



# **SNS COLLEGE OF ENGINEERING**

Kurumbapalayam (Po), Coimbatore – 641 107

**An Autonomous Institution**

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New Delhi & Affiliated to Anna University, Chennai



## **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

### **COURSE NAME : 19MC003 - ESSENCE OF INDIAN TRADITIONAL KNOWLEDGE**

**III YEAR /VI SEMESTER**

**UNIT II – Protection of Traditional knowledge**

**Topic 6: .Traditional Technical Knowledge**



## TRADITIONAL TECHNICAL KNOWLEDGE

- With the spectacular achievement in the field of agricultural sciences, India has been able
- to reach the stage of self-sufficiency in the agricultural production.
- But, in this change, we overlooked and rejected sustainable natural farming systems and moved towards “exploitative” agriculture with increased dependency on farm machinery and chemicals (fertilizers, pesticides, etc.), which proved counter productive and resulted in depletion of soil and water resources, increase in desert and climatic disturbances, natural calamities, deterioration of environment, and unprecedented fuel wood cries.
- Among many challenges in the coming years, the basic issue will/be to find ways for sustainable development which are environmentally sound and make the earth a better place to live in.



## TRADITIONAL TECHNICAL KNOWLEDGE



- The best solution of this problem could be to blend the modern technology with the
- traditional one.
- The integration of scientific and traditional knowledge would help, to develop
- technologies, which are need-based, better problem-solving, locally available, easily acceptable, cost-effective, convincing and credible to the rural clientele.
- There is a lot of indigenous agricultural know-how available with the farming communities
- specially the tribals.
- These traditional farming systems are products of centuries of accumulated experiences. Farmers all over the world have developed their own indigenous systems of farming with local inputs.
- In India the traditional system of farming is being practiced since the Vedic age (3700 BC). .



# Crop Protection



- Traditional systems of crop protection, rooted in the simple practices that farmers have
- learnt from their long association with the land, its flora and fauna, were based on ecofriendly
- systems of suitable cultural practices, judicious rotation of crops, and knowledge of pests and
- their life cycles.
- Some of the traditional methods of cultivation, which has direct bearing on pest
- control, are:
  1. Maize seeds are soaked in cow urine for 10-12 hours before sowing. According to farmers, this treatment increases resistance against insect pests.
  2. Rice seedlings raised from seed treated with extract of neem kernel are vigorous and resistant to leafhopper.
  3. In paddy, spraying a solution of 4 l of cow urine and 10 g asafoetida in 10 l of water, repel the sucking pests (aphids, jassids).



4. In paddy, spraying a solution of cow dung prepared by mixing 3 kg cow dung in 3 l of water was observed in the study area against the control of paddy blast and bacterial blight.

5. In case of insect holes made by shoot borer and bark eaters in mango tree, jaggery is placed in the holes to attract other predators (ants), so that they will feed upon the insects present in the hole. Similarly the practices of pouring kerosene in holes and 'blocking holes with cow dung were also observed in the area.

6. For prevention of infestation of shoot borer in mango tree, common salt is mixed with soil near the collar region of the tree.

7. In case of 'bunchy top' disease in chilies dusting of ash; use of gugul (*Commiphora wightii*) smoke; spray of sour butter milk; spray of liquid waste of tanned leather, and spray of cow/goat urine was recorded in the tribal areas.



8. A peculiar method of controlling diseases in chilli was observed in which the twigs of aak (*Calotropis* spp.) are placed in chilli field in between rows. Similarly some farmers placed fresh cow dung near the collar region of plant to prevent it from fungal diseases viz., damping off and die back.

9. In case of soil-borne diseases viz., root rot, collar rot, etc. and termites, the castor cake, karanj cake, or neem cake were used as a control measure.

10. In case of sugarcane crop, use of common salt (100-125 kg/ha) during intercultural operations was found to be common. According to farmers, the salt is effective against termite problem.

11. During sprouting of sets in sugarcane crop, putting stems of aak (*Calotropis* spp.) in the irrigation channels is effective against control of termites, white grub, and borers.

12. Use of kerosene was also common against control of termites in the field.



# Thank You