

PROJECT UPDATE

“Implementation of Sustainable Farming Practices in Trinidad’s Northern Range Communities” (EcoAgriCulture)

A View from Project Mgt.

The EcoAgriCulture Project partners are pleased to inform you that we are in the final phase of the project, where we work with farmers to implement sustainable farming practices. This phase is characterized by individual interactions between the project’s technical team and specific farmers in the Maracas/ St. Joseph and Caura Valleys to:

- Share and discuss the results of the High Nature Value Index (HNVI) exercise;
- Use the results of the HNVI to discuss, develop, revise and document the integration of sustainable farming practices into individual farming plans;
- Determine the material support needed by farmers to implement their farming plans;
- Monitor, evaluate and document the opportunities, barriers and challenges in implementing sustainable farming practices in the two target areas.

Over the next three months, the project’s technical team will work with the members of the project’s steering committee to identify and present the key messages and findings of the EAC project to a wide range of stakeholders including policymakers. Results of the EcoAgriCulture project are already disseminated through the project’s website and bi-monthly update bulletins. Additional communication tools will include information briefs specifically designed for key stakeholders, workshops, and a video presentation of sustainable farming practices in action in the Northern Range. I am pleased to report that the response of members of the farming communities in the Maracas/ St. Joseph and Caura Valleys to the project has been generally very positive, and we are seeing real possibilities for mainstream transformation of the way small-scale agriculture is undertaken in the Northern Range.



Pommecythere tree on a farm in Caura Valley

October 2011

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Many of the farmers that we are engaging through this project are knowledgeable about the ecological and health benefits of conserving the environment, and some do undertake their own conservation measures; these actions are indicative of their appreciation and understanding of the high nature value of the Northern Range environment. However, lack of finances and technical support are major barriers which prevent farmers from engaging or incorporating more sustainable farming practices. Now more than ever there is need for greater cohesion and collaboration among institutions that provide financial support to farmers, research on agriculture, and policies guiding land management and agriculture; such a collaborative agenda must be guided by a long-term goal for sustainable agriculture in the Northern Range.

In this issue we highlight the sustainable conservation practices of one farmer in the Maracas/ St. Joseph Valley and one farmer in the Caura Valley. One of the project’s technical consultants, Dr. Shango Alamu, shares his views on the need to (re) culture a philosophy of sustainable farming in the Northern Range.

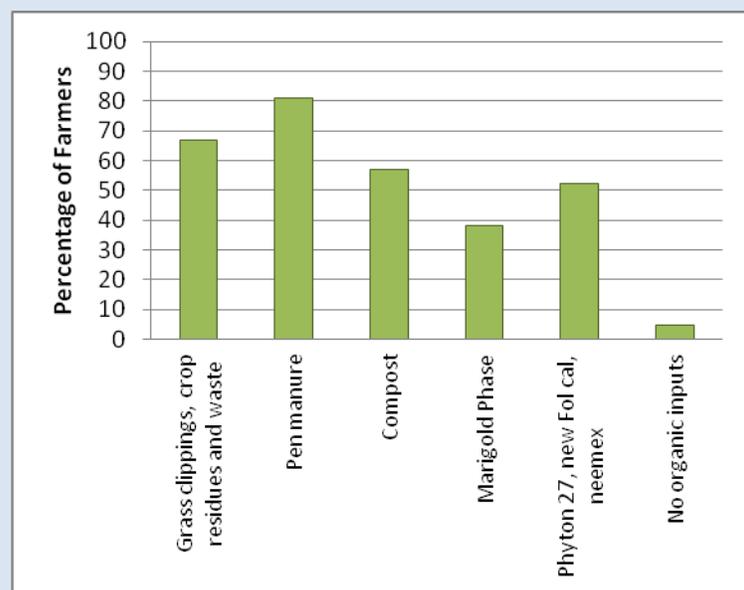
Maurice Rawlins
Project Manager

Working with farmers

Over the last two months, the EcoAgriCulture technical team has been engaging farmers on an individual basis to discuss and advise on key elements of their farm management plans (soil quality management, land preparation, crop management, and environmental integrity). The technical team has been working closely with 21 active farmers in the Maracas/ St. Joseph and Caura Valleys, and some findings based on these interactions are described below.

