

## **Promoting Agriculture and Food Sustainability through Apprenticeship Programs in the Caribbean: A Case Study in Trinidad and Tobago**

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### **Abstract**

*The urgent need for developing nations to ensure food security has driven efforts to increase youth participation in agriculture within recent times. The Youth Apprenticeship Programme in Agriculture (YAPA) in Trinidad and Tobago is a government-sponsored programme for youth 17-25 years. It was launched in 2003 and its primary purpose is to provide an opportunity for young people to become involved in farming. It is expected that this experience will show them that farming can be pursued successfully as a career and in a business-like manner. This should have the desired outcome of increased numbers of young persons entering the agriculture sector, a necessity for sustainable agricultural development. The program is linked to overall policy goals of food security, poverty alleviation, employment and rural development.*

*This paper assesses the YAPA and outlines key points related to challenges and success faced by the program. A mixed method approach was used to gather information. Focus group sessions were conducted with all programme coordinators and a sample of trainees. This was followed by a formal survey using a self administered questionnaire with all current trainees (n=57), a survey among past trainees (n=37) and an examination of archival data.*

*Results were mixed and showed that the majority of trainees in the programme had positive attitudes towards agriculture. They entered the program because of their strong belief in the future of farming and to generate additional. Those trainees who had negative attitudes disrupted the programme and upset the coordinators.*

*Results also showed that there are several shortcomings with the overall structure of the YAPA program. The government needed to be more supportive of the program and follow through with promised resources and post YAPA funding.*

**Key words:** Apprenticeship programs, regional model, youth engagement

## Introduction

According to the World Development Report of 2007, nearly 1.3 billion young people live in the developing world. The report further documents that there has never been a better time to invest in youth than now because youth are healthier and better educated than previous generations. However, failure to seize this opportunity to train them more effectively to be active citizens, could lead to widespread disillusionment and social tensions (The World Bank, 2007). It is for this reason, and also the growing need of food security in developing countries, that the urgency to promote youth participation in agriculture has increased over the years (The World Bank, 1992). Youth are not only energetic with the ability to replace the older generation in agriculture, but are filled with new innovations and technological competence to carry out commercial and technological agriculture (International Labor Organization [ILO], 2000).

However, youth lack the motivation and willingness to engage in agricultural activities—a debilitating factor resulting in slow growth in the agricultural industry in developed and developing countries (Russell, 1993; The World Bank, 2001). This lack of motivation and unwillingness are largely due to the negative stigma associated with those involved in agricultural activities (Divyakirti, 2000). Youth in agriculture are considered as low economic earners, a manual labor working class, and unproductive citizens. Further, farmers are perceived as old men, dressed in overalls, smelling dirty, and chewing on a straw (Holz-Clause et al., 1995). It is these stigmas and perceptions that have disengaged the youth in the agriculture industry (Oberai, 1983). As a result, there is as high as 30% youth unemployment in most countries of the world, particularly in urban communities of Asia where youth unemployment is three to four times higher (Ghee, 2002). In those countries, education is the major obstacle depriving many young people of the opportunity to increase the productivity of their human resource potential. Consequently, policies to reach vulnerable groups like youth should be designed with specific purposes in mind; otherwise unintended crises may follow (ILO & The World Bank, 2000).

Governments in the Caribbean region are formulating models of agricultural development programs to engage the youth in the agriculture industry (Rahael, 2002). Though one region, different approaches are taken. In Saint Lucia, the government and the United Nations Food and Agriculture Organization (FAO) have combined their efforts to address food security and agricultural sustainable development through an initiative to encourage rural youth to develop a greater interest in the agricultural sector (Hutchinson, 2001), whereas in Trinidad and Tobago, the government has established the Youth Apprenticeship Program in Agriculture (Rahael, 2002).

