

System approach to the creation of Siberian brands on the example of adaptogenic drinks from local plant materials

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Abstract. The subject of the article is to justify the prospects of using a systematic approach to creating a regional brand. The productivity of this approach is due to the fact that the process of designing a regional brand product as a system is characterized by the presence of a specific set of system-generating, system-forming and system-dependent factors. Their analysis is presented in this article. Features of the application of a systematic approach to the management of the range and quality of innovative products is shown by the authors in relation to the life cycle of products based on vegetable food raw materials with biologically significant active principles.

1. Introduction

Any scientific and technical development in the field of the extraction or use of a raw material resource will be effective and in demand if such development is aimed at creating a new product with improved consumer properties [1]. At the same time, it is necessary to solve the organizational and technical tasks simultaneously that determine the resource efficiency of the innovative technology being developed and the socioeconomic ones that ensure the steady demand of the population for the product being created.

The synergistic solution of these problems in food production, in our opinion, is determined by two basic settings:

- an integrated scientific approach to the organization of rational processing of raw materials;
- focus on long-term success in the market by not just manufacturing a product as the material embodiment of some recipe and technology, but by creating a brand, that is, a dynamically developing product portfolio characterized by sustained customer loyalty.

To create a Siberian grocery brand, the following premises can be distinguished: its attractiveness to consumers. First, severe climatic factors make it necessary for Siberians to provide products with high biological value that stimulate the body's adaptive abilities [2]. It is important to take into account the traditions of consumption of the product of this type, as well as its current and potential role in the daily diet. Secondly, the taste, energy and other characteristics of the product, which are important for the consumer, should meet the prevailing preferences of the target groups as much as possible [3].

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Third, the usefulness of the product for the public should be scientifically grounded and objectively proved using a complex of modern studies [4].

The listed reasons for the attractiveness of the brand which is being created for a Siberian consumer can be fully realized in the development of adaptogenic drinks based on wild-growing, introduced or obtained under controlled conditions of local plant raw materials. The purpose of this study is to prove the practicability of applying a systematic approach to creating a regional brand, allowing to identify and manage the factors that ensure recognition and effective product positioning among competitors.

2. Experimental part

The object of the research was enriched adaptogenic beverages.

The first criterion for the choice of the object of study was the uniqueness of the natural properties of wild-growing raw materials of the Krasnoyarsk Territory in terms of its compliance with the special needs of the population of Siberia and the Far North. The second criterion is the ability of locally introduced plant raw materials and raw materials obtained under artificial growing conditions with controlled environmental factors to accumulate beneficial properties when grown under different conditions in optimal quantities. The third criterion is in the proximity of such raw materials to the sites of processing.

Optimization of manufacturing technology and recipes of beverages with specified adaptogenic properties was carried out taking into account the conditions that simultaneously ensure the resource efficiency of production and sustainable customer loyalty.

Among such conditions, one should note the observance of safety standards, as well as the balance of parameters characterizing the usefulness of the product and its compliance with consumers' taste preferences. In addition, it is important to maximize the preservation of the useful properties of raw materials during processing and ensure the stability of product quality indicators at the stages of circulation.

The following circumstances confirm the relevance of the chosen positioning directions and means of promoting created adaptogenic drinks as objects of regional branding. An analysis of the current market supply shows a shortage of products of this type with an acceptable level of security and objectively proven utility. At the same time, there is an increased degree of public confidence in locally produced products that have passed quality control in regional centers of conformity assessment.

At the same time, the specificity of non-alcoholic beverages consumption allows to involve actively various segments of the population in tastings and thus not only quickly identify consumer preferences, but also include consumers in the process of interaction with the brand, which is an important condition for its development and expansion [5].

The research methodology is based on the system approach developed in line with the ideas of E.G. Yudin [8].

