

BEST PRACTICE 1:-

Title: Plantation of medicinal plants in the college campus.

Goal:

- To reduce on the collection from wild habitat in forest.
- To give the awareness of value of medicinal plants.
- To conserve the indigenous medicinal plants for traditional health care.
- To create a greenery environment.
- To provide sustainable means of natural source of high value industrial raw material for progress in rural economy.
- To create awareness of food processing technology among students and locality.

The Context:

Medicinal plants provide medicinal properties due to the presence of natural compounds. The presence of phytochemical constituents in medicinal plants plays an important role in healing and also helps in curing human diseases. Plants have been used for medicinal purposes since ancient time. Consumption of medicinal herbs is increasing day by day and in such condition the cultivation of medicinal plants would be very profitable. Treatment with medicinal plants is considered very safe as there is no or negligible side effects. Nowadays, due to the advancement in Science and technology, everyone is moving away from nature. But, we human being are a part of nature so we should contribute to the preservation of nature and promote the growth of medicinal plants. Plants are natural products and have no side effects, safe, eco- friendly and many of them are locally available. Hence, the college has taken up the cultivation of turmeric (*Curcuma longa*, family Zingiberaceae) and ginger (*Zingiber officinale*, family Zingiberaceae). Ginger and turmeric are both excellent sources of protective compounds. The anti oxidants found in ginger is known to prevent heart disease and cancer. Turmeric can be used to reduce cholesterol and the chemical compound curcumin which is present in it has inflammatory anti-cancer and antioxidant properties. In addition to this, both ginger and turmeric are widely used in food processing and preservation technology. They are also a source of income to the people who grow them in the fields. Also many entrepreneurs build small scale to medium scale industries for the production of turmeric and ginger products like ginger pickle, ginger powder, turmeric powder, ginger tea powder, etc. Turmeric powder is considered essential daily need and is widely used daily in cooking as curry powder, taste enhancer and food colour. It has many health benefits and is one of the most important ingredients in Manipuri cuisine. Fresh ginger is also one of the essential daily needs used as an important ingredient in Manipuri cuisine. Ginger is also used as a home remedy to relieve cough and throat pain. Due to their huge advantages, the demand for consumption of turmeric and ginger is very high and hence the price has risen over the last few years. Therefore, it is very important to increase the production of ginger and turmeric in the state on a high scale. This is one of the factors why our college has taken up the initiative to produce ginger and turmeric in the college campus.

Practice:

Among the medicinal plants our college cultivated turmeric (*Curcuma longa*) and ginger (*Zingiber officinale*) in the college campus. The cultivation programme was performed by the Botany Department and eco club. College NSS unit also look after the plantation. The land is prepared during early monsoon showers. The soil is brought to a fine tilth by giving about three deep ploughings. Split finger rhizomes are used for planting. Small pits are made with a spacing of 25x30 cm². Pits are filled with cow dung and vermicompost produced inside the college vermicompost unit. Mulching is also done immediately after planting with green leaves. Weeding and irrigation are also carried out at regular intervals by both Eco club and NSS unit. The crop is harvested in 7-9 months. By ploughing the lane, rhizomes are gathered by hand picking and mud is cleared. The fingers are separated from mother rhizomes and mother rhizomes are kept as seed material.

Evidence of success:

The college has achieved great success from the cultivation of ginger and turmeric. The product is used in the food processing technology where our Home Science Department utilize it for preparing delicious pickle and candies of ginger and turmeric. College also arranged an awareness programme with the students and local woman folk on how to make similar kind of pickle and candies. Thus, it helps in the entrepreneurial development among the students and the local residents. The college imparts entrepreneurial knowledge to the students and local residents on the wide benefits of ginger and turmeric, and the scope of expansion to industry level by growing and producing ginger products and turmeric products on a wide scale. On the other hand, by selling these products income is also generated to the college. Also by doing this, Botany Department helps the students and local residents to understand the medicinal uses of these plants.

Problem encountered and Resource required:

- Field management and to select the quality of planting material is also a difficult task.
- Difficulty in managing pests and diseases.
- Water supply for watering the plants is limited in during the non rainy season.
- Fund shortage of the college.

Difficulty in finding dedicated resource for the management of field as students are occupied in academic activities

BEST PRACTICE 2:-

Title: Fish Farming

Goal:

- To increase the food production of fish and also provide a better economy.
- To create additional income and improve its water management.
- To enhance the knowledge of fishery to the students.
- To provide a solution for the unemployed youths.

Practice:

Fish farming is the fastest growing branch of agriculture under animal food production. Fish is the main element of daily food chart and particularly in Manipur, fish is an important ingredient in our daily diet routine. The fish available in the state are mostly pond, lake and river fish which are not saline in nature. Fish has many benefits. It provides high quality proteins, minerals and oils. Freshwater fish are not as high as sea fish in the healthy omega-3 fatty acids, however they still make a nutritious choice for lunch or dinner as most are low in fat and high in protein. Also, the freshwater fish variants contain more vitamin A and folate, and are generally higher in calcium and monounsaturated and polyunsaturated fatty acids. Consumption of fish improves cardiovascular health. It is also known to lower risk of stroke, depression and mental decline with age. We need 45.3 gm protein daily and among them 15.1 gm will be animal protein and due to the presence of high amount of protein and other essential elements, the price of local fish is very high. The fishes which are harvested from seas and rivers are not sufficient for the mass consumption everyday due to high population and it increases day by day. Also cultivating naturally available fishes will affect the fish population and their natural habitat which will impact the food chain and may endanger the species. On the other hand, fishes also play important role in the employment, economy development and providing nutrition. Fish farming gives a great opportunity to exterminate unemployment problems in the state, and also increases the production of fish for the daily consumption. From these above reasons, college has take up the initiative to start fish farming on a small scale. College has a big pond near the science block and is planning to expand fish farming to inside the college campus or nearby areas in the near future. The teachers and the students of Zoology Department take part in this fish farming and they monitor and manage the food and health situation of the fishes on a regular basis. Composite fish culture technique is used in the college fish farming. Using this technique, culture is prepared for 5 or 6 species, both indigenous and exotic together, in a single fish pond. Selection of fish species is also done by the teachers after the study of fish and their habitat.

Evidence of success:

College has achieved grand success from fish farming. Fish farming in pond is a self sustaining as it grows plants and algae for fish food. Thus it helps in water management. Due to composite fish culture technique, the habitat of local fish is also restored. Another benefit of fish farming is by selling fish, extra income is also generated for the college. As there is more demand of fish by the people, the production and supply of fish is also more. The students who are involved in the programme have the idea of entrepreneurship. Thus, it provides employment to them thereby solving the problems of unemployment.

Problem encountered and Resource required:

- Seasonal flood
- Insufficient water in dry season
- Pollution in water
- Lack of fund.
- Maintenance becomes difficult as there is no dedicated resource available to look after the fish farming. Students are mostly occupied with academic activities.