

**3<sup>rd</sup> Progress Report on the provision of technical assistance to farmers  
towards implementation of sustainable farming practices in the  
Maracas/ St. Joseph and Caura/ Tacarigua Valleys**

**TIME PERIOD: OCTOBER - NOVEMBER 2011**

**Submitted by**

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# **3rd<sup>nd</sup> Progress Report on the provision of technical assistance to farmers towards implementation of sustainable farming practices in the Maracas/ St. Joseph and Caura/ Tacarigua Valleys**

**TIME PERIOD OCTOBER NOVEMBER 2011**

## **1.0 INTRODUCTION**

### 1.1 Background

An assessment of Trinidad's Northern Range completed in 2005 and published as the 2004 National State of the Environment Report for Trinidad and Tobago<sup>1</sup>, concluded, among other things, that unregulated and unauthorized small-scale farming practices are becoming more evident throughout several of the watersheds of the Range. Such practices are driven by a number of socio-economic factors including land use policy and practices, and accelerated development of housing, which often work in combination.

While small-scale farming is a means of livelihood for several farmers (especially in rural areas) and it also plays a key role in local food production, it is becoming increasingly evident that unsustainable agricultural farming practices are part of the cause for downstream environmental impacts being experienced throughout Trinidad. The main impacts include an increase in the incidence and severity of flooding at the foothills of the Northern Range, especially in densely populated areas such as the capital city Port of Spain and in several towns along the East-West Corridor; and a disruption in potable water production by the watersheds of the Range. With the Northern Range is known to produce a large proportion of Trinidad's water supply, reductions in both the quality and quantity of potable water are beginning to have a national-level impact which is only expected to worsen in the foreseeable future.

In order to address the problem of unsustainable agricultural practices in the Northern Range and provide a model for reconciling socio-economic needs of hillside farming communities with environmental conservation, the Inter-American Development Bank (IDB) and The Cropper Foundation have designed and embarked on a project entitled **'Implementation of Sustainable Farming Practices in Trinidad's Northern Range Communities'**. The goal of this project is to pilot alternative farming practices in two watershed of the Northern Range - the Caura and Maracas/ St. Joseph watersheds - that can assist in improving the returns and sustainability of agriculture for small farmers while mitigating negative impacts on the environment and affected downstream communities. Specifically, this project seeks to: examine how to sustain livelihoods based on hillside agriculture within the Northern Range while protecting the resources of the ecosystem and alleviating downstream impacts; support the social and economic development of selected communities; collect valuable baseline information to facilitate present and future participatory applied research and analysis; and understand how to replicate the approach and disseminate learnt lessons stemming from the project.

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<sup>1</sup> Northern Range Assessment 2005. Report of an Assessment of the Northern Range, Trinidad and Tobago: People and the Northern Range. State of the Environment Report 2004. Environmental Management Authority of Trinidad and Tobago. 184pp.

The project's concern centers on five (5) main sources of impact, namely:

- a) Agricultural production (food)
- b) Community Governance and empowerment
- c) Landscape management (Biological impact)
- d) Demographic changes (settlement, tenure)
- e) Watershed Maintenance

## **2.0 SUMMARY OF ACTIVITIES - OCTOBER/NOVEMBER 2011**

During this time period the technical team visited the Maracas/ St. Joseph and the Caura Valleys, and engaged in the following activities:

- I. Accompanied the Ministry of Food Production Land and Marine Affairs (MFPLMA) Soils Department to administer soil tests to all participating farmers in the project.
- II. The project's technical coordinator Dr. Allan Williams met with two farmers in the Caura Valley to share and discuss perspectives on ecologically friendly farming practices.
- III. Finalized the input list requested by participating farmers in the two subject areas
- IV. Shared more information in one-page bulletins on ecologically friendly farming practices.
- V. Captured footage on progress of projects (see power point production)
- VI. Arranged two field visits to highlight outstanding ecologically friendly farming practices by two farmers: Mr. Quddus Mohammed in the Caura Valley area (The field group was unable to reach Mr. Mohammed due to flooding on the Tumbasson road); Mr. Bruce Herbert in the Maracas Valley was only attended by the technical team, farmer absenteeism was likely due to the inclement weather on the day, and farmers attending the funeral of a prominent village member.
- VII. Continued discussing and adjusting farm plans (sustainable farming practices with farmers) on soil quality, land preparation, crop management and environmental integrity as an ongoing exercise
- VIII. Approximately 50% of farmers in the Maracas/ St Joseph areas who requested training in the use of the "A" frame received training during this reporting period, the other 50% would be accommodated by mid December 2011.
- IX. Farmers in the Caura Valley area mainly on Tumbasson Road were given advice on how to manage their bachac problem and were reporting positive results
- X. Farmers in the Caura Valley area mainly from Tumbasson Road were in the process of registering a farmer's group association.

