

REPORT

KUMARI ARIVIAL PERAVAI
YOUNG SCIENTISTS PROGRAMME 2010-2011

Seminar on water storage management

PECHIPARAI

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TEAM LEADER



In the water storage management seminar, we gathered at Government Tribal Residential Higher Secondary School, Pechiparai on 29th December 2010. We went for a long walk to the District Horticultural Research Station, located at Pechiparai. At the entrance of the Research Station we saw many trees flowering spices such as Clove, All spice, Cinnamon and also Pepper. The garden was so beautiful and we were amazed. We came to the office and noted the temperature and humidity of that area.

Then we assembled at the seminar hall. The programme was hosted by Feby from Blue team. The introductory speech was given by Mr. Mullanchery, M. Velaian, Organizer of Kumari Arivial Peravai. He showed a power point presentation on ‘water scarcity on 2070’ which was an imagination of our former President, Dr. A.P.J. Abdul Kalam. Mr. Balakrishnan, Head Master, Government Tribal Residential Higher Secondary School, Pechiparai in his presidential address told that the important river of Tamil Nadu is Cauvery which is originated from Karnataka and reaches Metur Dam and that stored water is used for irrigation purpose. The inaugural address by Dr. James Wilson, Vice Chairman, Marthandam College of Engineering and Technology, Kuttakuzhi was really amazing. He made a wonder speech on Water. “Little drops make an ocean. Where there is a flood, there is a drought. We want to make some reservoirs to manage water” he said.

Captain Bennet Singh, Pilot, Tuticorin port, said that if there is rain, it comes as acid rain. So there is no benefit. Water scarcity is not only in India but all over the world. Mrs. Thangam Selvi Bai, Associate Professor, Department of Horticulture, explained about water management. The three steps for water management are water conservation, water usage, avoiding pollution. We get pure water from rain. We want to recycle water. So we have to conserve water bodies. We can construct Check dams, farm ponds for the public to conserve water. Rain water harvesting is the method to conserve water in households. We should use limited amount of water for cleaning. The irrigation systems such as surface irrigation, subsurface irrigation and over head irrigation are there. Canal irrigation helps us to reduce the usage of water. By drip irrigation we can save around 60% of water. We can use pesticides and fertilizers by drip irrigation. We use sprinkler for irrigating plants such as tea, coffee in hilly areas due to undulating topography. In subsurface irrigation there is no wastage of water.

Dr. J.D. Nirmalatha, Scientist, HRS, Pechiparai discussed about the new technology- Hydroponics. It is a soil less culture. The main nutrients for plants are Nitrogen, Phosphorus, Potassium, Calcium, Magnesium, Sulphur, Iron, etc. Hydroponics was introduced by Jenson and Collins in 1985 as a new technique to grow plants in nutrients. The pH value lies between 0 and 14. If the pH value is less than 7, it is called acidic and if it is more than 7, it is called basic. 7 is the neutral pH value. White vinegar is used to neutralize a basic nutrient solution and baking soda is used to neutralize an acidic nutrient solution. Land is not necessary for Hydroponics. It can be practiced even in upstairs and open spaces to grow plants in hydroponics. Off season production, reduced wastages are some of the advantages of Hydroponics. Fruits such as Mango are ripened by usage of chemicals such as Calcium carbonate and ethylene bromide which are harmful. V.V. Vikram, Engineer, Malaysia made a presentation on water storage management. Water scarcity is caused by over exploitation, excess use and water pollution. The dams in china are 22000; in USA, 6575; in India 4291 and in Tamil Nadu, 78. In Tamil Nadu there are 41260 ponds and in Kanyakumari, 2623.

Then we walked along with Dr. Balakumbakan, Assistant Professor, HRS, Pechiparai to the field. We have seen Drip irrigation which was beautiful and useful. In drip irrigation we can use fertilizers and pesticides in the fertilizer tank and it can flow minimum amount of fertilizers and water. By this technique there was no wastage of water and fertilizer. Then we came back to Government Tribal Residential Higher Secondary School, Pechiparai. After lunch we had visited Pechiparai dam and its catchments area. There we had group discussion. Mr Mulanchery M.Velaian asked the members of each team to make their presentation on that camp. At last Mr. Gopalan and Mr. Edwin Sam gave the feed back. The camp was dispersed in the evening.



Hydroponics



Drip irrigation



Pechiparai dam



Aeroponics

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