Session 2: Crops and Varieties Information from Baseline Survey

Outline of Presentation

- Cropping Patterns
  - Selection of Crops
  - Crop Diversity
  - Pest / Biodiversity management
- Crop Rotations
- Gaps in information

Cropping Patterns

Selection of crops (1 of 2)

- In all countries, crops selection based on an understanding of soil type and nutrient status
- Trees used as borders between plots and as windbreaks
- Fruit trees intercropped with short-term crops e.g. pumpkin and squash
- Antigua & Barbuda: carrots and beets grown in sandy loam soils, best suited to those crops

Selection of crops (2 of 2)

- Grenada: On sloping land - large plants (fruit trees) used on steeper areas, and a good mix of annuals and perennials (different families, root depths etc.) planted for good coverage
- Dominica: within/outside of Carib Territory, planting of crops on specific areas based on their ability to reduce erosion, maintain soil nutrient balance and keep soil intact

Grenada: Crop mix to achieve good ground cover

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, used to manage pests
  - One farm with banana as main crop, intercropped with cassava; additionally rows of corn and sweet potato, interspersed with pineapple and yams

Pest/biodiversity Management

- Many farmers used biological insecticides
- Some used limited organophosphates only at planting
- Dominica: pest management, based on farm-grown plant extracts and low use of inorganic pesticides, led to abundant beneficial insects and pollinators

Crop Rotation (1 of 5)

- ‘Textbook’ crop rotations in several cases with choices reflecting:
  - different nutrient uptake regimes
  - differing feeding depths, dissimilar pest profiles
- Soil measurably improved due to fertility increases, lowered pest loads and improved friability (looseness of soil)

Crop rotation (2of 5)

Crops/Sequence in Dominica

- Carrots → String Beans → Cabbage
- Dasheen → Ginger→ Yam
- Bananas → Tannia → Bananas
- Ginger → Passion Fruit → Pineapple

Crop rotation (3of 5)

Crops/Sequence in St. Vincent & the Grenadines

- Melons → Peanuts → Ochroes
- Carrots → String Beans → Cabbage
- Tomatoes → Sweet Potatoes →Yams
- Cucumbers → Tomatoes →Lettuce
- Cucumbers→ Carrots → Eddoes → Cabbage

Crop rotation (4 of 5)

Crops/Sequence in St. Vincent & the Grenadines

- Sweet Potatoes → Yams → Eddoes
- Sweet Potatoes → Tomatoes → Yams
- Yams & Eddoes → Tomatoes → Ginger
- Tomato & Cabbage → Eddoe → Yam→Tannia
- Sweet Potatoes → Yams → Eddoes

Crop Rotation (5 of 5)

- St. Kitts/Nevis and St. Lucia
  - Significant evidence that rotations based more on economic factors than crop husbandry
  - Same family rotations as a means to 'cash-in' on high value crops ("rotated" crops had similar pest/disease and nutrient profiles)
  - Expected agronomic /soil improvement gains not obtained

Gaps in information

- Recent projects (e.g. on Urban and Peri-Urban Agriculture; Black Sigatoka Management) highlighted a general lack of availability of:
  - good quality seed of locally-adapted varieties
  - clean planting material
- No mention by farmers in Baseline Survey
- Important elements and should be taken into consideration in any SCPI programme

Thank You