PROJECT UPDATE

"Implementation of Sustainable Farming Practices in Trinidad's Northern Range Communities" (EcoAgriCulture)

July 2011

Mobilizing Field Support Staff

The Project is approaching its final stage of improving the returns and sustainability of agriculture for small farmers in the Northern Range while mitigating negative impacts on the environment and affected downstream communities. Specifically, we are seeking to engage in an exchange of information and farming practices with 30 selected farmers in the Maracas/St. Joseph and Caura Valleys. Our objective is to ensure that the economic and other benefits of proposed new practices are well articulated and continually reinforced during the period of technical support.

Keeping farmers' interest in the project is a significant challenge, which requires consistent engagement and interaction with the farmer. To maintain interest in the project, the project team has conducted frequent visits with key persons in the community such as heads of village councils and farmers' organisations, to keep them updated on project activities, and what is the likely course of action over coming months.

Interactions with farmers so far suggest significant buy-in and interest in alternative farm practices. Our select farmers have been engaged in a high nature value (HNV) indexing exercise, received both their index score and a summary of their practices, and asked as an introductory exchange to chose six (6) information bulletins that they would like to receive. These bulletins are part of the package to make farmers aware of the practices and alternatives for reducing farm input costs through a focus on on-farm recycling, reducing pest / weed outbreaks, and reducing crop losses.

Dr. Williams presents to project stakeholders at 2nd Project Stakeholders' meeting in May, 2011

Photo Credit: The Cropper Foundation

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Currently the Project is assembling a 3-member team to meet with the selected farmers on a regular basis to discuss and advise on key elements of the farm management plan (soil quality management, land preparation, crop management, environmental integrity) and report back to the technical coordinator. Team members will provide advice to the farmer *(based on farm management plans)* on what material support could be provided by the project and report on how the material support was used for each farmer and whether there were any challenges faced in using the materials. From these interactions the project hopes to summarize the concerns, questions, challenges, obstacles in implementing sustainable farming practices

Maurice Rawlins, Project Manager
The Cropper Foundation

What Questions should we ask?

Profile of High Nature Value (HNV) Questions

The HNV INDEX is a combination of positive points for good farming practices, recycling of farm wastes and extensive use of on-farm resources; and negative points for reliance on chemical inputs, biomass burning and chemical treatment of the soil.

The Index analyses the responses of farmers to eight (8) questions. The first set of four (4) questions simply confirms that their activity is farming and that they are in a high nature value environment. This section is set up to be expandable (*in the future*) to include the use of GPS to position the activity within the landscape and to be able to account for visual and measurable changes in that landscape.

The second set of questions (4) seeks to establish both the inputs used and the valued experiences gained by stakeholders farming in this environment.

The following is the profile of the eight questions:

Farmer Identification	• Name • Address
Farmer Location	• Relatively flat; gently sloping; steep • Surrounding environment
Soil Characteristics	• Predominant soil texture
Crops Grown	• Vegetable crops • Tree crops
Disease Pressure (high, medium, low)	• Disease pressure • Pest pressure • Weed pressure
Typical Agronomic Practices	• Source of water • Land preparation technique • Soil treatment • Structural land changes
Fertilizing Practices	• Chemical inputs • Non-chemical inputs
Managing Crop Growth	• Monitoring practices • Physical controls • Disease/ insect/ pest suppression • Weed supression

Finding Common Ground among Stakeholders

Small-scale Farming Systems are complex structures reflecting a variety of combinations of inputs and techniques that had been accepted for personal use because they have been shown to reward the farmer for his/her actions and are consistent with his/her perception of farming risks, farm production security and other threats. This is the farmer at his/her best as a ***resource appropriator.***

If we are interested in combining farming practices with environmental conservation, we have to do two things. First we have to find common ground between conservation and agriculture. Secondly we have to promote measures that will improve the returns to farming by farmers becoming more ***resource sustainers***.

The HNV Index provides the basis for a negotiated agreement among stakeholders on a common vision and goals for use of lands within a "High Nature Value Environment" for food production and food security.
The relative weights among the eight (8) questions are as follows:

Scoring Weights	200	100%
Farmer personal and confidential data	20	10%
Farm location	16	8%
Soil characteristics	5	2.5%
Crops grown (during the year)	35	17.5%
Local and pest disease pressure	15	7.5%
Typical agronomic practices used on your farm	52	26%
Fertilizing practices	16	8%
Managing crop growth	41	20.5%

The HNV Index for farming is structured like a "blood pressure" index, i.e. ***an error correction support instrument with an instructional component***.

The index value is meant to do three things:

1) To bring awareness to the "High Nature Value Environment" as a landscape that demands specific types of behaviour;
2) Open the gateway to facilitate the distribution of alternative farming practices from other sources including traditional farm practices;
3) Debunk dominant perceptions of the use of commercial inputs in these environments.

Exploring the Options in HNV Scoring

Entitlement and Responsibility

The first four questions on location and cropping pattern automatically awards the farmer 76 points or 38% of the Index. This recognizes that the farmer's very active presence in this environment connotes some level of entitlement (in terms of livelihood) as well as responsibility. While not challenging the entitlements, the use of the Index is more to accentuate the responsibilities.

Disease/Pest Pressure

The Index is careful not to use the words "elimination" or "control" when referring to the incidences of pests and disease. Exploring how much pressure the farmer feels he/she is under with respect to the "suppression" of these challenges, provides a gateway into how effective he/she considers his/her applications.

Agronomic Practices

The source of water, land preparation techniques, soil treatments and structural changes to the land are given a significant weight in the Index (26%) as these become the primary source of unsustainable farming practices. The Index tends to refocus farmers on these landscape-changing aspects rather than on the Fertilizing Practices (8%).

