

Evaluation of competitiveness, classification and calculation of customs payments of chicken breeds realized on the market

ОЦЕНКА КОНКУРЕНТОСПОСОБНОСТИ, КЛАССИФИКАЦИЯ И РАСЧЕТ ТАМОЖЕННЫХ ПЛАТЕЖЕЙ КУРИНЫХ ГРУДОК, РЕАЛИЗУЕМЫХ НА РЫНКЕ ГОРОДА ПЕРМЬ

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Abstract

The development of industrial production of poultry products is a permanently relevant task for all regions of Russia, including Perm Region, since chicken meat is a daily commodity of the population because of its reasonable price and high consumer properties. However, today there is no comprehensive scientific understanding of issues related to determining the competitiveness of poultry meat products, this scientific topic requires a study of the competitiveness of chicken meat products presented on the regional market. All this determines the relevance of the study. The purpose of the scientific research in the framework of this article is to assess the competitiveness of selected samples (brands) of chicken breasts sold on Perm market. When choosing the hypothesis of scientific research, the author dwelled on the assumption of insufficient coverage of the problem of increasing and calculating the competitiveness of poultry meat products in modern science. Achieving this goal the following tasks are carried out: consideration of the theoretical foundations of the competitiveness of chicken breasts; an examination of the quality of chicken breasts sold in Perm market; conducting market research on consumer preferences and determining the competitiveness of chicken breasts by value for money and using a comprehensive integrated indicator of competitiveness. The object of the research in this article are samples of chicken breast of various brands sold on Perm market. When assessing competitiveness, the selected

Аннотация

Развитие промышленного производства продукции птицеводства является permanently актуальной задачей для всех регионов России, в том числе и Пермского края, так как мясо кур является товаром повседневного спроса населения по причине его приемлемой цены и высоких потребительских свойств. Вместе с тем, на сегодня отсутствует комплексное научное понимание вопросов, связанных с определением конкурентоспособности продукции из мяса птицы, данная научная тематика требует исследования конкурентоспособности продуктов из куриного мяса, представленного на региональном рынке. Все это обуславливает актуальность проводимого исследования. Целью научного исследования в рамках настоящей статьи заявлена оценка конкурентоспособности отобранных образцов (торговых марок) куриных грудок, реализуемых на пермском рынке. При выборе гипотезы научного исследования автор остановился на предположении о недостаточной освещенности проблемы повышения и расчета конкурентоспособности мясопродуктов из птицы в современной науке. Достижение поставленной цели осуществлялось через решение следующих задач: рассмотрение теоретических основ конкурентоспособности куриных грудок; проведение экспертизы качества куриных грудок, продаваемых на рынке г. Перми; проведение маркетинговых исследований потребительских предпочтений и определение конкурентоспособности куриных грудок путем соотношения цены и качества, а также используя

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samples were considered according to group and economic criteria, according to the “brand awareness” indicator, point scales were used. Also, in the study of chicken breast samples, organoleptic, aesthetic indicators and other criteria for competitiveness were evaluated. For the examination of chicken breast in Perm market, the breasts of the following manufacturers were purchased: JSC “PRODO Perm Poultry Factory”, LLC “Udmurt Poultry Factory”, CJSC Uralbroiler, CJSC Petelinskaya Poultry Factory, LLC Belgrankorm-Veliky Novgorod. As a result of the research, the quality was determined and the tested samples of chicken breasts were ranked, their competitiveness was calculated from the professional objective point of view of product consulting by taking into account the quality per unit of money paid, and the real state of competitiveness in this market segment was determined taking into account consumer requests.

Keywords: agri-food policy of the Russian Federation, development of the poultry industry, chicken breast, quality examination, competitiveness assessment.

Introduction

Good nutrition is one of the most important social problems. According to the theory of balanced nutrition, the human diet should contain not only proteins, fats and carbohydrates in the required amount, but also such substances as essential amino acids, vitamins, minerals in proportions determined for a person. In the organization of proper nutrition, meat products are of paramount importance. According to E. A. Mazilkina, G. G. Panichkina, poultry is an important component of a healthy diet, a useful and tasty source of easily digestible proteins, vitamins and fatty acids (Mazilkina, Panichkina, 2009).

