



RESOURCE-SAVING TECHNOLOGY FOR THE USE OF LARGE AND LARGE CATTLE BYPRODUCTS

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Article history:	Abstract:
Received 22 th May 2021 Accepted: 6 th June 2021 Published: 10 th July 2021	The article investigates the challenges surrounding the waste-free use of by-products, optimizes the recipe and technology for culinary products made from by-products, and determines the organoleptic and chemical composition.
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INTRODUCTION

Resource-saving technology is currently one of the progressive directions.

At the same time, one of the most important objectives is to use raw materials and materials carefully, reduce waste, and eliminate losses, most of which will assist enhance output, rationalize capital investments, and save millions of people's labor. In light of modern concepts about a balanced diet, the expansion of the range of meals and goods should focus on developing new types of items that are rich in vitamins, minerals, dietary fiber, and other nutrients that are essential for population health. [1] Based on the above, the object of our study was semi-finished products prepared from offal.

LITERATURE REVIEW

In general, by-products are accustomed to value lower than the actual meat, consisting of muscle, adipose and connective tissue, but by-products are also meat. Their calorie content is usually lower, they contain even more vitamins and minerals than meat.

The most valuable are languages, liver, brains, kidneys. They contain a large amount of protein (up to 18%), rich in vitamins, iron salts, phosphorus. The tongue and heart contain up to 17% fat.

The liver contains a large amount of vitamins and iron salts. The liver of beef and veal is valued, since their bitter taste is weaker than that of pork. The liver is useful for impaired vision and anemia. The kidneys contain a lot of mineral salts. Brains contain phosphorus salts, phosphotides (cholesterol, lecithin), which are necessary for proper metabolism in the human body.

However, when using offal, you need to adhere to certain rules:

1. Offal must be fresh, clean, free of blood, mucus, signs of spoilage, properly processed.
2. Vitamins in them are quickly destroyed, so it is better to freeze fresh offal immediately.
3. Store offal at temperatures below 00C, chilled - 1 day. Frozen by-products - at temperatures up to -60C for no more than two days.

By-products belonging to category I - liver, heart, tongue, kidneys, brains in their nutritional value are not inferior to meat.

However, pork, beef and lamb legs, beef and lamb heads, pork tails, stomach, lungs, lips, throat belonging to the II category are treated with a high content of connective tissue proteins collagen and elastin. However, as noted in the scientific literature during culinary processing, ie, cooking as a result of collagen breakdown, the resulting glucose and gelatosis increases the secretion of gastric juice, improves the function of the gastrointestinal tract, and increases the state and function of beneficial intestinal microflora [2].

Consequently, at present, based on the scientific findings, the raw materials available in the composition of the connective tissue are a necessary component of the diet.

In the formulation of meat products, the introduction of by-products of both I and II categories from the point of view of their rational use is necessary. [3].

EXPERIMENTAL PART.

In connection with the above, we envisage the development of a recipe and technology for the preparation of the national boiled sausage product "Hasip", determination of organoleptic characteristics and chemical composition.

Component composition of the Hasip product (in gr)

Products	Gross	Net
Liver	75	75
Lungs	225	225
Spleen	111	111
Onion	231	194
Rice	169	167
Water (for minced meat)	720	720
Red pepper (powder)	0,2	0,2
Ground black pepper	0,1	0,1
Salt	22	22
Caraway	2	2
Lamb intestines	555	555
Output:	-	1000

The liver, lungs, spleen and onions are passed through a meat grinder, rice, red pepper and ground black pepper, cumin, salt, water are added and everything is mixed. Prepared semi-liquid bay mince into the guts. Both ends of the intestine are tied with a thread. They are placed in a cauldron, poured over with cold water and boiled for 60 minutes.

To prevent the product from bursting during cooking, pre-pierce it in several places with the blunt end of a needle. The finished Hasip product can be served hot or cold.

As a result of the organoleptic assessment, it was revealed that "Hasip" was highly appreciated by tasters in appearance, taste, aroma, consistency and other indicators. As a result of the analysis of the chemical composition of "Hasip" it was revealed that one portion (100 g) of the product contains: proteins - 14.7; fat - 2.2; carbohydrates - 14; fiber - 0.19; ash - 3.5 grams, the content of mineral elements: Na-996; K-201; Ca-27.6; Mg-62.9; P-242; Fe-7.1 mg. The content of vitamin A-0.07, B1-0.24, B2-1.46, PP-2.8, C-9.5 mg. The energy value of the Hasip product is 134.8 kcal.

CONCLUSION

Based on the above, we can conclude that by-products are rich in nutrients, especially minerals and vitamins. The by-products contain all essential amino acids, their medicinal properties have been proven, both in traditional and folk medicine.

The centralized production and processing of by-products, the development of recipes and technologies for the production of culinary products with their use, makes it possible to develop their waste-free use with an increase in their economic and social significance.

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