this discussion, the essential components of a model for the constructive engagement of young people are being suggested. It is hoped that this will assist the youth to become more engaged in the agricultural sector as productive constituents empowered by facilitating policies and organizations, thus enabling them to utilise modern technology in a business-like manner to achieve economic independence. At the same time, they will also become vested citizens in society helping to address societal issues such as criminal activity, poverty and economic destabilization.

#### **TRANSFORMING YOUTH**

Transformational learning as defined by Hart (2006) is regarded as the intersection between service learning and critical pedagogy. Students learn to analyse their civic attitudes, assumptions, and actions through political, economic, and social conditions and inequalities that exist in everyday life. Daigre (2000) contended that young people engaging in transformational learning must begin by problematizing the power structures they experience in their community, and to a larger extent in society and should be encouraged to ask critical questions about the implications of these structures. One practical way students can analyse power structures is by re-examining the formal classroom versus the informal classroom structure. Instead of viewing schools as the keeper and disseminator of knowledge, students work to solve problems and become engaged as agents of change in their communities. In this way they become both leaders and teachers helping to change the society in which they live. Young people are in positions to transform 'facets of school life that may have served to alienate and oppress students' (Hart 2006).

As young adults and youth become aware of concepts of leadership and change, they should then also begin examining how to create meaningful change. Only through an examination of these structures will students begin moving toward a true appreciation for agriculture (Hart 2006). For example, students who live in communities with rampant poverty could learn to openly create spaces with politicians, community leaders, social policy, and media messages to find solutions for the problem. For this to happen however, youth relationships with agriculture must be actively supported by opportunities within the current infrastructures and powers that exist.

To facilitate the inquiry of change, youth and communities must re-frame the inquiry from the individual to the systemic (Bickford and Reynolds 2002). For example, when investigating issues of participation in agriculture, youth should re-frame, 'what can this do for me?' to a state of 'what can I offer to this?' Similarly, Daigre (2000) advocated for the analysis of the root cause of social problems by questioning the current political system and the social injustices embedded within them. Youth must be encouraged to look for the links between the entrenched institutional systems and how these impact their present position. Just as imperative as questioning the political systems, students must also learn to critically analyse their personal role in the system (Freire 1998). Hart (2006) suggested that youth must constantly reflect on stereotypes and assumptions they may have about the population they are serving, how their individual actions affect power dynamics, and how their work connects to the larger political and social structures. This is essential for youth to make a difference in any sphere, more so in the area of food production.

# Youth engagement approach: Youth making a difference (YMD)

In order to effect a true change in the lives of rural youth, especially those engaged in agriculture, the central thesis of the discussion posits that there must be a rethinking, a paradigm shift in how we view youth in these areas. Youth must now be seen as viable individuals who have the ability to meaningfully contribute to the fabric of society. They have the ability to think, develop and act in a way that can cause serious change. They must not be treated as outcasts of the society, but rather as individuals who, when given the opportunity along with the correct tools and resources, and with sincere, meaningful support and guidance, can make a difference. They can, if their potential is properly directed, add tremendous value to agriculture. The YMD approach also makes some basic assumptions about government and its position on youth and agriculture. These include:

- 1. Promoting youth in agriculture high on the agenda of national governments.
- 2. Full commitment by governments to providing the funding and resources needed for youth development and agriculture.
- 3. Incorporating youth and agriculture as key aspects of their plans of work.
- 4. Setting realistic goals and benchmarks to measure development.
- 5. Including youth voices in the vision for agricultural development.
- 6. Viewing youth as part of the solution and not the problem.

These points, juxtaposed against our vision of youth engagement can lead to a paradigm shift in the way we approach programming for rural youth involved in agriculture.

#### AN ANALYSIS OF SELECTED AGRICULTURAL YOUTH PROGRAMMES

A review of several programmes across the Caribbean, Latin American, and the West African region reveals that most youth agricultural programmes within rural regions focus on building skills and moral development. Many programmes are grounded in developing positive character development and morals through Christian-based activities, such as the Young Boys and Girls Programme of Kenya. These programmes primarily focus on young people between the ages of eight and 18 who are still living with their parents. Young people attend day camps or after-school activities, which are monitored and/or facilitated by an adult. The take away message for youth involved in these programmes appears to be that in order to make it in life, one needs to be a good citizen. No emphasis is placed on building agricultural or leadership skills, as is the case in other youth programmes in the more tropical regions of the world.

