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ИЗВЕСТИЯ

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NEWS

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Қазақстан Республикасы Ұлттық ғылым академиясы "ҚР ҰҒА Хабарлары. Химия және технология сериясы" ғылыми журналының Web of Science-тің жаңаланған нұсқасы Emerging Sources Citation Index-те индекстелуге қабылданғанын хабарлайды. Бұл индекстелу барысында Clarivate Analytics компаниясы журналды одан әрі the Science Citation Index Expanded, the Social Sciences Citation Index және the Arts & Humanities Citation Index-ке қабылдау мәселесін қарастыруда. Web of Science зерттеушілер, авторлар, баспашылар мен мекемелерге контент тереңдігі мен сапасын ұсынады. ҚР ҰҒА Хабарлары. Химия және технология сериясы Emerging Sources Citation Index-ке енуі біздің қоғамдастық үшін ең өзекті және беделді химиялық ғылымдар бойынша контентке адалдығымызды білдіреді.

НАН РК сообщает, что научный журнал «Известия НАН РК. Серия химии и технологий» был принят для индексирования в Emerging Sources Citation Index, обновленной версии Web of Science. Содержание в этом индексировании находится в стадии рассмотрения компанией Clarivate Analytics для дальнейшего принятия журнала в the Science Citation Index Expanded, the Social Sciences Citation Index и the Arts & Humanities Citation Index. Web of Science предлагает качество и глубину контента для исследователей, авторов, издателей и учреждений. Включение Известия НАН РК в Emerging Sources Citation Index демонстрирует нашу приверженность к наиболее актуальному и влиятельному контенту по химическим наукам для нашего сообщества.

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NEW TRENDS IN THE IDENTIFICATION OF THE TRADITIONAL FOOD PRODUCTS OF KAZAKHSTAN

Abstract. Requirements for the traditional food producers and their relationship with regional brands or products with geographical indications (GI) are discussed. The development of the so-called regional or territorial brands that promote products produced in a given region meets consumer demand in the terms of traceability of the provenance of the good. Moreover, there is an emerging potential demand for the traditional food products that have a stronger link with the area of production and the traditional method of production, as it happens, for example, for the European Union GIs. The GIs food labels guarantee consumers the origin and the method of production. The potential of Kazakhstan's organic dairy products have opportunities for the identification of a significant value of the healthy nutrition and meet requirements of quality labels for agricultural products and foodstuffs: Protected Designation of Origin (PDO), Protected Geographical Indication (PGI) and Traditional Specialty Guaranteed (TSG). For instance, TSGs system of protection co-exists with individual EU member countries systems of recognition, two Italian TSGs are protected under the EU TSG system, while around 5,000 food products/recipes are recorded in the Italian '*prodotti alimentari tradizionali*' list. In the presented review, the branded dairy foods that produced in Kazakhstan are described, such as: "made in Kazakhstan", "irimshik", "shubat", "koumiss", "saumal" et al. These new trends allow to promote and to support the agricultural products. Organic food and beverages with a geographical indication will positively improve food industry, social and environmental consequences.

Keywords: dairy products, organic products, geographical indication, regional brand, PDO, PGI, TSG indicators.

INTRODUCTION

Recently, an increased consumer's demand for differentiated food is emerging, which is mainly focused on different value adding food attributes: healthiness, organic farming and processing method of production and/or traditional local links. These – above the mandatory safety and hygiene- attributes are value adding characteristics which can create value in the supply chain when properly signaled to the final consumers, through public labels and/or private brands - who are willing to pay a price premium for them [13].

In Kazakhstan have been recently introduced a policy framework, which aims to address this emerging demand providing a legal context to avoid unfair competition among producers and to provide clear information to final consumer through certification systems. At present time framework covers products from organic farming and the "made in Kazakhstan" labelling system assuring the provenance of the produce.

