

## Research on the quality of dried sludge- fertilizer

Whole term

1993. 9 ~ 1994. 1

### (Purpose)

It is predicted that the number of small and medium wastewater treatment systems will be increased as new wastewater treatment systems are established. And it is considered that the sludge generated in these systems can be used in the agriculture and grasslands, after drying and composting. Though, it is necessary to check the market value and the quality of the composted and dried sludge used for the agriculture and grasslands, it has not yet been materialized.

Hence, this study focused on arranging data on the types of sludge such as wasted and dried sludge composts produced at present; the actual situation of the usage of organic composts that consist of composts from wasted and dried sludge; transportation; and forecasting of the future market. Public Works Research Institute of the Ministry of Construction granted the responsibility of conducting a survey on these matters, to the Japan Institute of Wastewater Engineering Technology.

### (Results)

1) The results of the survey on the situation of the application of the organic compost, distributing means and forecasting of the future market are as follows:

(1) The content of the organic compost is 30% in weight.

(2) Wasted sludge-compost and dried sludge-fertilizer cover a vast portion in the organic compost production.

(3) The output of the compost and the sludge fertilizer is increasing smoothly. Raw materials of composts can be classified as mainly livestock and poultry' s night soil, secondly the barks of trees, and thirdly the composted sludge.

(4) In distribution of different types of wasted sludge, raw sludge is usually delivered to a private company or a trader. One third of the dewatered cake is delivered to a private company or a trader where it is converted to the compost and then distributed.

(5) The yield of organic fertilizer, especially produced by waste matter, is predicted to increase, however on long-view, it will be on the top when the actual situation of the agriculture is concerned.

(6) The components of fertilizer such as the compost made of barks, the compost made of livestock and night soil from poultries will be produced more. However, the yield of these things may hardly drop.

(7) The compost made of the wastewater-sludge can compete with the other types of fertilizer, however the fertilizer made of wastewater- sludge is expected to be used mostly in the future.

(8) The yield of dried sludge- fertilizer does not change; it seems possible that the yield would increase according to the drying method, application and alternative additives.

2) One' s view on future tasks and directions regarding the fertilizer made of wastewater-sludge is as follows:

(1) Additives to balance the fertilizer value of the wastewater sludge-merchandise should be studied, and it is necessary to plan highly valued products and make branding by setting the standards.

(2) To increase the amount of merchandised sludge made of wasted sludge, it has to cope with the problems associated with expanding the goals of fertilization, inaugurating a new market, merchandizing the fertilizer to compete successfully with the other types of fertilizer.

Public Works Research Institute

Study was granted by the Ministry of Construction

Personnel in charge of the study: Kazuaki Sato, Takao Murakami, Tadashi Fukao  
(Predecessor: Tadahiro Murakami)

Keywords

Organic fertilizer, Compost, Sludge fertilizer, Sludge compost, dried sludge fertilizer