# The 4-H Model and Grassroots Efforts

Among many Latin American and Caribbean (LAC) countries, the thrust of youth development programmes is built on the US model of 4-H. While the basis of this model was created to train rural youth throughout the United States in the early 1800s in agricultural production and canning, the format has morphed into a program for engaging youth in positive activities in the twenty-first century. This programme provides youth with opportunities to build important skills such as leadership, communication, and character building. The overwhelming majority of these experiences are embedded within a nonformal educational framework to allow for flexibility and making the youth voice heard. Within the LAC context, the 4-H model entails a number of key characteristics of the US model, while embracing local culture and context. For example, the curriculum is translated into local languages and is often tailored to meet the specific needs of the targeted youth. While these activities focus on the overall development of the youth, many do not incorporate the agricultural knowledge needed to thrive in today's agricultural industry, perhaps as a result of the institutionalization of 4-H in society. In some cases, countries incorporate 4-H as fully funded and supported programme within a Ministry (i.e. Ministry of Education or Ministry of Agriculture), while others treat it as a stand-alone programme that requires a cast of dedicated volunteers and funding for support. Because many young people view the 4H programme as a school activity, very few make the transition to becoming full-fledged members of the farming community.

An offshoot of the 4-H model have been the grassroots efforts observed in countries such as Jamaica and Barbados, where concerned individuals who see the need to educate the young while preserving culture and agriculture, have started local programmes for youth, which involve bringing youth onto their farms to teach them about agriculture and its benefit to themselves and their country. These programmes, which also have a mentorship aspect, teach young people about farming practices that are sometimes seen as traditional, but yet are being promoted by scientists in classrooms in other parts of the world as sustainable methods. Fundamental to this type of programme is recognition of the benefits to be derived from engaging youth in a waning industry, while also teaching them about a culture that has fed and sustained society. As such, the creation of a core cohort of youth who are able to become citizens who have an appreciation for farming while also being able to sustain their own lives in a holistic manner, is considered a major outcome of this drive. In spite of their good intentions however, these programmes do not form an integral part of the institutional fabric of developing nations.

#### Embedded in the Government

Programmes such as the Youth Apprenticeship Programme in Agriculture (YAPA) and the Youth Enterprise Initiative in Trinidad and Grenada respectively, are examples of programmes embedded into the core of the central government. Ministries of agriculture and education take a vested interest in the development of young people and help to create programmes that assist in enhancing their agricultural knowledge and skills. In the case of the YAPA programme for example, youth are able to gain agricultural knowledge through hands-on activities, which are facilitated by local farmers who share their knowledge via on-farm demonstrations and other types of experiential activities. These government-led programmes provide a realistic view of agriculture and give their participants a template from which to begin their agricultural careers, with the youth involved being given the opportunity to put their knowledge to practice through the management of their own plots and small enterprises, something that is considered a necessary and beneficial component of the skill building process. Nevertheless, despite serving as a mechanism to provide youth with a chance to venture into commercial agriculture, the efficacy of the programme has been questioned as a result of the lack of government follow through in areas such as training, pre- and post-funding and land for farming. The depth and breadth of the programmes have also been queried due to a lack of vision and questionable management practices.

The Agricultural Professionals Development Programme (APDP) in Trinidad and Tobago was initiated by the Ministry of Food Production as a means of increasing the number of farmers in the country. It was designed to boost the capacity of agriculture graduates to meet the challenges impacting the domestic agricultural sector, and is in line with the Ministry's National Food Production Action Plan for the period 2012–2015. The APDP operates as a platform for engagement of graduates with a vision, 'to assist Trinidad and Tobago to become a more food-secure nation through the creation of a globally competitive workforce of agricultural graduates through professional and technical skills enhancement within a motivational and structured environment' (IICA 2012). Graduates with a degree in Agriculture or Agribusiness have an opportunity to embark upon a one year customized internship in one of five areas namely Crop Production, Livestock Production, Aquaculture, Agribusiness or Agro-processing (IICA 2012).