Using Organic Inputs

The majority of farmers from the two areas use 'green' on- and off-farm generated inputs, including the use of grass clippings and crop residues and waste as manure, and marigold plants as a natural insecticide. Many farmers use organic chemical inputs such as Phyton 27, new Fol cal and neemex, while some farmers even make their personal 'home-made remedies', for example one farmer uses a combination of hibiscus, corn and peppers as a natural pesticide.



Farmers' use of organic inputs

Soil pH and Treatment

Many of the farmers have never had tests undertaken on their soil. They therefore do not know the pH of their soil and consequently have never applied soil treatments such as agricultural lime (calcium carbonate) for correction of the soil pH. While organic-type practices help to maintain an adequate soil pH, the use of inorganic products generally results in increasing soil acidity. The project is currently working with farmers and the extension services of the Ministry of Food Production, Land and Marine affairs to have farmers' soils tested, and if necessary the project will supply inputs (mainly agricultural lime) for correcting soil pH.

Inorganic Farm Inputs

All of the farmers use some type of inorganic input, albeit to varying degrees. NPK fertilizers and gramoxone as a weedicide are two common inputs used; the technical team is working with farmers to share and discuss various ways of reducing or completely eliminating their use of inorganic inputs by increasing the use of organic inputs and/ or methods.

Bachac problems

Leaf-cutter ants or bachacs are a major pest problem for farmers. The bachacs are especially attracted to seedlings, and can – within an hour – completely defoliate seedlings. Farmers commonly apply a pesticide called Fastac to deal with the bachacs problem, but according to farmers keeping the bachacs suppressed requires frequent and heavy treatments of Fastac – which is not very desirable ecologically or economically. The technical team is therefore working to help farmers manage the bachacs using organic methods. Some of these include applying herbal and plant treatments made with strong-smelling or bitter-tasting plants such as garlic and onion.



Leaf cutter ants/ Bachac

Photo Credit: Kevon Swift

Farm plans

All of the farmers that we have been engaged with have short to medium term plans for their farms. However, these plans are however, not documented by farmers; therefore the technical team is working with farmers to help them document their farming plans in terms of overall farm layout, soil management, land preparation, crop management and environmental integrity. Documented plans can facilitate greater access to support from research, technical and funding agencies, and can improve the understanding of farming practices from a landscape view, which is very important for sustainable watershed management. Security of tenure continues to be a major barrier to farm-planning. We therefore encourage farmers to record and document the investments that they make to improving soil conditions etc. so that in the event of eviction from their land, they can seek adequate compensation.

Quddus Muhammed – farmer in the Caura Valley



Quddus Muhammed

Quddus is currently growing bananas, plantain, and ochro on his 2.5 acre farm in the Caura Valley. He uses very little chemical fertilizers (NPK), instead opting for the use of compost for fertilization, and the marigold plant as a natural insect vector control. He weeds manually and uses a weed-whacker from time to time.

What influenced your current farming practices?

After observing the damaging impacts that heavy use of chemical fertilizers and pesticides have on the environment, I decided to find other ways of farming that used less of those types of inputs and more organic ones.



Bananas intercropped with tipitambo

What do you see as the biggest challenges with this type of farming?

It is labour intensive and there is little support from the authorities (Government) for this type of farming. For example there are no subsidies or incentives to be had.

Do you have a particular philosophy or approach to farming?

Try to grow in a safe and sustainable way that benefits plants and the environment.



Ochro intercropped with corn

Bruce Herbert – farmer in the Maracas Valley



Bruce Herbert

Bruce's 3 acre farm in Lluengo Village in the Maracas Valley consists mainly of long term tree crops. He has been working the land since 1987 and his bench terraces and check barriers are testament to two decades of finding various ways to manage soil erosion. In addition to these structural measures he also keeps a mulch made of elephant grass on the areas of his land that are not shaded by trees to help reduce soil erosion.

What influenced your current farming practices?

