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# Vitalii PIDLISNYI

**Passport:** in stock | **Date of birth:** 08/06/1979 | **Place of birth:** village of Pyatnychany, Ukraine | **Nationality:** Ukrainian | **Phone number:** (+380) 0679142358 (Mobile) | **Email address:** v.pidlisnyj37@gmail.com | **Website:** https://pdatu.edu.ua/ |

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## WORK EXPERIENCE

**TEACHING ASSISTANT OF THE DEPARTMENT OF ANIMAL HUSBANDRY MECHANIZATION – PODILSKYI STATE AGRARIAN AND TECHNICAL UNIVERSITY** – 01/10/2001 – 01/10/2003 – KAMIANETS-PODILSKYI, UKRAINE

**ASSISTANT OF THE DEPARTMENT OF MECHANIZATION OF PROCESSING AND STORAGE OF AGRICULTURAL PRODUCTS – PODILSKYI STATE AGRARIAN AND TECHNICAL UNIVERSITY** – 01/09/2006 – 31/08/2011 – KAMIANETS-PODILSKYI, UKRAINE

**ASSOCIATE PROFESSOR OF THE DEPARTMENT OF MACHINE USE IN THE AGRICULTURAL INDUSTRY – PODILSKYI STATE AGRARIAN AND TECHNICAL UNIVERSITY** – 01/09/2011 – 30/09/2018 – KAMIANETS-PODILSKYI, UKRAINE

- maintenance of computers
- relations with suppliers
- coaching a junior Ice Hockey team (10 hours/week)

**DEPUTY DIRECTOR OF THE EDUCATIONAL AND SCIENTIFIC INSTITUTE OF CORRESPONDENCE DISTANCE EDUCATION, PART-TIME ASSOCIATE PROFESSOR OF THE DEPARTMENT OF AGRICULTURAL ENGINEERING AND SYSTEMS ENGINEERING – PODILSKYI STATE AGRARIAN AND TECHNICAL UNIVERSITY** – 01/10/2018 – 31/08/2023 – KAMIANETS-PODILSKYI, UKRAINE

**ASSOCIATE PROFESSOR OF THE DEPARTMENT OF FOOD TECHNOLOGIES OF PRODUCTION AND STANDARDIZATION OF FOOD PRODUCTS – HIGHER EDUCATION INSTITUTION "PODILSKYI STATE UNIVERSITY"** – 01/09/2023 – Current – KAMIANETS-PODILSKYI, UKRAINE

- maintenance of computers
- relations with suppliers
- coaching a junior Ice Hockey team (10 hours/week)

## EDUCATION AND TRAINING

01/09/1994 – 30/06/1998 Borshchiv, Ukraine
**MECHANICAL TECHNICIAN** Borshchiv Agro-Technical College

**Field of study** Agricultural mechanization, Crop and livestock production | **Level in EQF** EQF level 5

01/09/1998 – 30/06/2001 Kam'yanets'-Podil's'kyy, Ukraine
**MECHANICAL ENGINEER** Podilskyi State Agrarian and Technical Academy

**Website** https://pdatu.edu.ua/ | **Field of study** Engineering, manufacturing and construction | **Level in EQF** EQF level 7

01/11/2003 – 30/09/2006 Kyyiv, Ukraine
**CANDIDATE OF TECHNICAL SCIENCES** National University of Food Technologies

**Website** https://nuft.edu.ua/ | **Field of study** Food processing | **Level in EQF** EQF level 8

2013 – CURRENT Kyyiv, Ukraine
**ACADEMIC TITLE: ASSOCIATE PROFESSOR OF THE DEPARTMENT OF MACHINE USE IN THE AGRICULTURAL INDUSTRY** Certification Board of the Ministry of Education and Science

**Field of study** Engineering, manufacturing and construction

## LANGUAGE SKILLS

Mother tongue(s): **UKRAINIAN**

Other language(s):

| | UNDERSTANDING | | SPEAKING | | WRITING |
|---|---|---|---|---|---|
| | Listening | Reading | Spoken production | Spoken interaction | |
| **ENGLISH** | A1 | A1 | A1 | A1 | A1 |

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

## SKILLS

Microsoft Word | Zoom | Microsoft Excel | gmail | Microsoft Powerpoint | Samoorhanizovanist' | Adaptability | Adaptability to different cultures and changes and willingness to learn | promote responsible consumer behaviour | show professional responsibility | handle stressful situations in the work place | perform multiple tasks at the same time | Multitasking | Priorization of tasks and multitasking