Throughout the world, the poultry industry plays a large role in providing the population with high-quality food. In connection with the changes taking place in the country in recent years, the development of the poultry meat market is carried out in new conditions. The recent agro-food policy of the Russian

комплексный интегрированный показатель конкурентоспособности. Объектом исследования в настоящей статье выступают образцы куриной грудки различных торговых марок, реализуемых на рынке г. Перми. При оценке конкурентоспособности отобранные образцы рассматривались по групповым и экономическим критериям, по показателю «известность торговой марки», использовались балльные шкалы. Также в исследовании образцов куриной грудки оценивались органолептические, эстетические показатели и другие критерии конкурентоспособности. Для проведения экспертизы куриной грудки на рынке г. Перми была закуплена грудка следующих производителей: АО «ПРОДО Птицефабрика Пермская», ООО «Удмуртская птицефабрика», ЗАО «Уралбройлер», ЗАО «Петелинская птицефабрика», ООО «Белгранкорм-Великий Новгород». В результате проведенных исследований определено качество и проведено ранжирование исследуемых образцов грудок куриных, рассчитана их конкурентоспособность с профессиональной объективной точки зрения товарного консалтинга путем учета качества за единицу уплаченных денежных средств, а также выявлено реальное состояние дел с конкурентоспособностью в данном сегменте рынка с учетом запросов потребителей.

Ключевые слова: агропромышленная политика РФ, развитие промышленности птицеводства, куриная грудка, экспертиза качества, оценка конкурентоспособности.

Federation is assessed by experts as highly effective, and it mainly stimulates the harmonious development of livestock, in particular poultry, raw materials and processing industries. The development of the poultry industry is an urgent task for all regions of Russia, since meat and meat products are everyday goods of the population. Rising prices for poultry meat caused unsatisfactory provision of the population with meat products of regional production, which created the conditions for the development of competition in this industry. But, despite the high prices, products in some cases are characterized by low quality and competitiveness. This is due to the lack of necessary work skills of regional producers of poultry meat and poultry products in the market conditions and the lack of development of their competition mechanism. V. E. Tereshkin points out that an important moment in the implementation of high-quality poultry meat and poultry products is a number of government

measures aimed at providing a regulatory framework for documents regulating the procedure for establishing minimum requirements for chicken breast quality (Tereshkin, 2012).

According to Rosstat, in 2019, the production of almost all types of meat and meat products increased compared to the previous 2018: meat and offal of slaughtered animals – by 9.2%, semi-finished meat products, meat-containing, chilled, frozen – by 10.1%, sausage products – by 0.6%, canned meat – by 8% (Meat and meat products market review from 10/04/2019, 2019). According to the observation of H. A. Faskhiev, only in the segment of meat and poultry offal a decline in production was recorded by 5.5% (Faskhiev, 2014). Given the changes in the import-export balance, the growing Russian production of meat and meat products practically covers the domestic demand of the country, the market is close to saturation.

However, there is no comprehensive study of issues related to increasing the competitiveness of production and processing of poultry meat. The relevance of the problem under consideration is confirmed by the scientific interest in the field of developments related to improving the pricing of poultry meat. A number of scientists, such as E. A. Stebeneva and N. A. Kashirina, emphasize the importance of studying the diffusion factors of the competitiveness of poultry meat and poultry products in the context of market globalization processes (Stebeneva, Kashirina, 2015).

The competitiveness of a product is a combination of qualitative and economic characteristics of a product that reflect the differences between the product and its competitors. A. A. Akhmetgareeva identified the following methods for assessing product competitiveness: express methods (calculated as the sum of points); graphical methods (using a graph, a figure showing the visibility of the product evaluation); functional card method (competitiveness matrix); calculation of the integral indicator (Akhmetgareeva, 2016).

Materials and methods

The purpose of the scientific research in the framework of this article is to assess the competitiveness of selected samples (brands) of chicken breasts sold on Perm market. When choosing the hypothesis of scientific research, the author dwelled on the assumption of insufficient coverage of the problem of

increasing and calculating the competitiveness of poultry meat products in modern science. This goal is carried out through the solution of the following tasks:

- 1) To study the theoretical foundations of the competitiveness of chicken breasts;
- 2) To conduct an examination of the quality of chicken breast sold in the market of Perm;
- 3) To conduct market research on consumer preferences and to determine the competitiveness of chicken breasts;
- 4) To assess the competitiveness of chicken breasts by value for money, as well as using a comprehensive integrated indicator.