When I began working this land I realized that I was cutting into limestone rock, that while very rich for the plants, eroded very easily and I needed to put some things in place to help reduce the soil erosion. That's when I started to do bench terracing, planting along contours, and planting long term tree-type crops.



Stone barrier to prevent soil loss

What do you see as the biggest challenges with this type of farming?

The lack of support from the government, both technical and financial support, makes this kind of farming difficult.

Do you have a particular philosophy or approach to farming?

Agriculture is a culture, and you must give it your all. You cannot be concerned only about the economic or making money part of it as you can end up doing things that damage your farm and others around you. It is also about caring for people around you and being responsible, as the things you do on your farm influence not only the people who are your neighbours but also people very far away in other towns etc. My inspiration comes from wanting to do agriculture and the love of labour; all of us are farmers in the virtual sense.

Bench terraces on the hillside



Promoting eco-sensitive agricultural production systems in Trinidad and Tobago

In its development, our country has experienced a diversity of agricultural production systems ranging from pure stand sugarcane production coming out of the plantation era, to perma-culture type multiple crop systems involving the production of cocoa and coffee intercropped with a range of medium and short term crops. These latter diverse systems were the essence of ecological stability - there was little dependence on pesticides and mineral fertilizers as the natural balance afforded the management of pest and diseases, the crop cover restricted the growth of unwanted vegetation and provided a continuous natural composting activity as vegetable matter fell to the ground, and assisted with plant nutrition.



Dr. Shango Alamu

With the quest to increase yields during the “green revolution” era on the premise that humankind was facing the threat of starvation, the world view was that the use of mineral fertilizers and synthetic pesticides - including at times extremely toxic types - was the solution. Naturally, this approach was adopted locally, particularly in the production of short term vegetable crops, a process which became progressively popular even in ecologically sensitive hillside areas.

This approach proved to be a self defeating system as agro-eco-systems became increasingly under threat; pests and disease causing organisms placed under selection pressure developed resistance and soil quality decreased, thereby increasing the dependency on these products, driving up costs of production and reducing productivity. Even farmers’ health became an issue as a number of farmers were hospitalized or even died as a result of chemical ingestion. Perhaps the most significant fall out was the degradation of the agro-eco-systems, which led to a reduction in the sustainability of production and threatened the livelihoods of producers.

These negative consequences stimulated the worldwide development of a movement for transforming agriculture guided by the philosophy of Ecological Crop Management.

utilizing the Farmer Field School approach. This is a participatory on farm strategy where farmers work in collaboration with extension officers and other technocrats in an effort to select and integrate environmentally compatible tactics to enhance soil quality and reduce pest damage below an economic threshold.

Coming out of this, a master trainers program was set up where several Caribbean agriculturists were trained and facilitated by a selection of international experts. This was followed by a training of trainers program involving local extension officers and farmers. Thus there is now a cadre of trained personnel poised to effectively transform agricultural production through the development of ecologically sound production systems ensuring the sustainability of agriculture and contributing to enhanced food security.

What is needed is the political will to drive the process beginning with the development of appropriate policy and provision of finance to promote the development of an enabling environment. Ecological crop management must not be seen as an option. It must be adopted as the central philosophy guiding agricultural development. At the farmer level, an incentive program and loan funding opportunities could be key facilitating mechanisms.

The country is ready for the change as there is an increasing consciousness among the national community to adopt healthy lifestyles and the availability of safe wholesome food could be a major driver of this transition.

Dr. Shango Alamu
Technical Assistant



Hillside Farm in Caura

Schedule of Activities



Technical Consultant, Richard Guy, discusses using organic pesticides with Farmer Krishna Heera



Farmer Vivian Howard, shows Technical Consultant, Richard Guy how he created support structures for growing barbadiene

Photo credits: The EcoAgriCulture Project Technical Team

September - November 2011:

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- Field workshops with farmers: Sharing experiences

December 2011– January 2012:

- Developing communication tools for project findings
- Designing research agenda for sustainable farming in the Northern Range
- Workshop to disseminate project findings

For more information on the EcoAgriCulture Project, The Cropper Foundation or any of the Project Partners, visit

www.thecropperfoundation.org

<http://tcfustainablefarming.weebly.com/>

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