

# Crop Farmers'



## Disaster Handbook

Bearing in mind that Jamaica is sensitively located in a disaster region, yearly affected by hurricanes, flooding and landslides, farmers must be aware of how to minimize the effects of natural catastrophes. Farming practices are also susceptible to man-made threats such as fires and power outages; hence prevention measures are needed.

Farmers' prevention methods will vary from each other; yet, disaster preparedness is a necessary activity for all.

### PRE-PLANNING

One of the major and most overlooked tasks of disaster preparedness is planning. Pre-planning will ensure that daily practices reduce the possible impacts to be faced and helps us to get back to business quickly after a disaster. Below are some considerations.

- Develop a cropping/rearing calendar that includes timing of hurricane preparedness tasks to be completed by the end of May.
- Establish gardens and farm buildings away from flood-prone areas, where possible.
- Join your local farmers' group and establish a revolving credit fund to assist with hurricane damage recovery.
- Identify dump sites in centralized locations, for disposal of waste which cannot be composted, used for soil conservation, etc.
- Before a hurricane, identify vehicles and operators required to carry out recovery efforts in specified areas.
- Make a list of all equipment, tools, business records, stationery etc. and assign the responsibility for the safety of these valuables to one person.
- Store business records in a safe, dry area.
- Store tools, equipment, pesticides, plastic bags, etc. in a safe, dry area preferably on pallets or on a raised area.
- Regularly prune shade trees to prevent heavy overhanging branches from breaking and falling on crops and livestock.
- Always ensure that you have more than one week's supply of feed, water, medication, pesticides, fertilizer etc. in storage.

### Protect farm buildings

- Check status of roofs and strengthen where possible by installing storm straps/ nailing down zinc sheets/ replacing damaged zinc sheets, roof tiles etc.
- Tar roofs to prevent leakage.
- Secure windows and doors.
- Cut/remove overhanging limbs that may fall on buildings.
- Cut diversion trenches to take water quickly and safely from building.
- Palletize fertilizer and cover with tarpaulin.
- Store insecticides and fungicides on raised areas, for example cupboards or tables to prevent them from being washed away in the event of flooding.
- Disconnect electricity supply to the buildings.



## Plant for disasters

Here are some suggestions for planting:

- On slopes, establish crop rows and artificial/vegetative barriers across contours including appropriate, deep-rooting trees.
- Establish rows of vetiver (Khus Khus / Razor) grass barriers on areas that are prone to slippage. The grass roots will help to hold the soil together and prevent erosion of the top soil.
- Plant suitable trees to stabilize river banks.
- Establish windbreaks, using recommended plants and plant spacing/density.
- Practise protected horticulture (e.g. greenhouses) where appropriate.
- Construct and maintain drains, check dams, diversion ditches as necessary.

## At release of warning

Farmers should attempt to finish the prescribed tasks listed below before the hurricane begins. Farmers place themselves at risk of injury or death by working during a storm or flood. The likelihood of being electrocuted, hit by lightning or washed away by flood currents becomes greater.

- Remove cladding, lay plants flat, and cover with plastic held down by twine tied across house posts.
- Reap mature fruits and store in a suitable area for use after the hurricane.
- Remove irrigation lines and equipment, and store in an area secure from damage.
- Clear clogged drains and cut diversion trenches to lead water safely away from the farm.
- Protect road-ways and foot paths by constructing cross drains to take water safely off the roads and into a paved or grassed waterway.
- Construct dams (using tyres, logs, stones) across gullies to prevent or minimize gully erosion.
- Cut crops and tree to appropriate heights to reduce wind damage
- Trim coffee trees in windswept areas, partially to 34 inches or totally to 12-15 inches from the ground.
- Keep fruit trees no more than 15 feet tall.
- Stockpile pruned branches for compost, coal and/or construction after the event.
- Clean up loose objects (branches, timber, zinc sheets, empty herbicide containers, fertilizer bags, cartons, plastics etc) that may be washed into and clog drains.
- Secure loose objects that may become wind-borne posing danger to life and property.
- Switch off electrical power to pump houses or other remote areas.

## Protecting plant nurseries

- If possible, remove shade cloth (saron) and store in a safe place. If not possible, secure it firmly to the uprights/posts which support it.
- If the nursery is in a low-lying area, remove and store the essential parts of the irrigation system, in particular the pump, in a waterproof area.
- Open drains to allow the easy passage of water.
- Cut diversion trenches around beds to prevent flooding.
- If possible, remove mixed potting soil, topsoil, and manure to an indoor location to reduce the possibility of them being washed away.



## Recovery measures

Following advisories are given to enable a fast return to farming activities after the hurricane or flood.

- Inspect recently planted fields for possible need for supplying (or even replanting).
- Begin cleanup activities as soon as possible.
- As soon as practicable, address weed control. (Farms tend to get overrun by weeds following a hurricane).
- Prop-up trees with 14 days of storm; cover roots with top soil and mulch.
- Assess property for damage to buildings, crops, equipment etc.
- Inspect chemical stores; clean-up any chemical spillage to avoid poisoning and restrict contamination of water sources.
- Check your surroundings for danger from fallen electrical wires or trees, pesticide spills, dead animals, etc.
- Recently planted nurseries may be given a supplementary fertilizer dressing to replace nutrients washed away during the storm.
- Sugar cane farmers should not re-fertilize fields after hurricanes. (This tends to result in poor juice quality and low cane price).
- Establish protected seedling production centres for early replanting after a hurricane.
- Call on neighbours and colleagues to ascertain their well-being for later assistance.
- Effect repairs to store houses and other structures, if necessary.
- Unclog drains, sink holes and canals to free up the passage of water.
- Repair drain, and canal infrastructure, electrical power lines (using competent electrician), pumping stations if necessary.
- Call your RADA extension officer, Parish office, farm group leadership, agriculture emergency operations centre (EOC) and report the damage caused by the hurricane.