The object of research in this article is chicken breast, marketed in Perm. The subject of the study was the assortment, quality, pricing characteristics and competitiveness of the object of study.

The empirical and informational basis for this article was the normative regulations, manuals and articles, as well as materials from Internet sites on the subject of the study.

In preparing the article, monographic, empirical, organoleptic, computational and sociological methods of scientific research were used, which together ensured the solution of the tasks and the achievement of the goal.

The first stage of the study was an assessment of meat products quality for analysis according to current quality standards, after which the second stage was their qualimetric assessment, then (the third stage) the quality-price ratio was evaluated. The final item of scientific research within the article was the calculation of the integrated indicator of chicken breasts quality on the basis of a study of target audience opinions.

Assessing the competitiveness of chicken breast using a comprehensive integrated indicator means researching the main criteria that influence its change. The main criterion for the competitiveness of goods is the degree of satisfaction of real needs, which determines the different attractiveness of competing goods to consumers. When assessing the competitiveness of goods, their organoleptic properties, other quality indicators, packaging, labeling, brand recognition and price were taken into account. According to B. F. Bessarabov, E. I. Bondarev, T. A. Stolyar, when assessing the competitiveness of chicken breasts, it is

necessary to be guided by group and economic criteria, indicators of “brand awareness”, point scales (Bessarabov, Bondarev, Stolyar, 2005).

In the study of chicken breast samples, organoleptic, aesthetic indicators and product reliability were evaluated. For evaluation, a point scale was used, meaning “5 points” – an excellent level of quality, “4 points” – good, “3 points” – satisfactory and “2 points” – unsatisfactory quality level. The assessment was carried out for each group of properties separately.

Results

As part of the article, the competitiveness of five samples of poultry meat sold in the market of Perm was studied. As noted by E. V.

Kolobanova, A. V. Semeyanova, the selected samples are analogous goods (a homogeneous group of goods), belong to the same market segment, at the time of assessment they have a high level of representativeness in Perm market (Kolobanova, Semeyanova, 2016).

An organoleptic evaluation of meat was carried out according to indicators of the appearance of meat, smell, consistency, section muscle, transparency and aroma of the broth. Actual values are fully consistent with regulatory requirements. In all samples, the color ranged from whitish yellow with a pink tint to yellowish gray with a reddish tint, and the smell was characteristic of fresh meat. A comprehensive analysis of chicken breast samples by organoleptic characteristics is illustrated in Table 1.

Table 1. Organoleptic characteristics of the studied chicken breast samples

Name of indicator	Requirements GOST 31962-2013	Test samples				
		“Troekurovo”	“Green Village”	“Healthy Farm”	“Clear Dawns”	“Chicken Kingdom”
Appearance and color	Whitish-yellow in color with a pink tinge; in non-greasy carcasses, yellowish-gray in color with a reddish tint; skinny - gray with a bluish tint	Whitish-yellow in color with a pink tinge	Yellowish gray with a reddish tint	Whitish-yellow in color with a pink tinge	Yellowish gray with a reddish tint	Yellowish gray with a reddish tint
Sectional muscles	Slightly wet, do not leave a wet spot on the filter paper; pale pink	Slightly wet, do not leave a wet spot on the filter paper; pale pink	Slightly wet, do not leave a wet spot on the filter paper; pale pink	Slightly wet, do not leave a wet spot on the filter paper; pale pink	Slightly wet, do not leave a wet spot on the filter paper; pale pink	Slightly wet, do not leave a wet spot on the filter paper; pale pink

Consistency	The muscles are dense, elastic, when pressed with a finger, the resulting fossa is quickly leveled	The muscles are dense, elastic, when pressed with a finger, the resulting fossa is quickly leveled	The muscles are dense, elastic, when pressed with a finger, the resulting fossa is quickly leveled	The muscles are dense, elastic, when pressed with a finger, the resulting fossa is quickly leveled	The muscles are dense, elastic, when pressed with a finger, the resulting fossa is quickly leveled	The muscles are dense, elastic, when pressed with a finger, the resulting fossa is quickly leveled
Smell	Specific to fresh poultry	Specific to fresh poultry	Specific to fresh poultry	Specific to fresh poultry	Specific to fresh poultry	Specific to fresh poultry
Transparency and aroma of the broth	Transparent, fragrant	Transparent, fragrant	Transparent, fragrant	Transparent, fragrant	Transparent, fragrant	Transparent, fragrant

According to the results of the tests, it was concluded that all samples comply with the regulatory documentation and are revolving.

