

**DIAGNOSIS OF THE ROLE OF GOVERNMENT
AND EDUCATION ENTITIES OF THE CACAO
SECTOR IN BELIZE**

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DIAGNOSIS OF THE ROLE OF GOVERNMENT AND EDUCATION ENTITIES IN EACH OF THE COUNTRIES CACAO SECTOR

A. Government Entities

i. Ministry of Agriculture

The Ministry of Agriculture of Belize aims to transform the ministry into a modern sector that is fully competitive, diversified and sustainable. The ministry's mission is to continue as the economic pillar of Belize, ensuring food security, income and foreign exchange opportunities, employment, and natural resources conservation, in order to grow the economy, reduce poverty and empower the local population for sustainable development.

The Ministry of Agriculture does not work in isolation. It considers the integrated approach as fundamental for success. Its partners and clients range from farmers, fishers, cooperatives, producers and workers, processors, manufacturers, distributors and exporters, consumers and investors, national and local government, civil society and local and external donors.

Its strategic objectives are as follows:

- increase the efficiency, profitability and competitiveness of the agriculture, fisheries and cooperative sectors;
- accelerate the diversification in production, processing and exports;
- improve and conserve the natural and productive resource base to ensure long-term sustainable productivity and viability;
- improve access to productive resources and services and create economic opportunities for small/young farmers, women and indigenous people, particularly in poor, marginal areas;
- strengthen the institutional capacities to provide effective support in marketing and trade, research and extension, as well as relevant education training.

The country of Belize is divided by local government and central government. However, the local government is dependent on the central government for development programs hence for subsidies to develop initiatives. Therefore, agriculture projects and programs are implemented by the central government, the Ministry of Agriculture.

Cacao production has been seen by the Ministry of Agriculture, hence the Government of Belize, as an alternative to alleviate poverty and to diversity agriculture products. The availability of a market for this product has pushed even further the government's interest in assisting in this initiative.

According to the chief agricultural officer, cacao production offers alternatives for income generation. Although the government recognizes the market potential of cacao, it tries not to

intervene much in its development. The chief agricultural officer believes that non-governmental organizations have done a good job in cacao production and therefore the government only collaborates in what is necessary and where assistance is really needed.

Government's policies do not provide specific detail for cacao production but this does not mean that it is not considered an important agricultural product. On the other hand, they do keep an eye on the development of this sector. An example is the establishment of a Cacao Task Force, which for the last few years has been rather dormant. One of the Chief Agricultural Officer's objective is to revive this group. The mention of cacao in the agriculture policy reads:

CACAO - Attention will center on increasing the number of small farmers involved in cacao production and in improving their fermentation and drying techniques. Efforts will also be directed at strengthening the Cacao Growers Association in their management, marketing and extension activities. The production of organic cacao for the high value end of the market will be aggressively pursued. All these efforts should contribute towards growth of the industry in a sustainable manner and in diversifying the agriculture base of the Toledo district.

The Government of Belize's collaboration in the cacao production is revealed in one of the biggest investments made three years ago, which was completed in March of 2007, The Community Assisted Rural Development Programme for Belize Project (CARD). This project was launched in 1999 and one of its sub-projects was to assist the Toledo Cacao Growers Association (TCGA) to improve cacao production. The project committed US\$133,800 to the TCGA for this venture. A committee comprised of the Ministry of Agriculture, Toledo Development Corporation, TCGA and the service provider was responsible for monitoring the project. In addition The Ministry of Agriculture provided funds to hire a project manager, an agronomist, administration officer and extension officers to implement the project. The personnel provided technical assistance at the farm/household level nationally. Through this project farmers and extension officers had the opportunity to visit cacao plantations in other countries as well as participate in technical training at the regional level.

