IMPROVEMENT OF MACHINERY FOR GRAIN PRODUCTION AND FEED

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Modern methods of production of grain and feed for farm animals requires the development and creation of new resource-saving technologies and machinery to carry them out.

An important part of the production technology of grain is cleaned from organic and inorganic impurities. The content of the latter in feed for farm animals should not exceed more than one percent of the total mass produced food. To perform this task a variety of machines are used for cleaning grain from impurities. Most of these machines for cleaning grain material from impurities in the production conditions have a low process efficiency. This fact makes the search, development and use of technical solutions aimed at improving the design and basic working of these machines in order to increase their efficiency.

As a result of theoretical and experimental studies of a number of technical solutions aimed at improving the efficiency of the process and improving the basic working bodies of machines for the cleaning of grain, priority novelty of which is protected by documents of title for inventions and utility models of the Russian Federation [1, 2, 3, 4, 5].

The proposed solutions differ from existing analogues that to improve the cleaning of grain material in the air duct reapply feed grain use of the overflow pipe. To improve the purification from impurities in the air chamber of the sedimentary applied device that provides air flow in the opposite direction. For fine adjustment of the air flow in the zone of separation of grain pipe fan further communicates with the clean air channel in which the set air flow regulator. Also under the air system of the

machine set on the original design sieve, which ensure the selection of various trash and receivers have a separation of grains and impurities.

The most effective way of preparing high-quality feed for farm animals is a conditioning of grain, which is a cost-effective process for both small farms and large agro-industrial enterprises. To perform this operation, developed an original design of roller conditioner for grain [6].

The present invention includes a charging hopper with destroyer deposition material on its walls, as a feeder conveyor, a bottom wall which is mounted in series two sieve to separate coarse and fine impurities, and conditioning chamber, inside which are mounted rollers for grinding grain. Developed device determines the stability of the feed grain to be ground in a crushing zone, resulting in increased throughput conditioners, as well as improving the quality of the finished feed for farm animals - rolled grain by increasing the effect of selection of large and small impurities from the received for grinding grain material.

Using the proposed technical solutions for the production of grain and forage of them will contribute to the improvement of both qualitative and quantitative characteristics of their own feed harvesting.

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