



PROSPECTS OF ORGANIC FERTILIZER PREPARATION FROM URBAN WASTE

Shoniyozov Bobur Kaldarboyevich¹

TDAUSF senior teacher,

Turdiyev Umarjon Uchqun son²

Student of TDAUSF,

Ko'chgarov Islam Rustam son³

Student of TDAUSF,

Toshtemirova Sarvinoz Jorabek daughter⁴

Student of TDAUSF,

Ismoilova Muxlisa Murtoza daughter⁵

Student of TDAUSF.

<https://www.doi.org/10.37547/ejar-v03-i02-p3-110>

ARTICLE INFO

Received: 10th February 2023

Accepted: 17th February 2023

Online: 18th February 2023

KEY WORDS

Organic fertilizer, waste, landfill, landfill, plastic, polythene, california, earthworm, hybrid, soil, fertility, biohumus, elements, plant, weed, urban waste.

ABSTRACT

In our country, the reforms aimed at protecting the environment, protecting public health, rational use of natural resources, and ensuring environmental safety continue more consistently, and scientists are doing various things in solving waste problems. The role and importance of worms and microorganisms in general is that their activity is increasing day by day, allowing us to process various wastes polluting our environment (municipal waste, household waste, sewage sludge, etc.) and use them as organic fertilizers in agriculture. This type of organic fertilizer production does not require large investment and operating costs. It is known from the experience of foreign countries that with the help of worms, any solid organic residues can be turned into organic fertilizers rich in useful nutrients for plants, with granular content, soluble in water and not washed away, and ultimately nutritious.

Enter. Determining the priorities of the state policy in the field of environmental protection, prevention of violations of laws in the field of nature protection, introduction of effective mechanisms for their detection and prevention, personal responsibility of state bodies, heads of economic entities and citizens for the sanitary and ecological condition of the republic's settlements. Strengthening is reflected in the new version of the draft law "On waste" included in the "Road map" on the revision of legal documents that should be systematized and unified in directly applicable laws, approved by the joint decision of the chambers of the Oliy Majlis of the Republic of Uzbekistan. The Republic of Uzbekistan On February 2 of this year, President Sh. Mirziyoyev launched the nationwide project "Yashil Makon" to improve the waste management system and improve the ecological situation in the regions. In connection with the implementation of priority tasks in 2022, the task of increasing the coverage of household waste collection to 95% and the volume of processing to 40% was set at the video selector meeting. It is a problem if the waste is recycled and the



revenue is thrown away. It is known that today waste has become a global problem. When a person is active, he creates waste from himself. Solid household waste per capita is increasing by 1% every year in all countries of the world. A person produces 1-1.5 kg of waste per day. Depending on the type of waste, it is divided into 7 groups: household, organic, construction, industrial, toxic, electronic, medical waste. According to the data, 5 million tons of waste are generated in Uzbekistan per year, of which only 14.2 percent is processed. About 2 billion tons of waste are stored in landfills and landfills, and they occupy 12 thousand hectares of land. About 700,000 m³ of household waste is produced in the city of Samarkand alone. Currently, there are 20 enterprises specializing in waste processing in the Samarkand region, which produce 14 types of secondary raw materials from waste. By sorting solid household waste, they are separated and processed into paper, iron, plastic, polythene. The rest of the fruit and vegetable leaves are taken to the landfill for disposal and utilized by burying. As we all know, the California red worm is a picky animal that adapts to a certain environment. It grows rapidly when given food containing glucose. Natural organic fertilizer obtained from it, i.e. biohumus, increases soil fertility 5-6 times more compared to ordinary rotted manure. Biohumus has nitrogen-storing properties and satisfies the nitrogen requirement of plants in a certain amount. In addition, up to 90 percent fewer weeds germinate on land fertilized with biohumus than on land fertilized with regular manure.