### *Agriculture in the Caribbean*

The region's problem of food decline and food insecurity is intractable with endemic poverty, environmental degradation, HIV/AIDS pandemic, lack of good governance, corruption, and youth disengagement to name a few (Alonge, 2006). As such, agricultural production for the past two decades has been low. This state of affairs of agriculture has caused a major rethink in management and strategic agenda, as well as the role of the governments and their agencies. Hence, given the general perceptions of the public sector, these governments have failed to achieve their institutional mandate to serve and feed the people (Alonge, 2006). Further, compounding the problem of agriculture is that the last five years have witnessed a shift away from commercial farming and youth-engaged agriculture to small scale agriculture involving the older generation. In order for Caribbean nations to become economically stable, youth

development in agriculture has been declared an “imperative.” The sheer size of the youth population in these countries underscores the magnitude of the challenge that governments face in integrating youth and developing their full potential.

### *Agriculture in Trinidad and Tobago*

The twin island Republic of Trinidad and Tobago is the southernmost country of the Caribbean islands and lies just off the northern coast of Venezuela. The climate is tropical and experiences an average rainfall of 1,561 mm (61.5 ins) per year; and an average daytime temperature ranging between 21°C (70°F) and 32°C (90°F) which makes it suitable for agriculture. It has approximately 1.3 million people. The economy is driven by oil and gas and according to the 2006 review of the economy; the energy sector is expected to grow by 20.6%, accounting for 41.2% of the total GDP (The World Bank, 2006b). Many critics claim that the government’s focus on energy has stunted the growth in the agricultural sector as evidenced with a marked slowing of growth in domestic agriculture in 2004 and 2005 (Ministry of Agriculture, Land, and Marine Resources, 2004a; 2004b), 2004. The drop in supply of local agricultural produce in 2005 led to an increase in food prices.

Critics also believe that the lack of vision and systematic planning has led to the sector’s decline, and little resources are given to the development of a sustainable sector.

Recognizing the need to address the concern of agricultural decline in the country by involving the younger generation, the government designed the YAPA program in 2002 in justification of the outcome of several empirical studies that have demonstrated that the average age of farmers in Trinidad and Tobago has been increasing over the years. The government further alluded that this aged population has resulted from the agricultural sector’s inability to attract and sustain youths in agricultural pursuits—and has therefore organized the YAPA program as a remedy in order to enhance food security and to create viable employment options for young people in the agricultural sector.

The purpose of this paper is to assess the YAPA program in Trinidad for its potential as a regional model for youth engagement in agriculture.

### *The YAPA Program Model*

The YAPA program, an initiative of the Ministry of Agriculture, Land, and Marine Resources was established in 2002 and launched in 2003. It was necessitated as a result of the inability of the agricultural sector to attract young people into agriculture. The primary goal of the program is to encourage youths between the ages of 17 and 25 years to participate in agricultural activities in the country. Such agricultural activities would include the technical, professional, and business domains. Through their participation, it is hoped, that young people would come to realize the importance of agriculture in nation building and in providing career and employment opportunities. More importantly, youth, in recognizing their potential, would realize a productive way of life.

The YAPA program model is conducted in two phases. Phase 1 is designed to place young people as interns on a range of successful private and public sector agricultural farm enterprises in order for them to develop practical skills in farm management, livestock and crop production, and in organizational operations and processes. The farms are selected based on established criteria, including, location in main agricultural areas where agricultural commodities have demonstrated high economic potential. The Ministry of Agriculture, together with the

selected farmer—the trainer, provides an intensive training program for the youth. Phase 1 is a six to eight week programme conducted in cycles each year.

About 70 young persons are accepted into the YAPA phase 2 programme after a formal assessment at the end of phase 1. This phase is conducted over a nine-month period and participants are involved in crop and livestock production, food processing, aquaculture and apiculture. Computer literacy is taught at some counties. Some counties have organized other training to improve the life skills of these young people. Members of staff are assigned the role of coordinators to facilitate the teaching and practical aspects of the programme. It is expected that at the end of this phase, these young persons would be able to engage in productive farming or in an agribusiness enterprise.

A Phase 3 component of the programme envisaged the settlement of select successful Phase 2 participants on suitable land and training in agribusiness development for others. To date, the YAPA programme has not engaged this phase, so that graduates of Phase 2 are out of the system and unemployed, working, pursuing further studies or doing some small, home-based agriculture.

