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633

PNEVMOMEHANICHNYY sowing device with directional vector PRYSMOKTUVALNOYI FORCE

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In one given paper presents an improved pneumatic seeding machine with a new seed disc that has sent prysmoktuvalnoyi force vector. This design improves precision sowing drive and increases the reliability of the process of seeding. Pneumatic seeding machine with the proposed structure sowing drive a lower degree of dilution in the pneumatic system, which generally reduce power inputs machine-tractor unit Drill technical cultivated crops.

Pnevmomehanichnyy seeding machine, seed disc prysmoktuvalna force vector is directed.

Resolutionska problem. Quality uniform distribution of seeds by sowing depends on many indicators of sowing machines. The main role is played by sowing device performance [1]. Sowing machines Precision drilling seeders have a large number of design decisions, but the main element of dosing dosing seeds remain seed disc with cells.

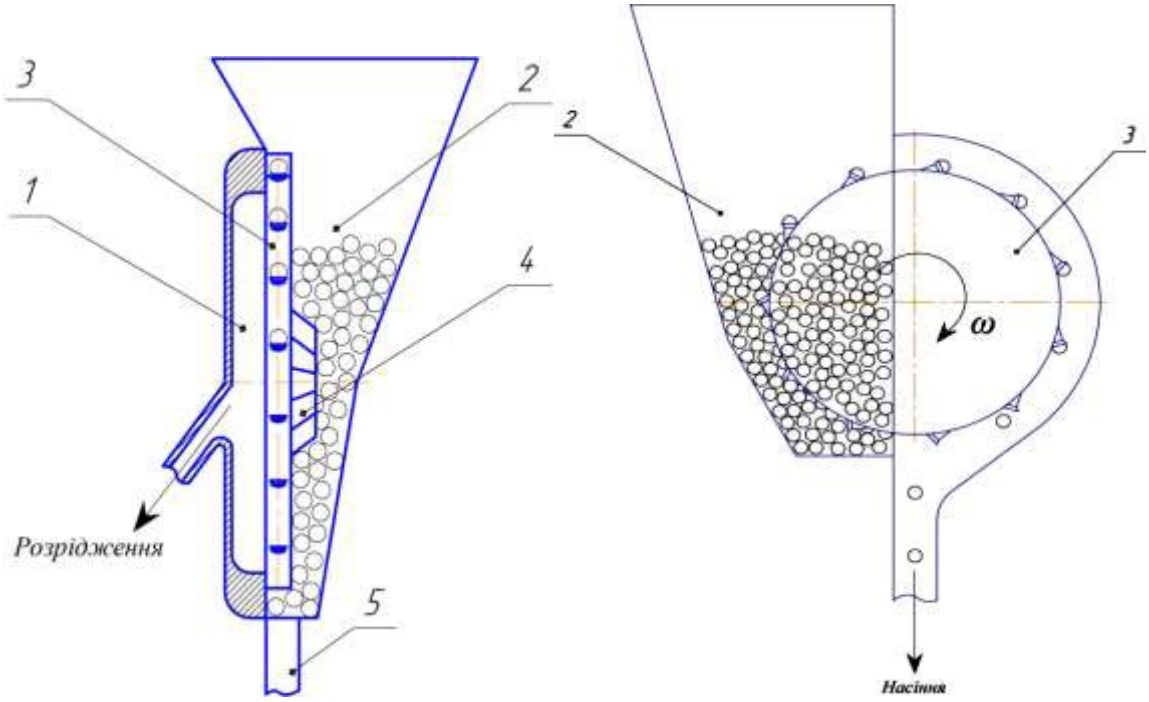
AnaLease Finalnnih dOSHidzhen. Proanalizuvavshy robotin Sectionnevmomehanichnyh sowing machines there is uneven seed that can be represented by two teams bounce sowing device, such as twins and omissions. As a result, there is a seed filling cells disk simultaneously by several seeds (twins) or filling cells seed (gap), which generally measured as the technology denial sowing device [2].

Disadvantages series pneumatic sowing machines is a violation of the process dosing seeds (omissions doubles). In pneumatic seeding apparatus main dosing element is a disk with cells in which the vector suction force does not match the rotation vector seed drive.

Metand dossurvey findings. Disclosedand construktyvni aboutsoblyvosti Sectionnevmomehanichnoho sowing device with directional vector prysmoktuvalnoyi force.

Rezultaty research. Pointness compliance spacing seeds in rows positive impact on productivity and technical

abouthoe cultures. To improve the accuracy of sowing proposed a fundamentally new pneumatic seeding machine revised the design of the sowing disc [3]. Scheme pneumatic sowing machine shown in Fig. 1.



