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COMMERCIAL WASTE MANAGEMENT SYSTEMS AND THE NEGLECT OF EXTENSION SERVICES IN NIGERIA

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ABSTRACT

The activities of two commercial waste management systems were reviewed in Nigeria. The scope of their operations and the impact of these centers on livestock waste management were examined. The case studies revealed that livestock waste management would be efficient among other things if there was a proper diffusion and adoption of waste management techniques. A proper linkage between research, extension and livestock farmers is suggested for effective management of wastes.

KEYWORDS. Commercial waste management, Extension services, Organo-mineral fertilizer, Nigeria.

INTRODUCTION

Animal waste is a broad term that refers to a complex array of by-products originating from the rearing and use of animals by man. Many types of animal wastes exist such as manure – the mixture of faeces and urine, which is the most common of all. Others include wastewaters, animal carcasses, solid and liquid waste generated during meat processing. Animal wastes often contain foreign materials in addition to the manure excreted by animals.

Animal waste management can be described as a systematic planning operations designed to collect, store, transfer and utilize the wide variety of wastes in a profitable and environmentally sound manner. Issues that are critical in animal waste management are the level of production, system of management type of livestock, production sites, the volume of waste generated and the socio-economic characteristics of the producer such as educational level, income derived and the type of technology employed in the production process.

Past researches (Sims, 1994) have shown that the waste management could be of beneficial use in terms of:

- Manure – developed through composting which is the aerobic, biological decomposition of organic matter by naturally occurring bacteria, which destroys pathogen on animal waste, convert nitrogen from unstable ammonia form to stable organic forms, reduces the volume of waste and improves the physical nature of wastes.
- Biogas – gases produced by anaerobic bacterial decomposition of organic wastes, which are typically rich in methane, which can be burned to generate energy or heat.
- Feed – the recycling of the energy, protein and nutrients in animal wastes by re-feeding of processed wastes to other livestock.
- Ornament – wastes that are used in the beautification of uncemented floor in rural areas in addition to other coloring materials, which improves the aesthetic value.

CASE STUDY 1: ORGANO – MINERAL FERTILIZER PILOT PLANT UNIVERSITY OF IBADAN

This is a center for the production of organo-mineral fertilizer, a joint project between University of Ibadan and Raw Material Research Development Council, Abuja. It was designed to generate 3 tonnes of finished product per day. The raw materials processed were poultry waste, cow dung, sawdust, water hyacinth and city refuse. (Omueti et al, 2000). The organic fertilizer produced, were field tested with cassava and maize crops, which recorded higher yield than mineral fertilizer.

CASE STUDY 2: OYO STATE PACESETTER ORGANIC FERTILIZER

The menace of waste generated in a cattle market in the city center of Ibadan, the largest city West Africa stimulated the need of managing animal waste. This project was started in July 1998 with five objectives of sanitation of the environment, turning waste into wealth, employment generation; conservation of environment through organic fertilizer and alleviation of the hydro-headed problems of procuring inorganic fertilizers.

The concept of the project was conceived when Ibadan was identified to be developed as a model city under the “Sustainable Cities Programme” of UNCHS/UNDP (NEST 1992). The plant was designed to process about 20 tonnes of waste per day with the resultant 10 – 12 tonnes of finished product. The plant is presently producing two grades of fertilizer: General or B grade for ordinary soils to increase organic matter content and yield while the second grade A for growing crops such as yam, cassava, maize, vegetables, flower and ornamental plants.

THE NEGLECT OF EXTENSION SERVICES

The process of indigenizing the production of fertilizers in Nigeria from locally sourced raw materials, particularly animal waste would be more result-oriented if the extension services are incorporated. This would introduce the multidisciplinary approach to the adoption of organic fertilizers.

A study on the awareness and use of Pacesetter organic fertilizer among farmers in Oyo state shows that about 77 percent are aware while only 34 percent have adopted. Fasina (2000). The extension services would work within the framework of proper methodology to create awareness, stimulate interest, attempt evaluation, establish trials and convince action.

CONCLUSION

The study has clearly shown that animal waste commercial management system has started in Nigeria. At this time there is a little capacity in respect to the amount generated. A proper linkage between research, extension and end users is suggested in order to improve the waste management system.

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