

**Промышленная политика и устойчивое
развитие экономики**

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ОЦЕНКА ПРОБЛЕМ И ПУТЕЙ РАЗВИТИЯ АГРАРНОГО РЫНКА

Аннотация: В статье исследованы совокупный объем рыночного спроса на сельскохозяйственную продукцию, выявлены динамика и тенденции на рынке сельскохозяйственной продукции, определены спрос и предложение на аграрном рынке и перспективные отрасли, сделан анализ самообеспечения и продовольственной безопасности Ставропольского края. Это позволило определить приоритеты развития предпринимательской деятельности в аграрном секторе экономики, которые автор распределил следующим образом: возделывание и переработка подсолнечника, овощеводство закрытого и открытого грунта, плодоводство, возделывание и переработка сои, молочное и мясное скотоводство, мясное овцеводство и производство зерна.

Ключевые слова: рынок, сельскохозяйственные организации, сельское хозяйство, предпринимательство, аграрный рынок, рынок сельскохозяйственной продукции, эффективность, агропромышленный комплекс, бизнес, аграрный сектор экономики

Industrial policy and sustainable development of economy

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**ASSESSMENT OF PROBLEMS AND WAYS OF DEVELOPMENT OF
AGRICULTURAL MARKET**

Abstract: The article gives an evaluation for the market for agricultural products, and the main directions of development of entrepreneurship in the agricultural sector on the example of the Stavropol region of the Russian Federation on the basis of data analysis of the balance resources and their use in

the context of product groups . It allowed to determine that the Stavropol region is self-sufficient in grain, meat and milk , and the most dependant on the export of fruit , but the share of imported food supply decreases annually . The application of the BCG Matrix of the investment strategic positions of commodity groups of agricultural products of the Stavropol Territory has allowed to establish the priority sub-sectors for the development of entrepreneurship in agriculture.

Keywords: *market, agricultural organizations, agriculture, business, agricultural market, the market of agricultural products, efficiency, agriculture, business, agricultural sector*

The Food Doctrine of the Russian Federation's strategic objectives highlights the formation of socio-effective national market for agricultural products, which is influenced by the particular features of the regional markets and global trends. All numerous factors affecting the development of the market for agricultural products can be united in groups: - economic - social; - scientific- technical and natural- climatic factors.

As an object of investigation we allocated markets in the following main groups of agricultural products: grain; meat and meat products; milk and dairy products; potatoes; vegetables and melons; fruits and berries; eggs and egg products; fish and fish products.

The total volume of market demand for any given time was evaluated with the indicator of the market capacity as possible volume of goods' sales at a certain price level. During the last 5 years in all considered markets the growth of their capacity at the regional level with the highest growth rate was observed, excluding the year 2010, when there was a significant reduction in the size of markets of crop products in 2010 due to unfavorable climatic conditions during this period.

The concentration of the North Caucasian and Russian markets is considered relatively stable, which is defined as the ratio of the capacity of the regional market to the average regional and nationally ones, respectively. So, the share of the regional market accounted for from 12.3 in 2008 to 12.7% in 2012, the capacity of the regional market from 1.8 to 1.9% of the national average, or 12.4% and 1.86%. The average level of concentration for milk constituted 10.3% and 1.5%, potatoes - 12.6% and 1.6%, vegetables - 12.1% and 2.9%, fruits - 6.5% and 1.5 %, eggs - 13.9% and 2.2% (Fig. 1).

