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*Predlahaetsya method definitions ratsyonal'nykh parameters usovershenstvovannoy perevalochnoy technology for sahar'noy beet.*

**Saharan beet, Other cleaning, transportyrovka, Efficiency, proyzvodyelnost.**

*The technique of definition of rational parameters of advanced technologies for transshipment of sugar beet.*

**Sugar beet, Cleaning, transportation, efficiency, productivity.**

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## **TECHNOLOGY REVIEW processing of residual FEED FOOD AND ANIMAL LIFE**

**VS Hmelovskyy, Ph.D.**

*The article analyzes the processing of residual feed, feeding animals and disposal of manure on livestock farms and complexes.*

**The remnants feed, recycling, compost, zvorushuvach, manure, reducing costs.**

**Formulation of the problem.** Research has shown that increasing the digestibility of feed for 1% makes it possible to increase daily milk yield per cow on average 250 g hardest body cattle

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digest cellulose. [1] Reaching high digestibility fiber can be an additional source of energy to produce milk with the same food, which otherwise is simply out of the transit of animals [1]. Also, the cost of livestock

production affecting feed ingredients dimensions beyond zootechnical requirements, in particular, these are gross and sylosovani feed. Indeed, abandoned animal feed, operators removed in dung channels, which increases the cost of livestock production and manure volume [3, 4].

Adding manure and manure into the soil without pre-treatment according to WHO (World Health Organization) can have negative consequences because of pathogens, helminth eggs. This creates a real threat to the spread of infections in the soil and weeds flash stairs.

Manure that accumulates on farms threaten the biological security and financial condition. For the "ecological" big fines. In this connection it is necessary to recycle manure.

**Analysis of recent research.** The technology of today, compost is not relevant because it does not fully decontamination is manure, and it is long term and economically burdensome because of fasting-loading work [2, 3].

Today in Ukraine in livestock farms technology begins to be implemented in the processing of animal manure compost next to the farm.

Compost (from Lat. Sompositus - "composite") - organic fertilizer, formed as a result of the decomposition of various organic substances under the influence of microorganisms. It consists of compost manure, dung, grass, straw, twigs and other organic waste available on any farm. [6] Base compost - animal excrement. After processing the manure we are able to get their own organic fertilizer, which naturally can "equalize" the biochemical composition of the soil, raise the level of humus.

**The purpose of research** - To prove the technology of food processing residues and animal feeding animal feeding waste treatment and disposal of manure on livestock farms and complexes and secure while reducing energy costs.

**Results.** For the processing of manure next to a farm must have rammed open area with a small slope for draining rainwater, manure solids and any organic waste that is on the farm or on the farm, old straw, silage, peat, leaves, remnants feed.

Composting technology - is aerobic (with oxygen) biological process where manure or manure and organic waste is transported to the site for composting and are stored in piles Fig. 1. When forming the first stacked piles less dense materials and ingredients with a higher density. Approximate dimensions collar width of 3 m, height 1.5 m, length 150 m piles estimated volume is 337.5 m<sup>3</sup>. Number of clamps depends on the number and value of manure platforms [5].



Fig. 1. Formation piles.

In the cold season is making compost - 60-65 days in the warm season - 45-50 days. Whereas it is necessary that all materials were both phases of composting, organic fresh piles added to only the first 2 weeks [5, 6]. To synchronize decomposition piles pour water or liquid manure and stir until the liquid is completely absorbed material. Periodically zamirayutsya temperature, humidity and CO<sub>2</sub> in piles. During the composting process reached temperatures above 55-60 ° C at a humidity of 40-50%. Unfavorable environment that creates many thermophilic microorganisms and Heat contributes to the destruction of pathogens bacteria, fungi and weed seeds. It was then intensively vapors hydrogen sulfide, carbon dioxide and ammonia compounds, methane and other toxic substances found in manure. These substances, by the way, and harmful to crop plants when udobryuvani of fresh manure. The conversion of nitrogen in compost is key, because for its formation is crucial carbon-nitrogen balance (C: N). Value C: N is the ratio of weight-to-weight carbon oxide. Required number of carbon should significantly exceed the amount of nitrogen. Check the value of this ratio during composting is 30: 1 (30 g per 1 g of carbon oxide). The optimum ratio is considered to be C: N as 25: 1 [2, 5, 6].

An integral machine technology in education is zvorushuvach compost, for example, PT-120, which is driven by GDP tractor class 1.4 Fig. 2. In the transport position zvorushuvach installed in a vertical position using the tractor's hydraulic system [5].



Fig. 2. General view of the unit for composting.

When soil piles must satisfy the ratio of the speed of the zvorushuvacha and the number of revolutions of the drum is the impact on CO<sub>2</sub> output speed and penetration air (oxygen O<sub>2</sub>) in the heap, the best option will be formed gap between the drum and piles zvorushuvacha 7,5-15 see Fig. 3. Zvorushuvach compost is moved in roll with variable speed, which establishes the operator (0-300 m / hr.) And a drum rotation speed of 270-540 rpm [5].

Stirring should be slow to promote the formation of humus, which will keep O<sub>2</sub>. If the stirring speed is high, we do not get the desired effect and organics will dissipate.

The drum mixes and presents material from external parties to roll into the middle, forming a heap behind a clear triangular rice. 4.

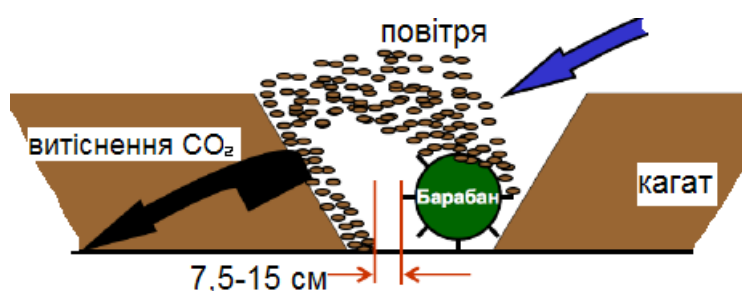


Fig. 3. Scheme of zvorushuvacha. Fig. 4. The existing heap.

The unit is equipped to form compost capacity for 6800 liters of rice. 2 and integrated system of spraying [5]. This enables the material to spray water or other liquids during processing to provide the necessary nutrients. Zvorushuvach composting process works through hydraulic system can drop to the lowest layers of piles as a result - high uniform mixing material. After proper process of composting piles volume decrease by 40-60%, depending on the material. The application rate of

the finished product is 4.8 tons per 1 hectare, which means that fuel consumption in the process of removal and disposal of manure on livestock farm significantly reduced.

**Conclusion.** Composting solve the problem of the processing of residual forage feeding and waste treatment animal feed and manure utilization and reduce the cost of crop production cost reduction for the purchase of fertilizers and improves the quality of the final product. Compost contains pathogenic organisms and no odor and can be used as bedding for cattle instead of straw. Composting technology does not require large amounts of machinery and equipment. Given the optimal schedule drawn up by the process of removing and composting manure can deal with one person. Proper compost - is the foundation and guarantee of the future yield and increase the profitability of the livestock industry.

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*In Article wires REFINING analysis ostatkov feeding animals with fodder and utylyzatsyyu hnoya zhyvotnovodcheskyh on farms and complexes.*

**Remnant feed, utylyzatsyya, compost, vorushytel, dung, Reduction of costs.**

*In paper analyzes the processing of food residues in animal nutrition and disposal of manure on livestock farms and complexes.*

**Forage remains, utilization, compost, lotsing, pus, decrease in expenses.**