### **Note:**

The farmers in the two study areas particularly for the period of October and early November experienced severe rainfall which resulted in the case of one farmer total crop loss and in the case of four farmers' partial crop loss. Most farmers who had plans to establish crops had to postpone plans.

### 3.0 MARACAS/ ST JOSEPH FARMERS

#### 3.1 General

Interactions with the farmers in Maracas/ St Joseph during the month of September 2011 were continued on the basis of:

- I. Distribution of more information bulletins
- II. Observations and discussions on ongoing projects and future projections
- III. Capturing footage on progress
- IV. Developing possible high nature value (HNV) initiatives
- V. Finalizing request (pro forma invoices) for supporting inputs to their farm plans
- VI. Continuing farm visits particularly those that were still outstanding
- VII. Facilitating soil tests conducted by MFPLMA on 9 of the 12 farms in the Maracas/ St Joseph area
- VIII. One field trip was arranged essentially to observe a system of bench terracing at the holding of Mr. Bruce Herbert in Lluengo Village
- IX. Approximately 50% of farmers in the Maracas/ St Joseph areas who requested training in the use of the “A” frame received training during this reporting period

#### 3.2 Soil Quality

**Table 1 –Notes on Maracas/ St Joseph Farmers’ practices aimed at building and maintaining soil quality**

	Last Name	First Name	Activities
1	Farrier	Holasco	<p><b><u>THUMBS UP!!</u></b> Continues to use compost in addition to on-farm generated cured manure from his livestock operation.</p> <p><b><u>THUMBS DOWN!!</u></b> Has requested a soil test but the Technical Team would still have to ensure HE RECEIVES THE TEST BEFORE THE END OF THE YEAR.</p>
2	Reyes	Andrea	<p><b><u>THUMBS UP!!</u></b> Continues to make and utilize compost, in addition to recycling crop residues as green manure and applies ash to the soil. Samples of her soil were sent for testing.</p>
3	Audain	Terrence	<p><b><u>THUMBS UP!!</u></b> Continues to use compost, and had a soil test carried out on his farm.</p>
4	Sinanan	Cathryn	<p><b><u>THUMBS UP!!</u></b> Continues to make and utilize compost, in addition to recycling crop residues as green manure and applies ash to the soil. Samples of her soil were sent for testing</p>
5	Herbert	Yusuff / Bruce	<p><b><u>THUMBS UP!!</u></b> Continues to Use compost and recycles crop residues as green manure / mulch and is in the process of building terraces, improving of on-farm drainage and enhancing accessibility on the hillside. This farmer has</p>

			received a soil test.  <b><u>THUMBS DOWN!!</u></b> The farmer continues to utilize some herbicide (glyphosate) for weed management during the preparation phase of the terraces
6	Thompson	Leon	<b><u>THUMBS UP!!</u></b> Mr. Thompson continues to use compost, recycles crop residues as green manure in his grow box system. On his hillside production plot he normally has a ten (10) year fallow period. This farmer has received a soil test.  <b><u>THUMBS DOWN!!</u></b> Continues to use environmentally harmful herbicides in his agronomic program but is willing try HNV compatible products as a first option such as applying molasses as a first option vs. a nematicide for the treatment of nematodes in his celery system.
7	Applewhite	Wayne	<b><u>THUMBS UP!!</u></b> Mr. Wayne Applewhite has crops at different stages as such he continues to build his soil quality by recycling crop waste as green manure and utilizing compost. Mr. Applewhite still has to have his soil test done.
8	Padillia	Ryan	<b><u>THUMBS DOWN!!</u></b> Still continues in the <b>non use</b> of on-farm generated eco friendly farm inputs
9	Williams	Chad	<b><u>THUMBS UP!!</u></b> Continues to produce and manage a compost heap and did receive his soil test
10	Bernard	Nigel	<b><u>THUMBS UP!!</u></b> Continues to recycle crop residues for use as green manure
11	Applewhite	Kurn	<b><u>THUMBS UP!!</u></b> Continues to manage compost heap to apply to his farm.
12	Walter	Dave	<b><u>THUMBS UP!!</u></b> Continues to incorporate compost, recycle crop residues as green manure, and apply ash. The farmer has requested a soil test. Samples of his soil were sent for testing.

