

SCI-CONF.COM.UA

CURRENT CHALLENGES OF SCIENCE AND EDUCATION



**PROCEEDINGS OF V INTERNATIONAL
SCIENTIFIC AND PRACTICAL CONFERENCE
JANUARY 15-17, 2024**

**BERLIN
2024**

UDC 001.1

The 5th International scientific and practical conference “Current challenges of science and education” (January 15-17, 2024) MDPC Publishing, Berlin, Germany. 2024. 612 p.

ISBN 978-3-954753-05-5

The recommended citation for this publication is:

Ivanov I. Analysis of the phaunistic composition of Ukraine // Current challenges of science and education. Proceedings of the 5th International scientific and practical conference. MDPC Publishing. Berlin, Germany. 2024. Pp. 21-27. URL: <https://sci-conf.com.ua/v-mizhnarodna-naukovo-praktichna-konferentsiya-current-challenges-of-science-and-education-15-17-01-2024-berlin-nimechchina-arhiv/>.

Editor

Komarytskyy M.L.

Ph.D. in Economics, Associate Professor

Collection of scientific articles published is the scientific and practical publication, which contains scientific articles of students, graduate students, Candidates and Doctors of Sciences, research workers and practitioners from Europe, Ukraine and from neighbouring countries and beyond. The articles contain the study, reflecting the processes and changes in the structure of modern science. The collection of scientific articles is for students, postgraduate students, doctoral candidates, teachers, researchers, practitioners and people interested in the trends of modern science development.

e-mail: berlin@sci-conf.com.ua

homepage: <https://sci-conf.com.ua>

©2024 Scientific Publishing Center “Sci-conf.com.ua” ®

©2024 MDPC Publishing ®

©2024 Authors of the articles

TABLE OF CONTENTS

AGRICULTURAL SCIENCES

1. *Hryhoriv Ya., Turak Yu.* 14
FORMATION OF MAIZE HYBRID PRODUCTIVITY IN THE
CONDITIONS OF THE WESTERN REGION OF UKRAINE
2. *Деревенець–Шевченко К. А., Шевченко О. М., Шевченко С. М.* 19
ГРУНТОЗАХИСНІ СИСТЕМИ ОБРОБІТКУ І ОСОБЛИВОСТІ
ФОРМУВАННЯ ШКІДЛИВОГО КОМПЛЕКСУ В ПОСІВАХ
КУКУРУДЗИ
3. *Підгора Н. В., Петров А. В.* 23
ВПЛИВ БІОЛОГІЧНО АКТИВНИХ РЕЧОВИН НА СТРЕС-
СТІЙКІСТЬ ЗЕРНОВИХ КУЛЬТУР В УМОВАХ ПОСУХИ
4. *Симчук Ю. С., Гринюк С. Б.* 30
ФОРМУВАННЯ ВРОЖАЙНОСТІ РІПАКУ ОЗИМОГО ЗАЛЕЖНО
ВІД РІВНІВ УДОБРЕННЯ ТА СТРОКІВ СІВБИ

BIOLOGICAL SCIENCES

5. *Кричковська Л. В., Хохленкова Н. В., Двінських Н. В.* 34
КОРЕКЦІЯ ЕНДОГЕННОЇ АНТИОКСИДАНТНОЇ СИСТЕМИ
ОРГАНІЗМУ ПРИ СТАРІННІ

MEDICAL SCIENCES

6. *Belik T., Slipchuk V.* 41
THE DNA VACCINE IS THE NEXT STEP IN THE EVOLUTION OF
VACCINES
7. *Haydash I. S., Krektun O. Ya.* 45
INDICATORS OF BLOOD COMPOSITION IN MILITARY
SERVANTS WITH NON-TRAUMATIC PATHOLOGY OF THE
DIGESTIVE SYSTEM
8. *Kuzmina G., Lazarenko O.* 49
ADHERENCE TO THE TREATMENT OF PATIENTS WITH GOUT
9. *Mammadova L. C., Garashova M. A., Aliyeva K. K.* 54
DIAGNOSTIC VALUE OF HORMONAL CHANGES IN
POSTMENOPAUSAL WOMEN WITH GENITAL TUMORS
10. *Баля В. М., Марченко А. С., Бобро Л. М.* 56
НЕВРОЛОГІЧНІ УСКЛАДНЕННЯ ПОСТКОВІДНОГО
СИНДРОМУ
11. *Бобро Л. М., Марченко А. С., Бутенко В. В.* 59
ПОСТКОВІДНИЙ СИНДРОМ. УСКЛАДНЕННЯ З БОКУ ШКТ І
ОПОРНО-РУХОВОГО АПАРАТУ У ПОСТКОВІДНИЙ ПЕРІОД
12. *Гейко І. А., Мельникова Д. С., Теплова В. Я.* 65
ГЕПАТИТ – ПРОФІЛАКТИКА ТА ЛІКУВАННЯ В
СТОМАТОЛОГІЧНІЙ ПРАКТИЦІ

