transform to be used to enhance the signal / noise ratio for further development of adaptive model of cultivation of vibration for the purpose of setting a clear diagnosis.

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Abstract.*Using spectral analysis Rassmotreno signal vybroakustycheskoho diesel engine SMD-31A, How adaptyvnoy element model obrabotku vybrosyhnala with a view of setting a clear diagnosis. Present Theoretical Chart udarov from hazoraspredelytelnoho mechanism, toplyvnoy apparatury, CHU on otdelnыm cylinder engine SMD-31A and s fazovaya Implementation for modeling yspolzovalys matematycheskye paketы MathCad, MatLab.*

Keywords: vybrosyhnal spectrum, Spectral analysis, Fourier transformation, amplitudes, fluctuations

Annotation.*The paper considers the use of spectral analysis of vibro-acoustic signal for diesel engine SMD-31A, as an element of the adaptive processing model of the vibration signal for the purpose of setting unambiguous diagnosis. Theoretical chart of strikes from timing, fuel injection equipment, CPG for individual engine cylinders SMD -31A and implementation phase was used For simulation the mathematical package MathCad, MatLab.*

Key words: vibrating signal spectrum, spectral analysis, Fourier transformation, amplitudes, fluctuations
UDC 631.53.01

STUDY OF FORCE PRYSMOKTUYUCHOYI THE EFFECTIVENESS OF CERTAIN delighted seed

A. Boyko, PhD
P. Popik, applicant
O. Banniy, Ph.D.

Abstract.*The article presents the results of experimental research to establish the impact of factors on the suction power pneumatic seed sowing device equipped cells with the vector directed action.*

Keywords: seeds, depression, prysmoktuyucha force cell

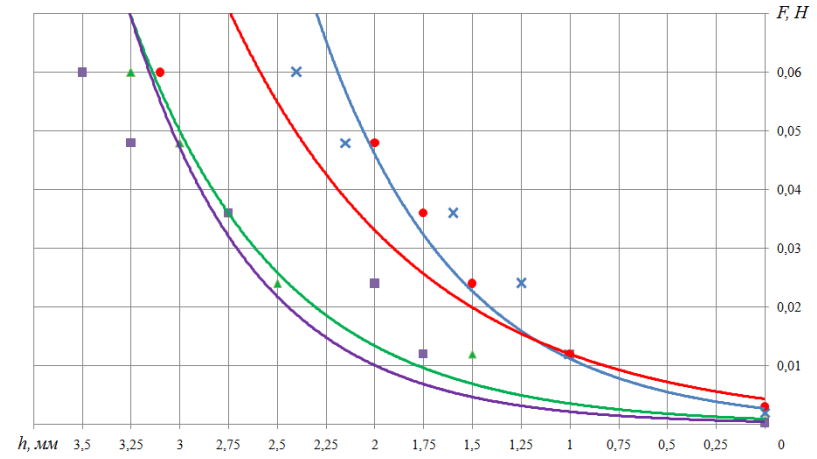
Formulation of the problem. The main operation in a separate seeds from the crowd fed to the chute is delight only one seed. In devices pneumatic capture action at the expense of power dilution arising in the area of prysmoktuvalnoyi cells [4]. From seed shape and condition of the surface, largely depends on the density contact in the interface between it and the surface of the cell prysmoktuyuchoho aperture metering drive. But in any case between the surface of seeds and conical surface cells having gaps in which air is reducing the overall power of suction, which greatly affects the efficiency of capture. Therefore, some results previously obtained theoretical studies need experimental additions to the identification of quantitative values of the parameters typical seeding row crops.

Analysis of recent research. In [2] theoretically derived relationship, which establishes the change in the suction power of the distance between the seed and cells. The formula structure is very similar to previously proposed Zenin LS [1] The empirical relationship. However, neither the author in this paper, nor his other [3] does not provide direct experimental confirmation prysmoktuyuchoyi force the laws change from distance to seed. Obviously, the direct experimental studies get this dependence is problematic enough. However oposerednenym by force by compensating the loss of power at remote prysmoktuyuchoyi seed might get the desired result, following a series of experimental studies.