## PUBLICATIONS

2022
### OPTIMIZATION OF PARAMETERS OF A VIBROCONVEYOR SYSTEM FOR INFRARED DRYING OF SOY

This paper proposes a method to determine the optimal parameters for the drying of soybean using a kinematic vibration dryer. Among the main parameters of the investigated vibroconveyor are heat and mass transfer, physical and mechanical. The paper presents a mathematical model of the dependence of parameters of the soybean drying process of soybean built based on experimental data obtained by organizing an effective experiment plan with a sufficiently large number of factor lev-els. To determine the rational parameters for drying soybean, it is im-portant to build the most accurate and adequate mathematical model, which will determine the most accurate values of the required parame-ters. For this purpose, it is recommended to conduct an experiment with as many levels of factors as possible. The article proposes an experiment established on a dedicated balanced orthogonal plan, which is optimal according to the D-efficiency criterion. Based on the experimental data, an adequate mathematical model of the dependence of the drying char-acteristics of soybean (moisture of the processed material (%), temper-ature inside the product layer (°C) on the parameters – vibration ampli-tude (mm), distance from the conveyor surface (mm), radiation power (Wt), weight (g·min-1). Following the analysis of the constructed math-ematical model, optimal parameters of the developed vibroconveyor in-frared dryer were substantiated. The main characteristics of the vibro-converyor mechanism of interoperational transportation of bulk products in the working area were also determined, and a technical and economic analysis of the developed oscillatory system was conducted.

Vira Malkina, Sergey Kiurchev, Taras Hutsol, Valentyna Verkholantseva, Lyidmila Kiurcheva, Mykola Miroshnichenko, Mykola Biliuk, Vitaliy Pidlisnyj, Hatice Gürgülü, Zbigniew Kowalczyk, 2022

**Journal Name**: Agricultural Engineering | **Volume, Issue and Pages**: vol.26, no.1, 2022, pp.157-166

**Link** https://doi.org/10.2478/agriceng-2022-0013

2022
### SUBSTANTIATION OF THE INFLUENCE OF INTENSIFICATION OF THE SCREENING PROCESS ON THE ADHESIVE PROPERTIES OF BULK MATERIALS

The article studies the current problems of screening of bulk materials by airflow, both in combination with sieve installations, and separately during screening and pouring; the optimal size of the holes of the sieves, as well as the fractional characteristics of the sifting food bulk masses, which depend on the technological efficiency and specific productivity of sifting machines. The purpose of the article is to evaluate the mechanics of the vibration screening

process and determine the limits of the intensity of vibrations of the working surface, which are the main factors in the adhesive properties of a layer of bulk materials. In the course of the study, it was found that the reduction of the negative consequences of adhesion and the rational use of the forces of adhesive interaction of a layer of loose particles with a contacting working surface makes it possible to intensify the sifting process. It was found that the presence of the adhesive bond of the particles with the contacting sieving surface significantly affects the process of vibrational movement of bulk materials.
It is proved that the dependence of the sifting process of bulk materials and the parameters of the vibrational displacement of a layer of flour particles on the parameters of the deck oscillations, which have a significant impact on the technological efficiency and specific productivity of the sifting process. The mechanics of the process of vibratory screening; limits of the intensity interval of vibrations of the screening surface; theoretical dependences of the parameters of vibration displacement of a layer of flour particles on the parameters of vibrations of the deck and the design scheme of the vibrating sifter of bulk materials are determined. Specific tasks have been formulated to increase the efficiency of the process of intensification of screening, productivity, and reduction of energy consumption during vibratory movements of bulk materials. Further research should be aimed at improving the design of vibrating screens, more significantly reducing the physical resistance of the material flow, rational use of drive energy, and increasing the efficiency of screening of bulk materials.

V.M. Fedoriv, V.V. Pidlisnyi, O.M. Semenov, O.O. Yermenchuk Obgruntuvannya vplyvu intensyfikatsiyi protsesu prosiyuvannya na adheziyni vlastyvosti sypkykh materialiv 2022. № 29. L'viv : S.70-76.

**Journal Name**: Visnyk L'vivs'koho torhovel'no-ekonomichnoho universytetu. Tekhnichni nauky. | **Volume, Issue and Pages**: № 29. L'viv : 2022. – C.70-76.

