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**TAPPING THE POTENTIAL OF SCIENCE, TECHNOLOGY AND
INNOVATION IN AGRI-FOOD CHAINS- CREATING EMPLOYMENT AND
WEALTH FOR YOUTHS IN THE CARIBBEAN**

“It’s all in the mind,” psychologists say, if we can control the mind then an obstacle will be turned into an opportunity. It translates that the solution to youth obstacles is to change their mind sets! This is not an easy task, it takes a determined effort by the youth to first recognize the need for a change and then make that change. In this essay the obstacles facing youth in attaining wealth and employment will be identified, proposals will be made at to alleviate these obstacles and an organization involved in helping youth obtain wealth and employment will be highlighted.

The obstacles identified on the part of youth are as follows:

- Failure of professional youth to keep up with evolving technologies
- Distorted mindset of youth toward agriculture instilled by their parents/ society;
- Lack of discipline and time management skills along with failure to prioritize
- Lack of self motivation leading to timidity of youth in business ventures and acceptance of mediocrity;
- Failure of youth to take responsibility for their choice of sexual activity leading to contraction of STD therefore degrading the caliber of the work force
- Youth are not able to make the transition from schooling to the work place
- Failure of youth to see how important agri-food chains are, in that there will always be a need for food and therefore a market for produce.

Obstacles identified on the part of others are:

- The present format of syllabi focuses mostly on qualification and not training/ experience
- Availability of and accessibility to resources to start businesses are scanty
- Breakdown of the family unit and predominant single parent homes where young males do not have positive role models
- Discouragement to pursue farming due to its vulnerability to natural disasters and environmental conditions (Grenadian Nutmeg and the hurricane, global warming)
- Lack of transparency in governmental policies
- Consumers have more confidence in imported goods even if similar ones can be produced locally
- ‘Crab in basket’ mentality coupled with passiveness of farmers which hinders formation and longevity of cooperatives and portrays farming as a non lucrative profession.

Many in the Caribbean attribute the failure of youth to take initiative and excel to a mental mark that slavery supposedly made which was passed down through generations. Since the link between slavery and farming is apparent most parents openly assert their preference for career as far as possible away from agriculture. A survey was carried out in a class of thirty two at a high school in Antigua, where the students were asked what they wanted to be when they grow up; neither farmer, agriculturist nor a food system based career was mentioned. Science seems to be reserved for the elite of the populace and good only for becoming a Doctor. “My children will have things better than I did!” parents proclaim. Children seem to have things so much better that they simply can’t help themselves. They don’t seem to realize that the butterfly has to muster its way out of the cocoon to develop its muscle to ensure its survival.

The field of innovation is ripe with ways to bring employment and wealth to Youth. It can be encouraged if teaching/examining strategies require students to make things instead of recalling how something was already made. To help inject ideas into youth’s minds, regular innovation fairs can be organized where technical, application or commercial innovation is duly rewarded. Sports celebrities and artist will be invited to

make it alluring. Since youth tend to operate on a monkey- see, monkey- do mentality, they will definitely conform. Proposals:

- A project such as using excess fruits and vegetables in Caribbean Islands to make methane is a viable business for which the research has already been done.
- Diversifying cane either by peeling, slicing, dehydrating and selling it or producing bottled cane juice and making syrup from it for pancakes and ice-cream could be undertaken instead of forgetting sugar cane altogether.
- Honey made in the Caribbean can be used to make cough syrups, skin care products, candles from the wax and spa therapy products from the venom of the bees' sting. Research has already been done on the usefulness of honey and the market for spa products is now opening up in the Caribbean in light of the growing tourism industry.

Technology which includes but is not limited to the computer if managed properly can produce employment and wealth. Proposals:

- Agricultural e-commerce can be used to help farmers sell their produce locally and regionally. A web page is not as expensive as a radio ad and the market is wider. Antiguanians will be able to buy Barbadian and Trinidadian flying fish year round.
- Fishermen can make use of tracking devices made from simple radioactive isotopes so that they know where schools of fish are and spend less time searching for fish. Marine Biologists instead of just instructing fishermen, can work along with them and in so doing provide useful information about the location of and population of different species of fish to lessen incidences of over fishing, pollution and destruction of marine resources.
- Graphics artist fresh out of university could form partnerships to produce labels for persons with small business so that they can better market their product. Many small businesses do not have websites even with the on set of the CSME and young Web Designers could showcase their talent by meeting the needs of these businesses. In so doing they can gain

experience and advertise their capabilities to companies who may be looking.

Youths who are scientist can use science to become self employed and make marked contributions to our standard of living.

- Young scientist can act as consultants to farmers providing soil testing services so that they know what to plant where and exactly the type of and how much fertilizer soil needs to improve productivity.
- Youths with Biology degrees can make proposals for and work along with Government in trying to manipulate the genome of GDP contributors such as banana and cacao so that at maturity they are smaller plants. Farmers will then be able to maximize their production.
- The components of young coconut water can be studied to see if it be used to make eye drops.

The idea is to change the perception of agriculture from plowing soil or pulling weeds in the scorching sun to a more refined one so that it is more appealing. So that when youths see fruits rotting on the side of the road they will be seeing dollars signs instead of turning their noses. A farmer's son will be able to help his father sell produce with out having to drive to town on the back of a pick-up shouting, "Melons for sale!" If banana can mature as smaller plants then a youth inheriting one acre of land can still have high yield.

Some organizations are dedicated to helping youth see the potential of agriculture to deliver employment. One such example is the Gilbert Agricultural and Rural Development Center (GARD) sponsored by the Canadian Training Award Project which began in November of 1989. The mission statement of GARD is "to increase the living standards of youth through their involvement in agricultural and rural based enterprises." This mission is achieved by the many courses offered: business management for artisans, beekeeping enterprise development, composting for home owners and farmers, pest management in vegetable production, communication technology in farming, preparing vegetables for the market, organophonic demonstration, commercialization course for small businesses, agricultural enterprise development, handling finances in your business, principles of marketing for producers, information communication technology,

entrepreneurship in the tourism sector, multimedia presentation and any other course requested by participants to meet their needs.

Mrs. Maria Bradshaw a successful GARD participant has opened a small business called Scentsations (in Villa, Antigua) where she does soap crafting and floral arrangement. Being six years old with two employees Scentsations sells its products to hotels, the museum and gift shops.

The obligation that governmental bodies have to provide the financial and infrastructural contributions to make these ventures sited possible can not be over emphasized. I would like to commend the Caribbean Council of Science and Technology for launching this essay competition. This is a key element that can be used to initiate thinking among youth. In retrospect there is one promising business venture which was not mentioned in this essay, because I intend to act on it. I hope to be one of the winners, but in lieu of that, I look forward to the announcement of the next essay competition.

Necessity is the mother of inventions. If youths are overly endowed with wants they will see no need to be creative or innovative. Science, technology and agriculture will remain just that without innovation. Youths need to realize that the onus is on them. If parent/society indulge youth by pampering them with undying understanding of so called 'youth issues' it will do little but to cripple their development. It is true though "the best way to lead is by example" and that is the why publications such as the Caribbean Icons in Science, Technology and Innovation are necessary to give aspiring youth hope, as they realize that if Dr. Andre Cropper of Trinidad can do it, so can I. Theses will help make mindsets more optimistic.

Thanks!!