Assessment of the appearance, color, consistency, smell, muscle in the section,

transparency and aroma of the broth of five samples is recorded in quantitative and digital indicators. Digital data showing the quality level of chicken breast samples according to five main criteria are presented in Table 2.

Table 2. General assessment of quality, taking into account the weight of indicators

Sample	Name of quality indicators										
	Appearance and color (weight ratio = 0.3)		Consistency (weight ratio = 0.2)		Smell (weight ratio = 0.2)		Sectional muscles (weight ratio = 0.2)		Transparency and aroma of the broth (weight ratio = 0.1)		Quality level, points
Sample 1	5,0	1,5	4,8	0,96	4,8	0,96	5,0	1,0	4,9	0,49	4,91
Sample 2	4,9	1,47	4,8	0,96	4,9	0,98	4,6	0,46	4,9	0,49	4,36
Sample 3	4,7	1,41	4,8	0,96	4,9	0,98	5,0	1,0	4,7	0,47	4,82
Sample 4	4,1	1,23	3,7	0,74	4,2	0,84	4,1	0,82	3,7	0,37	4,0
Sample 5	4,5	1,35	4,9	0,98	4,8	0,96	5,0	1,0	4,4	0,44	4,73

The analysis of Table 2 showed that according to quality indicators, sample 1 was the best – JSC “PRODO Poultry Farm Perm”, the smallest indicator was sample 4 – LLC Belgrankorm-Veliky Novgorod.

Next, the quality ratio was determined – the price for each sample. The price-quality correlation of the five samples of the brands “Troekurovo”, “Village Green”, “Healthy Farm”, “Clear Dawns”, “Chicken Kingdom” is shown in Table 3 and Figure 1.

Table 3. Price-quality ratio of chicken breast samples

Indicator	Test samples				
	Sample 1 “Troekurovo”	Sample 2 “Village Green”	Sample 3 “Healthy Farm”	Sample 4 “Clear Dawns”	Sample 5 “Chicken Kingdom”
Level of quality	4,91	4,36	4,82	4,0	4,73
Price per 1000 g, rub.	255,6	390,1	144,6	231,4	208,3
Ratio “price–quality”	0,019	0,011	0,033	0,017	0,023

The product with the highest price– quality ratio is recognized as the most competitive.

Thus, it can be seen that in terms of price– quality ratio, sample No. 3, “Healthy Farm”, leads due to a lower price. Less competitive sample– No. 2 “Village Green”, mainly because of its high cost.

O. Yu. Tikhonova, I. Yu. Reznichenko, M.V. Poznyakovsky believe that at the stage of conducting a marketing research, it is paramount to determine consumer preferences and develop on this basis the final values of the competitiveness of chicken breasts (Tikhonova, Reznichenko, Poznyakovsky, 2014).

