GRAIN AND GRAIN PRODUCTS PROCESSING TECHNOLOGY

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Abstract
The processing of grains and grain products is one of the oldest and most important processes of all food technologies and constitutes a large and important part of the food production chain. Cereals and cereal products are widespread throughout the world, and their important nutritional properties and economic importance are appreciated and recognized worldwide. Today, the grain processing industry is as diverse as the types of grain products. This article presents cereal products and their processing technologies.
Keywords. Grains, Grain products, Pastas, Ready-to-eat Breakfast Cereals, Baby Foods, Textured Vegetable Proteins, Pet Foods, Dried Soups, Dry Drink Mixes.
Аннотация
Переработка зерна и зерновых продуктов является одним из старейших и наиболее важных процессов всех пищевых технологий и составляет большую и важную часть цепочки производства продуктов питания. Зерновые и зерновые продукты широко распространены во всем мире, а их важные питательные свойства и экономическое значение ценятся и признаются во всем мире. Сегодня зерноперерабатывающая отрасль столь же разнообразна, как и виды зерновых продуктов. В данной статье представлены крупяные продукты и технологии их переработки.
Ключевые слова. Зерновые, зерновые продукты, макаронные изделия, готовые к употреблению сухие завтраки, детское питание, текстурированные растительные белки, корма для домашних животных, сухие супы, сухие смеси для напитков.

INTRODUCTION

Virtually every food product produced contains grains in some form, while the range of non-food applications is increasing day by day, all of which present great challenges to food manufacturers in the processing of grain products. New food processing methods are being introduced to improve or modify the safety and nutritional quality and physicochemical properties of various diseases, and to increase production and process efficiency. Among the various emerging technologies, there are potential opportunities for storage and processing of grain products through radio frequency, microwave, irradiation and high

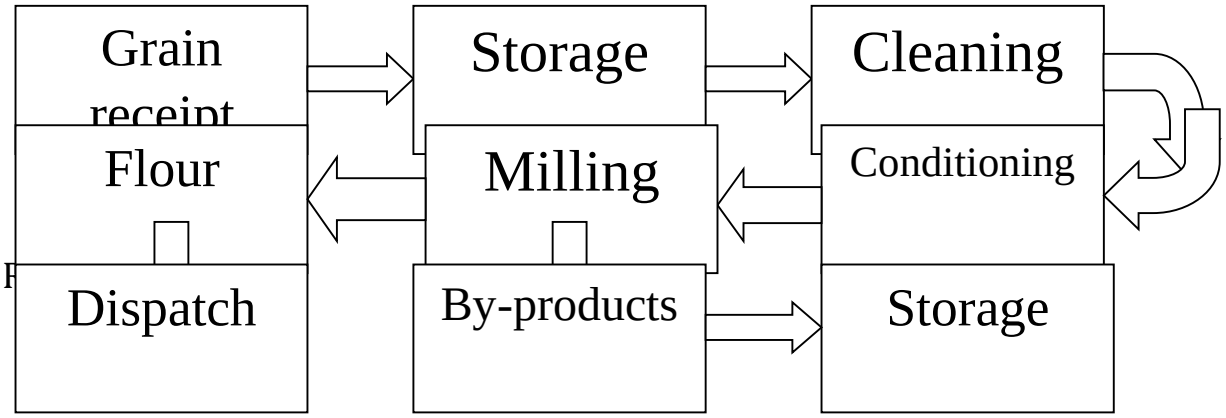
pressure processing. The introduction of new technologies improves the processing and use of impulses. Research is showing some promising results, but industrial adoption of these new processing methods may take some time for several reasons, including the cost of equipment to overcome before food processors can adopt the technology. is one of the difficulties.

LITERATURE ANALYSIS AND METHODOLOGY

In many developed countries, there is a growing interest in the use of cereal products and their crushed components in food. Processing grains into ingredients such as flour and small particles (eg, protein, starch) and using them in food products is common in Eastern-style food products. However, recently, cereal products have been successfully used as ingredients in the formulation of several meat products to improve functionality. Presslab cooking has attracted the attention of researchers and food manufacturers from grains to a variety of specialty foods, including pasta, ready-to-eat breakfast cereals, baby foods, snack foods, textured plant proteins, pet foods, dried soups, and more. is involved in the production of liquors, dry drink mixes, etc. Presslab cooking not only improves digestion, but also improves the biological activity of nutrients compared to traditional cooking.

RESULTS

Following the scientific evidence recommending the increase of cereal products from different species to improve human health, future research should focus on the bioavailability of bioactive compounds, technological processing and new food formulations to increase their potential benefits. The food processing industry needs to increase its knowledge of the processing of grains into ingredients and the impact of this processing on the functionality of ingredients in food product formulations. Optimizing processing in terms of quality and functionality, in addition to other factors such as yield and energy consumption, will be necessary to successfully introduce processing of value-added grains and incorporate these ingredients into food products. Ultimately, this opens the door to creating a new ingredient base for cereal products, leading to new food products and redesigned food products that meet consumer needs.



cts from cereal processing are promising sources of nutrients, including bioactive compounds (e.g. phytochemicals) that can be exploited for their favorable technological or beneficial nutritional properties. In recent years, many food companies have been trying to find value-added applications for these food products. As a result of many studies, some biologically active compounds have been identified, which can be incorporated into the food material to increase its functionality. Exploitation of by-products of cereal processing as a source of functional compounds and their application in the food industry is a promising field that requires interdisciplinary research by food technologists, food chemists, nutritionists and toxicologists. In the near future, we need to respond to the following research needs: first, food processing technology should be optimized to minimize the amount of waste; secondly, it is necessary to develop methods of full use of by-products resulting from the processing of grain products on a large scale and at low prices.

CONCLUSION

By-products from cereal processing are promising sources of nutrients, including bioactive compounds (e.g. phytochemicals) that can be exploited for their favorable technological or beneficial nutritional properties. In recent years, many food companies have been trying to find value-added applications for these food products. As a result of many studies, some biologically active compounds have been identified, which can be incorporated into the food material to increase its functionality. Exploitation of by-products of cereal processing as a source of functional compounds and their application in the food industry is a promising field that requires interdisciplinary research by food technologists, food chemists, nutritionists and toxicologists. In the near future, we need to respond to the following research needs: first, food processing technology should be optimized

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