

Special Aspects of Formation of Organic Products Food Market Segment

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Abstract—The article considers the organization of agricultural markets of organic products and the optimization of the placement of raw material zones of organic agriculture based on the use of mapping-zoning technology, which is a technique for segmenting an object of research by criteria. Criteria of segmentation of production and processing of agricultural products, with allocation of local markets of agricultural products are offered. The article assesses the strategic directions of development of individual segments of agricultural commodity production based on organic farming methods with a focus not only on the internal needs of the population and the formation of segments of organic products in the food market, but also exports, especially to Asian countries. Ecological agriculture and processing of agricultural products are considered in conjunction with other sectors of the economy, soil fertility, quality and certification of organic products, as a strategic direction for the development of agricultural production.

Keywords—segment, organic products, formation, food, local market.

I. INTRODUCTION

In the last two decades, organic agricultural products have been in demand in the world and domestic agri-food markets. The transformation of the food market has led to changes in the vectors of development, which was a consequence of the formation and development of a special segment as an independent market of organic products. Accordingly, organic farming methods are introduced in agriculture, which entails the creation of specialized organizations for the production of environmental products. More than 50 certified organic agricultural enterprises successfully operate in the Russian Federation [1,2].

II. RESEARCH METHODOLOGY

The basis of theoretical and methodological research is presented by the works of domestic and foreign scientists on the problems of agricultural production, land relations; recommendations of the Russian Academy of Agricultural Sciences. The assessment of normative legal acts of the subjects of the Russian Federation, the EU on the development of ecological agriculture, IFOAM standards is given. The research is based on a systematic approach that allows to ensure the complexity and purposefulness of scientific recommendations. Analytical, abstract-logical, computational-constructive, economic-statistical, economic-mathematical, monographic research methods are also applied. A methodological approach is proposed to justify the

location of production of organic agricultural products and food, its localization using mapping zoning methods, based on the method of mapping with the allocation of locally placed segments according to certain criteria or attributes based on a point-rating system. It allows to allocate local segments of the branch markets with application of signs of geographical and behavioral segmentation as the basic information for segmentation on these signs most often has open character. This criterion of segmentation on a geographical basis can be natural-economic zoning of the area under consideration, the criterion of segmentation under behavioral symptom may be the degree of need of the residents in a particular product. In the end, the allocation of segments is reduced to the ranking of local markets.

III. LITERATURE REVIEW

In historical significance, the conditions of development of territories and the problems of economic space attracted the attention of ancient philosophers (Aristotle, Plato). However, the space factor was not fully taken into account. Conditions of development of the territories limited by state borders remained a subject of scientific researches of scientists in all periods of economic thought.

Mercantilists singled out foreign trade as a source contributing to the development of the territory. Physiocrats said that an important condition for the development of the territory of the country is "... agriculture, as it is here that matter grows". French historians noted that the mercantilists represented the country in the role of a rich merchant, and physiocrats - in the image of a rural nobleman who lives on his land and eats its fruits" [3,4].

U. Petty was a bright representative of the classical school and in his works emphasized the factors that are involved in the creation of the product in natural conditions. Two factors (land and labor), in his understanding, were the main ones. The remaining factors are involved in the creation of an organic product, but are not the main ones. These include: qualification and professionalism of the employee; means of labor (fixed and circulating assets).

A. Smith also believed that the market economy develops in accordance with a certain order and according to certain rules. But unlike the physiocrats, he said that, guided by their own motive, each participant in economic activity seeks its own benefit. Assessing the impact of an individual participant of economic activity on the implementation of the needs of society, A. Smith said that it was almost imperceptible. But, being guided by obtaining own benefit, the person, eventually,

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influences growth of a public product and welfare that will affect positively development of territories [5].

D. Ricardo, in contrast to A. Smith, makes a strict distinction between value and wealth, considering the identification of these categories to be incorrect. The size of a country's wealth, its increase are directly dependent on the availability of "necessities and luxuries" that are in the possession and disposal of the people. Regardless of the cost of these things, they will equally meet the needs of the person. Cost differs greatly from wealth, "since it does not depend on abundance, but on the weight or ease of production" [6].