The increasing trend in organic food consumption is observed all over the world, including Kazakhstan, where producers are adapting their supply to satisfy the growing demand in the domestic

market [12]. Both large-scale companies and small private farms are engaged in the production of organic products, which are sold through restaurants, cafes, supermarkets and specialized shops.

In 2015, the Kazakhstan Government adopted the Law "On the production of organic products." This Law regulates the relations between producers of organic products, and the other agents operating along the supply chain. According to the international organic farming standards: synthetic substances, pesticides, hormones, antibiotics, food additives, and genetically modified organisms (GMO) are forbidden: The production, processing, and marketing rules have been defined by the Order of the Minister of Agriculture of the Republic of Kazakhstan dated May 23, 2016 No. 230, registered in the Ministry of Justice of the Republic of Kazakhstan on July 4, 2016 No. 13875. The compliance with the defined organic methods of production standards is under public Authorities control by means of inspections and preventive control in accordance with the Entrepreneurship Code of the Republic of Kazakhstan. Only having obtained a conformity certification, food is labelled with the national public label of certified organic products [20].

The demand for food having beneficial effects on human health is also increasing in Kazakhstan. For example, in 2010 the first dairy factory of the Kazakh Academy of Nutrition "Amiran" was founded, aiming at producing "healthy and functional food products" [22].

The same organization manages the label "product.kz" ("Made in Kazakhstan"): it characterizes goods produced in the Republic of Kazakhstan, aiming at increasing public confidence in domestic goods [14, 15].

Given that food tourism is growing in Kazakhstan, which is strictly related to the consumption of products with a strong link with the visited geographical area. Local products are also often demanded by consumers far from the production areas (e.g. in bistro restaurants supplying traditional food [10].

The development of the so-called regional or territorial brands, which promotes products produced in a given region meets consumer demand in the terms of traceability of the provenance of the good. Moreover, there is an emerging potential demand for traditional food products which have a stronger link with the area of production and the traditional method of production, as it happens, for example, for the European Union Geographical Indications (GIs) [5, 6].

Based on a long dating system of protection of food GIs in the Mediterranean European countries – particularly in Italy, France and Spain - the European Union (EU) food quality policy, has established a European public system of protection and labelling for agricultural products and foodstuffs GI (protected denomination of origin, PDO, and protected geographical indications, PGI) and traditional food products (TSG), since 1992 [7].

Overall, GIs represent an important element of culture, identity, and heritage and are characterized by both historical and geographical dimensions. The increasing attention shown in the past 25 years by academics, politicians, and food system agents, and their recognition through geographical indications, stems from their implications on economic, legal, political and social grounds [11].

The GIs food labels guarantee consumers about the origin and the method of production. Target analyses and analytical procedures, together with the chemometric tools can be used to discriminate foods from different areas and/or production methods [4].

Along with the geographical indication, the concepts of PDO, PGI and TSG used in Europe also presuppose the consideration and legal protection of methods of production, recipes, and traditions. Consequently, some work is needed to register and protect the names of places of origin of goods and strengthen legislation to protect intellectual property and collective trademarks [8, 19].

Another direction that requires a significant attention is national brands. As examples, the brands "made in Kazakhstan", "irimshik", "shubat", "koumiss", "saumal" et al are available. The work purpose is a review of the food products that traditionally available on the territory of Kazakhstan with a geographical indications. In each region, it can be discovered a few similar products that will be as the drivers for the development of ecotourism and rural areas.

MATERIALS AND METHODS

This review article is based on the study of the European scheme of GIs – PDOs and PGIs - and TSG, for instance in Italy, the analysis of information on the development of brands with the name of the place of production of goods, the experience of world markets in the production and promotion of food products

with GI, brand products with GI and the importance of this work for Kazakhstan, not only for the local food industry, but for the social sphere as a whole.

