

## **SEAWEED FARMING METHODS**

### **Course objectives:**

- To study the morphology and types of Seaweeds.
- To understand the Seaweed cultivation methods.
- To aware the identification of commercially important Seaweeds.
- To identify the nutrient value of Seaweeds.
- To facilitate self-employment scope of seaweed cultivation in small scale industry.

**UNIT I Introduction – Seaweed** morphology; Classification and distribution of seaweeds; life cycle of seaweeds. Identification of cultivable seaweeds – Global status – Present trend and scope in India and Tamil Nadu

**UNIT II Seaweed Farming** Infrastructure – Seaweed spores collection — Site selection – Physico-chemical parameters - site preparation – Farming methods - Construction specifications for cultivable species – Raft and rack culture site selection – design and operation of the systems

**UNIT III Seaweed cultivation methods**, Bamboo Raft, Monoline, Tube nets - Raft preparation and installation – mooring system - maintenance of seaweeds Raft; Seaweed Cultivation period; Farm management harvesting method and preservation of seaweeds – post harvest technology

**Unit IV Seaweed Byproducts** – Phytochemicals – Agar – agarose - carrageenan – Algin – Seaweed polysaccharides – sources and use - Seaweed as food – Nori – Kombu – Wakame – Seaweed Compost – Seaweed liquid fertilizer – Agricultural biostimulants – animal fodder.

**UNIT V Role of seaweed in Blue economy** - .PMSSY in seaweeds – seaweed based industries in India - CSMCRI – Subsidy for seaweed farming – seaweed cultivation as livelihood.

### **References:**

- John, B., (2023) Seaweeds of the World: A Guide to Every Order. Princeton University Press 249pp.
- Leonel, P. (2016) Edible seaweeds of the world Taylor & Francis 463pp.
- Leonel, P., Kiril, B., and Joshi N. H. (eds) (2019) Seaweeds as Plant Fertilizer, Agricultural Biostimulants and Animal Fodder. CRC Press 233pp.
- Ole G. Mouritsen, Jonas Drotner Mouritsen, Mariela Johansen (2013) Seaweeds: Edible, Available, and Sustainable 3<sup>rd</sup> edition. University Of Chicago Press 304pp.

### **Course Outcome**

After completion of the course, students will be able to

- identify the marine macro algae and their global status.
- analyze the importance of physico-chemical parameters in seaweeds
- learn the culture techniques of seaweeds
- understand the byproducts from seaweeds
- discuss the central and state schemes for seaweed farming