



Cases of Nuclear Exposure

Posted On: 09 FEB 2017 3:47PM by PIB Delhi

In the last two decades, there has been a continuous increase in availability of Radiation Oncology facilities for cancer care in India and the number of treatment units (Linear Accelerators and Telecobalts) have increased from less than 250 in year 1995 to approximately 552 units in 2015. The newer Radiation facilities, though lesser than the actual requirement in the country, do have advanced facilities for catering to radiotherapy cancer treatment. The Radiation Oncology community within India has utilized the available infrastructure to develop a strong scientific programme for radiation treatment delivery in India across academic centres of excellence.

The radioisotopes produced by use of nuclear energy are being effectively utilized in the fields of medicine (both diagnostic and therapeutic), agriculture and industry. Radioisotopes applications are on increasing trend world over in medical treatment, agriculture etc. Since radioisotopes are produced in reactors, increase in the numbers of reactors will increase the availability of indigenously made radioisotopes in medical treatment and agriculture. DAE also has developed technology in recovering Cs137 radioisotope from the radioactive waste generated from the fission products of the reactor, which has got application in medical field. BARC has a major agricultural research programme on improvement of oilseeds, pulses, wheat and rice using radiation-based mutation breeding methods for the past several decades. Already 42 varieties of different crops have been developed by BARC that include groundnut (15 varieties), mustard (3 varieties), soybean (2 varieties), sunflower (1 variety), mungbean (8 varieties), uridbean (5 varieties), pigeonpea (5 varieties), cowpea (1 variety) and 1 variety each of rice and jute. These crop varieties are endowed with one or more improved and desirable attributes such as higher yields, early harvesting, large seed sizes, along with resistance to biotic and abiotic stresses. These crop varieties are notified and released to the Indian farmers for commercial cultivation in the country. The farmers' feedback about these varieties from various states is extremely good as these are tailored to suite the agro-climatic conditions of the regions of cultivation. The seeds are available from the State Seed Corporation, National Seed Corporation, various agricultural state universities and also institutes of Indian Council of Agricultural Research. Some companies are also exporting seeds of these varieties to other countries.

The Atomic Energy Act, 1962 empowers the Government to produce, develop, use and dispose of atomic energy either by itself or through any authority or Corporation established by it or a Government company. In this regard, an indigenous sequential three-stage nuclear power programme based on optimum utilization of the country's nuclear resources of modest uranium and abundant thorium is being pursued. Large capacity nuclear power reactors based on foreign cooperation are also being implemented as additionalities, for faster capacity addition. In addition, the Government has taken the following measures to facilitate nuclear power capacity addition:

- In principle approval of sites to locate nuclear power plants in future.
- Creation of India Nuclear Insurance Pool to cover the Operator's Liability as prescribed under the provisions of the Civil Liability for Nuclear Damage (CLND) Act, 2010.
- Amendment to the Atomic Energy Act, 1962 to facilitate establishment of Joint Venture Companies (JVC) by Nuclear Power Corporation of India Limited (NPCIL) with other Central Public Sector Undertakings to set up nuclear power plants.

This information was provided by the Union Minister of State (Independent Charge) Development of North-Eastern Region (DoNER), MoS PMO, Personnel, Public Grievances & Pensions, Atomic Energy and Space, Dr Jitendra Singh in a written reply to a question in Rajya Sabha today.

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(Release ID: 1482324) Visitor Counter : 73

