

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ОДЕСЬКИЙ НАЦІОНАЛЬНИЙ ТЕХНОЛОГІЧНИЙ УНІ-
ВЕРСИТЕТ**



**ЗБІРНИК ТЕЗ ДОПОВІДЕЙ
МІЖНАРОДНОЇ НАУКОВО-ПРАКТИЧНОЇ КОНФЕРЕНЦІЇ**

**«ТЕХНОЛОГІЇ ХАРЧОВИХ
ПРОДУКТІВ І КОМБІКОРМІВ»**

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Збірник матеріалів конференції містить тези доповідей наукових досліджень за актуальними проблемами розвитку харчової, зернопереробної, комбікормової, хлібопекарної і кондитерської промисловості. Розглянуті питання удосконалення процесів та обладнання харчових і зернопереробних підприємств, а також проблеми якості, харчової цінності та впровадження інноваційних технологій продуктів лікувально-профілактичного і ресторанного господарства.

Збірник розраховано на наукових працівників, викладачів, аспірантів, студентів вищих навчальних закладів відповідних напрямів підготовки та виробників харчової продукції.

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were formed in the process of cabbage fermentation, added a special taste and a pleasant aroma to ham. The acids that contained in the brine gave the product a bright, saturated color. But with high concentrations of brine in the meat, the finished product has a sour, specific taste, which is not characteristic of this type of product.

The main component of cabbage brine is lactic acid, which is known for its preservative ability. Therefore, the shelf life of hams increased in direct proportion to the increase of the injected brine. Thus, the third sample (with the largest amount of brine) had a shelf life of 12 days, which is 5 days more than that of standard hams produced according to the traditional technology. But, as was shown above, high concentrations of brine negatively affect the taste and aroma of finished products. Although the addition of slightly alkaline phosphates to the brine shortened the shelf life from 12 days to 9 days, it allowed to improve the taste properties in comparison with the control sample.

Based on the above, formulation of the brine solution for cooked hams of the second sample, which consisted of 5 g of phosphate per 100 g of a solution of water and brine from fermentation, which turned out to be the most optimal of the studied options. As a result, we received the technology and recipe of cooked hams for mass production using the by-product of fermentation of white cabbage with improved organoleptic indicators and an extended shelf life. Despite the fact that the first signs of deterioration appeared on the 9th day of storage we recommend storing the product for no more than 7 days.

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METHODS OF SHEEP DICTYOCAULOSIS FIGHTING

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Currently, halal meat has been gaining popularity in the Odessa region. As a result, the amount of mutton farmed has increased. The beneficial properties of lamb are widely known. The microelements contained in meat are necessary for hematopoiesis (iron), ensure the normal functioning of the heart and blood vessels (magnesium and potassium), and affect the functioning of the thyroid gland (iodine). Meat also contains a number of vitamins: E, B1, B12, PP, as well as lecithin, which helps prevent diabetes.

Breeding sheep for food purposes requires significantly lower costs compared to other breeds of livestock. These animals are unpretentious, hardy and able to demonstrate high productivity even with poor feeding. In addition, this type of livestock is versatile. The main products of sheep breeding are lamb, wool and sheepskin and fur raw materials. However, when raising animals, farmers often face the problem of infestation of sheep with helminths. Parasites, multiplying in the body of an animal, affect the internal organs, muscles, skin and cause anemia. In the case of

late diagnosis lead to the death of the animal. As a result of the disease, sheep lose weight, and animal meat changes quality, its nutritional and taste characteristics decrease.

The dynamics of development and the intensity of the course of the epizootic process are influenced by the conditions of keeping animals. Also, the diversity of the fauna of endoparasites strongly depends on many factors in various climatic zones.

For example, in the ecosystems of the plains, the diversity of sheep parasites includes 194 species. In the foothill zones, the biodiversity of ecto- and endoparasites of small cattle in different species combinations includes 216 species.

In the conditions of the steppe Dnieper region, representatives of the Ascaridida, Enoplida, Strongylida, Metastrongylus elongatus, Dictyocaulus sp., Muellerius sp., Cystocaulus sp., Protostrongylus sp., Globocephalus sp., Bunostomum sp., Haemonchus sp., Rhabditida, S. papillosus and Plagiorchiida orders are often registered.