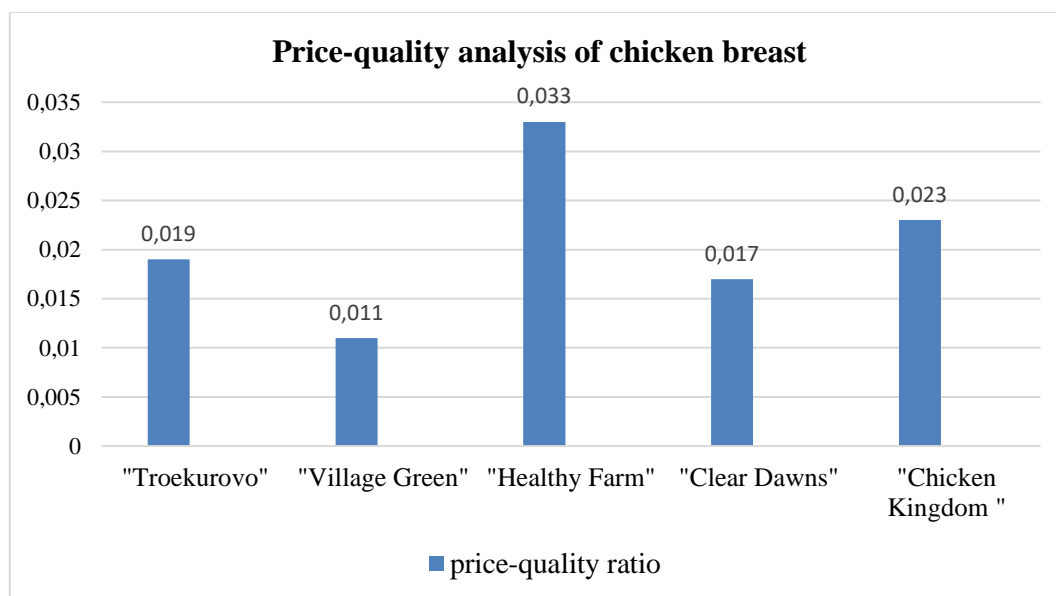


Figure 1. Price-quality analysis of chicken breasts

Studying the demand of the population for food products allows us to determine the potential product opportunities in the market, namely, to identify the relationship between supply and demand, determine the optimal market segment, pricing policy, and maximum demand for the product.

As a result of a consumer survey on organoleptic indicators, sample 1 turned out to be the best - JSC PRODO Perm Poultry Farm. The results of a social survey conducted in Perm, aimed at identifying the best organoleptic indicators of chicken breast samples, are displayed in Table 4.

Table 4. Consumer survey results on organoleptic indicators

Factor	Point	Test samples				
		Sample 1 “Troekurov o”	Sample 2 “Village Green”	Sample 3 “Healthy Farm”	Sample 4 “Clear Dawns”	Sample 5 “Chicken Kingdom”
Quality (organoleptic properties)	5	53	61	25	13	33
	4	47	32	26	45	32
	3	-	7	30	40	28
	2	-	-	-	2	7
	1	-	-	-	-	-
Grade point average		4,47	4,5	4,30	5,63	5,48

According to the results of the survey, it was found that the most attractive packaging for consumers is packaging in a tight-fitting film,

which amounted to 87% of respondents and 13% - vacuum packaging (Figure 2).

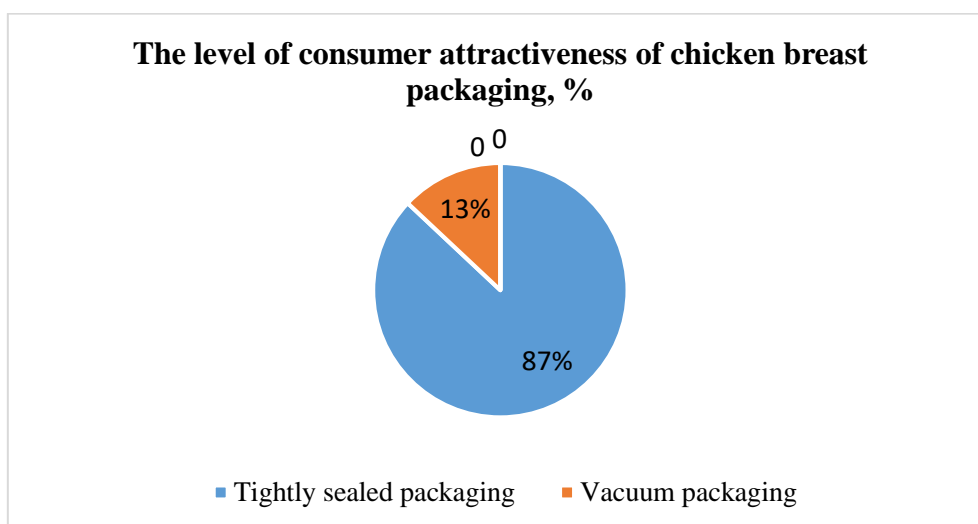


Figure 2. Chicken breast packaging consumer appeal

According to the respondents, the leader among the packaging of chicken breast was “PRODO Poultry Farm Perm” JSC (35% of respondents have chosen this trade mark). The second place was assigned to Udmurt Poultry LLC with 25%.