Source: Technical Team visits in October 2011

### 3.3 Land Preparation

**Table 2 –Notes on Maracas/ St Joseph Farmers’ Land Preparation practices**

	Last Name	First Name	Activities
1	Farrier	Holasco	<b><u>THUMBS UP!!</u></b> Continues his program that involves the ongoing use of compost in addition to on-farm generated cured manure from his livestock operation in the establishment of his

			<p>new fruit trees and new Columbian cedar trees.</p> <p><b><u>THUMBS DOWN!!</u></b> Farmer did not attend the training in the use of the “A frame”</p>
2	Reyes	Andrea	<p><b><u>THUMBS DOWN!!</u></b> Still continues to utilize inorganic pesticides and herbicides in her crop management program. A poly culture system has been established on un terraced parcels of the hillside</p> <p><b><u>THUMBS UP!</u></b> Has begun to receive training on the use of the “A frame.”</p>
3	Audain	Terrence	<p><b><u>THUMBS UP!!</u></b> Farmer has received training in the use of the A-Frame for the purpose of terracing for hillside conservation. Due to the severe inclement weather Mr. Audain has not been able to intercrop hot peppers in his plantain field, also his plantains are not doing that well. He has begun to establish a grow box system with technical assistance from Mr. Leon Thompson - another farmer in the area.</p>
4	Sinanan	Cathryn	<p><b><u>THUMBS UP!!</u></b> Has begun to receive training on the use of the “A frame.”</p> <p><b><u>THUMBS DOWN!!</u></b> Continues to utilize inorganic pesticides and herbicides in her crop management program. A poly culture system has been established on un terraced parcels of the hillside</p>
5	Herbert	Yusuff / Bruce	<p><b><u>THUMBS UP!!</u></b></p> <ul style="list-style-type: none"> <li>- Management of unwanted vegetation (weeding-keeping a low vegetative cover but not removing totally) between fruit trees</li> <li>- Preparation of terraces for cash crop program</li> <li>- Clearing and preparation of land for expanding plantain production. He has established hot and pimento peppers in addition to some tomatoes.</li> </ul> <p><b><u>THUMBS DOWN!!</u></b> Continues to use non friendly ecological chemical inputs in his program in addition continues to establish crops of the same family in the same area on a continues basis for example tomato, sweet pepper and hot pepper all from the solanaceae family.</p>
6	Thompson	Leon	<p><b><u>THUMBS UP!!</u></b> On the hillside this farmer is currently still preparing a parcel of land that has not been utilized for the past ten years (Proper fallow period).</p>

			<p><b><u>THUMBS DOWN!!</u></b>  Although he is aware of the negative impact of the use of conventional inputs he utilizes a full range of such products (herbicides, insecticides, fungicides, miticides) in his tomato production. He is a full time farmer and is not prepared to take the risk of crop loss. But is slowly coming around on the HNV initiative.</p>
7	Applewhite	Wayne	<p><b><u>THUMBS UP!!</u></b>  Mr. Applewhite still continues to create bench terraces check dams, drip irrigation systems as some soil conservation techniques since most of his farm is on sloping land.</p>
8	Padillia	Ryan	<p><b><u>THUMBS UP!!</u></b>  Shelved plans to establish seasoning pepper plants as currently is engaged in a non farming activity that is helping generate additional income for which some will be used to re-invest in his farm.</p> <p><b><u>THUMBS DOWN!!</u></b>  Farmer did not attend the training provided in the use of the “A frame”, probably due to his non farming activity consuming all his time at the moment.</p>
9	Williams	Chad	<p><b><u>THUMBS UP!!</u></b>  Has received training in the use of the “A Frame” for planting ochros. The farmer will begin harvesting of tomatoes soon.</p>
10	Bernard	Nigel	<p>This farmer has established a small plot of string beans and has plans to establish a poly culture system of medium term and short term crops all of different genera; this is good for farm diversity. The latter is only a plan at this stage as no time frame can be given for this activity to begin.</p> <p><b><u>THUMBS DOWN!!</u></b>  Did not have anytime this month to receive training in the use of the “A frame” to plant on the contour.</p>
11	Applewhite	Kurn	<p><b><u>THUMBS UP!!</u></b>  Pachoi plants have not been established as yet due to the severe weather experienced in October and November 2011 but the farmer intends to establish on raised beds in planting holes with no further tillage, in order to minimize disturbance to the soil on his slope. In addition, plants will be established in a mixture of compost and rabbit manure.</p>
12	Walter	Dave	<p><b><u>THUMBS UP!!</u></b>  Has cleared some new additional lands for planting by of brush cutting. Farmer has received training in the use of the ‘A Frame’ plans.</p>

			<p><b><u>THUMBS DOWN!!</u></b>          Has used herbicides in the process of clearing additional lands.</p>
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Source: Technical Team visits in October 2011

