

out that the analysis of hazard is a complex task, as many factors can play important roles in the occurrence of the disastrous event. Therefore, analysis requires a large number of input parameters, and techniques of analysis may be costly and time-consuming. He further added that space technology has made significant contribution in all the three phases, i.e. preparedness, prevention and relief of disaster management. With a constellation of both INSAT and IRS series of satel-

lites, India has developed an operational mechanism for disaster warning, especially cyclones and droughts, and their monitoring and mitigation. However, prediction of certain events like earthquakes, volcanic eruptions and floods is still at the experimental level. Developments in space-based earth observation and weather-watch capabilities in future may help refining existing models/approaches for prediction of such events and their management.

After discussions several recommendations were formulated at the final panel discussion session on 'Environmental awareness and preparedness for natural disasters: An Indian perspective'. The details can be obtained from the author.

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MEETING REPORT

Tenth Orissa Bigyan Congress*

The focal theme of the Tenth Orissa Bigyan Congress was 'Planet Earth'. Delegates from different parts of Orissa participated in the congress.

The keynote address on 'Science and technology-based agricultural development and its impact on environment' was delivered by B. Senapati (Orissa University of Agriculture and Technology, OUAT). The beginning of agriculture, according to Senapati, took place about 10,000 years ago in an oasis called Fertile Crescent in Mesopotamia, which included parts of Iran, Iraq, Turkey, Syria, Lebanon and Israel. Agriculture originated due to environmental, biological and cultural interactions during the early period of human development. The biosphere concept recognizes that, because of the global nature of various interactions, physical or biological, modifications of the environment in one part of the world, may affect all the flora and fauna in remote places. Studies on impact of technology adoption on agroecosystem have to be made, keeping in view the above concept. Three strategic approaches for science-based technology development through research for agricultural growth in the world are enhancement of capability of crop variety for higher production, management technology, and knowledge-intensive technology.

Senapati's lecture covered topics including protecting plants from abiotic stresses, crop cultivars for weed control, development of new plant-type varieties, water harvesting and water-, crop-, pest-, soil fertility-, energy- and post-harvest managements and genetically modified plants for yield and quality improvement.

In the Life Sciences Section, B. K. Sahoo (OUAT) spoke on 'Conservation of indigenous grasses in meeting fodder deficit in Orissa'. The natural fodder resources on which majority of the livestock depend for grazing, bear a future for sustainable development. About 90% of animals in rural Orissa maintain their livelihood on several herbs/grasses suitable for a variety of land situations. These grasses grow naturally on field, river and canal embankments, forest areas, hilly slopes and swampy areas. These are palatable and have a potential for improving the health and productivity level or can be genetically manipulated for improving their nutritive status and productivity.

B. K. Mohanty (Khallikote Autonomous College, Berhampur), in the Environmental Section, spoke on 'Hazards of mercurial ayurvedic drugs'. Mercurial compounds and drugs are commonly used in ayurvedic therapy, but the role played by mercury in biological systems has been ignored. The speaker detailed on kayjoli, a widely used ayurvedic drug containing mercury. It is applied externally in the treatment of venereal diseases such as syphilis, and in skin disorders. According to Mohanty, since the outbreak of Minamata/Hunter Russel disease, mercury

has gained importance as an extremely hazardous environmental pollutant. According to him, the usual symptoms of acute mercury toxicity consists of shock, cardiovascular collapse, acute renal failure and severe gastrointestinal damage. He lamented over the fact that ayurvedic drugs containing high percentage of mercury are still in use throughout this country, particularly in the rural areas.

In the Physical Sciences section, Swaswat Kumar Mohanty (Orissa State Pollution Control Board, Bhubaneswar) spoke on 'Solar energy, our future energy source'. Due to rapid increase in population and growth in the number of industries, there is tremendous pressure on the finite fossil fuel deposits, which are the major sources of energy. An ecofriendly and economic alternative source of energy is the need of the hour. Solar energy can fulfil the energy demand to some extent. Solar energy is available through a variety of processes like solar heating, solar water heating, photovoltaic energy (converting sunlight directly into electricity) and solar thermal electric power. Mohanty also discussed details of solar thermal technologies and solar photovoltaic technology, which are the processes by which solar energy can be converted to other forces of energy according to requirement.

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