3. Results

The process of creating Siberian brands of adaptogenic drinks based on local raw materials is a complex system that integrates interdisciplinary scientific knowledge and practical application. The features of application of a systematic approach to managing the range and quality of innovative products was shown by the authors in relation to the life cycle of products based on vegetable food raw materials with biologically significant active principles. The following raw materials were selected: wild rosehip varieties and introduced buckthorn and currant varieties with enhanced vitamin properties; as well as adaptogenic and immunostimulating plants (*Rhodiola rosea*, *Echinacea purpurea*) and a source of sugar substitutes (stevia), obtained under conditions of regulation of nutrient substrates and changes in the spectral composition of light [6, 7].

Creating a product brand capable of becoming regional take into account the need to manage the range and quality of innovative products, which makes it possible to consider it from the point of view of a systematic approach.

Another important step in the framework of the creation of regional products based on vegetable raw materials is the development and optimization of new technological modes of processing of raw materials and methods aimed at creating a product with improved or fundamentally new consumer properties. This stage should provide guarantees of maintaining the status of a regional brand through certification of the production process and confirmation of compliance with the declared consumer properties of the product which is being created through a system of defined indicators.

To implement a marketing strategy for promoting a regional brand product to the market, it is necessary to take into account not only the features of the target consumer segment and the emerging competitive conditions. A significant moment is the psychological component of consumer perception. In this case, you need to understand that regional brand, providing the local population in its specific living conditions a product with the desired beneficial properties, is seen in one way, and for consumers in other regions, especially remote from Krasnoyarsk region in particular and Siberia as a whole - in a somewhat different, more exclusive. In this connection, the positioning of such products should take into account several important factors, namely:

1. For the local consumer, the important characteristics should be utility, special taste and high confirmed (especially in comparison with products from other regions) quality. In this case, a patriotic attitude will be formed towards the products of the regional brand, the region and Siberia; at the household level, such products want to "share" as souvenirs, gifts, presents, treats.
2. For an extraregional consumer, positioning in addition to the same characteristics should be shaped with an emphasis on the wealth and bounty of nature, which creates unique products.

Positioning regional branded products within the region and beyond should be based on appropriate information to different purposes of product support, disclosing the advantages of both direct users and indirect stakeholders.

A special feature is the investigation of the process of creating a regional brand products as the system is the specific complex, system generative, system forming and system dependent factors related to the fact that the definition of objectives to them based on certain government documents [6, 7] priorities in the field of safety and health of the nation, expressed in conceptual and legislation.

System generative target state of the system create a regional brand products for example adaptogenic drinks includes the goal of a different rank. Home exogenous aim directly determines the satisfaction of the interests of all consolidated entities interacting socio-economic space (federal, regional and municipal authorities, consumers of goods and services, product manufacturers). Objectives of lower rank associated with the system performance of the technology development of branded products, positioning itself and the region as a guarantee of quality, security and unique consumer properties, are complementary: preparing the ground for its subsequent optimization procedure. In this study, the extent of systemic involves access to a variety of control methods, the quality of products and their forming factors.

Studies related to the control of parameters in light-culture conditions [6, 7], with a general similarity of technologies (changes in the spectral composition of light), had different points of control and comparisons (different planting material or comparison with similar plants on the dynamics of growth and accumulation of a complex of substances, or dynamics accumulation of active principle on elements of one vegetative part of a plant with different levels of development). The goal-setting of these studies was expanded to the creation of products for various purposes, the physiological influence of which was determined by the properties of the active principle (diabetic, immunostimulating, adaptogenic orientation). From the point of view of human ecology, its presence in implementation will allow at least partially mitigate the problem of increasing immunity and the adaptability of the population to the harsh working and living conditions and unfavorable environmental conditions associated with anthropogenic activities.

The system-generating contradiction between the direction of development of the object of research and the possibility of providing it includes a whole range of contradictions: between the interests of different categories of interacting subjects of the socio-economic space, between the capabilities of regional producers, the quality confirmation system and market needs, etc. Internationalization of business, “erosion” national, regional boundaries, dominance in the global markets of transnational corporations generates a lot of contradictions that are closely related to the interests of regional production, the rational use of local resources to provide the specific properties of the products that meet the needs of the region in extreme conditions. Such problems are complex, systemic in nature, where it is difficult to identify the hierarchy of the importance of existing forces and factors of development. The identification of this determinant is the most important methodological prerequisite for the system representation of the socio-economic phenomenon under study.