The Helping out our Primary and Secondary Schools (HOOPSS) programme in St Lucia is described as playing an important role in the socioeconomic fabric of St Lucian households, especially in rural areas (IICA 2012), due to dwindling youth participation in agriculture. HOOPSS is built on a philosophy that only the actual engagement of young persons in theoretical and practical farming best-practice can provide that critical knowledge necessary for sustainable employment and ultimately, household food security (IICA 2012). The project also seeks to sensitize and expose students to the viability of agriculture as a business, and to promote the creation of agricultural leaders through school gardens and farm activities. Ultimately, it is hoped that this will drive the development of agriculture in St Lucia and as well, address food security and nutritional concerns of the school feeding programme. Success is based on continuous collaboration amongst its many stakeholders, mainly, the Ministry of Agriculture (technical support), IICA (implementation support), and a number of formal linkages with actual markets such as the primary school feeding programmes, local restaurants, hotels, and most notably, Consolidated Foods Limited (CFL) a major supermarket on the island.

The Gilbert Agricultural and Rural Development Centre (GARDC) in Antigua started as a pilot project before being formalized with external funding (Maximay 2005). Its mission is to develop and maintain a demonstration centre to serve the Organisation of Eastern Caribbean States (OECS), by providing a place for practical, hands-on training in sustainable good agricultural practices that protect natural resources to assist the nation with food security and poverty alleviation. The centre, which has offered agricultural and enterprise training mainly to youth between the ages of 16 and 30 years since 1993, focuses on life and entrepreneurial skills development, with a specific emphasis on the use of natural resources in agriculture and other forms of rural enterprise.

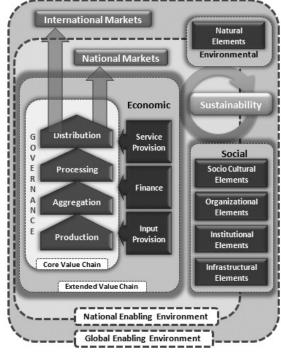
## COMPONENTS FOR SUCCESS BASED ON REVIEWED EXPERIENCES

The above review suggested that agricultural development directed at youth in rural areas of the world has been supported by a variety of models ranging from government supported, top-down approaches, to a more grassroots-type orientation funded by local citizens, and others supported by regional agricultural organisations. Notwithstanding, the economic hardships, agricultural downsizing, and inadequate funding for youth programmes and agricultural services, for any intervention to have meaningful impact, it must incorporate basic youth development elements along with core agricultural components. The review of a number of youth agricultural programmes across the Caribbean, Latin America, and Africa, has brought to the fore essential issues that can promote youth involvement in the sector, and allow them to add value to the sector.

Taking all this into consideration, the essential components of a model will now be offered to help address some of the inherent issues countries face when trying to assist rural youth. Any, or all of these components, can be used by countries to construct their own template for implementation that is in line with financial and other resources. It also allows for social, cultural and other types of contextual information to be appropriately inserted into the model. Components, several of which have been referred to in previous regional reports, rather than a fixed model, provide the ability to be flexible while also providing a framework for success (King 2006; Maximay 2005; Gordon and Glean, 2004), as well as international country reports on development of youth in agriculture programmes.

#### **FRAMEWORK FOR THE ANALYSIS**

The framework presented in figure 2.1 serves to explain the central thesis of the discussion, that youth should be seen as key actors in the chain who can add value to agriculture. As presented by the FAO (2013), the framework is built around the core value chain in which value chain actors, i.e., those who take ownership of the product, and who produce or procure from the upstream level, add value to the product, and then sell it on to the next level. Value chain actors are mostly private sector enterprises, but can include public sector organizations such as institutional buyers (e.g., food reserve agencies, emergency food buyers such as the World Food Programme [WFP]), and even youth.