RESULTS AND DISCUSSION

1. *The geographical indications for the terroir characteristics of the food products.*

The rationale of the EU GIs system of recognition and protection is the concept of *terroir*, i.e. the link between the characteristics of both the traditional area of production and the historically-linked method of production (the so-called human factors well rooted in the culture of the traditional area of production) and the food quality attributes. Accordingly, and in line with the 2015 revision of the Lisbon Treaty on GIs, two different GI types are defined: the Protected Designation of Origin (PDO), and the Protected Geographical indications (PGI). PDOs have a stronger link with the terroir than the PGIs: i) for PDOs *terroir* characterize all food quality attributes and, consequently, all the production stages (farming, processing, packaging) take place in the traditional area of production, while ii) for PGIs the link is weaker and has to be proved for at least one quality attribute or food product's reputation; in this case, only one stage of the production has to take place in the traditional area.

The main characteristics of the EU GIs system are the followings:

i) the present time Regulation (EC Regulation 1151/2012) emphasizes the relevant role that GIs can play in the creation of value in their specific supply chains and as a rural development tool, while in the past the intellectual property right administrative protection from frauds and from imitation of the protected name prevailed;

ii) the system of legal protection is a *sui generis* system, which is public, protects the GI for an unlimited time span, assures that the protected name will not become a generic name and strongly protects consumers -at least in the EU market- from misleading information (e.g. GI name translation and use of 'type', 'like' are not allowed);

iii) aiming at increasing the consumer awareness of the over than 1,350 PDOs and PGIs registered in the DOOR database, the use of the EU PDO or PGI label is mandatory for all PDOs and PGIs since 2016;

iv) the GI supply is based on a certification system, under public authority supervision which controls that the method of production both takes place in-the traditional area and complies with the defined historically-linked code of practice.

In the WTO international context, the food GI definition is similar to the EU PGI one (TRIPS agreement art. 22.1), but the issue of the international protection of the GI food products is not yet fully accommodated, several conflicts arising. In brief, the level of protection varies among different products' category (it is generally higher for wines and spirits than for food products) and ii) and, among countries. While some non-EU countries adopt a *sui generis* system, others protect their GIs under trademark legal systems. However, the increasing number of bilateral agreements on mutual recognition and protection of GIs - which have been signed or are under negotiation - between the EU and a non-EU country and, since 2006, the European Union opening to non-EU GIs of the EU register of GIs (DOOR database), show the possible coexistence of both systems in the international context and the potential market opportunities in terms of international trade. For example, Italian food GIs overall turnover reached 6,4 billion euros in 2016 (around 5% of the food industry value of production) and 3.1 billion where exported both to other EU countries and to non-EU ones.

While the PDO and PGI system for geographical indications recognition and protection is exclusively managed at the EU level, traditional food products, having lost their link with a given area of production but maintaining their link with the traditional method of production, are protected by the Traditional Specialty Guaranteed (TSG) system. It has to be pointed out that TSGs are not GIs, and the property right to use the protected name is assured to all the producers who comply with the code of practice, independently from the place of production. TSGs system of protection co-exists with individual EU member countries systems of recognition (for example, two Italian TSGs are protected under the EU TSG system, while around 5,000 food products/recipes are recorded in the Italian '*prodotti alimentari tradizionali*' list [3]).

2. *Branded food products of Kazakhstan*

Priority commodity positions in Kazakhstan for the assignment of labels in accordance with the European scheme as products of PDO, PGI, are: Shymkent beer, Saryagash water, sublimed powder koumiss Saumal, Rakhat chocolate, national sour-milk products - koumiss and shubat.

Regional products are a cultural tradition, technologies that have been developed for centuries, pride and motivation. An important role in promoting such products, both on the domestic and foreign markets, can be played by a geographical indication.

Products of "Eurasia Invest LTD" LLP - dry mare milk "Saumal" - received a declaration of compliance with the requirements of the Eurasian Customs Union for Security. The international document gives the right to sell the product both on the territory of the Eurasian Economic Union (EAEU), and export to abroad countries [21].

As a result of freeze-drying of mare's and camel's milk, powder remains, which when re-diluted with water retain practically all the beneficial properties of milk [16, 17].

