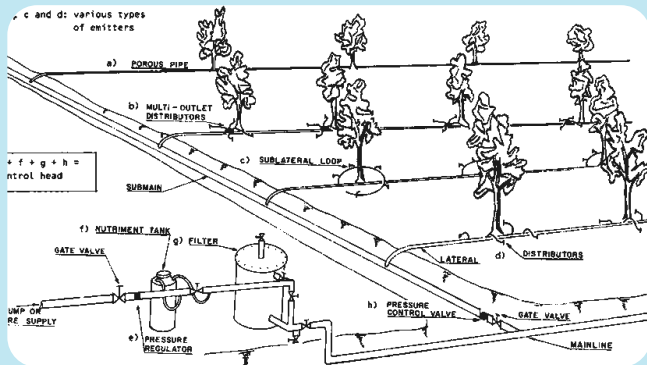


## DRIP SYSTEM LAYOUT



Source: FAO.ORG

A typical drip irrigation system is shown in Figure above and consists of the following components:

- Main and Submain lines
- Laterals
- Emitters or Drippers
- Filter

Depending on the situation:

- Rain water harvesting system
- Pump unit
- Control head

These items can be purchased at your local retail outlet.

For information on design set up, you can contact the Agriculture Extension Officer in your parish

### FOLLOW US FOR MORE TIPS



Climate-Resilient  
Water Sector  
in Grenada

G-CREWS



### ABOUT G-CREWS

The project is jointly financed by the Green Climate Fund (GCF) and the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) under its International Climate Initiative (IKI), and the Government of Grenada.

Over 6 years, the Government of Grenada, the Grenada Development Bank and the National Water and Sewerage Authority (NAWASA) in partnership with the German Development Corporation (GIZ) will implement the project's five components.

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### PROJECT/PROGRAMME

Climate-Resilient Water Sector in Grenada (G-CREWS)

The Carenage, NAWASA Building,  
P.O. Box 3269,

St. George's, Grenada WI.

T. +1-473-440-2722 ext.26847

E. marion.geiss@giz.de

I. www.giz.de

I. www.climatefinance.gov.gd

### CONTACT

Government of Grenada

Mr. Brian Bonaparte, Project Manager

Department of Economic and Sustainable Development and Planning

Ministry of Economic Development, Planning,

Tourism, ICT, Creative Economy, Agriculture and

Lands, Fisheries and Cooperatives

T +1-473-435-8889 ext.31127



# DRIP IRRIGATION

## WHAT IS DRIP IRRIGATION?

Drip Irrigation is the most efficient water and nutrient delivery system for growing crops. It delivers water and nutrients directly to the plant's root zone, in the right amounts, at the right time, so each plant gets exactly what it needs, when it needs it, to grow optimally. It enables farmers to produce higher yields.



## HOW DOES IT WORK?

Water and nutrients are delivered across the field in pipes called 'driplines' featuring small units known as 'drippers'. Each dripper emits drops containing water and fertilizer, resulting in the uniform application of water and nutrients direct to each plant's root zone, across an entire field.

## FACTORS TO CONSIDER IN SETTING UP

### PRESSURE

Pressure is necessary to guarantee a constant, adequate and uniform flow at the drippers.

Drippers exist to dissipate the pressure and allow the water to exit drop by drop.

If there is not enough pressure, the flow from the drippers will be significantly reduced and not uniformed.

The first drippers will release relatively more water than the last drippers.

Consequently, the plants will not receive enough water and will develop in a varied way.

### FILTRATION

Filtration is the process in which solid particles in a liquid or gaseous fluid are removed by the use of a filter medium that permits the fluid to pass through but retains the solid particles.

The pressure reduction in the drippers is obtained by passing the water in very narrow passages.

If the water carries impurities, these will accumulate in the narrow passages, thus clogging the dripper.



### MAINTENANCE

For a drip irrigation system to work properly, periodic checks are needed for good crop yield.

- **KEEP THE FILTER CLEAN**

The more particles are suspended in the water, the more frequently the farmer must clean the filter.

- **CLEANING OF THE DRIP LINE**

The drip lines can easily be cleaned by allowing the water to flow out at the end of the drip line for a few minutes.

The particles that accumulate inside the pipe will escape without obstructing the drippers.

- **REGULARLY OBSERVE**

Conduct periodic checks on your irrigation system to ensure each plant is getting the right amount of water and nutrients.

Regular checks ensures maximum crop yields.