

## **BEST PRACTICE 2**

### **MES Centre for Sustainable Development**

#### **Objectives of the Practice**

1. Find a sustainable solution to the acute water scarcity in cardamom cultivation.
2. Adopt effective water conservation method.
3. Ensure high yield in cardamom cultivation.
4. Implement cost effective groundwater recharge system.

#### **The Context**

M E S College Nedumkandam locates in the midst of a great expanse of the lush green cardamom plantations. Cardamom, known as “Queen of Spices,” is one of the most exotic and highly-priced spices. The geographical and climatic conditions of the High Ranges of Idukki are ideal for the best quality cardamom, which make them highly unique in the international market. But climate change and erratic rain patterns have made things worse for cardamom, resulting in a substantial decline of cardamom produce. The significant changes in climate, particularly increasing temperature and decreasing humidity affect the plantations very badly in recent years. Even a slight change in climate has a substantial influence on agriculture development in the district. In order to fix an immediate solution for this alarming situation, The UNAI Aspire Chapter of MES College Nedumkandam proposes MES Centre for Sustainable Development. The Centre aims at ensuring a sustainable yield in cardamom amidst the issues pertaining to the scarcity of water, energy consumption, varying geographical features, climatic changes and production expenses. It also focuses on recharging groundwater resources on a cost-effective method. The MES Centre for Sustainable Development envisions to function on a collaborative effort of the College, farmers, government agencies and technical support institutions to optimise the use of water in cultivation and to recharge groundwater resources.

#### **The Practice**

The MES Centre for Sustainable Development, as an initial step, has formed a Farmers Collective, to address various issues pertaining to cardamom cultivation especially availability of water. The

College conducted a one day seminar on the topic “Effective Water management in Cardamom plantations” on 3<sup>rd</sup> September 2019. Dr. Abdul Hakkim V M, Professor, Kerala Agricultural University and Dr. K. Devaraja, Senior Scientist, University of Agricultural Sciences, Bangaluru led the sessions on Micro Sprinkler Irrigation and Recharging Bore wells Using Rain Water respectively. The conference concluded to implement micro sprinkler irrigation which is the most appropriate irrigation system for cardamom plantations. This initiative aims at effective water management in cardamom plantations with an eye to increase the yield as well. The Centre for Water Resources, Development and Management, Kozhikode (CWRDM) has extended their technical support in our initiative. We also aim at providing the labourers Skill Training in operating and maintaining the technology assisted irrigation system, which will help them to become skilled labourers and at the same time they will get accommodate with micro sprinkler irrigation system.

### **Evidence of Success**

A considerable number of farmers implemented the Micro sprinkler irrigation system. They shared their successful experience of effective water conservation using Micro sprinkler irrigation system comparing to the conventional hose irrigation. Some have installed bore well-recharging units of roof top water at their house.

### **Problems Encountered and Resources Required**

High cost, scarce availability of equipments, and the lack of skilled labourers cause a serious issue to the farmers to switch to the micro sprinkler irrigation system.

### **Notes**

The MES Centre for Sustainable Development has submitted a project proposal on “Automated Micro Sprinkler Irrigation and Fertigation System and Ground Water Recharge” to the United Nations Academic Impact for their expert intervention on sustainable water management. A proposal seeking financial assistance for installing Micro Sprinkler Irrigation and Fertigation System has submitted to the authorities concerned.