### **Methodology**

A mix of methods was used: focus groups, structured questionnaires and examination of archival data. Focus group sessions were conducted with trainers in the program as well as a sample of trainees. Separate sessions were held for the Northern and Southern regions of the country. Focus group questions were developed for each subgroup (adults and youth) to assess their perceptions and feelings towards the current structure and model of the YAPA program, to understand participant and facilitator relationships, and to understand the connection of participants to the program.

Each of the researchers facilitated one of the two groups. In total, 16 trainers and 20 trainees participated in these sessions. The focus groups lasted an average of 90 minutes and were audio recorded and transcribed for future analysis.

A formal survey using a self-administered questionnaire was conducted among all Phase 2 trainees (n=57) present in the program in August 2006. The instrument captured some personal and demographic data and utilized rating scales to assess participants' reasons for entering as well as levels of satisfaction with various areas of the programme.

### **Results and Discussions**

*Participation.* Table 1 provides data on participation in the YAPA program (both phases) for period 2003-2006. It shows that a total of 5042 persons participated in Phase 1 and of this total, over half (54%) were male. In Phase 2, some 221 persons graduated, and again, over half (52.5%) were males.

Table 1

*Participation in YAPA by Gender, Trinidad and Tobago*

Year	Gender	YAPA 1	YAPA 2
2003	Males	927	11
	Females	782	4
	Sub total	1709	15
2004	Males	648	26
	Females	618	43
	Sub total	1266	69
2005	Males	623	40
	Females	534	31
	Sub total	1157	71
2006	Males	520	39
	Females	390	27
	Sub total	910	66
Grand Total	Males	2718	116
	Females	2324	105
		5042	221

*Characteristics of Present Trainees Surveyed*

Summary data showed that of the 57 trainees surveyed, 53% were females; a modest 27% had fully diplomas from the Caribbean Examinations Council (CXC); and the majority (75%) reported that they were pursuing other studies presently. Some (70%) indicated having had previous farming experience and 65% reported that they did Agricultural Science as a taught subject in school. A slight majority (56%) came from a farm family.

*Issues as Perceived by YAPA Staff in Focus Group Sessions*

During the focus group sessions both coordinators and participants discussed a number of issues regarding program logistics, gender issues, program facilities, training and development and program support. Each group shared their perspective and commented on issues, challenges and successes. Although the two groups were interviewed separately, there were many themes which overlapped each groups' discussion.

*Assignments.* Coordinators were usually assigned the YAPA program without much choice, and in some instances the newest and least experienced member of staff would be assigned. The staff had to conduct this program on a daily basis for 6-9 months. A program in any county could have two or even three coordinators over this period because of staff entitlements to official leave from duty. While staff generally thought the program was needed and useful, they had several helpful suggestions to enhance the quality of the programme.

*Personal Problems and Obstacles.* Several of the staff members believed many students came to the programme with a willingness to learn, but were distracted by personal family problems, which translated into disrespectful behavior and bad attitudes. Although many YAPA staff believed the students were committed to the programme, several expressed the students' interest in only receiving the stipend, which translated into participation at a minimum level.

Other issues observed by the staff included, poor money management skills and low levels of literacy among students which affected the delivery and outcomes of the entire training program. The limited access of land to farm after graduation contributed to student's losing interest in the program and seeking to find other jobs. Despite this phenomenon, a small number of students was able to practice on family owned farms and expressed value in the programme.

*Staff's preparation for a youth program and respect.* Most staff reported they had received no formal training or experience in working with young adults. When they began their jobs as coordinators, they were expected to bring personal experience and "real world" knowledge into the classroom. They were not provided with books, supplies, or training to successfully complete their coordinator positions.

Coordinators expressed a concern that they were unable to connect with many of their students because they did not have the formal skill set to address many of the social and psychological issues faced by the young persons in their classes. This lack of connection polarized their interaction with students and often times they found some trainees were disrespectful, making the task of getting things done very difficult.

#### *Facilities*

Coordinators reported that in the quality of the training facilities affected participation by students. While some counties had adequate facilities, others lacked basic amenities. Although there was significant female participation, little or no field facilities had been made for their convenience. Other noted issues, included incidences of theft due to lack of security. Many coordinators felt this was directly linked to inadequate facilities.