### 3.4 Crop Management

**Table 3 –Notes on Maracas/ St Joseph Farmers’ Crop Management practices**

	Last Name	First Name	Activities
1	Farrier	Holasco	<p><b><u>THUMBS UP!!</u></b>            Still continues in the management which involves the further establishment of fruit trees in an eco friendly way            Management of livestock where the manure is used in the tree crop production system</p>
2	Reyes	Andrea	<p><b><u>THUMBS UP!!</u></b>            Continues to maintain her mixed crop farm system with a range of short term and long term crops: Food crop production - string beans, plantains, bananas, tannia, cassava and eddoes; Fruit trees - coconuts. This farmer has a strong program for building and maintaining soil quality</p> <p><b><u>THUMBS DOWN!!</u></b>            Has some challenges in crop management in terms of still using harmful non environmentally friendly fertilizers and pesticides</p>
3	Audain	Terrence	<p><b><u>THUMBS UP!!</u></b>  <b>Cocoa rehabilitation:</b> Still slowly continues brush-cutting and pruning existing trees, clearing all vines and old branches are being removed, replanting with new high yielding cultivars and intercropping with bananas, and maintaining his small existing coffee field (Out sourcing Labor is a challenge)  <b>Management of plantains:</b> Mr. Audain has adopted a totally organic approach in which he will use only chicken manure as fertilizer for his plantain plants.</p> <p><b><u>THUMBS DOWN!!</u></b>            The only treatment is monthly applications of black disinfectant.</p>
4	Sinanan	Cathryn	<p><b><u>THUMBS UP!!</u></b>            Continues to maintain her mixed crop farm system with a range of short term and long term crops: Food crop production of string beans, plantains, bananas, tannia, cassava and eddoes; and Fruit trees - coconuts. This</p>

			<p>farmer has a strong program of building and maintaining soil quality.</p> <p><b><u>THUMBS DOWN!!</u></b> Farmer has some challenges in crop management with respect to the application of environmentally harmful pesticides in her program.</p>
5	Herbert	Yusuff	<p><b><u>THUMBS UP!!</u></b> Farmer has indicated that HNV compatible products are to be utilized as the first option in a short term farming program.</p>
6	Thompson	Leon	<p><b><u>THUMBS UP!!</u></b> In the process of comparing the conventional method against the HNV approach in production of celery in grow boxes.</p> <p><b><u>THUMBS DOWN!!</u></b> Still has some challenges in crop management with respect to the application of environmentally harmful pesticides in his program.</p>
7	Applewhite	Wayne	<p><b><u>THUMBS UP!!</u></b> Continues to maintain his mixed crop farm system with a range of short term and long term crops for food crop production.</p> <p><b><u>THUMBS DOWN!!</u></b> Faces some challenges in crop management in terms of still using harmful non-environmentally friendly fertilizers and pesticides.</p>
8	Padillia	Ryan	<p>This farmer is relatively inactive.</p> <p><b><u>THUMBS UP!!</u></b> The farmer continues on a very slow basis to prune his fruit orchard and brush cutting the shrubbery in between trees.</p>
9	Williams	Chad	<p><b><u>THUMBS UP!!</u></b> Farmer is utilizing the use of marigold plants and is waiting on the telefund distribution of eco friendly inputs to utilize in the management of ochros and sweet peppers and some tomatoes.</p> <p><b><u>THUMBS DOWN</u></b> This farmer indicated that pesticide usage is at a minimum. Copper fungicides are sprayed but insecticidal sprays are based on ecosystem analysis.</p>
10	Bernard	Nigel	<p><b><u>THUMBS UP!!</u></b> Mr. Bernard intends to adopt a strictly eco-friendly approach. He requested a soil test, and a range of eco-friendly products for the management of bachac ants.</p> <p><b><u>THUMBS DOWN!!</u></b> The farmer is currently using a mixture of dieseline and cooking salt to control his bachac problem. He intendeds to compare garlic tea and soya bean oil with his current environmentally harmful measure or method.</p>

11	Applewhite	Kurn	Continued maintenance of mangoes, oranges and barbadene (currently being harvested),  <b>THUMBS UP!!</b> Of interest also is that the compost heap was drenched with garlic tea periodically during its production.
12	Walter	Dave	<b>THUMBS UP!!</b> Crop management consist primarily of brush cutting to maintain his short and long term crops and the incorporation of the Marigold plants

Source: Technical Team visits in October 2011

### 3.5 Environmental Integrity

**Table 4 – Maracas/ St Joseph Farmers’ views on maintaining environmental integrity and a summary of their progress in adopting eco friendly farming practices**