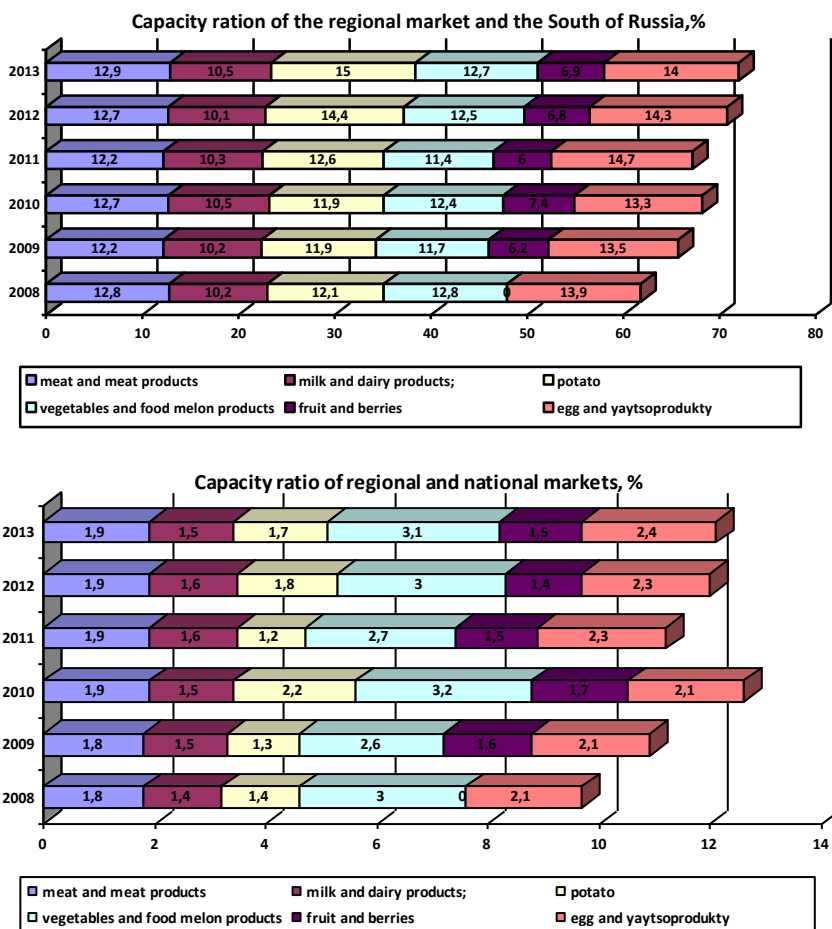


Figure 1 - Market capacity of main agricultural products in the Stavropol Territory, %.*

The basis of the balance sheet of data resources and their use in the context of product groups allowed us to calculate the number of indicators:

- the level of self-sufficiency as the ratio of production in the territory to its domestic consumption (production consumption + private consumption + loss of production+recycling products for non-food purposes);

- the import dependence as the ratio of import to the territory, including imports to "total resources";

- the import consumption as the ratio of import to the territory, including imports to domestic consumption;

-the exported level as the ratio of export, including the export to production;

- the balance of trade as the difference between exports and imports to the territory;

- the coefficient of openness of the agricultural market as the ratio of foreign trade turnover of the main food groups goods to their production:

$$Co = (I+E) / STMC \text{ (share of total market capacity)}$$

If $Co = (I+E) / STMC > 1$ – the branch is importing ;

If $Co = (I+E) / STMC < 1$ – the branch is exporting .

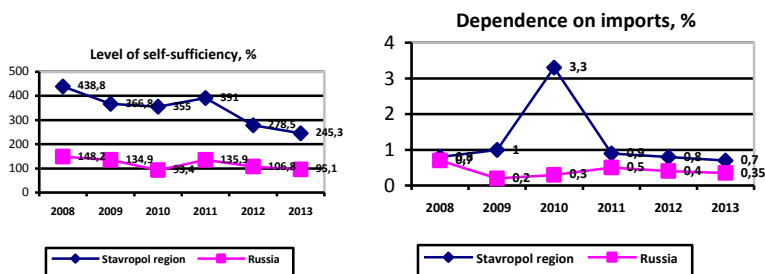
When increasing the degree of market openness the level of market concentration is reduced, which to a certain degree leads to the increased competition from foreign suppliers. It is possible to estimate the share of imported goods and imported products in the total sales for a particular product market:

$$LIM = I / (P + I - E) \times 100,$$

where LIM (Level of imports at the internal market), I (Imports), P(Production), I(Import), E(Export).

This figure is also the starting point in addressing issues related to protective measures for domestic producers. The border to assess the number of the threatening share of imports is considered to be 10-35% on various commodities.

From the data it is evident that the region is self-sufficient in grain provision (Fig. 2), meat and milk. The lack of resources in the territory's own products is covered by the import from other regions and other imports. So the market is the most import dependant on fruits, the share of imports ranges from 44.7 to 46.9% and on fish by more than 65%. In the Stavropol region it is observed the decline of import dependence on potatoes and vegetables (almost 2-fold decrease), significant increase of dependance on imports(almost 2-fold increase), milk – (35.5%), eggs (1.8 –fold).



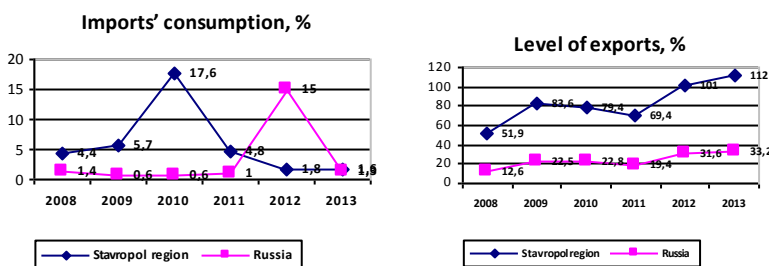


Figure 2 - Fragment of an Analysis of the grain market in the Stavropol Territory

As a result, the level of the import consumption of meat has increased 2.5 times , milk - 1.4 times, eggs - 1.7 times, fruit and eggs - 5.1%, grains - has reduced up to 60%, potatoes - 45%, vegetables - 47%.