13.	<i>Демецька О. В., Лашко О. М., Ябчанка Р. Я.</i>	71
	СОЦІАЛЬНО-ЕКОНОМІЧНИЙ ТЯГАР БОЛЮ У НИЖНІЙ ЧАСТИНІ СПИНИ В КОНТЕКСТІ ПРОФЕСІЙНОГО ЗДОРОВ'Я	
14.	<i>Демченко О. М., Попова Т. В.</i>	75
	НЕЙРОМЕДІАТОРНИЙ МЕХАНІЗМ ДІЇ ТИРЕОЇДНИХ ГОРМОНІВ НА КОГНІТИВНУ ФУНКЦІЮ ЩУРІВ В РАНЬОМУ ОНТОГЕНЕЗИ	
15.	<i>Корнієнко С. І., Стрижак Н. В., Бабошкін А. І.</i>	78
	МІКРОБІОЛОГІЧНИЙ МОНІТОРИНГ АНТИБІОТИКОЧУТЛИВОСТІ	
16.	<i>Малик Н. В., Гавриленко С. Д.</i>	81
	ЗАСТОСУВАННЯ АРТ-ТЕРАПІЇ ДЛЯ КОРЕКЦІЇ ПОРУШЕНЬ ОСОБИСТОСТІ ПСИХОЕМОЦІЙНОГО СТАНУ ДІТЕЙ В УМОВАХ ВІЙНИ	
17.	<i>Малик Н. В., Гладка Ю. В.</i>	84
	ЕФЕКТИВНІСТЬ ПРЕПАРАТУ ОЗЕЛЬТАМІВІР ПРИ ЛІКУВАННІ ГРИПУ У ДОРΟΣЛИХ	
18.	<i>Малик Н. В., Омелянчук І. В.</i>	86
	ПОШИРЕНІСТЬ ТА ФАКТОРИ РИЗИКУ СМЕРТНОСТІ У ХВОРИХ НА ЕМФІЗЕМАТОЗНИЙ ПІСЛОНЕФРИТ	
19.	<i>Нечитайло Л. Я., Чорна К. О.</i>	89
	ОСОБЛИВОСТІ ВПЛИВУ ТЮТЮНОПАЛІННЯ, АЛКОГОЛЮ І НАРКОТИКІВ НА ОРГАНІЗМ МОЛОДИХ ЛЮДЕЙ	
20.	<i>Ніязметов Т. С., Семеник В. М.</i>	93
	ЗМІНИ ЯДЕРНО-ЦИТОПЛАЗМАТИЧНОГО ІНДЕКСУ ЕНДОКРИНОЦИТІВ КЛУБОЧКОВОЇ ТА ПУЧКОВОЇ ЗОН КОРИ НАДНИРКОВИХ ЗАЛОЗ ЗА УМОВ ВПЛИВУ ОТРУТИ ГАДЮК ВИДУ VIPERA VERUS VERUS	
21.	<i>Огоренко В. В., Кокашинський В. О.</i>	99
	ВІКОВІ ОСОБЛИВОСТІ ОБРАЗУ ВЛАСНОГО ТІЛА ТА НАПРАВЛЕНОСТІ ХАРЧОВОЇ ПОВЕДІНКИ ПАЦІЄНТІВ З ПОРУШЕННЯМИ ХАРЧОВОЇ ПОВЕДІНКИ ПРИ ТРИВОЖНО-ДЕПРЕСИВНИХ РОЗЛАДАХ	
22.	<i>Прокопенко С. А., Малик Н. В.</i>	103
	САМОЛІКУВАННЯ – ПРОБЛЕМА СЬОГОДЕННЯ, ЯКА ВИХОДИТЬ НА СВІТОВИЙ РІВЕНЬ	
23.	<i>Слабкий Г. О., Гечко М. М., Кузьо М. В., Дудник С. В.</i>	106
	МЕТОДОЛОГІЯ КОМПЛЕКСНОЇ ОЦІНКИ ПЕРИНАТАЛЬНОЇ ДОПОМОГИ НА ДОГОСПІТАЛЬНОМУ ЕТАПІ	
24.	<i>Слабкий Г. О., Гечко М. М., Кузьо М. В., Шень Ю. М.</i>	112
	ВИЯВЛЕННЯ ЗЛОЯКІСНИХ НОВОУТВОРЕНЬ У ДОРΟΣЛОГО НАСЕЛЕННЯ УКРАЇНИ ПІД ЧАС ПРОФІЛАКТИЧНИХ ОГЛЯДІВ ТА В ЗАНЕДБАНИХ СТАДІЯХ: ВПЛИВ ВІЙНИ ПРОТИ РОСІЙСЬКОЇ АГРЕСІЇ	

