

### NEED

Right from the time of creation, man was charged to 'increase, multiply and subdue' the earth. Thus man has continually sought to improve the quality of life by transforming nature to provide food and better living conditions for a long life.

The Indian economy is predominantly rural and agricultural. Agriculture and technology are part of the Tools used to accomplish this transformation and achieve many of the man's goals. The declining trend in size of land holding poses a serious challenge to the sustainability and profitability of farming.

The problem is easy to understand and difficult to resolve. In 2030 the population will be 9 billion inhabitants, against 7 billion today. A growth which, according to the FAO, will entail a 70% increase in agricultural production by 2050. Only the introduction of effective solutions that allow farmers to improve productivity while preserving resources will enable to meet this challenge.

Through mechanization and other tools of modern technology man has been cultivating crops and rearing animals for his food needs and carries out other sundry activities – all in a bid to make his life happy and comfortable. Major fallout of all these activities is generation of wastes. The adoption of proper and appropriate approaches for enhancing resource-use efficiency and livelihood security is the need of the hour as a powerful tool for management of natural resources and to achieve sustainability in agriculture.

Farming systems involve a number of enterprises and taking the physical, socio-economic and bio-physical environments into consideration are complicated, expensive and time-consuming. There exists a chain of interactions among the components within the farming systems, and it becomes difficult to deal with such inter-linking complex systems manually. This is one of the reasons for slow progress in the adoption of the practice in India and elsewhere.

As livestock production is increasing to fulfill the necessities of increasing population, the generation of solid and liquid cattle waste is also increasing at a rapid manner requiring proper alternative methods of utilization and intervention of aerobic and anaerobic digestion technologies for restoration of nutrients through a circular economic approach This problem could be overcome by construction and application of suitable whole farm models.

Proper use of agricultural, industrial and solid waste is an important component of sustainable agriculture in order to close nutrient cycles on a global, regional and local scale.

# OBJECTIVES

(i). to help in better understanding of the broad scope of the resources and waste management,

(ii). to provide advance training and improve the professional competence, knowledge and skill in the area of Bio-waste Resource Management,

(iii). to share with the trainees, the advances in production and utilization of solid waste and natural resource conservation practices,

(iv). to provide an opportunity to discuss utility of organic waste in promoting soil health and productivity, and

(v). to develop human resource capabilities of research and extension personnel on Bio-waste Resource Management

# **COURSE CONTENT**

The course would broadly cover the following topics:

- (i). Sustainable Agriculture: Importance and Concept;
- (ii). Classification of waste, different methods of its decomposition and effect on soil health

(iii). Potential technologies to recycle Bio-wastes" and "Efficient residues management in Conservation Agriculture for Sustainable Soil Health and productivity"

- (iv). Organic Matter a resource to be exploited
- (v). Developing effective agricultural solutions respectful of water and energy resources.
- (vi). Wastes and Residues: Utilization and Disposal
- (vii). Reusing waste water, a solution for tomorrow's agriculture
- (viii). Role of composting in Sustainable Agriculture

# TRAINING METHODOLOGY

Programme would be on virtual / online mode using webex platform. It could comprise of Powerpoint presentations, Video films, lecture cum discussion sessions on best practices. Based on the attendance and on assessment of the understanding of the contents by the participants, E - certificates would be issued at the end of the programme.

### PARTICIPANTS

The State, District and Block level officers of Government Departments of Agriculture, Horticulture, Soil Conservation, Forestry, Animal Husbandry and Fisheries, Scientists of KVKs and SAUs, and Voluntary agencies engaged in extension, teaching, research and consultancy in agriculture. Officials of SIRDs, RIRDS (ETCs), SRLMs, SMMUs, DMMUs.

# DURATION

The programme is scheduled from **June 28 – 30, 2021 on virtual mode.** The link would be shared with the participants on their Email, well in advance so as to ensure their participation from the beginning.

#### **PROGRAMME FEE**

There is no fee. The last date for registration is June 25, 2021

Click the following link to register for the programme

# https://forms.gle/cEqgDCiyXzgJNgjP8

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