PROBLEMS OF INTRODUCTION OF TECHNOLOGIES OF PROCESSING DOMESTIC WASTES IN SUMY AREA

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Nowadays defense of environment became the world's problem number one. People with their daily actions pollute earth, water and air. It is known that pollutions take beginning from the time when people began to occupy the same locality for a long period. But pollution was not a serious problem, while there was enough space, accessible for every individual or group. With development of technologies, rapid distribution of industrialization and increase of population, pollution became the universal problem. The cost of rapid industrial growth is very high: natural resources are exhausted, ecological balance of planet is broken.

Today Sumy area is included in ten of the most ecologically favorable areas of Ukraine. In spite of it, pollutions because of surge of domestic garbage is a big problem for this region as well. Therefore a problem of introduction of technologies on processing of garbage at the nowadays level of industrialization is very actual.

Now there are technologies that allow to process domestic wastes effectively. For example:

•processes for the microbial converting the rests of processing food products into organic acids and other nourishing ingredients (natural flavours, pigments and dietary fibres);

•receipt of energy from wastes by the selection of power carrier which is possible to store and transport or incineration of wastes for the receipt of heat and making of electricity;

•methane fermentation - a method is based on the use of activity of microbes, extracting from organic wastes combustible gas, containing 60% methane with calorie content 5-6 thousands of kkal/m3.

•twocistern method - 2 colonies of bacteria are used – for oxidization (liquefaction) and for methane fermentation (gasification). Application of two colonies of bacteria that work separately in the most favorable terms increases speed of gasification. At this method from 1 kg of organic wastes we can get 300 l of methane (at onecistern method 200-250 l/kg);

•processing of wastes into a hard fuel consists in crushing and pulverizing of wastes.

Low-caloric wastes interfuse with high-calorie for the increase of homogeneity.

Innovative projects like that are very scientifically based and capital-intensive. Technical and technological barriers for introduction of foregoing technologies in Sumy area are practically absent, that is why the attraction of investment facilities is a main problem for their realization. An unfavorable financial situation in our country is not the only reason for that. Absence of tangible income during realization of investment projects like that affects the choice of investors of capital investment objects. At making decision about investing in one or another projects, modern top managers still do not take into account the ecological and economical estimations of effects from introduction and also damage to the economy prevented by it.

It can be explained by difficulties of psychological perception by Ukrainian businessmen of necessity and expedience of introduction of technologies on processing domestic wastes. Also there can be other obstacles of introduction of technologies such as: unfavorable investment climate (high inflation; political instability and vagueness; high level of external debt); insufficient developed of the credit-financial providing, shortage of trust of creditors and responsibility of recipients of credits (enterprises, municipalities and other potential recipients of credits, do not yet have solid credit histories; shortage of available facilities; shortage of credit guarantees).

New scientific developments that will diminish capital-intensity of technologies of processing domestic wastes can be the decision of this problem. Also this problem can be solved by development of the special legislative base which will obligate the businessmen of the region to do certain investments for introduction of foregoing technologies, or give them different privileges for that, what is straightly depends on state and local legislative departments.

Zero Waste Business Principles can help enterprises to reduce the cost of introduction of new technologies. For example:

- commitment to the triple bottom line (inform workers, customers and the community about environmental impacts of our production, products or services);

- zero Waste to landfill or incineration (more than 90% of the solid wastes are generated from Landfill and Incineration from all of our facilities);

- responsibility: takeback products & packaging (taking financial and/or physical responsibility for all the products and packaging that are produced and/or market under our brand(s), and requireing suppliers to do so as well);

- buy reused, recycled & composted (use recycled content and compost products in all aspects of our operations, including production facilities, offices and in the construction of new facilities);

- prevent pollution and reduce waste (redesign supply, production and distribution systems to reduce the use of natural resources and eliminate waste; prevent pollution and the waste of materials by continual assessment of our systems and revising procedures, policies and payment policies);

- highest and best use;

- use economic incentives for customers, workers and suppliers (encourage customers, workers and suppliers to eliminate waste and maximize the reuse, recycling and composting of discarded materials through economic incentives and a holistic systems analysis);

- use non-toxic production, reuse and recycling processes.

Due to introduction of technologies of processing wastes it is possible not only to facilitate ecological stresses but also produce products which will bring a certain income. Processing of metallic, paper, glass, plastic and organic

wastes diminishes requirements in energy and raw material. This fact can be confirmed comparing charges on utilization of garbage and its simple burial place that indicates the predominance of the second above the first.