To further elaborate on the CARD project, in 2000 with the support of the CARD Project, a 7 year basic development plan was prepared for TCGA in order to gear the industry in meeting the market quota demand in the United Kingdom. The first year (2001), CARD assisted the association in obtaining about US\$5,000 from an organization called Trees Belize in nursery equipments and supplies to build nurseries for plant propagation necessary to start implementation of the TCGA growth scheme. However, Hurricane Iris, which devastated southern Belize in early October 2001, completely changed the plans. Following Hurricane Iris, in 2002 CARD financed US\$20,000 in external consultancy costs to continue implementation of the plan. After 2002 TCGA again requested funds from the MOA through the CARD project. This request was approved and entailed the following objectives:

1. Improved cacao production system for greater economic viability and ecological sustainability, and to exploit opportunities for production diversification, technology supply and market access.
2. Strengthen capability of the TCGA to deliver more effective services to its member;

The following activities were accomplished through this project:

1. Fertility program
2. Grafting
3. Pest control program
4. Integrated farming system
5. Field tests
6. Technical training
7. Payment of an agronomist
8. Strengthening of the organization

The Ministry of Agriculture other than coordinating programs in the country and developing policies are involved in research. This is done in partnership with its local arm, the Belize Agricultural Health Authorities – BAHA (plant health), and regional organizations such as Inter-American Institute of Cooperation in Agriculture - IICA (funding and technical assistance) and International Regional Organization for Plant and Animal Health - OIRSA (plant health and funding) and international organization from the Republic of TAIWAN (technical assistance). Another institution that contributes to MOA objectives is the Regional Unit for Technical Assistance in Costa Rica – RUTA. These organizations has also provided technical assistance to TCGA through the collaboration of the MOA.

Most of the work done by the Ministry in cacao is in the Toledo and Stann Creek District where the majority of cacao farmers are located. To be more specific they work with producer organizations and with executives of organizations. Following an interview with the Chief Agriculture Officer, it was noted that the ministry is involved in agro-forestry initiatives in general and that they have participated in formulating laws for agriculture and agro-forestry through the development of strategies and policies.

The ministry has commercial nurseries that sell seedlings to farmers throughout the country of Belize. They also provide technical assistance in addressing issues regarding cacao production systems. The ministry also coordinates what they call a “Cacao Task Force” which looks at cacao production, diseases, etc.

The ministry is not a major direct funder, whereas they assist TCGA in identifying funding sources. They also assist in monitoring and evaluation, advising in disease control, subsidy programs, incentive programs (through work with BAHA) and capacity building/extension programs.

As mentioned earlier, cacao as a crop is not given too much emphasis in the policy of the Ministry of Agriculture (MOA). At this point in time they think there is no need for norms and regulations in Belize because the country is still at the rudimentary level in the cacao sector. But the Ministry has plans for this relationship to change in the future. They feel that better policies for production and research is required. There should be more incentives for the farmers to expand their cacao production. There is a need to introduce new varieties of seedlings that are more productive and disease resistant, for example, 'monilia' a fungal infection which is destructive to the cacao industry. Technical innovations like germplasm improvement will bring new varieties, higher yielding of product and more disease resistant seedlings. Also needed is promotion and support for organic production within the cacao sector.

Presently, the ministry is conducting an economic analysis of cacao production. They are looking mainly at the sustainability of the sector to evaluate its environmental and economic viability. This initiative indicates that the ministry has a long history of experience with the cacao sector and is knowledgeable in the needs of the cacao industry. MOA considers the interference, or conflict of interest of the buyer or buyers' representatives (Green and Blacks Ltd.) in Belize a major difficulty in the cacao sector.

ii. Ministry of National Development

The Ministry of National Development, carries the responsibility for producing long term and medium term development plans and strategies. For the past years this ministry has been conducting studies to comply with the Millennium Development Goals for poverty alleviation. The result of these studies has been the development of the National Poverty Elimination Strategy 2006 – 2010. The Ministry of National Development having the mandate to implementing this action plan, this ministry is responsible for policy matters and daily operations of the tasks related to poverty alleviation of the country at large.

The Government of Belize in its action plan has given special attention to alleviate poverty in the Toledo District. This district is where the Toledo Cacao Growers Association is located and where the majority of the cacao farmers live. It's the national poverty action plan that has recognized the need to continue to implement the Toledo Action Plan which was developed last year.