The composition of any kind of milk includes two groups of proteins - whey and caseins. The casein group is quite problematic for the children's stomach, since it does not dissolve in water. When digested, this casein forms a clot, which is difficult and not always qualitatively absorbed by the body. Hence, disorders of the gastrointestinal tract and allergic reactions. But whey proteins are easily absorbed. In milk, there are two types - albumin and globulin. The first contains a valuable irreplaceable amino acid tryptophan, which is not found in any other protein. The second is the carrier of immune bodies. Immunoglobulins have the ability to "glue" foreign proteins and cells of microorganisms, thus providing antibacterial protection to newborns [18].

In this regard, the dietary supplements powder of carrot and holy thistle (*Silybum*) can be used as the fortification sources of antioxidants, flavonoids and various vitamins [2].

Of course, caseins are also needed for the human body; it's all about their quantity. If the ratio of caseins and albumins in cow's milk is 80 to 20%, then in female milk it is 72%. In mare, the balance is ideal - 50 to 50%. As a result, saumal is easily digested by the stomach, without causing allergic reactions. It is recommended to use milk powder, dissolved in water, obtained from sources located in the resort area of Saryagash. It is possible to talk about the beneficial effect of two natural resources of Kazakhstan - the natural water of Saryagash and Saumal - on each other. Even at the first tasting, patients positively assessed the taste of the drink, its beneficial tonic effect on the body.

Interest in mare milk in the world has been growing in recent decades, and therefore this product "Saumal" is promising, and significantly expanding the sales market, it can be attributed to products with a geographical indication, as well as water Saryagash.

As for national fermented dairy products such as koumiss and shubat, it is difficult or even wrong to say today that the potential of goods with the name of the place of production is realized. Much more serious work is needed on the domestic and foreign markets, it is necessary to acquaint the foreign consumer with these goods, ensure compliance with the declared quality standards and ensure the protection of intellectual property [1].

For the assessment to the European criteria for GI the work to be done in this direction consists of the following steps, after having identified the institutional context:

1. Development of standards and regulations
 - Define the historically-linked method of production
 - Implementation and management of the internal control system
 - Conflict resolution and arbitration
 - Identification of the tradition-based production area
2. Ensure production
 - Technical support of production processes
 - Training of manufacturers and further training
 - Introduction of innovations in the production process
3. Marketing support
 - Development and implementation of collective marketing campaigns
 - Ensuring a balance of marginality along the value chain
 - Development, promotion and updating
 - Market analysis, sales optimization
 - Support for individual marketing campaigns of manufacturers
4. Protection of interests
 - Counteraction to counterfeit goods

- Ensuring that all positions are taken into account when managing the production of the product, ensuring high confidence between participants [9].

CONCLUSION

This review highlights the social success of branded eco-products that with certain marketing support and legal protection can be assigned the signs of PDO, PGI, TSG.

In the above mentioned Kazakhstan brand eco-products some attributes inherent in GI products are traced: typicality and uniqueness connected with the territory; reputation among consumers, mainly in the export markets in developed countries, but they are not guaranteed by legal processes.

This is a new direction for Kazakhstan to promote and support agricultural products, organic food and beverages with a geographical indication will positively increase food industry, social and environmental consequences. Thus, further work is needed to identify the branded organic products with high commercial potential and support for the ecotourism.