Representatives of the historical school, including F. List, condemned the concept of the classics for its unfitness in practice and universality. The creation of conditions for the development of territories should not be achieved by uniting disparate people who are bound only by the division of labor and exchange. The fulfillment of this condition is not enough for the development of a set of local territories. "To obtain the best results – participants of economic relations need to interact and unite mentally, materially" [7, p. 200]. F. List saw the main condition for the development of the territories in the increase of productive forces "starting with a separate factory and then spreading to the national association" [7].

IV. RESEARCH RESULTS

Russian agriculture is developing at a steady pace: Russian producers confidently lead in the production of wheat, buckwheat, millet, etc.

Russia is also developing a market for organic products, which is a relevant segment of the food market, aimed at consumers seeking to preserve their own health and their loved ones. We believe that consumers of organic products with appropriate measures of state support and regulation can be separate age and sex groups.

Scientific research in the field of transition of certain local segments of agricultural producers to the production of organic products has not yet been sufficiently developed. They should be comprehensive, so the inclusion of issues of

fertility, quality and certification of organic products is relevant [1].

The development of organic products and food markets in Russia largely reflects the socio-economic and natural features of the Russian territories.

The main issue of effective development of local markets is the problem of product sales. Therefore, the strategic direction in the long-term development of local zones for the production and processing of agricultural products should be the optimization of the placement of agricultural raw materials and processing enterprises.

In our opinion "... the problem of optimal zonal placement of raw materials markets of agricultural products can be solved with the use of marketing technologies, which consists in determining the territorial placement of raw materials and processing facilities with the allocation of priority strategic specialized segments (areas) for production and commercial activities of organizations in accordance with the resource capabilities of territorial agricultural zones. The market, localized in a certain territory, is determined not only by the purchasing power of consumers, but also by the level of concentration of sellers and buyers; suppliers and intermediaries, the concentration of resources and logistics, as well as other market participants" [8].

A number of authors believe that "... the method of mapping is considered as segmental zoning of a limited territory by means of mapping with the designation of geographically located segments according to certain criteria. At the same time, the optimal commodity flows and their territorial zoning are determined and the optimal channels of product distribution are determined" [8,9].

Natural and climatic conditions and land and resource potential of the region allow to effectively develop the economy of the agricultural sector. The complex and consistent use of different sources allows us to propose an organizational and economic mechanism for the functioning of branch markets of organic products (Fig.1).

