

**Satish Chander**

City Compost for Swachh Bharat

depleting gradually. Application of city compost increases the carbon content of soil. Higher carbon content in soil improves both physical and biological properties of the soil. This in turn improves the water retention capacity of soil and also enhances the population of useful microbes in the soil.

In spite of encouragement by Government of India and state governments, production of city compost has not materialized on large scale. There is a poor capacity utilization of the installed capacity. There are several constraints. There is no systematic segregation of urban waste into organic and inorganic components in Indian cities. There is a problem of high moisture content in waste in rainy season. Economics of city compost is not favourable vis-à-vis conventional fertilisers. While there is heavy subsidy on chemical fertilisers, no such concession was extended to city compost on its sale.

The present government took policy decision in form of providing market development assistance (MDA) to city compost. It would reduce the selling price to the farmers. Government issued guidelines for marketing of city compost. Cities have been tagged individually to fertiliser marketing companies. Guidelines provided for signing of tripartite agreement amongst municipal body, compost manufacturer and compost marketer, which has been done by many fertiliser companies.

These initiatives should ideally help the cause of city compost, but concerns remain. Quality of city compost is of utmost importance. Adequately equipped laboratories are not there to certify the quality of city compost. There is also concern of presence of heavy metals in compost and its effect on soil health with long term application. Insufficient composting may result in carryover of pathogens to soil creating health hazard. Manufacturers have no control over raw materials for manufacturing compost. The nutrient content in form of N, P and K will vary significantly from place to place. Objective of application of city compost is to add organic carbon to soil and not providing nutrients. Therefore, insisting on particular level of these nutrients does not serve any purpose.

The market development assistance is not adequate

The new government in 2014 launched several 'abhiyans' for faster development and improvement in environment and quality of life of citizens. One of the missions is 'Swachh Bharat Abhiyan' to improve the living environment. Objective of the mission is to prevent many health problems and improve the aesthetic of the cities, towns and villages. Solid waste management in the cities is identified as one of the tasks at hand. Conversion of urban waste to compost is considered an optimum solution to meet the objectives of disposal of waste and providing an organic fertiliser for agriculture.

Composting of urban waste had started much earlier. Hon'ble Supreme Court of India constituted a Task Force in 2003 on Integrated Plant Nutrient Management using city compost in response to a public interest litigation. On the recommendation of Task Force, the Supreme Court directed in 2006 that city compost be co-marketed alongwith the chemical fertilisers. Fertiliser companies started marketing city compost and reached a level of sale of 1.87 lakh tonnes in 2011-12. State government facilitated initial phase of composting city waste by providing land on easy terms and Government of India through the Ministry of Agriculture and Ministry of Urban Development provided capital investment subsidy. As a result, a capacity of about 0.8 million tonnes of making city compost was built. FAI contributed to the promotion of use of city compost by getting several crop demonstrations done during 2012-14 using city compost alongwith chemical fertilisers. These demonstrations clearly brought out the benefit of city compost.

City compost is a good source of carbon and also contains plant nutrient albeit in very small quantities. Carbon content of Indian soils has been

to make purchase of city compost attractive for the farmers. Market Development Assistance will be provided to fertiliser companies which will market the city compost. The mechanism for payment of MDA is same as that for payment of subsidy on conventional fertilisers. The present payment mechanism for fertiliser subsidy is not functioning smoothly. Large quantum of funds remain unpaid at any given time. Payments are delayed for months and even years. This is happening due to lack of provision of sufficient funds in Union Budget year after year, impractical payment procedures and poor governance.

According to payment procedures of MDA for city compost, 50% of MDA will be paid for the quantity of city compost sold at first point sale to the dealer/retailer at district level and balance 50% will be paid after certification of quality and quantity by state governments. How the state governments would certify the quality when they do not have adequate testing facilities? Therefore, the payments of MDA are likely to be stuck with the government more so when one sees what is happening for subsidy on conventional fertilisers where there are no quality issues. Thus merely making provision for payment of some financial assistance and forcing fertiliser

The policy for composting of urban waste is a laudable initiative under 'Swachh Bharat Abhiyan'. It is hoped that government will work to remove the bottlenecks in consultation with stakeholders to make the Abhiyan a success.

companies to market city compost is not going to work unless all these issues are addressed.

Central and state government need to create a conducive socio-economic environment. First, local municipal bodies should cooperate with compost manufacturers. A culture of segregation of waste from household, restaurants, hotels and commercial establishments should be established. State governments should establish new and augment the present laboratories for testing city compost. There is need for creation of awareness among the farmers about the benefits of city compost by all concerned specifically by the extension machinery of central and state governments.

Specifications of N, P and K

contents need not be insisted and FCO should be amended accordingly. Agriculture research institutions including state agriculture universities should be commissioned to carry out long term experiment to study the effect of application of city compost on soil health. The market development assistance needs to be suitably enhanced and should be paid in full or at least 90% of it once material reaches the destination.

There is also an issue of delineating responsibilities amongst the stakeholders for complying with various regulations. For example, manufacturer should be responsible for compliances including quality till material is sold to the farmers through sales network of the fertiliser companies. The public liability of any adverse impact on soil health also remains a grey area. Marketers should be indemnified from the responsibility of any ill-effect on soil health as a result of long term use of city compost.

The policy for composting of urban waste is a laudable initiative under 'Swachh Bharat Abhiyan'. But attention needs to be paid to the difficulties in its implementation. It is hoped that government will work to remove the bottlenecks in consultation with stakeholders to make the Abhiyan a success. ■