Since the species diversity of helminths is closely related to climatic and geographic zones, it is necessary to properly design therapeutic and preventive measures. Treatment and prevention should be based on knowledge of the epizootological patterns of helminthiasis in specific climatic zones. Data for the Odessa region show that hemonchosis, chabertiosis, trichuriasis and dictyocaulosis are registered among sheep in the farms of the Odessa region with different extensiveness among young and adult livestock.

One of the most widespread invasions of small cattle in the region is dictyocaulosis. The causative agent of this disease is a nematode of the genus Dictyocaulus of the suborder Strongylata parasitic in the bronchi, accompanied by bronchitis and bronchopneumonia in infected animals. In sheep, dictyocaulosis is caused by the nematode Dictyocaulus filaria. These are thread-like helminths of white color, their length is 3-5.7 cm, thickness is 0.35-0.6 mm. The development cycle of dictyocaulus occurs without the participation of an intermediate host. Dictyocaulus parasitize in the bronchi and trachea, where they secrete eggs containing larvae. Dictyocaulosis in the temperate climate of eastern Europe is ubiquitous. Severe outbreaks of the disease are diagnosed after a rainy, humid summer. Livestock that are grazing are at the greatest risk. The main source of sheep infection is pastures that are contaminated with faeces excreted by invasive animals containing larvae. In addition to infection by the alimentary route on pastures, animals become infected during a watering place. To prevent infection of animals, it is necessary to monitor the sanitary condition of places of detention, to prevent contamination of water in drinking bowls. In case of infection, timely diagnosis is important, so regular inspection of the livestock is one of the requirements for prevention. It is also important to avoid pastures with high humidity. Measures to combat dictyocaulosis in small cattle include a selective (20–25 head) helmintholaryoscopic examination of the livestock of farms that are unfavorable for dictyocaulosis. If infected animals are found, deworming with anthelmintics is performed. To date, thanks to modern pharmacology, the treatment of diseases caused by parasites can occur quickly and successfully. There are a number of broad-spectrum anthelmintics that are used to treat dictyocaulosis. Given the high risk of infection of sheep with helminths due to the wide prevalence of pathogens in the Odessa region, the task of combating parasites remains relevant. If helminths are found in sheep at the enterprise, it is recommended that the affected parts of the organs be sent for disposal or destroyed; unaffected parts of the internal organs and the carcass should be released without restrictions. However, like all parasites, nematodes die when exposed to high temperatures. Helminth eggs are more resistant, but after frying they become incapacitated.

Dictyocaulus nematodes and their larvae die at a temperature of 60°C. Thus, the processing of meat and offal in an autoclave, using a high-temperature processing mode, is guaranteed to disinfect the product.

We have proposed a formula for the sterilization of helminth-infected sheep meat and offal. The formula is intended for tin cans №9. Saturated water steam acts as a heating medium in the autoclave.

Recommended sterilization formula:

$$\frac{20 - 110 - 30}{120}$$

Where 20 – the duration of heating, min.; 110 – duration of actual sterilization, min; 30 – duration of cooling, min; 120 – temperature, °C.

Thus, meat and offal from infected animals should be isolated from the meat of healthy animals and sent for processing to canning shops. At canning plants, in turn, shifts should be provided when only infected meat will be processed.

Under such conditions, it becomes possible to save a sufficiently large amount of products, since the infection of sheep with parasites is found everywhere, and to obtain a safe product.

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PROSPECTS FOR THE PRODUCTION OF DIETARY SUPPLEMENTS FROM THE BLACK SEA RAPANA

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In the current conditions of the development of our state and society, providing the population with a full healthy diet is becoming increasingly important and inalienable. It, in turn, must comply with both the well-established classical dogmas of ensuring normal physiological metabolism and modern world trends in the diversity of diets.

In recent years, almost irreversible ecological changes have occurred in the Black Sea, affecting the living conditions of aquatic organisms, their species diversity and quantity. With the development of navigation with ballast water, new species have been introduced. One of the most dangerous species is the shellfish *Rapana*. *Rapana* is a genus of predatory gastropods. Black Sea rapana by some scientists is separated from the separate species *Rapana pontica*. Black Sea rapana is a descendant of the Far Eastern rapana that inhabits predominantly in the waters of the Sea of Japan. Due to the absence of natural enemies in the Black sea, for example, the starfish, the population of mollusks has grown very much and caused great damage to the fauna of the Black Sea. In particular, rapana massively eats commercial shellfish mussels and oysters. All this requires new approaches to the integrated use of raw materials, which for various reasons are not used for food or fodder purposes in full, or not at all.