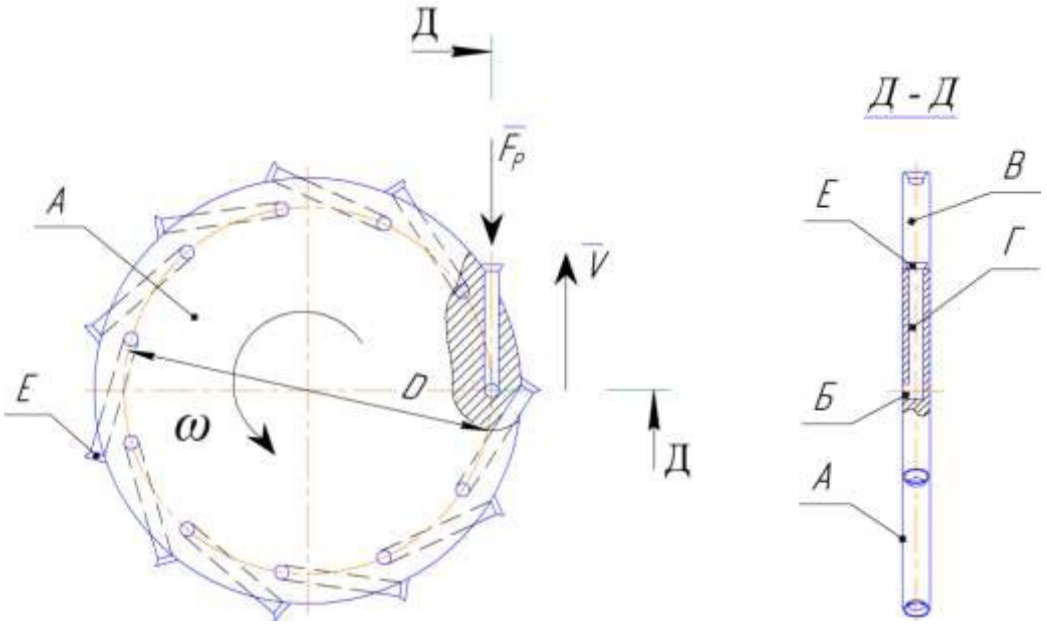
Ric. 1. pneumatic seeding machine with directional vector prysmoktuvalnoyi force 1 - vacuum chamber; 2 - Seed camera; 3 - seed disc with directional vector prysmoktuvalnoyi force; 4 - rake; 5 - nasinnyeprovid.

Appliance was purchasedt consists of a vacuum chamber *1*which connected the camera seed *2*. Between the cameras set seed disc *3*.

Yousivnyy drive *3*(Ric. 2) is designed as a plate with a thickness of not less than the diameter of the seed used. In the plane *And*diska of the diameter D is made not through-drilling *B*.

Pat a tangent to the circle of diameter D in the plane *In the*drilling disk made *D*, The ends of which coincide with the axial not cross drilling *B*. Boring with conical nozzle (prysmoktuvalni cell) *E*.

The direction vector *V* linear speed of rotation coincides with the sowing drive direction drilled *D*. Vector *V*lies in one SectionDell prysmoktuvalnoyi vector of force F_pAnd direction to each other. Pneumatic seeding machine works as follows. When working sowing device under the external source in a vacuum chamber formed dilution within 0.0040 ... 0.0050 MPa. Dilution transmitted by drilling *B* seed disk *3*drilled to *D*.



Ric. 2. Seed disc with directional vector prysmoktuyuchoyi power: *And*- Lateral plane seed disk; *B*- Axial through-drilling is not; *In the*- End planes seed disk; *D*- Drilling;

E - conight withoplo(Atsmoktuvalna costandards) – toectop $\bar{F}_p$ atsmoktuvalnoyi force; $\bar{V}$- Linear velocity vector.

Due to the dilution of seminal chamber *2*to the nozzle *E*drilled *D*seed disk *3*atsmoktuyetsya seeds and rotates with the drive to the bottom of the sowing machine, which ceases to operate dilution. As a result, under its own weight seed falls into nasinnyeprovid *5*continue to drill.

Stillway of action aimed prysmoktuvalnoyi force $F_p$linear velocity and direction V Oberting seed disc, promote better conditions capture seeds from seed chamber and nozzle conical shape (cell) provides a better seed retention and worsens extra delight.

Conclusion. Yousivnyy pneumatic device amended frommines in the design of the disc provides the best conditions for the capture, detention and removal of the mass of seeds of one seed and transporting it to nasinnyeprovodu even with a slight vacuum in the vacuum chamber. As a result of improved precision seeding process and reduced the whole unit for power inputs of seed sowing technical cultivated crops.

References

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3. *Patent* Categoriesa useful model №84210 Ukraine, IPC A01S 7.4 pneumatic seeding machine / *And.And. Boyko, PS Popik* // №u201305473; publ. 10.10.2013, Bull. Number 19.

In pryvedennoy articles presented usovershenstvovannыy vыsevnoy pneumatic mechanical apparatus with vыsevnыm join the new drive kotorыy ymeet napravlennыy vector prysasыvayuschey force. Dannaya constructions vыsevnoho drive and improves accuracy of povыshaet nadezhnost of technological process vыseva. Vыsevnoy pneumatic mechanical apparatus with predlozhennoy constructions vыsevnoho drive nuzhdaetsya in smaller degrees razrezhenyya in pnevmatycheskoy system as a whole something umenshyt эnerhozatratы tractor unit for poseva tehnycheskyh cultures.

Pnevmomehanycheskyy vыsevnoy apparatus, vыsevayuschyy drive prysasыvayuschaya force napravlennыy vector.

In paper over improved pneumatic mechanical sowing apparatus is presented with new sowing disk which has directed vector of suction force. This construction of sowing disk improves exactness and promotes reliability of technological process of sowing. Pneumatic mechanical sowing apparatus with offered construction of sowing disk needs in less degree rarefaction in pneumatic system, that on whole will decrease power expenses of machine and tractor unit asm for sowing of industrial crops.

Pneumatic mechanical sowing apparatus, which sows disk, suction force, directed vector.

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The technique of structural and technological calculations hammer crusher line granulation of wood biomass

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