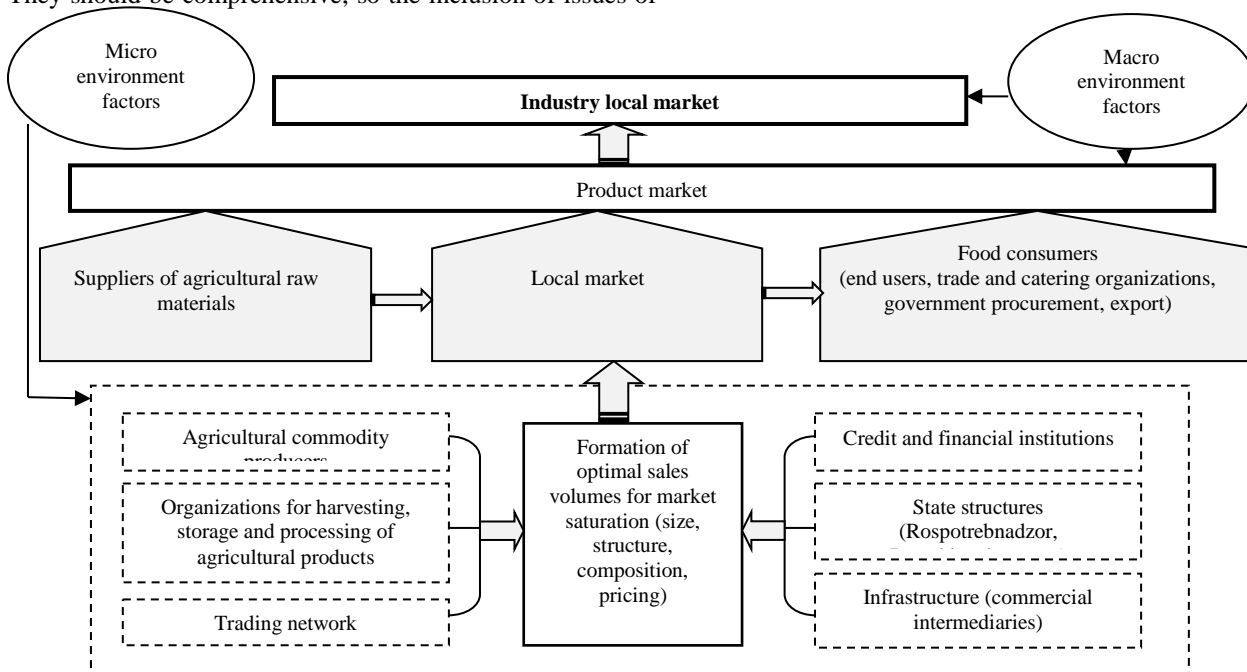


Fig. 1. Organizational and economic mechanism of functioning of the industry market of organic products [8]

Application of segmentation methods allows on the basis of ranking of indicators of development of local branch markets to estimate perspective development of the market of organic production. The result is formed in the form of a two-dimensional matrix (Fig. 2) [8]. At the same time, segment A assumes a stable level of competitiveness, market leadership and an increase in sales markets. Segment B characterizes the industry market as unstable with the priority of improving the consumer properties of food, rebranding or positioning the industry as a whole in order to form a consistently high competitiveness of products [8].

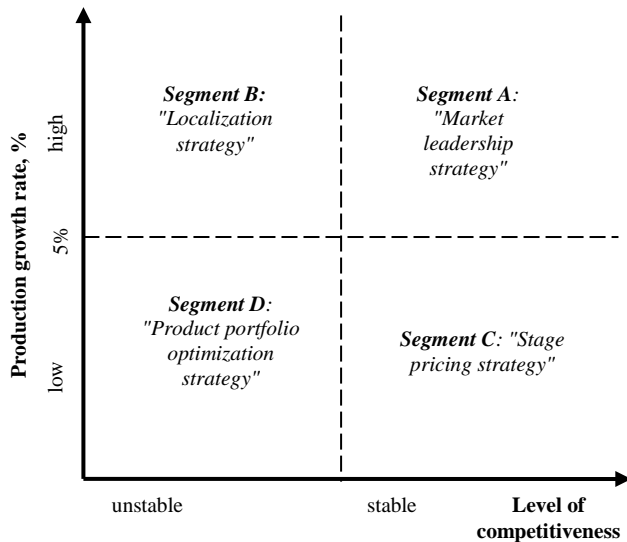


Fig. 2. Strategic matrix "production/competitiveness" [8,9]

Segment B determines the choice of waiting strategy. Segment C shows low rates of production growth and unstable level of competition, which determines the choice of multiplication strategy, attracting investment in the industry and increasing the organoleptic properties of the products.

An example of using the mapping-zoning method is the market of dairy products of the Altai Krai, ranked by geographical and commodity characteristics (Fig. 3, table 1) [8,9].

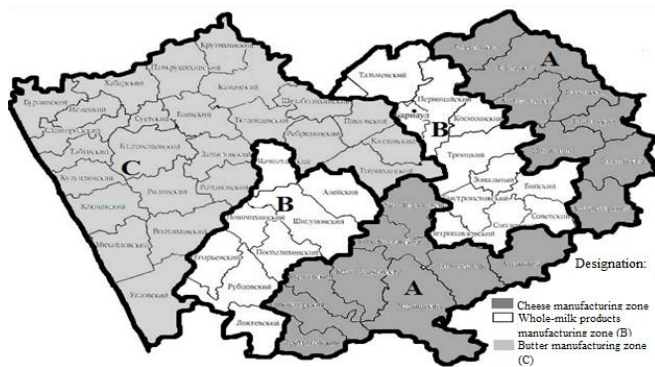


Fig. 3. Perspective mapping-zoning of the industry local market [8-10] Perspective mapping-zoning of the industry local market [8,9]

Local markets	Cheese of different fractions		Butter		Whole milk products	
	%	thousand tons	%	thousand tons	%	thousand tons
Zone A	85	66.7	15	29.3	3	12.6
Zone B	10	7.6	20	39.0	32	130.8
Zone C	5	4.3	65	126.8	60	245.2

The application of the mapping method allows to optimize not only the local segment in terms of placement of agricultural raw materials, but also solves issues of socio-economic nature.