**Link** http://journals-lute.lviv.ua/index.php/visnyk-tech/article/view/1103

2023

## DETERMINATION OF HYGROSCOPIC PROPERTIES AND THERMODYNAMICAL ANALYSIS OF CRYOPRESERVED FISH OBJECTS

The results of the study of hygroscopic properties and thermodynamic analysis of cryopreservation fish objects with the use of herbal powder additives are given. The studied samples were mincemeat from pike perch and carp. in accordance with the plan of experimental research, appropriately prepared white cabbage powder, obtained by convective drying, was added to the resulting minced meat. It was established that the introduction of a dry additive in one or another percentage ratio leads to a decrease in free moisture in the mixture due to its partial binding of the experimental additive. The upper limit of the content of the additive in the mixture is limited by two indicators, on the one hand, by the maximum sorption capacity of the additive (hygroscopic moisture), and on the other hand, by sensory evaluation, since when a certain content of the dry component is exceeded, the indicators of the obtained semi-finished product may differ radically from the model sample. In order to justify and recommend the amount of adding powdered white cabbage to the minced meat mixture, an organoleptic evaluation of the quality of the ready-made semi-finished products was carried out in comparison with the control sample.Since the basic characteristics for each class of requirements have different units of measurement, for the convenience of solving the tasks, for example, for the unification of indicators of technology and quality of finished products, which depend on various factors, all units of measurement are reduced to a dimensionless form using entropy evaluation of quality indicators, which allows them to be compared and connected with each other, which is especially important in the complex design of multi-component and multi-phase food systems. In the context of this study, it is enough to consider the satisfactorily, primarily organoleptic requirements for a food product. From the given data, it follows that for the rational implementation of the processes of obtaining frozen semi-finished products, as well as the preservation of their organoleptic indicators, the relative content of the vegetable additive should be in the range from 15 to 20% of the mass of dry substances of the native minced meat.

Prylipko, T. M., Kostash, V. B., Semenov, O. M., & Pidlisnyi, V. V. (2023). DETERMINATION OF HYGROSCOPIC PROPERTIES AND THERMODYNAMICAL ANALYSIS OF CRYOPRESERVED FISH OBJECTS. Tavriys'kyy naukovyy visnyk. Seriya: Tekhnichni nauky, (4), 154-160.

**Journal Name**: Tavriys'kyy naukovyy visnyk. Seriya: Tekhnichni nauky | **Volume, Issue and Pages**: (4), 154-160.

**Link** https://journals.ksauniv.ks.ua/index.php/tech/article/view/428

2020

## SUBSTANTIATION OF THE INFLUENCE OF PHYSIOLOGICAL PROCESSES ON THE QUALITY OF GRAIN STORAGE

The study is devoted to the analysis of the influence of physiological processes on the storage period of high-quality grain, determining its economic durability and viability. The study is based on the assessment of the decrease in grain moisture and temperature, which are the main factors affecting the durability of grain during long-term storage, increasing the technological quality of grain and seed viability during storage. Experimental studies were conducted during 2018-2020 at the Podillia Research Center and involved determining the chemical composition and processes occurring in the grain mass that significantly affect the storage period. The studies showed that the technological

qualities of grain during storage are affected not only by drying methods and modes, but also by the fractional composition, respiration rate and hydrolysis of the substance. Based on the results obtained, it can be stated that the processes of reducing the sugar content in grain and increasing the acid number affect the quality of grain during final storage.

Fedoriv, V., Pidlisnyi, V. ta Semenov, O. (2020). SUBSTANTIATION OF THE INFLUENCE OF PHYSIOLOGICAL PROCESSES ON THE QUALITY OF GRAIN STORAGE. Podil's'kyy visnyk: sil's'ke hospodarstvo, inzheneriya, ekonomika , 1 (33), 47–53.

**Journal Name**: Podil's'kyy visnyk: sil's'ke hospodarstvo, inzheneriya, ekonomika | **Volume, Issue and Pages**: 1 (33), 47–53

**Link** http://pb.pdatu.edu.ua/article/view/239512

2025

### Design parameters justification of the plough bottom's landside

The use of a plough is characterized by the presence of a turning moment acting in a clockwise direction. When placing the plough resistance center to the left of the tractor's longitudinal symmetry axis, it becomes possible to use the plough with one landside placed on its last bottom. The article presents a new analytical dependence that allows determining the design and technological parameters of the plow using the transverse displacement of the center of resistance to the left of the tractor's longitudinal axis of symmetry. Studies have shown that using a plough with one landside instead of five does not affect the ploughing depth and the operating width. At the statistical significance level of 0.05, the null hypothesis about the equality of the mean values and variances of these parameters' oscillations is not rejected. The normalized correlation functions and spectral densities of these processes' oscillations are approximately the same. Using a plough with one landside instead of five leads to a 10.3% decrease in draft resistance, accompanied by a 10% decrease in specific fuel consumption. This study fills a gap in the practical operation of plows, aimed at reducing their draft resistance, which is key in reducing fuel consumption.Write here the description...

Nadykto, V., Horetska, I., Kyurchev, V., Golub, G., Kielbasa, P., Pidlisnyj, V., & Hutsol, T. Design parameters justification of the plough bottom's landside. Sci Rep 15, 43713 (2025)

**Authors**: Nadykto, V., Horetska, I., Kyurchev, V., Golub, G., Kielbasa, P., Pidlisnyj, V., & Hutsol, T. | **Journal Name**: Scientific Reports | **Volume, Issue and Pages**: Sci Rep 15, 43713 (2025) | **Publisher**: Design parameters justification of the plough bottom's landside

**Link** https://www.nature.com/articles/s41598-025-27466-z

## HOBBIES AND INTERESTS

### Sport

Football, volleyball, tennis.