



Session 4: Crop and Pest Management Information from Baseline Survey

Outline of Presentation



- Crop Management:
 - Crop Diversity (covered in presentation on Crops and Varieties)
 - Pest / biodiversity management
 - Financial sustainability
 - Socioeconomic sustainability
- Conclusions and recommendations

Crop diversity (1 of 2)



- Very few farmers in the study had monocultures
- On most farms: bees, butterflies, wasps observed
- Around and beyond farms: endemic mix of plants and weeds

Crop diversity (2 of 2)



- Some of the diversity was deliberately organized to explore synergies:
 - A pineapple farm with >20 different fruits trees and a range of crops, including sorrel, cucurbits and beans
 - That farm also had bee hives /pollinators, which were sometimes rented to other farmers

Pest/biodiversity Management (1 of 2)



- Intercropping, together with crop rotation and diversity and other cultural practices, were used to manage pests
 - One farm with banana as the main crop, intercropped with cassava; additionally rows of corn and sweet potato, interspersed with pineapple and yams

Pest/biodiversity Management (2 of 2)



- Many farmers used biological insecticides & some used limited organophosphate pesticides only at planting
- Dominica: biological control, based on farm-grown plant extracts and low use of inorganic pesticides, led to abundant beneficial insects and pollinators

Financial Sustainability



GAP Training

- Good Agricultural Practices (GAP):
 - Relationship between GAP & sustainability very evident: GAP training increases the likelihood that sustainable practices such as record-keeping become a part of farmer's routine
- Most farmers were GAP trained, if not GAP certified

Marketing (1 of 2)



- Noticeable inter-island differences in quality or strength of marketing arrangements
- In all islands, farmers had verbal contracts with hotels, restaurants, supermarkets and hucksters
- Few farmers supplied government institutions with vegetables on continuous basis
- Some farmers were retailers as well as producers and had stalls at public markets

Marketing (2 of 2)



- Dissatisfaction with inordinate delays in payment by corporate buyers and retail chains
- Farmer's financial sustainability often rested with cash turnover from farm-gate sales to hucksters
- A few instances of entrepreneurial creativity:
 - One farmer sold his vegetables to persons in his community, even dropping off vegetables to members who were confined to their homes

Farmer Cooperation (1 of 2)



- Few farmers were members of farmers groups
- In some instances, cooperative membership was linked directly to market access, supplying the hospitality industry - often in informal arrangements
- Only Windward Islands Farmers' Association (WINFA) and Caribbean Farmers Network (CaFAN) were found to be effective

Farmer Cooperation (2 of 2)



- WINFA
 - WINFA banana farmers have access to Fair-trade market, where emphasis is on ethical, eco-friendly production, and there is direct impact on environmental sustainability and socio-economic soundness
 - Social premium earned by Fair-trade farmers redounds to benefit of entire communities

Land Tenure (1 of 2)



- Security of tenure: one of the root determinants of sustainability
- Long-term lease/free-hold/well-monitored rental agreement foster sustainable agribusiness models
- Farmers without secure title:
 - Unable to make long-term choices, take short-term gains
 - Lack of access to/availability of financial resources (e.g. bank loans) to capitalize operations

Land Tenure (2 of 2)



- Most farmers in the study rented lands from government; others had freehold interest or were in various stages of regularization
- Producers interviewed were those utilizing sustainable practices, hence high levels of freehold and secure tenure encountered
- General farming populations in the Caribbean have less secure tenure

Constraints: Financial Sustainability



- Sphere of finance: greatest threat to sustainability of production in all the islands:
 - Legislative and incentive mixed-signals
 - less stratified markets to reward environmentally sound production
 - weak financing arrangements

Conclusions and Recommendations – Financial Sustainability

Conclusions (1 of 2)



- Several examples of environmentally sound, sustainable practices were recorded but financial sustainability aspects were less evident
- Apparent exclusion of producers from a number of value-chains is cause for concern
- With the exception of producers belonging to a handful of farmers' organizations and the cooperatives (Black Bay, Belle Vue), the others depended on very loose verbal agreements at best

Conclusions (2 of 2)



- Formal, structured marketing arrangements for non-traditional fruits and vegetables still pose a problem
- Bananas (Windward Islands) and onions in Barbados are two of the more developed value chains
- Incorporation of VINCYKLUS, the agribusiness cluster in St Vincent and the Grenadines is a potential source of improvement



Recommendations

- Continued promotion of the Value Chain approach with a concentration on looped value chains to include by-product and end-product utilization
- Proper Record Keeping as part of a regimen of business monitoring
- maintain a customer database
- keep the community informed about production and sustainability issues

Socio-economic Sustainability

Farmers and their community



- Farmers in study were all recognizable members of various communities and involved in farmers groups, village councils, sporting groups, etc.
- Although the majority are well-entrenched in their communities, financial viability is still based on satisfying demand generated elsewhere. In other words the major market for their produce is located outside of their local community

Cooperation at community level



- One farmer in Antigua and Barbuda reported that farmers with contiguous plots helped each other at planting and harvesting
- Other less structured community-based groups did not necessarily echo this level of cooperation
- Only 4 of 245 direct interviewees stated that persons in their respective communities assisted with short-term labour, when needed

Policy-level Support



- Overall sustainability of activities depends on State support via legislation, incentives and disincentives



Recommendation - Policy-level Support

- Amalgam of policies (example of St Kitts/ Nevis):
 - Support services from Department of Agriculture & allied Agencies (CARDI, IICA, FAO, Diplom. missions)
 - Policies amended to support Sustainable Agriculture
 - Land Development Act of 1991 (contract of tenancy under Agric. Small Holdings Act Chap. 87 of Laws of St. Kitts /Nevis)
 - Nat. Conservation & Environ Prot (Amendment) Act, 1996
 - Nat. Conservation & Environ Conservation Act (1987)

And finally...



- This Study considered close to two thousand holdings/ operations, yet there were no examples of operations utilizing a full set of sustainable practices across environmental, financial and socio-economic spheres
- The current sustainable practices are still part of an *ad hoc* approach

And finally...



One of the most important uses of the Baseline Study could be the re-introduction of Good Agricultural Practices with a focus on Climate-Smart Agriculture that could, in one fell swoop, ensure the viability of the sector in a comprehensive way

Thank You