	Last Name	First Name	Activities
1	Farrier	Holasco	<b>THUMBS UP!!</b> Mr. Farrier practices continue to contribute to building a strong program of soil quality which is very beneficial to ensuring environmental integrity.
2	Reyes	Andrea	<b>THUMBS UP!!</b> Has received training in the use of the A Frame to encourage contour planting which minimizes soil erosion and will contribute towards maintaining environmental integrity.
3	Audain	Terrence	<b>THUMBS UP!!</b> Mr. Audain has indicated that he has adopted a totally organic approach. Mr. Audain is taking steps in the right direction. All these actions will make strong contributions towards maintaining environmental integrity.
4	Sinanan	Cathryn	<b>THUMBS UP!!</b> Has received training in the use of the A Frame to encourage contour planting which minimizes soil erosion. These actions will make strong contributions towards maintaining environmental integrity.
5	Herbert	Yusuff / Bruce	<b>THUMBS UP!!</b> Mr. Herbert continues to build the quality of his soil by using compost, recycles crop residues as green manure / mulch in addition to building bench terracing in addition receiving a soil test results should continue to focus and his program. In terms of crop management he has stated that he will use HNV compatible products as a first. All these actions will make strong contributions towards maintaining environmental integrity.  <b>THUMBS DOWN!!</b> Mr. Herbert continues to utilize non friendly chemical farm inputs in his program. With continued dialogue it is hoped that this will change.

6	Thompson	Leon	<p><b><u>THUMBS UP!!</u></b> Farmer continues to use compost, recycle crop residues as green manure for building soil quality and on the hills has a 10 year fallow period. These actions will make strong contributions towards maintaining environmental integrity. The farmer is making a good start in his usage of strictly HNV compatible products in his grow box system.</p> <p><b><u>THUMBS DOWN!!</u></b> Even though in a trail phase according to Mr. Thompson's as far as environmentally friendly ecological products, his continued usage of environmentally toxic pesticides would eventually lead to soil degradation acidification and the killing-off of flora and fauna creating un balanced eco systems if not addressed very soon.</p>
7	Applewhite	Wayne	<p><b><u>THUMBS UP!!</u></b> The farmer continues to use compost, recycle crop residues as green manure and build check dams and bench terraces. These actions will make strong contributions towards maintaining environmental integrity. A good start is his willingness to try strict HNV compatible products on part of his farm.</p> <p><b><u>THUMBS DOWN!!</u></b> Discourage the use of environmentally harmful pesticides which would cause serious harm to our eco systems.</p>
8	Padilla	Ryan	<p><b><u>THUMBS DOWN!!</u></b> Discussion continues with farmer on his current practices of leaving the soil bare and without any cover. It is stressed that such practices can lead to erosion and depletion of organic matter in the soil.</p>
9	Williams	Chad	<p><b><u>THUMBS UP!!</u></b> Farmer has requested training in the use of the A-frame in order to plant on the contours of the hillside. He continues to use compost, recycle crop residues as green manure, apply ash, and integrate marigold plants in his farming system. These activities point toward maintaining environmental integrity.</p>
10	Bernard	Nigel	<p><b><u>THUMBS UP!!</u></b> Mr. Bernard is demonstrating that he is interested in building soil quality. He intends to adopt a strictly eco-friendly approach and is making a strong statement that this farmer is firm believer in maintaining environmental integrity.</p>
11	Applewhite	Kurn	<p><b><u>THUMBS UP!!</u></b> This farmer has some reservations about fully adopting</p>

			or embracing an environmentally friendly farming approach, and he has instead opted to establish a plot fully devoted to these alternative practices; a move in the right direction no doubt! This represents a step towards contributing to maintaining environmental integrity. This exercise is scheduled to be undertaken in late November /early December.
12	Walter	Dave	<b><u>THUMBS UP!!</u></b> The farmer's practices continue to make strong statements in terms of building soil quality and the integration of marigold plants in his farming system all make strong contributions towards maintaining environmental integrity

Source: Technical Team visits in October 2011

#### **4.0 SUMMARY OF ACTIVITIES IN MARACAS/ ST JOSEPH**

In spite of key challenges face by this project: (i) limited timeframe afforded to the implementation phase of this project, (ii) inaccessibility of some of the farms, (iii) and the part time nature of their farming activities, the technical team continues to make progress in influencing a move towards more sustainable farming in the two Valleys.

Undoubtedly there is high interest among farmers in transitioning to sustainable practices and in sharing amongst themselves best practice for such a transition. It is noteworthy, that farmers have been visiting Bruce Herbert's farm to discuss how he transitioned his slope to bench terraces.