25. **Томин І. В.** 119
 АНАЛІЗ РІВНЯ ЗАПАЛЬНИХ МАРКЕРІВ У ПАЦІЄНТІВ З COVID-19-АСОЦІЙОВАНОЮ ПНЕВМОНІЄЮ ТА СУПУТНИМИ ХРОНІЧНИМИ КОРОНАРНИМИ СИНДРОМАМИ
26. **Чернуха О. В., Овденко А. Ю.** 123
 ПРОБЛЕМА ОЖИРІННЯ У ХАРКОВІ ТА ШЛЯХИ ЇЇ ВИРІШЕННЯ
27. **Якименко Д. О., Черненко В. М.** 128
 УДОСКОНАЛЕННЯ МЕТОДИКИ ПРОВЕДЕННЯ ЗАКРИТОГО СИНУС-ЛІФТИНГУ З МЕТОЮ РОЗШИРЕННЯ ДО ЙОГО ПОКАЗАНЬ
28. **Якубінський М. В., Хоменко І. М.** 130
 МЕДИКО-СОЦІАЛЬНІ АСПЕКТИ ПРОФІЛАКТИКИ У ХВОРИХ НА ОБЛІТЕРУЮЧИЙ АТЕРОСКЛЕРОЗ СУДИН НИЖНІХ КІНЦІВОК В СИСТЕМІ ГРОМАДСЬКОГО ЗДОРОВ'Я

CHEMICAL SCIENCES

29. **Пітюкіна О. А., Кушко А. О.** 137
 СИНТЕЗ ЦИКЛІЧНИХ ЦИС-АМІНОСПИРТІВ ШЛЯХОМ 1,3-ДИПОЛЯРНОГО ЦИКЛОПРИЄДНАННЯ

TECHNICAL SCIENCES

30. **Burda Yu., Pivnenko Yu., Cherednik A., Chaika Yu., Tkachenko R.** 140
 ANALYSIS OF THE CLEANING EFFICIENCY OF GAS EMISSIONS FROM THE VENTURI SCRUBBER
31. **Gavva O., Volodin O., Butyk T.** 147
 METHODOLOGICAL APPROACHES TO THE ORGANIZATION OF PACKAGING PRODUCTION
32. **Nikolaienko D. S.** 152
 ANALYZER OF HUMAN MOVEMENTS BASED ON VIDEO IMAGES
33. **Ostrovska K., Remeslo O.** 154
 RESEARCH OF NEURAL NETWORK CLASSIFIERS FOR THE IMPLEMENTATION OF A VEHICLE IDENTIFICATION SYSTEM
34. **Polishko S., Nilova K., Seledtsova A., Vybla D., Tkachenko A.** 157
 STUDY OF THE RELATIONSHIP OF THE CHEMICAL COMPOSITION, STRUCTURE, PHASE TRANSFORMATIONS DURING HEATING OF TITANIUM ALLOYS WITH THEIR MECHANICAL CHARACTERISTICS
35. **Zhiguts Yu., Krainiai I., Kopcha O.** 162
 FEATURES OF THE MECHANICAL AND SERVICE CHARACTERISTICS OF FERON-CARBON ALLOYS SYNTHESIZED BY EXOTHERMAL PROCESSES

UDC 658.512.2:621.798:681.5

**METHODOLOGICAL APPROACHES TO THE ORGANIZATION OF
PACKAGING PRODUCTION**

Gavva Oleksandr,

Doctor of Technical Science, Prof

Volodin Oleksandr,

graduate student

Butyk Taras,

master

Educational and Scientific Institute of Technical Engineering by name of
acad. I. S. Hulyi, National University of Food Technologies,
Kyiv, Ukraine

Abstract: The features of the analysis of the optimal organization of packaging production in terms of logistics are considered. Examples of the formation of various technological cycles with the most common types of product placement are given. The methodology for organizing packaging production includes the following main stages: analysis, planning, organization, control. The following methods and techniques have been studied to organize packaging production. Integration of logistics processes, which allows to increase the efficiency of the logistics system and reduce costs. Automation of logistics processes, which increases the speed and accuracy of logistics operations. Use of information technology to improve the efficiency of logistics management. Efficient organization of packaging production to ensure production continuity. Improving the quality of packaging materials and products. Modern trends in the organization of packaging production.