#### Figure 2.1: The Sustainable Value Chain Framework

Source: FAO (2013)

Value chain actors are sustained by business development support providers who do not take ownership of the product, but who play an essential role in facilitating the value creation process. Along with the value chain actors, these support providers represent the extended value chain. Three main types of support providers can be distinguished. Firstly, there are those who supply physical inputs, such as seeds at the production level or packaging materials at the processing level. Secondly, there are the service providers in areas such as field spraying, storage, transport, laboratory testing, management training and market research. Thirdly, are the providers of financial services, which are separated from other services given the fundamental role played by working and investment capital in getting the value chain on a path of sustained growth. The facilitation of access to inputs and services then becomes essential for youth if their roles as actors in a value chain are to be fully actualised. A critical element of the core value chain is its **governance structure**. Governance refers to the nature of the linkages between actors at different links in the chain, and within the overall chain. As related to youth, some higher levels of governance and management of youth development in the sector would be another critical element for youth as agriculture promoters.

Value chain actors and support providers operate in a particular **enabling environment** in which social and natural environmental elements can be distinguished. Social elements refer to the man-made creations that make up a society, and which can be grouped into four types: socio-cultural elements (consumer preferences, religious requirements), organizational elements (national inter-professional associations, research and educational facilities), institutional elements (regulations, laws), and infrastructural elements (roads, ports, communication networks, energy grids). Thus communities, schools, neighbourhoods, regional and international organisations, concerned leaders of farmer groups, and civic minded citizens, all have roles to play in creating the enabling environment for increased youth participation in the food sector. The **sustainability** of the value chain plays out simultaneously along three dimensions – the economic level, the social level and at the level of the environment, all of which must be given adequate attention by all youth supporters.

#### APPLICABILITY TO YOUTH IN THE CARIBBEAN: VALUE ADDITION

As a constituency, youth add value to the chain of food production as key actors and their views must be factored into any decisions to be taken concerning their sustained involvement in the agriculture sector. A key statement by a youth leader in the region advised that 'youth need to be properly prepared for the positions made available to them. There shouldn't be a strong sense of entitlement that the government should provide any and all opportunities' (CARICOM 2012). Nevertheless, there are issues that constrain youth

participation in the food production sector, which were extensively discussed at the regional level meeting of Caribbean youth leaders in Antigua, in 2012. Some key issues raised are listed below (CARICOM 2012);

# Strengths of youth in the region:

- Technical competence achieved through training programmes
- Youthful exuberance
- Persistence
- Strong ICT skills

# Constraints:

- Access to initial support for start-up of businesses
- Lack of capital, land, technical support and farm equipment
- Lack of mentorship
- Inadequate resources to sustain youth development and leadership
- Urban bias
- Youth not prepared for leadership
- Older generation not giving youth the opportunity to lead

# **Opportunities:**

Many opportunities and action areas were suggested by participants at the forum which they genuinely believed would assist them to make a successful entry into, and have a sustainable livelihood in the sector. These included:

- Focusing on specialty production modes such as nutraceuticals, culinary herb trays, branded produce (e.g. Fairtrade)
- Exploring linkages with tourism
- Informing youth of the opportunities that exist in the agribusiness sector
- Initiating an internship programme to allow students to hone their skills
- Exposing youth to all forms of protected agriculture and other climate-smart production systems

- Providing services in marketing, landscaping etc.
- Rebranding 'farming' to 'food production' in an effort to delink with the negative connotations of traditional farming
- Teaching agriculture at all the primary and secondary schools
- Developing a mechanism for information sharing among youth and more experienced farmers in the technical aspects of food production to enable them to become entrepreneurs, as against being labourers
- Encouraging greater use of modern technology and the social media
- Teaching agriculture in an interactive manner rather than classroom/textbook mainly
- Considering opportunities in culinary tourism
- Exploring post-harvest areas such as packaging and marketing of products
- Considering nutrition security as an issue to be of equal or greater importance than food security
- Revitalising the 4H movement as an organisation which can help promote agriculture among youth
- Highlighting the successes in agriculture so that young persons may be encouraged to consider getting involved in the sector
- Developing a regional initiative to promote youth in agriculture
- Hiring national consultants to work with policy makers
- Undertaking advocacy work
- Having persons at senior levels in the sector serve as mentors for young persons, especially agriculture graduates
- Looking beyond primary production and considering the value added operations and manufacturing aspects of an agribusiness enterprise
- Instituting job attachments as an initiative that could build youth capacity
- Identification of training and scholarship opportunities for self-development
- Youth engagement in volunteerism to prepare themselves for the future, and as a practical way of gaining work experience