The Toledo Action plan delineates the need to improve competitiveness, diversification and efficiency in all aspects of agricultural production through adequate extension officers. This is planned to be achieve by developing and implementing training programmes for cooperatives, associations and their members. Trainings will focus on building participants capacity in business and financial management, marketing, product development, value-added processing and quality control. In addition, it aims to revitalize and strengthen agriculture extension programmes to provide support to farming communities. Finally, it aims to conduct detailed cost of production analyses for all aspects of current agricultural production, in regards to their cost-effectiveness.

The action plan for the district does not mention cacao production, but since the few associations in the district are being targeted it is assumed that the cacao association stands a chance to benefit. TCGA has over 1,000 farmers which have recognized the the benefits cacao production brings. This indicates that most of these farmers are already earning some income from this agricultural product, therefore contributing to poverty alleviation; the goal of the government of Belize.

iii. Ministry of Education

The Ministry of Education, on behalf of the Government of Belize, is charged with the responsibility of ensuring that all Belizeans are given the opportunity to acquire the knowledge, skills and attitude required for full and active participation in the development of the nation and for their own personal development.

As they move to accomplish this goal, the Ministry works in partnership with the churches and other voluntary agencies to ensure that adequate support systems exist for the delivery of appropriate and equitable education services. The cooperative involvement of educational agencies is crucial to the success of the Government's policy on education.

The long term strategic goals of the new Education Sector Strategy arise from a clear vision of what must be done to address national educational needs in the 21st Century. Two core concerns identified by the present Prime Minister Said Musa in 1998 are 1) universalizing access to education and 2) ensuring quality in education. A critical foundation for this new vision is recognition of the emerging global information infrastructure.

In pursuing the overall goal of systematic institutional transformation in a rapidly changing world, the new vision maintains that essential Belizean attitudes and values must be preserved and promoted:

"Among these are a holistic education which provides for the spiritual, moral, intellectual, physical, and aesthetic development of our children. Our curricula need to foster character education so that our youth assume responsibilities of citizenship. It is vital that our young people be taught the importance of telling the truth, of cherishing freedom, of respecting and celebrating difference, of fostering a sense of social responsibility, of developing their self-esteem and confidence, and of protecting our environment."

In order to pursue this new vision, an overhaul of the entire curriculum is envisaged. This renovation is required in order to produce the necessary effects that will allow the accomplishment of goals of social justice and the establishment of a culture of peace.

ROLES AND FUNCTIONS

The Ministry of Education has the following responsibilities:

- To formulate, implement, monitor, review, and articulate policies and plans and provide for the conduct of appropriate educational research.

- To maintain and improve equality in access to educational opportunities in partnership with churches and the community at large.
- To ensure that the education system produces human resources with the appropriate knowledge, skills, and attitudes to meet their own personal development and the social, economic, and technological needs of Belize.
- To ensure the development and implementation of relevant curricula and provision of a supportive environment that facilitates the teaching/learning process.
- To ensure that the system is managed by qualified staff.
- To manage efficiently and effectively all resources under its portfolio.
- To monitor and evaluate the performance of the education system and assess its impact on the achievement of equity.
- To ensure the implementation of a system which is characterized by a working environment that:
 - is conducive and supportive of a high level of efficiency and productivity;
 - allows for effective management performance
 - facilitates job satisfaction and high motivation.

The country of Belize has only one public education institutional “University of Belize”. This university is diverse in its programs and falls under the Ministry of Education rules and regulations. The College of Agriculture under the University of Belize is the only institution that covers agriculture and cacao production in its curriculum. Please note that private universities do not have agricultural programs.

B. Educational Entities

The University of Belize is a national, autonomous and multi-location institution committed to excellence in higher education, research and service for national development. As a catalyst of change it provides relevant, affordable and accessible educational and training programs that address national needs based on principles of academic freedom, equity, transparency, merit and accountability.

Its vision for the next five years will be dedicated in fostering Belize’s development by producing graduates who are socially and ecologically responsible, analytical, self-confident, disciplined, ethical, entrepreneurial, and skilled communicators and who are committed to using these skills and values for Belize’s enrichment.