The system group of factors includes properties, composition and structure. In the system under consideration, the first two factors are attributed to the chemical and raw material composition, the aggregate of consumer properties determined through a system of standardized indicators. In terms of chemical composition, we are talking about creating enriched products that have a high content of certain physiologically significant substances, which in our study is achieved either by selecting individual botanical varieties of fruit or berry crops, or by controlling environmental parameters to accumulate the active principle in the required quantities [6, 7].

The structure of the system for creating a regional brand product implies the constancy of relations and communication between elements of a unique socio-economic phenomenon that has complexity due to its longline organization (at the level of an individual enterprise, industry, region, etc.), which in turn sets and appropriate levels of connections available elements of the system.

The third group of factors contributing to the formation of the system includes economic, managerial and social, determined by environmental conditions and imposing restrictions on the preservation, functioning and development of an object as a system, ensuring its reproduction within specified limits. The first group includes restrictions that are expressed in the organization’s desire to break-even, increase profitability and are designed to resolve the contradiction between the capabilities of the enterprise and the demands and needs of the market. The bans associated with management are due to the existence of a strategy for the functioning of the entire system of regional brand management in general and an individual enterprise, the industry in particular, as well as the existence of government regulation in the event of socially significant products being released. The prohibitions with the social aspect of the research are a concrete resolution of the contradiction between the interests of various categories of interacting subjects of the socio-economic space: federal, regional and municipal legislative and executive bodies, consumers of goods and services, and producers of products.

4. Conclusion

The presented ways of implementing a system approach in creating a regional brand using the example of food products do not exhaust all the possibilities of its application, but only indicate the vector of scientific research and practical application of the methodology in further developments. Expanding and deepening the concept of management in relation to the creation of a regional brand has become possible when state priorities are included in the complex environmental factors, including in the area of ensuring the health and safety of citizens. From the internal factors, the technological parameters of obtaining significant raw materials were added at the “pre-production” stage and confirmation of compliance with the innovative or specific properties of the finished product.

References

- [1] Cooper RG 2011 *Winning at New Products: Creating Value Through Innovation* (New York: Basic Books)
- [2] Evmenova L N 2018 Traditional food culture of siberian peoples *Vestnik Slavianskikh Kultur - Bulletin of Slavic Cultures* **48** pp 67-75

- [3] Kim-Soon Ng, Ahmad A R and YuanHow Y 2018 Creating sustainable snack food business success through brand experience and brand loyalty *Advanced Science Letters* **24**(5) pp 3018-21
- [4] Stoklasa M and Starzyczna H 2016 Regional brand benefits for companies – comparison of 2013 and 2015/6 *19th International Colloquium on Regional Sciences. Conf. Proc.* June 15-17 2016, Čejkovice, ed V. Klímová and V. Žitek (Brno: Masarykova univerzita) pp 210-217
- [5] Visram Sh, Crossley S and Cheetham M 2017 Children and young people`s perceptions of energy drinks: A qualitative study *Plos One* **12**(11) e0188668
- [6] Menylo L N et al. 2015 *Scientific Basis for the Formation of a Range of Food Products with Desired Properties. Technologies for Production and Processing of Vegetable Raw Materials* (Krasnoyarsk: Sib. Feder. University)
- [7] Gulenkova G S, Demakova E A, Doyko I V, Zobnina I A, Krotova I V and Rybakova G R 2016 *A Systematic Approach to Managing the Assortment and Quality of Products* (Krasnoyarsk: Sib. Feder. University)
- [8] Yudin E G 1978 *System Approach and Principle of Activity: Methodological Problems of Modern Science* (Moscow: Science)

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