

## **BEST PRACTICE**

### **1. Title of the practice**

- Azolla cultivation and distribution

### **2. Objectives of the practice**

- To increase the soil fertility
- To avoid chemical fertilizers.
- To increase crop yield by using Azolla
- Impact of Azolla in pollution control.

### **3. The context**

Azolla is also known as Mosquito ferns, Duckweed fern, Fairy moss and Water fern. Azolla is unique because it is one of the fastest growing plants on the planet yet it does not need any soil to grow. Unlike almost all other plants, Azolla is able to get its nitrogen fertilizer directly from the atmosphere. That means it is able to produce bio fertilizer, livestock feed, food and biofuel exactly where they are needed and at the same time, draw down large amounts of co2 from the atmosphere, thus helping to reduce the threat of climate change. Azolla has many nutrient benefits when compared to other fodders, Apart from this, it has the nature of fixing nitrogen in rice crop fields. This is the reason it is being used as common bio fertilizer and green manure in rice fields. The blue green algae grow in symbiotic association with this fern and are responsible for nitrogen fixation in the rice crop.

### **4. The practice**

The department of Botany collected Azolla seed from the agriculture department in 2016-17. After the collection of Azolla, cultivated in the garden department of Botany of the college Water is a prerequisite for its multiplication . so it is not suitable for upland crops. Huge quantity of inoculum is required which is difficult for transplanting action during rainy days. Temperature more than 35°C is not suitable. Extremely low temperatures are also not suitable. Non availability of technology to use Azolla as dry inoculums. Market for Azolla is not so popular, lacking knowledge about the benefits of Azolla. The legacy continued every year

### **5. Evidence of success**

The concept of using aquatic plants for different purposes is receiving special attention nowadays. Because of its growth habitat, high multiplication rate, excellent source of protein for mono-gastric animals, high biomass production and increasing demand as organic food, Azolla has gained importance in recent years. Azolla is one of the aquatic Pteridophytes that may be used as animal food, as green manure, biofertilizer for increasing soil fertility, bioremediation of waste water and reclamation of saline soils. Indian agriculture has become a chemical agriculture in which numerous chemicals like insecticides, herbicides, and commercial fertilizers are being used for producing crops. Due to these major microbial population eliminated from soil and rhizosphere is getting polluted. Biofertilizers play an important role in improving soil fertility and boosting crop yields.

### **6. Problems encountered and resources required**

To inform the farmers about the benefits of Azolla used as biofertilizer to the surrounding areas of Siddipet district. Give the practical knowledge about the cultivation of Azolla to farmers. Resources for Azolla growth & development depends upon the water availability, constant temperature (25°C-30°C), acidic soil (pH 5.2-5.8) condition and humidity.

### **7. Notes**

Azolla fixes Nitrogen. It is an excellent source of nitrogen and also has a high nutrient value. Azolla cultivation requires less investment, hence it is a low cost alternative for good feed and good biofertilizer. Azolla is ideal feed for livestock. If we take good care of Azolla pond, we can harvest good quality weed every day, and it definitely reduces the cost of feed and fertilizer.