The goals of this institution are:

1. to meet national needs
2. encourage sustainable development
3. increase self-sustainability
4. prepare Belize to meet global challenge
5. encourage an international student population

i. University of Belize – School of Agriculture

The University of Belize-Central Farm (agriculture department) is a national university that focuses on research at the regional, national and international levels. It aims at achieving all areas related to agriculture to their student body, but very little emphasis is put on the cacao sector, even though they do have syllabus/curricula that are used in educating students on the cacao industry.

The syllabus presented below includes the following general format and information for a semester:

**ASSOCIATES DEGREE PROGRAMME
BELIZE COLLEGE OF AGRICULTURE
Citrus/Bananas/Cacao**

36 HOURS

1. Introduction
 - World production, trends and trade
 - National production and economic importance
 - Nutritional importance
2. History, origin, distribution and use of crop
3. Taxonomic and botanical description
4. Botany and physiology
 - Growth and development
 - General physiology, including climatic requirements, nutrition, water uses and yield potential
5. Nursery management
6. Varieties
 - Selection of varieties, (including rootstocks where applicable), yield potential.
7. Cultural practices
 - Land preparation, planting, propagation, planting system and density, pruning, fertilization, weed control, irrigation.
8. Pest and Disease Management

- Soil borne and foliar diseases (bacterial and fungal), insects, nematodes, virus, birds and other animals, control of pest and diseases, the importance of balanced metabolism.

9. Harvesting, post-harvest and processing

- Harvest maturity, harvest systems and techniques, handling processing and storage, factors affecting quality, quality control and assurance, use or disposal of crop and processing by-products or waste.

10. Economics and marketing

- Yields, cost of production and profitability,
- World and local prices,
- Marketing.

The course outline above for a semester looks very impressive to what students learn, however, the course into the cacao sector is only an introductory approach.

The institution does consider cacao a relevant topic in their curriculum because it is a growing commodity for the agriculture and tourism industry. However, mahogany reforestation is a key aspect in their agro-forestry objectives. Mr. Mendez, an associate lecturer at the Central Farm Campus, is very keen to point that yes cacao production is included in the syllabus but is careful in mentioning that only an introductory course is taught. He also boasts and points that the Farm has around one hundred and ten (110) different varieties of cacao plants, but that the major difficulties of labor and access to the field, hinders the institution to work within the cacao sector. He further adds that the institution also lacks financial support, but that they have a faculty capable of dealing with the cacao sector.

A total of twenty-five students are enrolled at this institution (20 males and 5 females; average ages: 20 years; all are Belizean). These students cannot specialize in cacao production because the program only reaches as far as the associate level. A participatory-action-research methodology is not included in the curricula and most students come from rural and urban areas. This is where farmers benefit from the education provided to the students, where most of them become extension officers in agriculture departments across the country of Belize and share their knowledge with farmers. The institution is engaged in extension outreach for agro-forestry and cacao.

Students do show a high interest in the capacity building program titled: Agricultural Senior Project for young Entrepreneurs and Agricultural Field Practice. 19 of the 25 students are enrolled in this course. The interest has increased over the last five years. The institution has not contemplated organizing courses on specializations on cacao but does have summer programs for students and farmers in other areas of agriculture. The main reason for this is limited financial capacity of the institution.

Associate lecturer Mr. Mendez concluded that he would really like to increase more cacao information in the syllabus and curriculum so that students can specialize and be better prepared to work with the cacao sector/industry. However, the objectives of the farm are in other areas, and because of lack of labor and access to the field, as well as limited financial aid make it difficult to achieve such objectives.

C. Non-Governmental Organization

i. Tumulkin learning Center

The Tumulkin Center of Learning is a non-governmental organization and technical/agricultural/cultural and educational school in the mountain regions of southern Belize. Much of what students learn within the agricultural and cacao sector has been at the local/communal, and national levels.

