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Evaluation of Quality and Composition of Rich Organic Solid Waste in Developing Countries (Morocco), and Comparison with Europe

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Abstract

Many developing countries are trying to eliminate their domestic waste more environmental friendly than before and at the same time to recycle its valuable material. While the industrial usable materials are at least partly reused, the organic matter is mostly dumped.

As an example the Moroccan solid waste contains about 73% of weight organic matter, twice as much as in Europe. In contrast the portion of the dry valuable materials, particularly metal, glass and paper, is in Europe considerably higher than in Morocco. However due to the intensive use of plastic bags in Morocco, the portion of plastic is same as in Europe.

The composition of solid waste in Moroccan towns (Rabat & Agadir) mostly depends on the standard of living and daily activities (market, commerce, tourism, . . .) in a district, as well as on the recovery of valuable materials before and during the waste collection.

The major portion of solid waste in Morocco consists of fresh vegetables, simultaneously the garden wastes are normally not collected with solid waste. Thus, it leads to constantly high water content in solid waste throughout the year.

Therefore, a direct wet garbage incineration is not efficient as waste elimination method. In opposite, composting can supply a humus carrier for organic poor soils through its high content of organic material.

Also substantial costs of the environmental pollution can be saved through avoiding wild dumping and duration of dumps utilization can be increased. Whereby the high water content of approximately 70% represents a problem for the composting starting phase, as the aerobic conditions are particularly difficult to assure due to the lack of structure material in the solid waste.

Keywords: Composition, composting, developing countries, Morocco, quality, solid waste