

Farmers' Adaptation to Climatic Variability in the Caribbean

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Climatic phenomena being observed presently

- ❖ Variable rainfall conditions with alternating droughts and period of excess rainfall
- ❖ Increased number and intensity of tropical storms.
- ❖ Decrease in the overall predictability of weather and climate, making the day-to-day and medium-term planning of farm operations more difficult

Mulch farming in South St Elizabeth, Jamaica

- ❖ Rainfall in South St Elizabeth is low - 1450 mm [57 inches] per annum.
- ❖ Land clearing provides the mulch for the planting area
- ❖ Crops are introduced directly into plant holes dug through the mulch.
- ❖ Increases water use efficiency and decreases risk to drought



Soil Water Conservation systems

- ❖ This includes live mulches as well as straw mulches and plastic mulches



Water harvesting and storage facilities



Ferro cement Water Tank in St. Lucia



Increased use of Trickle irrigation

- ❖ Uniform water distribution
- ❖ Efficient water use
- ❖ Easy installation, operation and maintenance
- ❖ Possibility of fertigation
- ❖ Decreases risk to drought



Using raised beds during the wet season to increase drainage



Adjusting planting times so that production is mainly done in less wet seasons and decreased during the hurricane season (One and a half crops)

Dry season	Wet season (Hurricanes)	Crops/year
Full acreage	Full acreage	2
Full acreage	Half acreage	1 + 1/2
All crops	More tolerant crops	1 + 1/2
All crops	Only short term crops	1 + 1/2
All crops	Limited acreage & crop types	1 + 1/2

Growing specific crops in the hurricane season e.g. Crops more tolerant to hurricane conditions, short term crops



Protected agricultural systems

- Relatively low cost exclusion cages
- Exclude important leaf eating pests of leaf vegetables like Callaloo (amaranthus spp.)
- Structure can be collapsed and rapidly restored in the event of a tropical storm or hurricane



Re-construction after hurricane



Climatic information needs of farmers

❖ On the macro level:

- The duration of the rainy season
- The time of rainy season commencement.
- The total amount of rainfall in the next three months in the area.
- The rainfall distribution over the rainy period
- Temperature variations over the rainfall season

❖ On the micro level:

- Total rainfall over the next week
- Rainfall distribution over the next week

Thank you