Cacao is considered a relevant topic at the institution because it is a Mayan, inter-cultural education that adds both cultural value and economic value to the community. Income generation and educational purposes are key aspects about agroforestry being addressed at the institution and yes, cacao production is included in their curricula. Other areas addressed are adding value to cacao, Monilia management, and grafting. All of this is done in classroom and at the demonstration sites the institution has. The objectives and mission of this institution will not change since it is seen to a great extent as part of their cultural heritage.

However, the major problem foreseen at the center is the control of monilia, a fungal disease, and the control of the leaf cutting ants (wee-wee). Technical personnel, though, is seen as a strength the institution has that facilitates the work within the cacao sector.

The average student is 14 to 16 years of age, where 75% are males and 25% are females. All students come from the rural areas and their ethnic backgrounds are either: Maya Ketchi, Garifuna, Mestizo, or Yucatecan. Students can specialize in cacao production in the areas of agro-production and agro-processing. Apart from students coming from the rural areas of Toledo, they come from Toledo and the Cayo district as well. The programme does not include a participatory-action-research methodologies. There is no gender relationship as to how many men versus how many women specialize in cacao production.

The center does contain a capacity building program for young entrepreneurs in management, marketing and business studies. These programs are mandatory to the students. Because the program just started five years ago, the Managing Director points out that it is difficult to mention if interest in the program has either increased or decreased. The center does have plans to include other courses in the future. These courses include: Eco-cultural tourism, Sustainable use of Natural Resources, Research Programs as well as Outreach Programs.

Finally, the centre is engaged in the consultancy of honey production as an extension/outreach program. Farmers are the social group that benefit from these research and out reach programs.

D. Existing Laws and Regulations for the Agricultural Sector and Specifically for the Cacao Sector in the Country.

There are no existing laws and regulations that guide the initiatives of the Agriculture Sector of Belize. Therefore, there are no specific laws that guide the cacao sector in Belize. Nonetheless, there exists a national policy on agriculture that the Ministry of Agriculture has development (see annex 1: National Agriculture Policy 2006). In addition the annual report 2005 of the ministry outlines training and capacity building in general issues on agro-forestry and agriculture; projects and statutory bodies, community initiated agriculture and resource management/rural development project and partner agencies (see annex 2: Ministry of Agriculture Annual Report 2005). This annual report makes slight mention of the cacao sector in Belize.

E. CONCLUSIONS

Cacao production offers an alternative for the agriculture sector in Belize. The Government is cognizant of the fact that cacao production has significant potential in contributing to the alleviation of poverty, and therefore will oversee what is happening in the industry. Although it's polices is weak in this sector, the government, in the past has contributed assistance in the growth of the cacao sector through projects. The Ministry of Agriculture's Chief Agriculture Officer, attests that the government has intentions of further assisting these initiatives because of the market assurance. They also feel that one of the reasons they are not more involved is because they have seen that non-governmental organizations have filled gaps in the sector.

Although it is at an introductory level, educational institutions also give importance to cacao production. However, they have intentions to continuously review its programs. The Toledo Cacao Association in the past has not developed a curriculum for schools (see annex 3) but have never published them, nor have they collaborated with the Ministry of Education or non-governmental organizations specializing in cacao.

Finally, it is worth noting that cacao is not recognized as a product in the feeding programs of schools. Feeding programs do exist but with other products.

F. Contact Persons:

Institution	What does it do	Contact person
BAHA	Enforces policies and regulations, esp. in Plant health	Mr. Francisco Gutierrez 824-4899
OIRSA	Plant and Animal Health policies and regulations	Mr. Fermin Blanco 822-0521
IICA	Funding and Technical Assistance/Cooperation	Mr. Wilmot Garnett 822-0222
RUTA	Technical/Financial Assistance/Sustainable Development Practices	Mr. Joe Lisbey 822-1283
MOA	Policies, regulations and Technical Assistance	Mr. Eugene Waight 822-2241
University of Belize-CENTRAL FARM	Educational Approach to Cacao	Mr. Trinidad Mendez 824-2129

G. Annexes

1. National Agriculture Policy 2006
2. Ministry of Agriculture Annual Report 2005
3. Education Curriculum