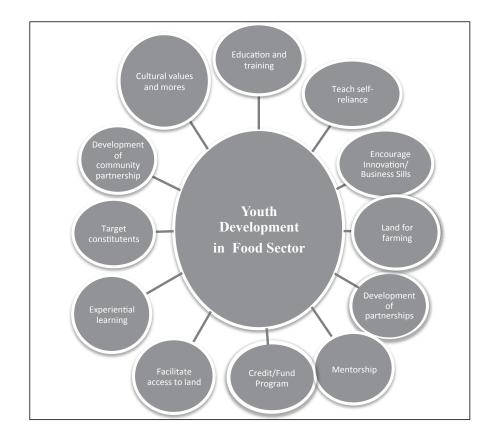
# Recommendations

The two major recommendations coming out of the exercise included:

- Inviting policymakers to future youth for so that they can be more enlightened on the issues; and
- Advocating and lobbying for greater collaboration between the Ministries of Agriculture and Education since both have a tremendous impact on the decision made by youth to enter the agriculture sector.

# MODEL FOR YOUTH DEVELOPMENT IN AGRICULTURE

Taking all of the above into consideration, Figure 2.2 is a diagrammatic representation of several issues that we believe impact youth development on the food production sector. Each of these issues is now discussed under three broad headings: Youth centred interventions; Human capital interventions; and, Governmental interventions (enabling policies).



#### Figure 2.2: Components of the Proposed Youth Making a Difference Model

#### YOUTH CENTRED INTERVENTION

*Identify the constituents*: the focus should be primarily on graduates, whether from the universities in the region or technical colleges. New agriculture requires persons prepared to innovate, use modern technology and who are business oriented, something for example, that is in line with the Sudanese model project titled 'Graduate Employment Fund Program for 2005–2008'<sup>1</sup>. Agriculture must be seen as a worthy profession and not as something only pursued by those who fail in the formal education system. While there will always have to be training for young persons who are not academically inclined, a development model must of necessity focus on those constituents who are most likely to succeed in the achievement of national food security goals.

#### HUMAN CAPITAL INTERVENTIONS

*Promote education and training*: opportunities for youth to be trained to understand the sector and work efficiently in the sector are important. These educational experiences must prepare youth to tackle the changing tides of agriculture. Cutting edge resources, technology, and other innovative tools must be introduced in order to truly prepare youth for the agricultural industry.

*Emphasise experiential learning*: while classroom work is important, more emphasis is required on practices. Although the YAPA model in Trinidad and Tobago was assessed and found to have a good mix of classroom and experiential learning activities, the latter were called into question particularly as there was inadequate preparation for the 'new agriculture', with still too much emphasis placed on traditional methods of field-based farming in the sun for long hours using minimum technology (Ganpat and Webster 2007). This is certainly not going to attract young persons into agriculture, so it is important that an engaging and interactive curriculum, together with use of latest technology and techniques, be developed to fully engage youth in the field.

*Encourage mentorship*: the use of business and technical mentors will always be a critical aspect of the proposed transformation of youth involvement in the food sector, especially in the Caribbean, where there are few role models in the form of successful farmers who are prepared to state publicly that the sector is a lucrative one. What one however generally finds is an environment in which the elders convey extremely negative messages to youth about the sector so that it becomes more difficult to encourage youths, especially where they have access to other options, to take an interest and be involved in agricultural production.

<sup>1.</sup> http://siteresources.worldbank.org/INTAFRMDTF/Resources/Document\_5.doc

Mentors with positive dispositions can therefore help direct youth to successful engagement in the sector.

*Promote the sector*: the food sector has never been proactively sought out by the brightest and the best to lead the transformation, and is not promoted as one of first choice, despite its importance, profitability and current high profile as a mitigation avenue against climate change. National, and even regional communication/promotional programmes or campaigns on a sustained basis can bring the message to an otherwise distracted youth population.