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ҚАЗАҚСТАННЫҢ ДӘСТҮРЛІ АЗЫҚ-ТҮЛІК ӨНІМДЕРДІ СӘЙКЕСТЕНДІРУ ЖАҢА ТЕНДЕНЦИЯЛАРЫ

Аннотация. Дәстүрлі азық-түлік өндірушілеріне қойылатын талаптар мен олардың аймақтық брендтермен немесе географиялық көрсеткіштерге ие (GI) өнімдермен өзара қарым-қатынасы талқыланады. Регионалдық және территориялық деп аталатын, осы аймақта өндірілген өнімді ілгерілететін брендтердің дамуы тауарларды қадағалау тұрғысынан тұтынушылық сұранысты қанағаттандырады. Сонымен қатар, дәстүрлі азық-түлікке жаңа потенциалды сұраныс пайда болады, мысалы, GI Еуропалық Одақ үшін болып жатқандай, өндіріс және дәстүрлі өндіріспен берік байланысқа ие. GIs өнімдерінің заттаңбалары тұтынушыларға шығу тегі мен өндірістік әдісті қамтамасыз етеді. Қазақстандық органикалық сүт өнімдерінің потенциалы салауатты тамақтанудың маңызды құнын анықтау және ауыл шаруашылығы өнімдері мен азық-түлік үшін сапалы этикеткалар талаптарына сай мүмкіндігі бар: шығу тегінің қорғалған белгісі (PDO), географиялық көрсеткіш (PGI) және дәстүрлі арнайы кепілдік (TSG) қорғалған. Мысалы, қорғау жүйесі TSG жеке ЕО мүше мемлекеттердің тану жүйелерін, ЕО TSG жүйесі мен «prodotti alimal tradizionali» итальяндық тізімінде жазылған шамамен 5000 тағамдар / рецепт бойынша қорғалған екі итальяндық TSG бар. Көрсетілген шолуда «Қазақстанда жасалған», «ірімшік», «шұбат», «қымыз», «саумал», т.б. Қазақстанда шығарылатын фирмалық сүт өнімдері сипатталған. Бұл жаңа әзірлемелер ауыл шаруашылығы өнімдерін ілгерілету және қолдауға мүмкіндік береді. Географиялық нұсқаулары бар органикалық азық-түліктер мен сусындар тағам өнеркәсібін, әлеуметтік және экологиялық салдарына оң әсер ете отырып жақсартады.

Түйінді сөздер: сүт өнімдері, органикалық өнімдер, географиялық көрсеткіштер, аймақтық брендтер, PDO, PGI, TSG индикаторлары.

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НОВЫЕ ТЕНДЕНЦИИ В ИДЕНТИФИКАЦИИ ТРАДИЦИОННОЙ ПИЩЕВОЙ ПРОДУКЦИИ КАЗАХСТАНА

Аннотация. Обсуждаются требования к традиционным производителям продуктов питания и их связь с региональными брендами или продуктами с географическими показателями (GI). Развитие так называемых региональных или территориальных брендов, которые продвигают продукцию, произведенную в данном регионе, удовлетворяет потребительский спрос в терминах прослеживаемости происхождения товара. Кроме того, появляется новый потенциальный спрос на традиционные пищевые продукты, которые имеют более прочную связь с производством и традиционным способом производства, как это происходит, например, для GI Европейского Союза. Этикетки продуктов GIs гарантируют потребителям происхождение и способ производства. Потенциал органических молочных продуктов Казахстана имеет возможности для определения значимой ценности здорового питания и удовлетворения требований к этикеткам качества для сельскохозяйственной продукции и продуктов питания: защищенное обозначение происхождения (PDO), охраняемая географическая индикация (PGI) и традиционная специальная гарантия (TSG). Например, система защиты TSG существует с системами распознавания отдельных стран-членов ЕС, два итальянских TSG защищены в рамках системы TSG ЕС, а около 5000 пищевых продуктов / рецептов записаны в итальянском списке «prodottialimaltradizionali». В представленном обзоре описаны фирменные молочные продукты, производимые в Казахстане, такие как: «сделано в Казахстане», «иримшик», «шубат», «кумыс», «саумал» и др. Эти новые тенденции позволяют продвигать и поддерживать сельскохозяйственную продукцию. Органические продукты питания и напитки с географическим указанием будут положительно улучшать пищевую промышленность, социальные и экологические последствия.

Ключевые слова: молочные продукты, органические продукты, географические показатели, региональные бренды, PDO, PGI, TSG показатели.

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