The A-frame project shows great promise. To date about ten (10) farmers have been involved in this, and are beginning to apply some of the conservation strategies that are being practiced. It is recommended that materials for A-frames be included in the material support from the Telefood project.

The provision of information through bulletins is useful but its impact is uncertain considering the attitude of some farmers to rest down documents for future reference. The soil testing project is commendable, and both the farmers and technical team eagerly await the results of the tests which will provide insight into conditions of farmers' soils, and thus soil treatments could then be based on this information.

We have made some progress, perhaps limited on the ground, thus far. But there is potential and as earlier stated farmers are still enthusiastic and I am sure will fully appreciate receiving the inputs. I am convinced that this will be perceived as a genuine commitment to their cause. It is a pity that this project in the valley is nearing closure. In the absence of a new project we should try to develop some strategy to maintain communication; maybe occasional visits, if not to all farms to those that are active and where the interest level is high.

## 5.0 CAURA VALLEY FARMERS

### 5.1 General

Major farming activity in the Caura Valley is located along four roads, namely Caura Royal Road, Concordia Road, Tumbasson road and Capigical road. Capigical Road and the eastern side of Caura Royal Road in addition to WASA have a River as their main source of water for irrigation. Therefore it is not surprising that most of the farmers whom have direct access to the river have been able to develop most of their parcel whereas the other farms that do not have direct access or no access to the river as their main water source on average only developed no more that 50% of the farm land. The technical team may want to begin discussions with the farmers who do not have direct access to the river to introduce the grow box technology particularly in the dry season as a way to maximize year round production, because the grow box system can be supported by WASA as its main water source.

Another interesting recent development is in process and it involves the farmers along Tumbasson road forming and registering themselves into a farmers association with help from the Trinidad and Tobago Agri Business Association (TTABA). The Tumbasson farmers have a perception that they are not getting adequate service from the Caura Valley Farmers Association.

During the month of October 2011 the Caura Valley experienced excessive rainfall which affected most of the farmers' farm plans in terms of new plantings, crop water logging applying routine agronomic practices to their crops and in some cases total annihilation of their crops. On some visits by the technical team including a planned field trip, had to be cancelled due to the inaccessibility of the roads due to flooding.

### 5.2 Soil Quality

**Table 5 –Notes on Caura Farmers' practices aimed at building and maintaining soil quality**

	Last Name	First Name	Activities
1	Heera	Krishna	Mr. Heera received a soil test but experienced total crop loss due to flooding, and is in the process of starting over. Mr. Heera also had a meeting with the technical coordinator of the project Dr. Williams to share ideas and experiences in farming. This meeting was not an attempt at a conversion but an effort to highlight some of the benefits of a more sustainable approach to agriculture.
2	Tannis	Clement	<b><u>THUMBS UP!!</u></b> Mr. Tannis received a soil test. Mr. Tannis continues to recycle crop residues as green manure and apply ash to the soil.
3	Howard	Vivian	<b><u>THUMBS UP!!</u></b> Mr. Howard received a soil test on his farm. He continues to recycle crop residues as green manure and apply ash to the soil
4	Balgobin	Kevin	<b><u>THUMBS UP!!</u></b> Mr. Balgobin received a soil test. He continues to make and utilize compost, in addition to recycling crop residues as green manure. Mr. Balgobin suffered partial loss to his melongene and cucumber crop.

5	Ramcharan	Naresh	<p><b><u>THUMBS UP!!</u></b> Mr. Ramcharan received a soil test. He continues to recycle crop residues as green manure / mulch.</p> <p><b><u>THUMBS DOWN!!</u></b> He continues to use environmentally harmful pesticides on his farm operational plans such as herbicides and its negative effect on building soil quality</p>
6	Ramcharan	Rajendra	<p><b><u>THUMBS UP!!</u></b> Mr. Ramcharan received a soil test and continues to recycle crop residues as green manure / mulch.</p> <p><b><u>THUMBS DOWN!!</u></b> He continues to use environmentally harmful pesticides on his farm operational plans such as herbicides and its negative effect on building soil quality.</p>
7	Haywood	Terrance	<p><b><u>THUMBS UP!!</u></b> Mr. Haywood did receive a soil test. He continues to recycle crop residues as green manure / mulch and has requested a soil test and is very knowledgeable on environmentally sound ecological farming practices</p> <p><b><u>THUMBS DOWN!!</u></b> Mr Haywood sometimes uses environmentally harmful herbicides</p>
8	Mohammed	Quddus	<p><b><u>THUMBS UP!!</u></b> Mr. Mohammed did receive a soil test and continues to recycle crop residues as green manure / mulch and incorporate compost to continue to build his soil quality, has requested a soil test and is very knowledgeable on environmentally sound ecological farming practices.</p>