#### *Issues as perceived by Students' in Focus Group sessions*

Several issues the students raised in their focus groups were similar to those discussed by the coordinators; however, they voiced concerns in the area of respect, post programme outcomes, and programme supplies.

*Respect.* A large number of students felt the coordinators did not respect them because they were not "bright" or intelligent. Students complained that although several coordinators were supportive and provided a nurturing class environment, there was a handful that made disparaging remarks about the students' level of commitment to the program. Students also felt that a few coordinators did not trust them with the limited number of equipment and supplies and treated them like children rather than young adults.

Students expressed concerns across gender lines. A number of female students complained that they were occasionally being sexually harassed by office and field staff. They also expressed that sometimes they were not taken as seriously as their male counterparts in class discussions and field visits.

*Access to land and program supplies.* Nearly all students reported doubt about their ability to successfully engage in agriculture after completion of the program. This was due to the government's failure to provide land for previous graduates and the lack of follow up resources that were also supposed to be provided by the government. The lack of faith in the Ministry of Agriculture created animosity between the coordinators and the students because they felt the

coordinators were part of the system. Students felt that coordinators could have more influence on the land and resource issue, but they choose not to get involved.

Tension was high among students because of the lack of basic equipment and supplies. Students had to share hand tools and other equipment which they believed should have been more plentiful. Many students said that if they had their own basic supplies, the program would be more effective and provide students with a greater sense of ownership.

*Ranking of reasons why trainees enter the YAPA.* The reasons why trainees chose to enter the YAPA programme were ranked from most influential to least influential (Table 2) based on mean scores. Reasons ranked highest were “to generate additional income”, seeing an “opportunity for self employment”, belief that “farming is interesting/ fascinating” and “love of working with nature”. “To improve the nation’s food security” and “to make farming the main means of living” were also important reasons. Reasons such as “the influence of friends”, “the influence of family”, “the need for the stipend”, trainees’ unemployment status, and having studied Agricultural Science at school were the lowest ranked reasons.

Table 2

*Ranking of Reasons Why Trainees Enter the YAPA Programme and Ranking of Areas of Satisfaction, Trinidad and Tobago*

Ranking of Reasons why trainees enter the YAPA	Mean	SD	Ranking of areas of satisfaction with the YAPA	Mean	SD
1. To be able to generate additional income in the future	4.47	.73	1. The amount of field work done	4.07	.90
2. Saw an opportunity for self employment	4.31	1.00	2. The overall experience gained from the programme	4.03	.90
3. Believe farming is fascinating/interesting	4.17	.86	3. The informal discussions in the field about farming	3.79	.84
4. Love working with nature	4.02	1.14	4. The equipment, tools and clothing for field work	3.77	1.25
5. To improve the nations food security	3.77	1.29	5. The knowledge and skills of the trainers	3.68	.84
6. To make farming my main means of living	3.73	1.09	6. The classroom discussions	3.68	1.15
7. Wanted to get into the Training institute (ECIAF)	3.67	1.49	7. Opportunities to visit farms/ farmers to learn from	3.57	1.28
8. Heard about a promise of land by Government	3.65	1.38	8. Projects, other than farming involved with	3.54	.94
9. Parents/family are into farming	3.54	1.58	9. The respect provided by the trainers to you	3.36	1.20
10. Needed the stipend being provided	3.43	1.51	10. Agricultural projects involved with	3.35	1.15
11. Parents have land, other resources	3.37	1.47	11. Cooperation of YAPA trainees	2.96	1.43
12. Influence of parents	3.33	1.53	12. The amount of classroom work done	2.91	1.18
13. Studied Agricultural Science at school	3.10	1.58	13. The facilities for changing, washing, lavatory etc	2.77	1.41

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14. Was not employed when I heard about the programme	2.98	1.45
15. Influence of friends	2.82	1.47

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Ranking of program areas based on level of satisfaction. Table 2 also shows that overall, trainees were very satisfied with the amount of fieldwork done, the experience gained from the programme, and the informal discussions about farming in the field. There was some good level of satisfaction by trainees with the tools and equipment provided, the knowledge and skills of the trainers, classroom discussions and farm visits. Highest levels of dissatisfaction were with the co-operation of other trainees (2.96) and the amount of classroom work (2.91). Trainees expressed most dissatisfaction with the facilities for changing, washing, lavatory etc (2.77).