Key words: methodology, packaging production, logistics processes, system efficiency, accuracy of execution.

The main goal of organizing the development of any production, including packaging, is to improve the economic performance E (pcs/ uah), which is characterized by the ratio of total output for a certain period of time when packaging equipment is used to total costs for the same period. With an increase in the speed of

movement of processed products, the duration of the entire production cycle and the volume of work in progress are reduced, and at the same time, working capital is reduced. If the density of product flows increases, the length of the path of their movement during processing in the technological process decreases, which is a prerequisite for reducing the size of the equipment in the selected plane and reducing the production planes themselves.

$$E = \frac{\sum_0^T R}{\sum_0^T J} \quad (1)$$

R - output, i.e. the number of manufactured products; J - costs in uah, T – is the calendar time of operation of this production equipment, hours. To the expression $\sum_0^T R$ include current performance ratios Q to calendar time T taking into account the calendar time factor k_T , to $\sum_0^T J$ include the sum of all costs for the time T , i.e. one-time costs (cost of equipment, production areas, working capital), current costs, and operating costs. Continuity of production is a characteristic of the flow of products in the technological process and is usually characterized by three parameters - speed, density, and processing area. To increase production productivity, it is necessary to increase the values of these parameters. At the same time, these parameters also affect related production indicators [1, p. 126]. The greater the density of the product flow, the more items can be placed per unit of its length, which steadily increases the system's productivity (Fig. 1). The optimal placement of products in the flow can be considered such an arrangement when the largest size of the product is in the cross-sectional area (Fig. 1.b). The larger the cross-sectional area of the product flow, the greater the productivity of the technological system. An increase in the cross-sectional area of the flow, provided the maximum transverse density of the arrangement of machined products in the cross-section, i.e., when they are located close to each other and provided the distance from the periphery of the cross-section of the flow to the dimensions of the production area is constant, causes an increase (Fig. 2) in the ratio of the cross-sectional area flow to the cross-sectional

area of the equipment, and accordingly reduces the size, weight, cost, and production area per unit of output.

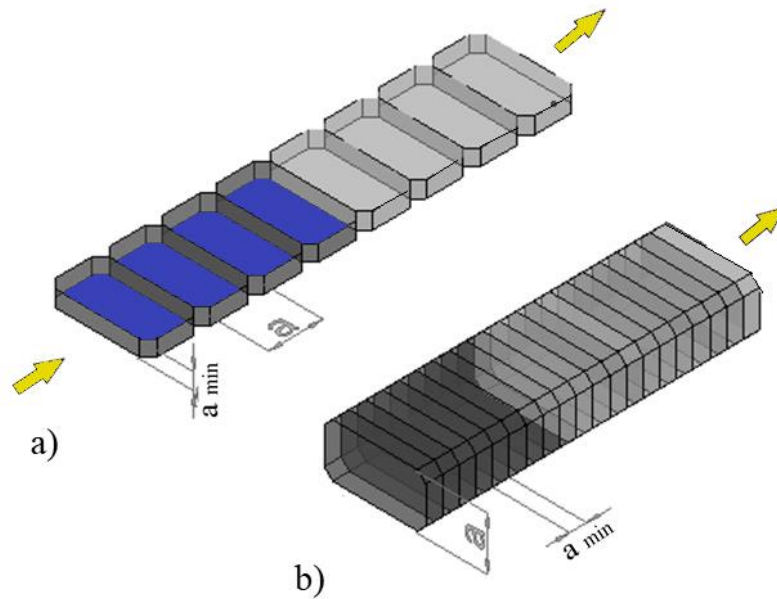


Figure 1. Flows of processed products in the technological cycle: a - flow with maximum density, b - flow with maximum density and optimal arrangement of products (a is the overall size of the product in the flow, and min is the minimum overall size of the product)

The highest degree of process continuity implies the elimination of inter-operational inventories, reducing production areas and, accordingly, reducing current operating costs. However, the actual production flow (Fig. 2a) differs from the ideal in all respects. The flow rate during the operation of the equipment is unstable in different parts of the technological process (Fig. 2b), and manual labor is used in some interoperable areas. In addition, many packaging machines are irrational in their structure. The main problems of ensuring a high-tech continuous optimal process are: 1) maintaining a consistently high utilization rate of automatic lines while increasing the number of combined operations; 2) the payback period of machines that replace human labor; 3) the complexity of the kinematic and layout structure of packaging machines; 4) the imbalance in machine performance during operations; 5) the degree of versatility of automatic machines; 6) insufficient mass of packaging objects. [2, p. 121].