Source: Technical Team visits in October 2011

### 5.3 Land Preparation

**Table 6 –Notes on Caura Farmers’ Land Preparation practices**

	Last Name	First Name	Activities
1	Heera	Krishna	<b><u>THUMBS DOWN!!</u></b> Mr. Heera lost all of his crops due to excessive flooding.
2	Tannis	Clement	Mr. Tannis did not make much progress with creating bench terraces in preparation for planting citrus, corn and lettuce due to the inclement weather.
3	Howard	Vivian	<b><u>THUMBS DOWN!!</u></b> Due to the inclement weather, Mr. Howard had to postpone his plans for transplanting barbadene, plantain and passion fruit.
4	Balgobin	Kevin	Mr. Balgobin was not able to undertake much agronomic maintenance due to the inclement weather. In terms of new planting activity this was postponed due to the severe inclement weather.
5	Ramcharan	Naresh	Mr. Ramcharan plans for an acre for planting were put on hold due to the inclement weather.
6	Ramcharan	Rajendra	<b><u>THUMBS UP!!</u></b> He displays a lot of knowledge of the advantages of sustainable farming practices.

			<b><u>THUMBS DOWN!!</u></b> This farmer did not honor his appointment with Dr. Williams.
7	Haywood	Terrance	Mr. Haywood's plans for additional planting were put on hold due to the inclement weather.
8	Mohammed	Quddus	<b><u>THUMBS UP!!</u></b> Mr. Mohammed continues to maintain his mixed crop farm system with a range of short term and long term crops for food crop production.

Source: Technical Team visits in October 2011

## 5.4 Crop Management

**Table 7 –Notes on Caura Farmers' Crop Management practices**

	Last Name	First Name	Activities
1	Heera	Krishna	<b><u>THUMBS UP!!</u></b> Mr. Heera received more information bulletins on soil conditioning, preventing soil erosion and companion planting
2	Tannis	Clement	<b><u>THUMBS UP!!</u></b> Mr. Tannis also received more information bulletins on soil conditioning, preventing soil erosion, and polyculture
3	Howard	Vivian	<b><u>THUMBS UP!!</u></b> Mr. Howard also received more information bulletins on soil conditioning and preventing soil erosion.
4	Balgobin	Kevin	Mr. Balgobin also received more information bulletins on soil conditioning and preventing soil erosion and companion planting.
5	Ramcharan	Naresh	<b><u>THUMBS UP!!</u></b> Mr. Ramcharan managed to transplant melongene and tomato plants even in light of the severe inclement weather experienced.  <b><u>THUMBS DOWN!!</u></b> Continues to use environmentally harmful herbicides in his agronomic program
6	Ramcharan	Rajendra	<b><u>THUMBS UP!!</u></b> Mr. R. Ramcharan received more information bulletins on soil conditioning, preventing soil erosion, and polyculture  <b><u>THUMBS DOWN!!</u></b> Continues to use environmentally harmful herbicides in his agronomic program
7	Haywood	Terrance	<b><u>THUMBS UP!!</u></b> Mr. Haywood received more information bulletins on soil conditioning, preventing soil erosion, and polyculture  <b><u>THUMBS DOWN!!</u></b> Continues to use environmentally harmful herbicides in his agronomic program
8	Mohammed	Quddus	<b><u>THUMBS UP!!</u></b>

			<p>Mr. Mohammed continues to boasts of zero use of inorganic fertilizers and pesticides and continues to achieve high production levels; a testament that aiming to maintain the integrity of the environment by adopting good eco friendly farming practices will not sacrifice farm productivity.</p> <p>Mr. Mohammed also received more information bulletins on soil conditioning, preventing soil erosion, and polyculture</p>
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Source: Technical Team visits in October 2011

## 5.5 Environmental Integrity

**Table 8 – Caura Farmer’s views on maintaining environmental integrity and a summary of their progress in adopting eco friendly farming practices**