Managing Crop Growth

Observation, record keeping, and preventative measures are encouraged by the Index scoring (26 out of 41 maximum points) while a heavy reliance on chemical inputs tend to attract negative points. Overall chemical uses account for 108 negative points as against a total of 200 positive points.

Potential of a High Nature Value Index for Farming

The HNV Index can be used to:

- Secure the support of key stakeholders and spreads the vision of a green economy as functional;
- Support private sector organizations to develop and adopt standard codes of conduct, transparency in private sector initiatives, and independent monitoring;
- Leverage contributions for technical and financial assistance to the supply chain;
- Support internal and external audits to test compliance with legal environmental requirements;
- Build or strengthen government institutions, civil society and the private sector ability to develop, implement or manage verification systems;
- Promote policy dialogue and exchange of experience and information.

Farmers Responses to the HNV Questionnaires

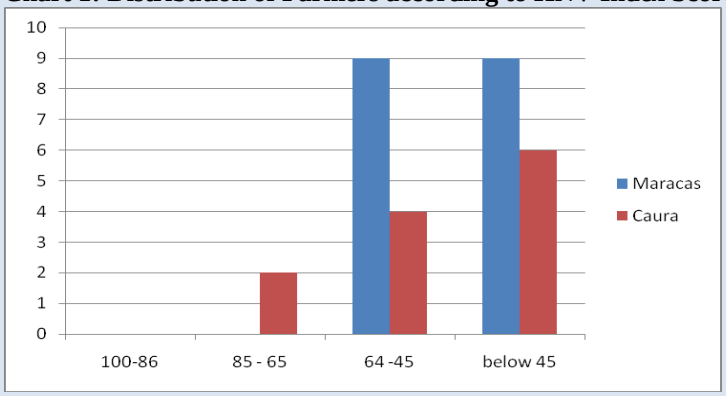
Thirty farmers willingly participated in interviews to determine their HNV Score: 12 farmers from Caura Valley and 18 farmers from the Maracas/ St. Joseph Valley. The topographies of the farming environments were found to be significantly different. 50% of the farmers in the Maracas Valley considered their farms to be on steep or gently sloping lands. In the Caura Valley 50% considered their farms to be relatively flat. In both areas only a few farmers had invested in any structural changes on their farms.

Each interview generated an HNV Index score. The explanation of the scoring offered to the farmer was as follows:

100 – 86	Your practices definitely have a strong ecological bent. Continue to follow your practices and share them with others
85 – 65	You are definitely on the way to a strong Eco-Friendly farming practice. Strengthen your practices by examining the weak points.
64 – 45	There may be some lessons that you can learn from nature itself. If you are interested in pursuing a more Eco-friendly farming practice, explore some of these alternatives
Below 44	There may be a few "chemical" uses that are causing your index to tank. You can definitely improve your performance by changing both your inputs and also your approach to crop production

The majority of the farmers in both valleys scored below 45 on the Index. The main reason for this was the heavy dependence on NPK fertilizing practices and the use of some toxic chemicals in weed suppression and chemical control of pests/diseases.

Chart 1: Distribution of Farmers according to HNV Index Score



A Farm Plan to Support Project Intervention

Eco-Agriculture, as a farm production/management system, uses the knowledge and information of soil biological activity, crop diversity and the biological cycles of plants, to produce a healthy and cost-effective crop. The HNV Index provides access to over 50 information items that share the experience of sustainable small scale farming. The challenge is whether farmers will adopt what we consider to be more sustainable farming practices.

Besides information support and the use of successful demonstration plots, the project hopes to assist the farmers in devising their own farm plans designed to test whether the proposed new practices and inputs do achieve the twin goals of providing economic benefits and sustaining the land base in this environment.

The Projects Guidelines on a practical farm plan will follow four general outlines.

1) **Define a plan to manage soil quality:**
   - Soil testing, composting, off-farm manure;
   - Green manure plowdown/cover crop;
   - Approved soil amendments;
   - Recycling of crop residues;
2) **Identify material inputs:**
   - Garlic Tea, ash, compost;
   - Manure (cow, horse or chicken-treated)
   - Sea-Weed (liquid or granular)
   - Approved commercial inputs
3) **Point out any necessity for appropriate structural changes to the soil:**
   - Terracing or water channeling;
   - Wind breakers, planting trees;
   - Constructing raised beds;
   - Setting out path separators;
   - Sheet composting.
4) **Agreeing to a Crop Maintenance Plan including:**
   - Monitoring early crop growth;
   - Reporting on disease/pest incidence;
   - Recording crop performance.

FAO Support for Sustainable Farming Practices in the Caura Valley

The Food and Agricultural Organization (FAO) has approved funds from the **TeleFood Special Fund (TSFP)** in support of Sustainable Farming Practices in the Caura Valley. EcoAgriCulture project partners have identified members of the Caura Valley Farmers Association (MVFA) as the direct beneficiaries of the TFSP. At present, our project has engaged 12 farmers (beneficiaries) in the Caura Valley, producing both vegetables and tree crops on about 50 acres of land. Interesting most of these farmers are farming on plateaus (relatively flat) and some are engaged in commercial contracts. The average farm in the Caura Valley is about 4 acres.

Schedule of Activities

July - September 2011:
- Researching and disseminating critical farm practices information
- Initial farm practices intervention
- Enlisting supportive research action
- Meeting of the project's steering committee

July– December 2011:
- Implementation of interventions
- Implementation of research plan

For more information on the EcoAgriCulture Project, The Cropper Foundation or any if the Project Partners, visit
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The Cropper Foundation acknowledges the financial support of the EcoAgriCulture Project by the Inter-American Development Bank Grant ATN/ME-11488-TT