The producer Uralbroiler CJSC has taken the third place - 20% was assigned to it. CJSC Petelinsky Poultry with 12% has the fourth place. LLC Belgrankorm-Veliky Novgorod ranks fifth with 8%. The results are presented in Figure 3.

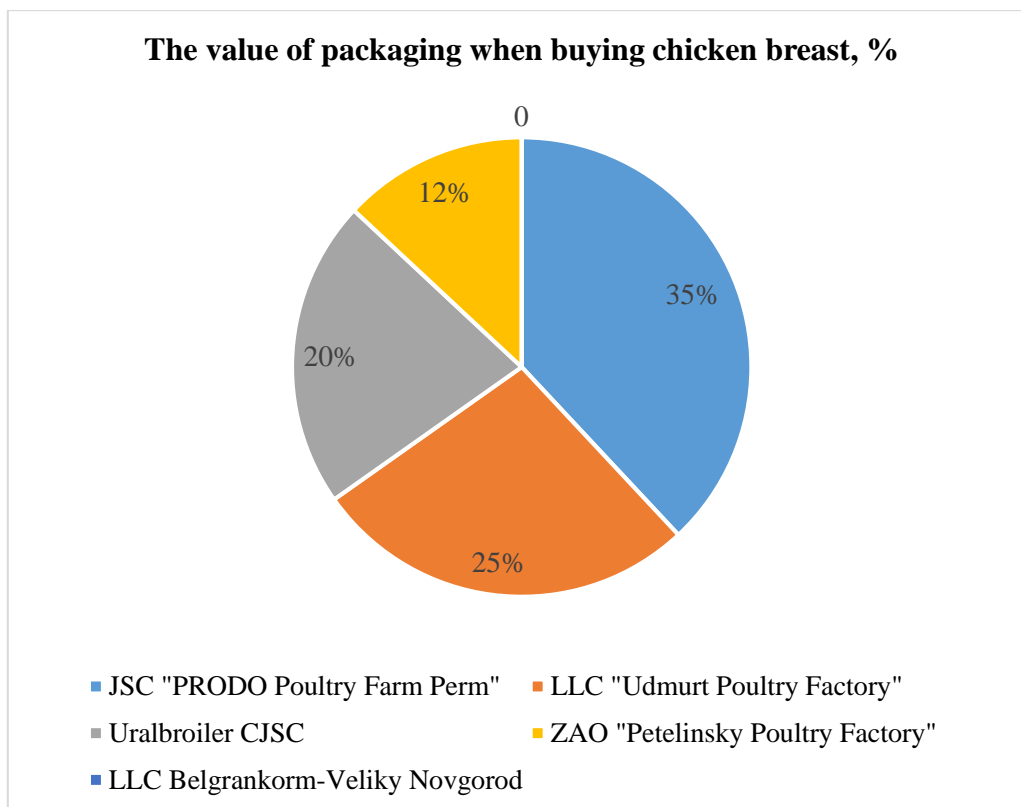


Figure 3. The value of packaging when buying chicken breast

According to the results of consumer preferences research, the following conclusions can be drawn: the most important criterion when buying chicken breasts is their price - 36% of respondents, an important criterion is quality - 32%, then the brand is known for the product - 22%, 10% of the packaging.

Next, integral indicators of the competitiveness of the studied goods were calculated using

weighting factors with the following values: for the organoleptic indicator - 0.55; for the indicator "product popularity and aesthetics" - 0.15; for an economic indicator - 0.30. An "ideal model" is adopted to determine the class of competitiveness with 5 integral indicator.

The results of the assessment of the competitiveness of the studied chicken breast samples are presented in Table 5.