### Discussion

The assessment of reasons why trainees participate in YAPA shows that young people's attitudes towards agriculture was relatively positive. Many of the students believed that agriculture was important and would be a valuable source of income to support their future and their families. Although they seemed to have a strong belief in agriculture, this did not necessarily correlate with their satisfaction and classroom discussions were viewed as moderately satisfactory for the trainees. This might translate into more training and development for both coordinators and trainees.

Based on the comments from the coordinators and students, it was clear that an induction program may be useful for programme preparation. A period of training for staff and students (probably 1-2 weeks) before the start of the formal program is needed. This would serve as a sound preparation to set norms and expectations for all participants.

The selection process should be revised and a comprehensive measurement should be created based on performance in Phase 1 and coordinators should be involved in this assessment and final decision. Better coordination of the selection of trainees may assist in the satisfaction of programme participants and help coordinators tailor programme discussions and activities to fit the needs of the students.

Many of the trainees expressed a reason for entering the programme due to the need of the stipend. In the focus group some felt this was not being paid on time and should be addressed by the coordinators. Due to the dependence on the stipend for travel and living expenses, stipend payments should be on par with other similar youth programs to reflect the importance attributed to the development of the agriculture sector.

The issue of land to successful Phase 2 participants and further training in agribusiness should be immediately implemented. Staff should be adequately prepared through training in areas such as the "art of teaching young adults" and how to manage groups of people, especially young adults. Future training for participants should also include a formalized code of conduct for trainees.

Training and development was an important issue identified in both the focus groups and the surveys. Trainees noted their level of satisfaction with "visits to farms", "projects other than farming" and "agricultural project they were involved with", but during the focus group expressed some concerns in this area. Trainees felt there were not enough hands-on experiences integrated into the curriculum. Perhaps with more discussions and respect between student and coordinator, the classroom experiences can be enriched with projects and activities that enhance the learning of the trainee and fit within the programme plan of the coordinator.



Students also noted that adequate gender appropriate change rooms and bathroom facilities be constructed at all locations. They also noted that adequate storage areas for tools, fertilizers, other programme supplies be built at all locations. Students felt that there should be sanctions for inappropriate actions by office and field staff. This will hold people accountable and help female students feel assured that their concerns regarding sexual harassment will be addressed. Along with the coordinators, the students felt that all staff who work with YAPA students must be educated on the goals of the program and adhere to acceptable behaviors.

### Conclusion

Most models under construction will have faults. Notwithstanding its inherent difficulties, the YAPA as a model for the engagement of young people in productive agriculture holds tremendous promise. Timely appropriate interventions can strengthen the base of this model after which it can be presented as a sturdy model for inclusion of young people in productive agriculture in the Caribbean region. The findings of this study are useful in this regard.

The model has further implications for creating a system which values the input and strengths of young persons in the field of agriculture. In order for the region to become a stronger force in the field of agriculture, citizens will need to recognize the strengths of young persons and the new face they bring to the field of agriculture. The YAPA model provides not only an outlet to learn about agriculture, but also the opportunity for youths to be a part of the changing face of agriculture within the Caribbean region. For these reasons, it is important to address the concerns voiced by both coordinators and trainees in this valuable programme.

