Materials And Methods

Study area :-

Satara is situated at the foot of Sahyadri ranges. Satara is rich in plant diversity. It has a particular topography and climate. Because of this reasons, Satara has favourate site of the botanists for botanical studies.

It lies between North latitude 17°31` and East latitude 74°3`. Average height is 773.3 meters above mean sea level (Bahulekar, 1984).Area of Satara has 876.24 Sq. Km. It is the western limit of the Deccan Table Land.

Ajinkyatara is the main hill of Satara. It is the main hill of the Satara. It is about 1006 meters above the mean sea level and 366 meters above the plain. Yewteshwar and Pateshwar are another hills of Satara varing from 910 to 1215 above the mean sea level.

Rainfall – In Satara during 2006 and 2007, average rainfall recorded were 1571.1 mm, 1274.5mm respectively.

Temperature –

In the 2007, maximum temperature at the Satara was 38.2^{0}C., January is the coldest month and minimum temperature recorded in January 2007 was 13.6^{0}C.
(Metrological Department of India, Satara).

Humidity -

Maximum and Minimum humidity value recorded. in the year 2006 were 98% and 42%, while in the year 2007 there were 98% and 22% respectively. (Metrological Department of India, Satara).

Fruits and vegetables are get contaminated by important sources of food. They provide nutrition to man kind. Most of the vegetables may contain a diverse group of microorganisms during storage and transit. These microorganisms damage the fruit during stirage and transit. Due to which quality of fruits is reduced and losses to producer, sellers and consumers. Therefore, it was decide to study microorganism particularly mycoflora associated with the fruits collected from Satara markets and around the Satara.

The following samples of fruits were studied.

- **Horticultural fruits**
  - *Pyrus malus* L. (Apple)
  - *Citrus aurantiolia* Swingle (Sour lime)
  - *Citrus reticulata* Blanco (Mandarin Orange)
  - *Citrus sinensis* Osback (Sweet Orange)
  - Musa paradisiaca L. (Banana)
- **Vegetable Fruits**
  - *Pisum sativum* L.(Pea Pod)
  - *Cyamopsis tetragonolobus* L. (Cluster bean)
  - *Dolichos purpureus L.* (Lablab)
  - *Phaceolus vulgaris* L. (French bean)
  - *Capsicum annuum* L. (Chilli)
  - *Lycopersicon esculentum* L. (Tomato)
  - Solanum melanogena L. (Brinjal)
  - *Abelmoschus esculentus* L. Moench. (Okra)
  - *Cocos nucifera* L. (Coconut)

The fruit samples were collected from storage and markets of Satara with abnormalities like discoloration and having different rotting smell. They were brought to laboratory by using sterile plastic bags. These fruit sample were used for study of mycoflora. To study the mycoflora following methods are employed :-

- Examination of fruits by naked eyes
- Examination of fruits after incubation
  a) Humid chamber method
  b) Agar plate method

Examination of fruits by naked eyes

The fruit sample were collected from storage and markets of Satara with abnormalities like discoloration and bad odour.

Examination of fruits after incubation

a) Humid chamber method :-

In this method, abnormal fruits were kept in trough. Sterilized bricks were moistened with sterilized distilled water. On sterilized bricks, abnormal fruits were kept. These bricks with fruits were kept in sterilized trough. The fungal colonies were grown from fruits and were observed on 8^{th} day after incubaton (27 $\pm 2^0$C, under alternative cycles 12/12 h of natural light and darkness).

b) Agar plate method :-

Petriplates were washed with distilled water. These petriplates were sterilized by using mercuric chloride solution. In the sterilized plate, sterilized culture media was poured.

(Musekett and Malone, 1941). Medium which used for the study was

Czapek's (Dox) Agar :

Sodium nitrate	3.0 gm.
Potasium dihydrogen phosphate	1.0 gm.
Magnesium Sulphate	0.5 gm.
Potasium chloride	0.5 gm.
Ferrous sulphate	0.01 gm.
Sucrose	30.0 gm.
Agar	20.0 gm.
Distilled water	1000 ml.
pH	6.5

For each experiment, parts of abnormal fruits were placed in petridishes and each type of fruit was inoculated in triplicates and incubated at room temperature. Average of three such observations were taken. Slides were made and fungi were identified.

Identification of Culture:

Fungi were identified up to generic level using the " Illustrated Genera of Fungi Imperfecti " by Barnet (1960) and identification up to species level was done with the aid of Ellis (1976, 1977), Raper and Thom (1944), Thom and Raper (1945), Subramanian (1971), Neergaard (1977) etc.