	Last Name	First Name	Activities
1	Heera	Krishna	<p><b><u>THUMBS DOWN!!</u></b>            Although Mr. Heera lost his entire crop he continues to adopt a program of using very harmful pesticides for example as a consequence of the flood, the secondary damage to his crop fungi began to set in and affect his papaya trees and fruits, his solution was to destroy the affected trees using gramoxone (inorganic in nature).</p> <p><b><u>THUMBS UP!</u></b>            Hopefully a soil test may reveal the beginnings of some of these negative effects. This farmer is working against maintaining environmental integrity.</p>
2	Tannis	Clement	<p><b><u>THUMBS UP!!</u></b>            Mr. Tannis is on the road towards developing and practicing good eco friendly farm practices and by embracing this culture he is on the road to maintaining environmental integrity.</p>
3	Howard	Vivian	<p><b><u>THUMBS UP!!</u></b>            Vivian Howard continues to show keen interest in sustainable farming practices particularly building quality soils and a zero approach on harmful pesticides, this approach can only auger well for maintaining environmental integrity.</p>
4	Balgobin	Kevin	<p><b><u>THUMBS UP!! / THUMBS DOWN!!</u></b>            Mr. Balgobin is at a cross roads on how his practices contribute towards the maintenance of environmental integrity. He continues to build soil quality but at the same time is counter productive to this activity by using <b>inorganic fertilizers and pesticides</b>. Is willing to tilt towards maintaining environmental integrity, the provision of the TeleFood inputs<sup>2</sup> along with the provision of information bulletins should contribute.</p>
5	Ramcharan	Naresh	<p><b><u>THUMBS DOWN!!</u></b>            Mr. Ramcharan predominantly is focused on maintaining his farm via mainly using very harmful pesticides and inorganic fertilizers to the flora and fauna.</p>

<sup>2</sup> The use of the inputs can assist in building confidence on their use as pest and disease suppressant products

			His practices work against maintaining environmental integrity and in the medium and long term would prove costly to himself and the environment.
6	Ramcharan	Rajendra	<p><b><u>THUMBS UP!!</u></b> Continues to uses compost, recycles crop residues as green manure. The technical team has scheduled a meeting between the projects technical advisor (Dr. Allan Williams) and Mr. Ramcharan to discuss the pros and cons of Mr. Ramcharan’s approach</p> <p><b><u>THUMBS DOWN!!</u></b> Mr. Ramcharan predominantly is focused on maintaining his farm via mainly using very harmful pesticides and inorganic fertilizers to the flora and fauna. His practices work against maintaining environmental integrity and in the medium and long term would prove costly to himself and the environment.</p>
7	Haywood	Terrance	<p><b><u>THUMBS UP!! / THUMBS DOWN!!</u></b> Mr. Haywood is at a cross roads on how his practices contribute towards the maintenance of environmental integrity. He continues to build soil quality but at the same time is counter productive to this activity by using <b>inorganic fertilizers and pesticides</b>. Is willing to tilt towards maintaining environmental integrity, the provision of the TeleFood inputs<sup>3</sup> along with the provision of information bulletins should contribute.</p>
8	Mohammed	Quddus	<p><b><u>THUMBS UP!!</u></b> Mr. Mohammed is doing an excellent job in demonstrating that a farmer can be successful whilst maintaining environmental integrity. In recognition of his eco friendly practices and proven results the project had planned a field visit to his farm late in October 2011 so that other farmers may benefit from his knowledge.</p>

Source: Technical Team visits in October 2011

## 6 SUMMARY OF ACTIVITIES IN THE CAURA VALLEY

Despite the limited timeframe afforded to the implementation phase of this project, the technical team has helped to facilitate some positive activities mainly:

- ✚ Facilitating the MFPLMA to conduct soil tests for all the farmers who are part of the implementation phase of the project,
- ✚ Distributed a significant amount of bulletins on eco friendly farming practices
- ✚ Gave good recommendations on how to control a problem with bachac
- ✚ Functioned as a good listener when the Tumbasson Road farmers were thinking about forming a farmers association
- ✚ The facilitation of the project’s Technical Advisor interacting with farmers in the Caura Valley

It was a pity though that the workshop / field trip planned for October could not have taken place due to the severe inclement weather on that day.

<sup>3</sup> The use of the inputs can assist in building confidence on there use as pest and disease suppressant products

## 7.0 ACTIVITIES SCHEDULED FOR DECEMBER 2011

The technical team's program for the month of November/December 2011 will entail:

- I. The distribution of organic inputs and a few small equipment items to **the twenty (20) participating farmers in the program**, some include:
  - a. Off-farm produced compost
  - b. Limestone
  - c. Organic certified foliar fertilizers
  - d. Granular and liquid organic certified fertilizers
  - e. Organic based and certified plant growth enhancers
  - f. Organic certified pesticides
  - g. Hoes, Shovels, machetes etc
  
- II. The team would continue to share information on ecologically friendly farm practices and monitor if these discussions are being put into practice.
  
- III. The technical team would try to assist in the areas of other challenges identified by the farmers in the two areas, particularly by interacting with the respective extension officers assigned to the Caura Valley and the Maracas/ St Joseph areas.
  
- IV. Facilitate two field trips to share with the projects' participating farmers the ecological friendly practices adopted by two of the more successful farmers in the group.