Table 5. The assessment results of the competitiveness of the studied samples of chicken breast (based on an integrated indicator of competitiveness)

Test samples	Organoleptic indicators (coefficient of group weight = 0.55)		Reliability and aesthetics (coefficient of group weight = 0.15)		Economic indicators of marking assessment (coefficient of group weight = 0.30)		Integral competitiveness score	Competitiveness class
	total point	considering group weight	total point	considering group weight	total point	considering group weight		

“Troekurovo”	4,8	2,64	5,0	0,75	5,0	1,5	4,90	1
“Village Green”	4,7	2,56	4,5	0,66	5,0	1,5	4,72	1
“Healthy Farm”	4,7	2,56	4,5	0,66	4,1	1,23	4,45	1
“Clear Dawns”	4,4	2,42	3,8	0,57	3,4	1,02	4,01	3
“Chicken Kingdom”	4,5	2,46	4,2	0,63	4,0	1,2	4,29	2

Based on the above data, we can conclude that the most competitive among the samples in all evaluated parameters is the chicken breast of “Troekurovo” brand. Indicators of these samples have received high scores for all evaluated groups of criteria. “Chicken Kingdom” is called competitive enough, the status of medium competitiveness is assigned to “Clear Dawns”.

Discussion

An analysis of different definitions of the product competitiveness category showed that researchers, including E. Yu. Raikova, to one degree or another, distinguish three of its main features: satisfaction of the specific needs of customers; optimal ratio of quality and cost indicators; providing better enterprise results compared with competitors (Raikova, 2015).

Analyzing the marketing (integrated) method of assessing the competitiveness of products, E. P. Golubkov made a significant conclusion: the competitiveness of a product can change in one market from segment to segment, and since consumer preferences can change in time, the competitiveness of a product in one segment also changes in time (Golubkov, 2016). However, the time factor for all products is different. Moreover, this factor does not always depend on the storage and use of the goods. So, for example, it is not necessary that preferences for sausages will have a shorter duration than for cars.

M. O. Ermolov claims that the only true indicator of product competitiveness is consumer preferences (Ermolov, 2007). In turn, consumer preferences are formed under the influence of various information coming to them in various forms. This information is converted into preference and product knowledge, which translates into an addiction to a particular brand. Therefore, in addition to consumer preferences, the competitiveness of products is influenced by the degree of brand development, which forms a favorable location of consumers in relation to the goods of this company.

Competitiveness is determined both in the factor plane and in the resulting aspect, since any factor indicators of competitiveness should be checked by the resulting ones, which are confirmed by the words of A. Smith: “We do not wish the brewer or the butcher to be benevolent, but to observe their own interests” (Smith, 1993).

The development of the substantive components of the term “competitiveness” in foreign literature, represented by the scientific works of S. Lall, S. E Jorge, A. Wiemerskizch, repeats the evolution of views on competition, which is obvious when studying late literature - 19- 20th centuries (Lall, 2001; E Jorge, Wiemerskizch, 2015).

Conclusions

After analyzing the organoleptic characteristics of chicken breast, it should be noted that all samples comply with the requirements of GOST 31962-2013 (GOST 31962-2013. “Meat of chickens (carcasses of hens, chickens, chickens broilers and their parts). Technical conditions”). According to the results of experts’ work on translating qualitative characteristics into a quantitative form, the chicken breasts of “Troekurovo” trademark were awarded the lead, “Healthy Farm” trademark was at the second place, the products under “Chicken Kingdom” trademark were at the third place, and the worst characteristics were products under “Clear Dawns”.

Determining competitiveness by simply calculating price– quality ratio, it turned out that the optimal value for this indicator is the chicken breast sample No. 3 - “Healthy Farm”, solely due to the low price. The least competitive was the sample No. 2 “Village Green”, which with very mediocre quality (4th place) has a relatively high price.

The studies and the calculation of an integrated indicator of the competitiveness of 5 chicken breast samples sold by the city of Perm allowed

us to draw the following conclusions. According to the calculation of the integrated competitiveness indicator, the most competitive was sample 1 - with a score of 4.90; Sample 4 scored the least 4.01 points - that is, it is the least competitive. The obtained results of the competitiveness assessment indicate that the most competitive among the considered samples in all evaluated parameters is the chicken breast of "Troekurovo" brand. "Chicken Kingdom" is called competitive enough, the status of medium competitiveness is assigned to "Clear Dawns".

Thus, the results of the competitiveness assessment indicate that the most competitive among the considered samples in all evaluated parameters is the chicken breast of "Troekurovo" brand, Perm Region. The status of average competitiveness is assigned to "Clear Dawns".

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