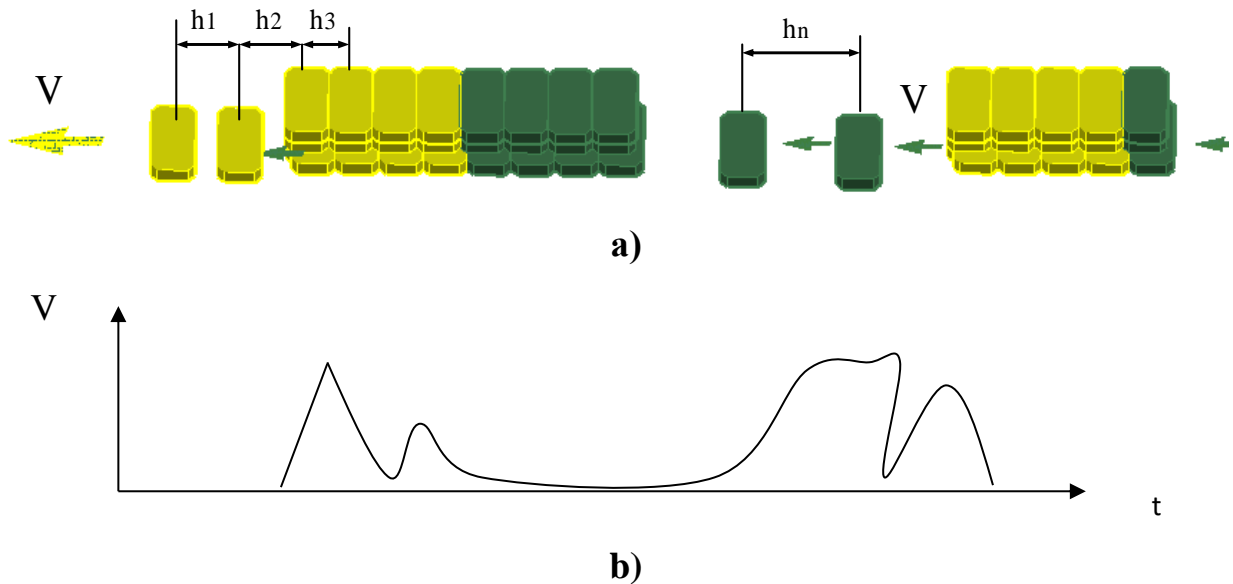


Figure. 2. Characteristics of the real flow of products during their processing in discrete technological cycles: a - diagram of the real flow ($h_1...h_n$ - steps between products during processing); b - diagram of the speed of movement of the flow of products in the technological cycle

Based on this analysis, we can formulate requirements for an ideal technological production flow. An ideal flow should have an average speed during the entire calendar time and along its entire length equal to the maximum possible speed of the production flow; maximum density in the longitudinal and transverse directions, optimal arrangement of products in the flow and the maximum possible number of products in the cross-section of the flow. In discrete production, single-row flows, characterized by the placement of only one product in the cross section, are of great practical importance. For a single-row flow, the cross-section is determined by the cross-sectional parameters of a single product, so the concept of cross-sectional density is not relevant for it.

REFERENCES:

1. Gavva, O., Kryvoplias-Volodina, L., Blazhenko, S., Tokarchuk, S., Derenivska, A. (2021). Synthesis of precision dosing system for liquid products based on electropneumatic complexes. Eastern-European Journal of Enterprise

Technologies, 6 (2 (114)), 125–135. doi: <https://doi.org/10.15587/1729-4061.2021.247187>.

2. Mironchuk V. G., Gera V. M., Volodin S. O. (2023) Innovative locking and regulating devices in technological flows of sugar production Print Scientific works of NUFT. Vol. 29, No. 4. - K. : NUHT.-107-117. doi: <https://doi.org/10.24263/2225-2924-2023-29-4-10>.