*Highlight linkages*: the importance of agriculture can be reinforced by demonstrating its linkages to other sectors such as health (from a nutritional standpoint), tourism, infrastructure (e.g. soft engineering solutions for slope protection) and sport (field/pitch/ course management). Youth can also assist in bringing to the fore other areas which can be directly or indirectly linked to agriculture.

*Teach values*: this includes respecting and valuing the environment (flora and fauna, water, and the earth). It is insufficient to teach future farmers skills without providing a sense of value for the environment and encouraging sustainability.

*Teach self-reliance*: an emphasis must be placed on broadening the scope of agriculture for it to be viewed as a sustainable and acceptable career. Caribbean youth need to be encouraged and empowered to become problem solvers. The time has passed for the promotion of the traditional approach, which upholds the government as some sort of generous benefactor that provides all that is needed. Actions that build self-confidence and self-reliance will not only contribute to transforming Caribbean agriculture, but societies in general.

*Encourage innovation*: young persons must be taught to experiment and innovate. New agriculture will require constant innovation for farmers to maintain a competitive edge over foreign products. This skill has to be learnt and should form part of the learning experiences. Youth should be encouraged to be innovative and both adopt and adapt strategies that can be used to explore new and emerging opportunities in intellectual property, including branding and utility models, agriculture, and in science and technology.

*Teach business skills*: traditional training is generally insufficient as it is geared towards improving production skills in situations where there is generally poor farm record keeping across the region. This is insufficient. Post-production and marketing skills are equally important for young people to successfully engage the market economy, and source external markets. Computers and other communication devices must be seen as primary tools for young people in this regard.

*Teach sustainability*: the resources in the region are quite limited and must be used in a productive manner in the present, while maintaining productivity for future farmers. This will require a reorientation of training at all levels, starting at the university level, where issues of sustainability do not take precedence in most curricula.

#### **GOVERNMENTAL INTERVENTIONS (ENABLING POLICIES)**

*Provide land for farming*: farmers in the region cannot practise extensive forms of agriculture due to limited land areas. Modern agriculture, which is land intensive, requires smaller parcels of land and is regarded as the preferred option today. There are several forms of agriculture that do not require very fertile lands, e.g., protected agriculture using soil-less media, vermiculture, and biotechnology. Agro-based industries also do not require large land spaces to be successful.

*Create a credit/Fund programme*: this can be set up to assist graduates who wish to engage in small- and medium-sized projects. This is in line with the aforementioned Sudan model, and the 'Youth Window', a former project of the Agricultural Development Bank (ADB) in Trinidad and Tobago, which had some success. There is also a need for venture capital and humane financing provisions to encourage youth to engage credit arrangements.

*Development of partnerships*: linkages with organizations and institutions should be actively promoted, and because the sector is diverse, assistance may have to come from a range of sources. Young farmers must be placed in direct contact with these agencies to access information and other support in a timely manner. Linkages with other sectors are also crucial. The tourism and food and beverage sectors can promote wider markets for products.

*Continuous monitoring and evaluation:* any model geared at effective change would need to be constantly monitored, evaluated and modified where necessary. In a dynamic sector like agriculture, to allow mechanisms to run on for years without evaluation is tantamount to abandoning a seedling or new born livestock.

# CONCLUSION

To outsiders, the Caribbean may appear as one people, and indeed, it is in some respects. However, a closer look will reveal tremendous diversity, and while this is cherished among Caribbean people, it makes development planning somewhat difficult. In the foregoing analysis, this diversity in social and cultural areas, economic resources, human resource capacities, land availability and topographies is acknowledged. It is for this reason therefore that neither the pattern of other development initiatives is followed, nor is a fixed model offered for promoting youth involvement in the agriculture sector. Instead, based on a review of international experiences with youth in agriculture programmes, a range of components is proposed that could be included in any intervention. A particular country or grouping of countries may choose to incorporate componenets into a culturally and socially acceptable model that is in line with resources and development goals. Because the construction of a definitive model will take a multitude of Caribbean experiences gathered overtime, for now, only the essential components have been identified as we edge towards a model.

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