Studies of the location of production and processing of agricultural products in the Altai Krai showed that the raw material zones of the region are located in the North and West of the region, processing industries are distributed in the North, which causes the problem of effective functioning of rural areas and local markets located on them - spatial remoteness (table 2). At the same time, more than 21% of the population of the region lives in areas remote from the concentration zones of processing and food industries.

TABLE I. LOCALIZATION OF PROCESSING INFRASTRUCTURE FOR 2015-2017, % [9,10]

Name	Milk processing industry	Meat processing industry	Grain processing industry
Prialeysk zone	9	13	15
Altai zone	6	–	–
Kulunda zone	20	8	28
Biysk-Chumysh zone	33	65	33
Prisalair zone	8	3	5
Priob area	16	5	15
Prialtai zone	8	6	4

The significant issue for effective development of local markets is the problem of product sales.

Therefore, the strategic direction in the long-term development of local zones for the production and processing of agricultural products should be the optimization of the placement of agricultural raw materials and processing enterprises.

The development of the market of organic products in the Altai Krai and other regions involves a comprehensive assessment of the suitability of territories for various forms of economic activity, including the assessment of total biological productivity, comfort of meso- and micro-climate for recreation, the efficiency of agriculture, forestry and hunting with the preparation of appropriate maps and registers. This information is useful for assessing the value of land, their optimal use and is included in the range of tasks solved by landscape planning (Spatial planning, Environmental planning, Landuse planning). It also requires assessment of condition and mapping of specific resources [9], justification of the need for ecosystem services, including: engineering and environmental assessment of the relief, meso- and micro-climate assessment, taking into account the spatial structure of the vegetation cover, analysis of soil quality and their potential productivity, forest development projects, allocation of types and valuation of hunting areas.

V. CONCLUSIONS

The development of the market of organic products in the regions involves the analysis of territories for economic activity, including the overall biological productivity, comfort of meso- and micro-climate for recreation, efficiency of agriculture, forestry and hunting with the preparation of

appropriate maps and registers. These issues can be solved by digital economy in terms of assessment of mapping of specific resources, services, including engineering and environmental assessment of relief, meso- and micro-climate, potential for conditionally bare surface and real, taking into account the spatial structure, vegetation cover, assessment of soil quality and their potential productivity, forest development projects, allocation of types and valuation of hunting areas (intra economic inter-farm hunting) [10]. The development of the organic products market corresponds to the modern trends of agro-industrial production in the world economy. This is due to the fact that the market of organic products is associated with less damaging to the natural environment of agricultural production. Therefore, to a greater extent, in comparison with the traditional food market, it corresponds to the conditions of sustainable development of the world economy as a whole, adopted by the FAO world session in Rome in 1996 [11].

The production of environmentally friendly agricultural products and food can be called innovative from the economic standpoint, from the supply side, that is, from seller's market [12]. The market of organic products is considered by us from the standpoint of sustainable interaction of supply and demand, it involves the assessment of the necessary conditions to ensure their balance. At the same time, the market for organic agricultural products and food is affected by many factors that affect both the production and consumption of these products. The factors of negative impact on the formation of the market of organic agricultural products and food should include a very insufficiently formed regulatory framework not only for the market, but also for the entire technological "chain" of organic products production, which would allow to give an objective assessment of their quality and on this basis motivate consumer demand. At the stage of formation of the organic agricultural products market, it is necessary to form competence centers for producers of organic products in localized production zones, marketing services, expansion of information support for the population, including the Internet, which allows to increase significantly awareness of the requirements for the production technologies of organic agricultural products and food.

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