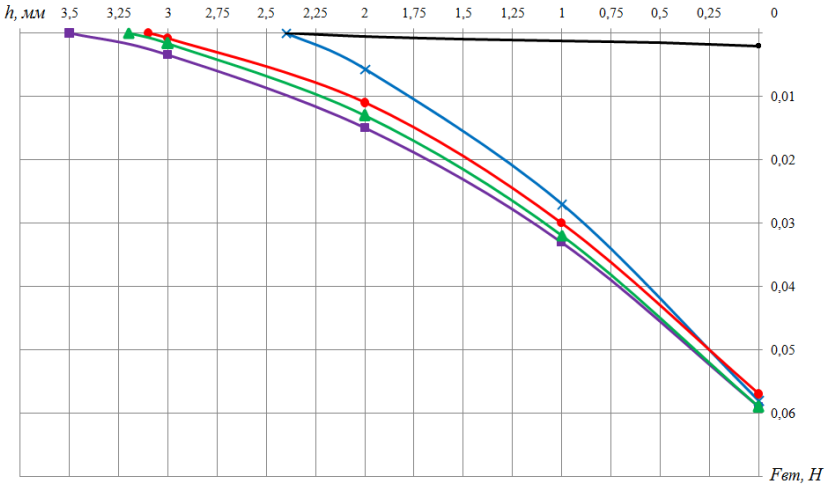
The purpose of research - Confirmation of the main provisions of laws and dosing parameters seeds at separating them from the crowd.

Results. Experiments performed seed crops: soybeans, corn, sugar beet and sunflower.

The resulting impact depending on the distance to the particles change prysmoktuyuchoyi forces represented graphically in Fig. 1 as well.



and)



b)

Fig. 1. Change impact force factors acting on the seed, depending on the distance to prysmoktuyuchoyi cell: a) the effect of distance on prysmoktuyuchu force; b) the effect of distance on additional strength; (Hn = hmax = 3.5mm; ▲ - Sunflower; × - Soy; ● - Corn; ■ - Beet).

As shown in a graph, between prysmoktuyuchoyu force that created the watering hole in the cell and the distance to the seed, there is a nonlinear relationship. For all types of crop seeds strength significantly increases with increased distance.

Physical picture of the interaction between the seed of air flow in prysmoktuyuchiy cell may be explained as follows. If prysmoktana seeds to the surface of the cell completely, the force required for its maintenance upright (according techniques of the experiment) is

$$F_0 = P_0 \cdot S_{отв} = mg \ , \qquad (1)$$

where: P0 - dilution necessary to hold the seed; Sotv - square hole prysmoktuyuchoyi cell; m - mass of seed; g - acceleration of gravity (g = 9,81 m / s2).

When studied real conjugations surfaces of particles (seeds) with an aperture prysmoktuvalnoyi cell Zenin LS fair introduces an additional

factor that takes into account their leak fit. This leak and loss of dilution air that caused it automatically compensated and included in the resulting force F, acting in the doorway of the cell. For further analysis of the total resultant force advisable decomposed into two main components: F0 - theoretically necessary for the maintenance of seed in the thick of adhesion to cells at h = 0 and Fd - additional power that must develop in the doorway of the cell to overcome the extra costs leaks and shift seed from a selected distance h. Then perhaps add the following amount:

$$F = F_0 + F_\partial . \qquad (2)$$

Nature of extra force Fd complex. It compensates for some losses that result from particle removal prysmoktuyuchoho hole. This includes, above all, different aerodynamic losses from airflow interaction with the particle laminarnist or turbulence of the flow and the real power and that occurs in remote from the hole of dilution air in the hole. Change the value of the last forces from a distance of particles and presents scientific and practical interest in this study. Does not cause doubt that this virtue indirectly indicates additional compensating force Fd. But the smaller the loss of the interaction of particles with prysmoktuyuchym hole, the less power is needed and compensating. With increasing distance compensating sharply enough power also increases. As can be seen from the data (Fig. 1, a) the greatest influence on this power range observed for corn seeds and the lowest for sugar beet. However, it should be noted that for all cultures studied, graphs located close enough to each other and have the same fundamental nature of the change curve. Identify the impact of the distance between the seed and the efforts of the cell, acting on seed may graph - analytical method. You must have an overall effort to F, which removes part of the selected distance h. Its value is determined experimentally (taken from the graph). From this calculated effort that is necessary to hold the particles when the distance is zero - F0. The difference between them is what Fd extra effort that goes into various indemnification of losses (Fig. 1b). Force acting on a particle at a certain distance from prysmoktuyuchoyi power cell can be calculated according to the following formula:

$$F_{вті} = F_{\partial(n-i)}(1-\frac{h_i}{h_n}) \qquad (3)$$

Where: Fvti - force acting on a particle and a point away from prysmoktuyuchoyi cell; Fd (n-i) - additional effort required for the separation of particles at point (n-i) the distance between the particle and the cell; and - fluid number value point distance h between the cell and seed;

hi - The distance between the cell and the point on the axis and 0 - h; hn - the maximum distance between the particle and the cell, which was

adopted in the research; n - number of the latter is the most remote point.

Graphic dependence constructed according to calculations performed and presented in Fig. 1b. Comparing them with the theoretical [2 (Fig. 2)] shows the identity character dependencies. The difference in the numerical value of the forces due to feature performances of the experiment. The family of experimental curves (Fig. 1b) shows the resultant decrease in power at the point of the particles of the distance to this point prysmoktuyuchoho hole. Moreover, to implement the separation of particles of the charge in the hole as the removal particles constantly increasing.

The theoretical curve in contrast, built on the basis of the provisions of depression in prysmoktuyuchomu hole is constant and equal in magnitude gravity. In this case, the force acting on the particle at a distance due to dilution in descending field, which studies show decreases according to the established theoretically and experimentally verified laws.

Comparison of theoretical data with experimental results to simplify the calculations and exclude extraneous influence factors, it is advisable to perform at full suction particles (h = 0). Theoretically calculated for soybean seed in its mass m = 0,2 g force retention is F0 = 0,002 H. experimental research for the same seed in the contact area Sotv = 12 mm2 and dilution at the time of separation P0 = 0,2 kPa suction power was F0 = 0,0024 H, slightly larger than the theoretical. The difference is caused by the leak of the data fit the particles to the surface of the cell. The more particles (seeds) in its spherical shape closer to the less error between theoretical and experimental results. In this study, the difference is 16%.

Conclusion. Experimentally verified nonlinear relationship between the distance to the cell and prysmoktuyuchoyu force. Established a significant impact state and shape of the seeds on the value prysmoktuyuchoyi force.

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Abstract.*In Article predstavlenы эksperymentalnыh results of research on the Establishment of power Influence factors on prisasyvanija semyan pneumatic mechanical vыsevayuschym by the device osnaschennым cells with vector napravlennым action.*
Keywords: seeds, razrezhenye, prysasыvayuschaya force Cubicle

Annotation.*The paper presents the results of experimental research to establish the impact of factors on the suction power pneumatic seed sowing apparatus equipped cells with a vector directed action.*
Key words: seeds, rarefaction, suction force, cell

UDC 548.2.001

FEATURES USE LOHISTYKYV AGRICULTURE

LA Savchenko, Ph.D.

Abstract.*In the present study, logistics is seen as a tool that will use the transport at the lowest cost. Logistics in agriculture aimed at addressing issues stosuyutsyamaterialnyh flow of goods movement (raw materials, spare parts) to save and*

profit. Therefore, studies aimed at optimizing material flows in agriculture, using logistic approaches.
Keywords: logistics, multimodal transport, route, material flow

Formulation of the problem. In agriculture, logistics, management science as material, financial and information resources is becoming more popular. Use tools on farms logistics is especially important. In particular, the processes of logistics, marketing of agricultural products, and of short-term and long-term warehousing companies.

When used in agricultural production logistics, materials management provided most efficiently. In the application of logistics in agriculture produce such things as planning, control, transportation, goods movement and minimizing the time and money. Thus, a single logistic chain that integrates shipper and consignee. The cost for the carriage of goods by silskohohospodarskyh in Ukraine and abroad reaches about 35% of the total costs [1]. This is a significant drawback, which has a number of transportation costs in the agricultural sector.