Earthworms have long been known to have a positive effect on soil fertility. The role of earthworms in soil formation was first noticed and described by English scientist Gilbert White. As early as 1789, he proposed the idea that without earthworms the soil would be "cold" and "barren". Other naturalists in Europe also wrote about the positive activity of earthworms, but the work of Ch. Darwin in 1881 "The creation of earthworms and observation of their lifestyle" is considered the most complete. The first farms specializing in the artificial reproduction of earthworms appeared in the USA in the late 1940s. However, in these farms, worms were bred not for humus, but as food for fishing. Only ten years later, in the middle of the 1950s, in a situation where the problem of excessive nitrate content in agricultural products in the United States was on the cross, scientists began to seriously think about the issue of artificial production of biohumus. As a result of scientists' experiments, a new hybrid species of earthworms was created in California near the end of the 50s, which was named "California red worms". Since 1979, this hybrid type of worm has been widely bred in Western Europe in an industrial way. By the end of 1980, 700 special farms were established in the USA, 140 in Italy, 40 in France, and 30 in Germany.

We can get cheap and high-quality biohumus by feeding worms with household waste from cities, residential areas, industrial enterprises, landfills, and at the same time prevent waste from accumulating on the ground. According to accurate calculations, the organic fertilizer from a farm with 500 head of cattle reaches only 200 hectares. When this organic material is used for the production of biohumus, it is possible to fertilize an area of about a thousand hectares more efficiently, that is, we get up to 5 times more profit. In addition, biohumus contains a very small amount of weed seeds, which prevents weeds from overrunning the fields.

Summary. By feeding California red worms with municipal household waste, we can obtain quality biohumus, reduce excess costs, reduce the price of biohumus on the market,



achieve high economic efficiency, and prevent our land from being allocated to landfills. In short, California red worms can be beneficial in every way, all it takes is a desire and a little effort. The ecological condition of the soil will also change for the better.

References:

1. "Do you want to turn 80 tons of manure into one kilogram of pure gold" R. Usmanov Khanabad publishing house. 2019 year.
2. Шониёзов Б.К., Ортиков Т.К. Внесение удобрений и формирование урожая амаранта Журнал «Актуальные проблемы современной науки» № 2(125) 2022 г.35-39 ст
3. Shoniyozov B.K., Ortikov T.K., Usmanov R INFLUENCE OF MINERAL AND ORGANIC FERTILIZERS ON THE PROPERTIES OF SEROZEM - MEADOW SOILS, NUTRITIONAL DYNAMICS AND YIELD OF AMARANTH Jilin Daxue Xuebao (Gongxueban)/Journal of Jilin University (Engineering and Technology Edition) ISSN: 1671-5497 E-Publication: Online Open Access Vol: 41 Issue: 10-2022
4. Shoniyozov B.K., Ortikov T.K., Usmanov R MINERAL VA ORGANIK O'G'ITLARNI AMARANT YETISHTIRISHDA OZIQ MODDALAR BALANSIGA TA'SIRI. O'zbekistonda agrar sohani innovatsion rivojlantirishning nazariy va amaliy asoslari. Respublika ilmiy-amaliy konferensiyasi. 5-6 oktabr, 2022 yil. Academic research in educational sciences (ARES). Volume 3. -P. -659-664
5. Sultonbekova R., Ortikov T.K., Shoniyozov B.K O'zbekistonda agrar sohani innovatsion rivojlantirishning nazariy va amaliy asoslari. Respublika ilmiy-amaliy konferensiyasi. 5-6 oktabr, 2022 yil. Academic research in educational sciences (ARES). Volume 3. -P. 665-668
6. Tilovov S., Shoniyozov B.K., Qo'chqorov I., TUPROQDAGI HARAKATCHAN FOSFOR MIQDORINI AMARANT O'SISHI VA RIVOJLANISHIGA TA'SIRI. O'zbekistonda agrar sohani innovatsion rivojlantirishning nazariy va amaliy asoslari. Respublika ilmiy-amaliy konferensiyasi. 5-6 oktabr, 2022 yil. Academic research in educational sciences (ARES). Volume 3. -P. 676-679
7. Shoniyozov Bobur, Ortikov Tulkin INFLUENCE OF DOSES OF NITROGEN FERTILIZERS ON THE CHEMICAL COMPOSITION OF AMARANTH PLANTS ACADEMIC RESEARCH IN MODERN SCIENCE
8. International scientific-online conference 136-139 2023 y