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DOLLARITY OF GRANULER DEVICE

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Abstract
Small livestock, poultry, rabbit and fish farms are growing in our country. Based on this, for the rapid development of farms, there is a need to strengthen the feed base and the necessary equipment for preparing feed. Based on this, research is being carried out on the development of small-tonnage granulators for the development of fisheries, poultry farming, livestock farming and rabbit farming. The article has developed an experimental copy of a granulator device and presents the effect of the working parts on the granule, the results obtained and conclusions.

Keywords: Device, parameter, poultry farming, fishing, rabbit farming, pellets, farm.

Introduction

Today, one of the urgent tasks is to feed fish, poultry, cattle, rabbits and similar animals on the basis of a full-value ration in order to produce meat products from plant residues to a sufficient level in agriculture. remains. For this, the strengthening of the nutritional base is of course important.

Based on the above, as a result of the analysis of all granulator devices used in foreign countries and brought to our republic, a prototype of a small granulator device suitable for small and family farms was developed. The advantage of this device is its low cost, low energy consumption and low purchase cost for small farms [1, 2, 3].

Problem setting. Development and comprehensive support of livestock, rabbit breeding, fishery and poultry breeding in our country, introduction of advanced technologies and innovative developments in the field, deepening of processing of livestock, rabbit, fish and poultry products, their types and export Priority tasks for the development of livestock, rabbit breeding, fishery and poultry industry were given in order to expand the region [4-5].

Materials and methods. In order to study the needs for granulators in our country, to study the state of meat production from livestock, rabbit, fishery and poultry farms, to determine the required feed, the composition of feed, their different sizes and indicators. , determined in consultation with experts working in feeding and nutrition and based on their recommendations.

granulators was obtained from scientific journals and Internet databases in Scopus and Web of Science, and their constructions were analyzed using SWOT methods, morphological synthesis and ARIZ methods, and their disadvantages and advantages were determined.

Results and discussion. Based on the results of the above research and based on the specified requirements, a preliminary test copy of the granulator device used in the granulated feed

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production line, which is being developed for small livestock, rabbit, fishery and poultry farms, was developed (Fig. 1).

Figure 1. Developed mini granulator.

It is equipped with a combined matrix, two parts: for steel - for the formation of granules and fluoroplastics - to eliminate the defects that appear after pressing, it was observed that the product stuck in the matrix, and to eliminate this, additional knives were added to this granulator. research is being conducted.

The purpose of the study was to determine the legitimacy of the influence of structural and technological parameters of the wet granulation process on productivity and specific energy costs in a screw granulator.

During the research process of the developed granulator, we studied the following factors: the rotation speed of the granulator screw, the moisture content of the pressed raw materials, the number and parameters of the blades. The last factor has the greatest effect on productivity, and it has been found that the more often the matrix is cleaned of fibrous particles stuck in the matrix compartments, the better the quality of the wet granulation process.

A full factorial planning technique was used to determine the operating modes of the screw granulator. Boxa-Benkin's second-order composition plan for three factors was not adopted.

was carried out at a humidity of 15-18$^{O\,C}$, with various plant residues reduced to a powder state .

Conclusion

The role of rationed feed is important in livestock, rabbit breeding, fishing and poultry farming. Due to the small size of livestock, poultry, fishery and rabbit farms in Uzbekistan, it is not possible to use granulation lines and their devices developed for large farms. Based on this, a small-sized granulator device was developed, which is used in the granulated feed production line, which is designed for small livestock, poultry and fish farms. The finished granules were divided into different fractions. From the results of the experiment, it can be seen that the pellets prepared based on the recommendations of zootechnical experts are fish. can be given to poultry, cattle and rabbits.

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