

**THE PROBLEM OF PROVIDING DOMESTIC PLANT GROWING  
WITH ORGANIC FERTILIZERS AND THE PROSPECTS FOR ITS  
SOLUTION WITH THE USE OF ENERGY RESOURCES AND SAVING  
MULTI-STAGE BIO- AND HEATTECHNOLOGY**

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**Purpose.** Speeding up the production process of composting and improving product quality.

**Results of exploration.**

Today, Ukraine is almost the last in Europe to use organic fertilizers in crop production. During the former USSR, the fate of organic fertilizers (in recalculation on NPK) of the total reached 45%, for today below 1%. Accordingly, there was a significant decrease in the humus content in the arable land.

In our opinion, for the modern conditions of Ukraine, the only technology for the production of organic fertilizers, which may be acceptable from commercial organizational and environmental considerations, is modern accelerated composting in field conditions.

We implement composting in the field with a self-propelled sprayer on a crawler ride.

Humidity of compost is 40÷45%. When receiving 1 ton of dry granular compost, the amount of water to be evaporated is 4 ÷ 5 times smaller than that at production, for example, from native chicken litter.

Institute of Engineering Thermophysics NAS of Ukraine in accordance with the order of the «Weisity» Farmer a Canadian grant provides the development of technology and equipment for the production of compost in the field, using self-propelled sprayers and specialized domestic bacterial preparations.

**Conclusions.**

1. A multi-stage technological process for the preparation of working fluids for the uniform irrigation of biomass particles has been developed, which is punched.

2. A set of hinged equipment for self-propelled sprayer for compost to ensure a fine dispersion of working fluids and uniform wetting of biomass particles during processing by a sprayer.