

Rajya Sabha The Government of India has given top priority for promotion and use of bio-fuels, which includes bio-diesel and bio-ethanol. Considering the importance of promotion and use of bio-fuels for transportation, stationary and other applications, the Government of India has issued a Notification in July, 2006 giving specific responsibilities to various Union Ministries and Departments. The Government emphasise use of non-edible oils such as *Jatropha curcas*, *Pongamia pinnata* oils, etc. for production of bio-diesel and use of forest & non-forest wastelands for plantation of non-edible oil seed bearing plants.

The Ministry of New & Renewable Energy has sponsored Research and Development projects on bio-fuels to some leading R&D Institutions. Process parameters for production of bio-diesel from *Jatropha curcas* (Ratanjot) and *Pongamia pinnata* (Karanja) have been optimized; field trials on diesel car have been carried out with different levels of blend of bio-diesel produced from *Jatropha* and *Pongamia* with diesel. The vehicle response has been found to be comparable with diesel vehicles. A 200 liter capacity per batch bio-diesel reactor has been designed, fabricated and developed. The MNRE has prepared a Draft National Policy on Bio-fuels, which is under consideration of Govt. of India.

The Ministry of Rural Development (MoRD) has provided financial support to nine States in 2005-06 for raising of about 18 crore seedlings of *Jatropha* and *Pongamia* and to 18 States in 2006-07 for raising of another about 18 crore seedlings of these plants. The proposal of the MoRD for establishment of the National Mission on Bio-diesel and launch of its demonstration phase (Phase-I) is under consideration of Government of India.

Department of Bio-Technology has initiated a Micro-mission programme on production and demonstration of superior quality planting material of *Jatropha* based on oil content of 30-35% and seed yield of 3-5 tonnes per hectare. They have raised 22.48 lakh plants under nursery at different places and have initiated R&D projects for improvement of oil quality and seed yield and identification of superior varieties.

The Ministry of Agriculture through National Oil Seeds and Vegetable Oils Development (NOVOD) Board is promoting *Jatropha* and *Pongamia* under the Scheme of Integrated Development of Tree borne oil seeds. The NOVOD Board has undertaken model plantation of *Jatropha* in about 10,000 hectare area and *Karanja* in about 1400 hectare area for producing parent material for undertaking large scale plantation. NOVOD Board have identified elite planting material of *Jatropha* and *pongamia* under their R&D programme and have preserved the germ plasm. Besides, NOVOD Board has sanctioned model plantation of *Jatropha* in 1445 hectare and *Karanja* in 55 hectare during 2007-08.

Indian Council of Agricultural Research (ICAR), under All India Coordinated Research Project (AICRP) on agro-forestry, have initiated efforts in respect of *Jatropha* for collection of germ plasm, evaluation trials for growth, seed yield and oil content, hybridization, reproductive biology, agri-silvicultural trials, molecular characterization, biochemical activities and farmers training. ICAR has identified a *Jatropha* variety for commercial cultivation.

Presently, the activities initiated on research & development for development of superior quality planting materials and bio-diesel production technologies, testing of diesel engines using bio-diesel and their demonstration have been initiated.

This information was given by the Minister of State in the Ministry of New and Renewable Sources, Sh Vilas Muttemwar. in a written reply to a question in the Rajya Sabha today.