Food and Agriculture Organization of the United Nations

Improved utilization of urban waste, Hubli - Dharwad City Region, Karnataka, India

Source	UK Department For International Development (DFID)
Keywords	Solid wastes, fertilizers, urban wastes
Country of first practice	India
ID and publishing year	4591 and 2006
Sustainable Development Goals	Zero hunger, and industry, innovation and infrastructure

Summary

Municipal solid waste (MSW) can be a valuable fertilizer for peri-urban farmers in India. An integrated approach to urban waste management, currently absent, is needed to improve its use, to include segregation of waste materials (removal of plastic and glass), thereby halting the decline in quality, and its management and marketing in an environmentally sustainable way. The addition of night soil would improve the nutrient content of MSW. There is a range of options that could be considered to maintain access to MSW by near-urban farmers, including subsidizing composts produced by the private sector, producing a range of composts at different prices and maintaining access for both farmers and the private sector.

Description

Urban organic wastes are used productively in many southern countries and include much municipal solid waste (MSW), collected from households, street bins and street sweepings by the municipal corporation, or private companies contracted by the corporation, vegetable market waste, wastewater and livestock manure. Within Hubli-Dharwad, Karnataka, India, MSW has been purchased from two dumpsite; one in Hubli and the other in Dharwad, for many years. Until 1997, decomposing MSW was sold from the Dharwad dumpsite via an annual auction system managed by the Hubli-Dharwad Municipal Corporation (HDMC), selling waste by the pit load. The auction system stopped because of the lack of staff at the dumpsite to prepare pits for auction and to manage the auction process. The sale and use of MSW is, however, reducing as the waste is increasingly contaminated by non-compostable items, particularly plastics.

Other factors which have affected the ability of HDMC to sell the waste, and farmers' willingness to buy, include shortages of labour at the dumpsites, making pit preparation difficult, and shortages of labour for farmers to hire to dig up the waste pits, sort the waste and spread it onto the fields. This is due to competing employment opportunities, and higher wage levels, in the urban areas.

Farmers who do not own tractors are less willing to hire vehicles to purchase MSW when the quality is so low. There are, however, some farmers who continue to purchase MSW. These farmers are relatively wealthy, have their own tractors and are able to hire labour to transport and sometimes sort Declining quality of MSW was the most often cited reason by farmers for not, or abandoning, using it. Adding night soil to MSW could be a good way to increase its nutrient content, and crop yields, though health and management issues would have to be explored. Segregation of waste materials is a key issue, but is a very difficult problem to solve in a cost-effective manner. The involvement of a range of stakeholders is needed, as is perseverance in raising awareness.

There is a range of options that could be considered to maintain access to MSW by near-urban farmers. These include subsidizing composts produced by the private sector, producing a range of composts at different prices and maintaining access for both farmers and the private sector. Marketing the waste does not appear to be the most important issue in Hubli-Dharwad. The main problem is to improve the quality of the MSW (principally by removing contaminants).

Transport of MSW from the point of collection or sale, to the farm, was also identified as a significant constraint for small farmers wishing to utilize this resource.

2. Health and safety

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3. DFID disclaimer

This technology is an output from the Renewable Natural Resources Research strategy funded by the UK Department for International Development (DFID), for the benefit of developing countries. The views expressed are not necessarily those of DFID.

4. Acknowledgements

The technology was selected and the record was compiled from original project documentation by Natural Resources International Ltd, with funding from DFID's Central Research Department (Communications). Implementing and advising on this process were: Karen Wilkin and Tina Rowland (joint project leaders), Andy Frost, Vino Graffham, Jody Sunley, Liz McVeigh, RNRRS programme staff, FAO's Research and Technology Development Service, FAO's LEAD programme, DFID's Central Research Department, Ken Campbell, Graham Farrell (Plant Clinic), Simon Eden-Green, Peter Golob, John Esser, Liz Betser (360˚ Responsibility). Validation domain reviewed by the Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD), Simon Eden-Green and Peter Golob. Uploading by Random X Solutions Ltd. For more information, please contact Karen Wilkin, NR International Ltd or Tina Rowland, Random X Solutions Ltd.

5. Further reading

- Nunan, F. 1999. Improved utilisation of urban waste by near - urban farmers in the Hubli-Dharwad city region. DFID Natural Resources. URL
- Systems Programme, Final Technical Report, project R7099. International Development Department, University of Birmingham, UK. 81 pp.

6. Agro-ecological zones

- Tropics, warm

7. Objectives fulfilled by the project

7.1 Resource use efficiency

The technology allows for waste to be used as valuable fertilizer for farmers. It improves urban waste management, increases quality of crops, and is environmentally sustainable.

7.2 Pro-poor technology

The technology allows for production of range of composts to be sold at different prices allowing for additional income and also increase in food source quality and quantity when used.