### References

- Alonge, A. (2006). Bringing stakeholders into agricultural extension reform agenda: A participatory swot analysis of the Trinidad National Agricultural Extension Service. In J. Vreyens (Ed.) *AIAEE 22<sup>nd</sup> Annual Conference Proceedings*. Retrieved March 15, 2007, from <http://www.aiae.org/2006/compiled.pdf>
- Divyakirti, V. (2002, November). *Rural Development: The Strategic Option of Youth Employment*. Paper presented at the Youth Employment Summit, Alexandria, Egypt. Retrieved March 15, 2007, from [http://www.fabi.it/giovani/congresso/DOCUMENTI/rural\\_dev.pdf](http://www.fabi.it/giovani/congresso/DOCUMENTI/rural_dev.pdf)
- Food and Agriculture Organization of the United Nations. (1996). *Inter-Asian Training on Rural Youth Population Programmes*. Retrieved March 15, 2007, from <http://www.fao.org/docrep/X5635E/x5635e00.htm>
- Food and Agricultural Organization of the United Nations. (1999). *Youth against hunger*. Retrieved March 15, 2007, from <http://www.fao.org/food/docs/wfd99-e.pdf>
- Ghee, L. (2002, November). *Youth Employment in the Asia-Pacific Region: Prospects and Challenges*. Paper presented at the Youth Employment Summit, Alexandria, Egypt. Retrieved March 15, 2007, from [http://www.un.org/esa/socdev/poverty/papers/youth\\_unescap.pdf](http://www.un.org/esa/socdev/poverty/papers/youth_unescap.pdf)
- Holz-Clause, M. & Jost, M. (1995). Using focus groups to check youth perceptions of agriculture. *Journal of Extension*, 33(3). Retrieved March 15, 2007 from <http://www.joe.org/joe/1995june/a3.html>

- Hutchinson, P. (2001). *Incentives for Rural Youth in Agriculture*. Retrieved March 15, 2007, from The Government of Saint Lucia website:  
[http://www.stlucia.gov.lc/pr2001/incentives\\_for\\_rural\\_youth\\_in\\_agriculture.htm](http://www.stlucia.gov.lc/pr2001/incentives_for_rural_youth_in_agriculture.htm)
- International Labor Organization. (2000). *Key Indicators of the Labor Market*. Retrieved December 12, 2006, from [http://www.world-affairs.org/globalclassroom/curriculum/service\\_learning.htm](http://www.world-affairs.org/globalclassroom/curriculum/service_learning.htm)
- Ministry of Agriculture, Land, and Marine Resources, The. (2004a). *Agriculture in Trinidad and Tobago – Women in Agriculture*. Retrieved February 26, 2007, from The Government of the Republic of Trinidad and Tobago website:  
<http://www.agriculture.gov.tt/applicationloader.asp?app=articles&id=1040>
- Ministry of Agriculture, Land, and Marine Resources, The. (2004b). *Programmes and Projects – Agricultural Incentive*. Retrieved February 26, 2007, from The Government of the Republic of Trinidad and Tobago website:  
<http://www.agriculture.gov.tt/applicationloader.asp?app=articles&id=1061>
- Oberai, A. (Ed.). (1983). *State policies and international migration: Studies in market and planned economies*. London, England: Croom Helm.
- Rahael, J. (10 July 2002). [address] Address presented at the Launch of The Youth Apprenticeship Programme in Agriculture, Trinidad and Tobago. [Transcript] Retrieved February 26, 2007, from  
<http://www.agriculture.gov.tt/documentlibrary/downloads/93/YAPA%20Launch.doc>
- Russell, E. (1993). Attracting Youth to Agriculture. *Journal of Extension*, 31(4). Retrieved March 15, 2007, from <http://www.joe.org/joe/1993winter/a2.html>
- World Bank, The. (2006a). *Rural Development & Agriculture in Papua New Guinea*. Retrieved March 15, 2007, from <http://go.worldbank.org/S4LJLNM0C0>
- World Bank, The. (2006b). *Urgent Need to Invest More in Developing World's Record Youth population, Says World Development Report*. Retrieved March 15, 2007, from <http://go.worldbank.org/L889ZRIN20>
- World Bank, The. (2001). *World development indicators: 2001*. New York, NY: Oxford University Press.
- World Bank, The. (1992). *World Development Report 1992: Development and the Environment*. New York, NY: Oxford University Press. Retrieved March 15, 2007, from [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2000/12/13/000178830\\_9810191106175/Rendered/PDF/multi\\_page.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2000/12/13/000178830_9810191106175/Rendered/PDF/multi_page.pdf)
- World Bank, The. (2007). *World Development Report 2007: Development and the Next Generation*. Retrieved March 15, 2007, from <http://go.worldbank.org/TCFXCF42K0>