Therefore, it was decided to consider the Black Sea rapana as raw material for the food industry. The overall chemical composition and energy value of mollusk meat and its differentiated organs are presented in Table. 1 and 2. The meat of the rapan on the average contains up to $16.7 \pm 0.8\%$ protein (68.9% of dried weight) and is characterized by the presence of all essential amino acids (up to 33.6% of the protein mass), among which leucine and lysine - 68100 and 59400 ppm of protein, respectively. The protein-water coefficient (PWC) of rapana's meat is in averaged 4.6 ± 0.3 , whilst the watercut of proteins was markedly reduced in summer - autumn period; for comparison - PWC meat mussels varies limits of $5.8 \div 11.4$. At present, there is every reason to believe that the most rapid, economically acceptable and scientifically substantiated way to solve the problem of rationalizing the population's nutrition is the widespread use of dietary supplements in daily practice. Dietary supplements are part of the right, healthy human diet.

27. TECHNOLOGY OF OBTAINING FAT-AND-OIL GRAPESEED PRODUCTS Ye. Kotliar	46
28. ОРГАНОЛЕПТИЧНА ОЦІНКА ЯКОСТІ М'ЯКИХ СИРІВ З ПРОБІОТИЧНИМИ ВЛАСТИВОСТЯМИ Скрипніченко Д.М., Скрипніченко С.К., Ткаченко Т.А.	47
29. CHARACTERISTICS AND JUSTIFICATION OF THE APPLICATION OF BRINES FROM THE FERMENTATION OF WHITE CABBAGE IN THE TECHNOLOGY OF COOKED HAM S. Patyukov, A. Fugol, A. Palamarchuk	49
30. METHODS OF SHEEP DICTYOCAULOSIS FIGHTING S.Patyukov, A. Fugol, A. Palamarchuk, N. Azarova	50
31. PROSPECTS FOR THE PRODUCTION OF DIETARY SUPPLEMENTS FROM THE BLACK SEA RAPANA A.Palamarchuk, O.Glyshkov	52
32. ТЕХНОЛОЛГІЯ БЕЗЛАКТОЗНОГО ВИСОКОБІЛКОВОГО КИСЛОМОЛОЧНОГО ДЕСЕРТУ З МАСЛЯНКИ Трубнікова А.А., Чабанова О.Б., Шарахматова Т.Є.	53
33. ПЕРСПЕКТИВИ КОМПЛЕКСНОГО ПЕРЕРОБЛЕННЯ МОЛОЧНОЇ СИРОВАТКИ У ПРОДУКТИ ПРЕМІУМ-КЛАСУ Чагаровський О.П., Дідух Е.Г.	55
34. CEREAL PRODUCTS AS AN IMPORTANT FUNCTIONAL INGREDIENTS: EFFECTS OF BIOPROCESSING L.Kaprelyants	57
35. ПЕРСПЕКТИВИ КОМПЛЕКСНОГО ПЕРЕРОБЛЕННЯ МОЛОЧНОЇ СИРОВАТКИ У ПРОДУКТИ ПРЕМІУМ-КЛАСУ Ткаченко Н.А., Антонюк Т.А.	58
36. ДОСЛІДЖЕННЯ ТИПІВ КОАГУЛЯНТІВ ПРИ ВИРОБНИЦТВІ СИРУ МОЦАРЕЛА ІЗ СУМІШІ КОРОВ'ЯЧОГО ТА ОВЕЧОГО МОЛОКА Ланженко Л.О., Дец Н.О.	60
37. КІЛЬКІСНО-ЯКІСНІ ХАРАКТЕРИСТИКИ АВТОМОБІЛЬНОГО ТРАНСПОРТУ, ЩО ДОСТАВЛЯЄ ЗЕРНО ПШЕНИЦІ НА ЗЕРНОВИЙ ТЕРМІНАЛ Кац А.К., Станкевич Г.М.	62
38. ДОСЛІДЖЕННЯ ВПЛИВУ ЕЛЕКТРОМАГНІТНОГО ПОЛЯ ВКРАЙ НИЗЬКИХ ЧАСТОТ НА ЖИРНОКИСЛОТНИЙ СКЛАД ЗЕРНА ПШЕНИЦІ Ковра Ю.В., Станкевич Г.М.	64

Наукове видання

**Збірник тез доповідей
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