Under identified trends of the import dependance ,the operated level in the Stavropol region increased up to 95% in the grain production , meat – up to 2.3 times, milk – up to 12.5%, vegetables – up to 6.7 times, fish – up to 4.5 times, fruit decreased - 56%, eggs - 23%.

The comparison of import and export of products allows to determine the trade vector . So the regional market has an active trade balance of grain, meat and milk. [1]

The importing industry is considered to include the production of fruits and berries, as openness coefficient > 1 for all the considered markets. At the same time there is a tendency of the increasing openness at the market of grain, meat, milk, eggs and fish, at the national market- grains, milk, eggs. Therefore, the level of the market concentration has reduced , which has led to the increased competition from foreign suppliers in these markets.

The borderline number to assess the number of the threatening share of imports is considered to be 10-35% on various commodities. So, in the Stavropol region, such situation is typical for fish (over 70%), fruits (more than 50%), vegetables and meat (more than 20%).

The inventory analysis indicates the exixtance of food security in all product groups and types of markets. However, the regional market is experincing decline in stocks of grain -58%, meat - 3.2%, eggs - 13.3%.

The done research of the market capacity must be complimented by the study of the level of saturation of the population needs needs in food , including through the self-provision . This raises the need to determine the total demand for agricultural products as food . The data show a

steady trend of growth of the aggregate demand for agricultural products up to 2.1 times against the backdrop of the population growth of the Stavropol Territory. In general, during the study period the income of the population has increased 1.7 times. The household spending on food increased up to 1.9 times. While the share of food expenditure in the total consumer spending has increased. As a result, the ratio of household demand for agricultural products to the volume of agricultural production increased up to 1.6 times [2].

To determine the saturation level of the population's needs for food products the value of scientific norms of consumption will be used.

As a result of the comparison of consumption of basic foodstuffs with the standard value, we concluded that there is a persistent increase in the saturation level of the physiological needs of the population [3].

Physiological needs of the population in the region are met by grain products up to more than 140%, meat up to 91.8%, milk up to 62.4%, 122.4% for potatoes, vegetables up to 112.3%, 42.1% fruits, 111.5% eggs, 40% fish. After comparing the data values with indicators of self-provision and import dependency it is evident that the product substitution is present in the process of food consumption, due to the ratio of real incomes and the prevailing prices in the food market, ie purchasing power [4].

Comparative characteristics of prices show the exceeding of regional prices over the average ones for the region and Russia as a whole. A lower price for imported products would explain the growth import use for meat and milk, fish and fruits due to the low competitiveness of the regional producer due to the high cost of production.

As a result of the detailed study of the market price, we came to the conclusion that pricing in agriculture has certain unique to this industry features, which are due to the specific demand and supply of agricultural products. Thus the expansion of demand for agricultural products, unlike for the most non-agricultural goods, has more clearly defined limits of saturation of the human consumption, associated with physiological boundaries. This ensures that the share of food expenditure in the total consumer spending on food products in the process of the progressive development of the society and the growth of real incomes of consumers are decreasing. Wherein in the region the reverse tendency is observed. As we approach the needs of the population for food to the level of absolute requirements, the decrease in the demand elasticity on incomes of final consumers occurs. With the accelerated growth in the level of

supply , the level of demand growth slows. At the same time , in contrast to the demand ,the agricultural proposal has no clearly defined growth limits. That becomes relevant as a result of the Russia's becoming a member of the WTO [5].

So at the regional market according to the the results of 2012 the traditional export sector increased the grain production level of export compared to the year 2011 by 30 percentage points. As a result, the market capacity , the grain boundary structure of resources and their use have changed. If in 2008 the share of the production in the resource potential constituted up to 82% had, in 2012 it accounted for 58%. The inventories significantly reduced at the end of the year from 38.7 to 20.1%. Wherein the export European average price is inferior than the one worldwide [6].

Russia's entering the WTO requires constant monitoring of international prices. So in September 2013 the average value of the FAO Food Price Index constituted 199.1 points that is 2.3 points (1%) lower than in August and 11 points (5.4%) lower than at the beginning of the year. This marked decrease in September, is a continuation of the fifth month in a continuing downward trend in the index value, the cause of which was the sharp drop in world cereal prices, wherein the prices of all other components of the index: dairy products, oils, meat and sugar, rose slightly [7].

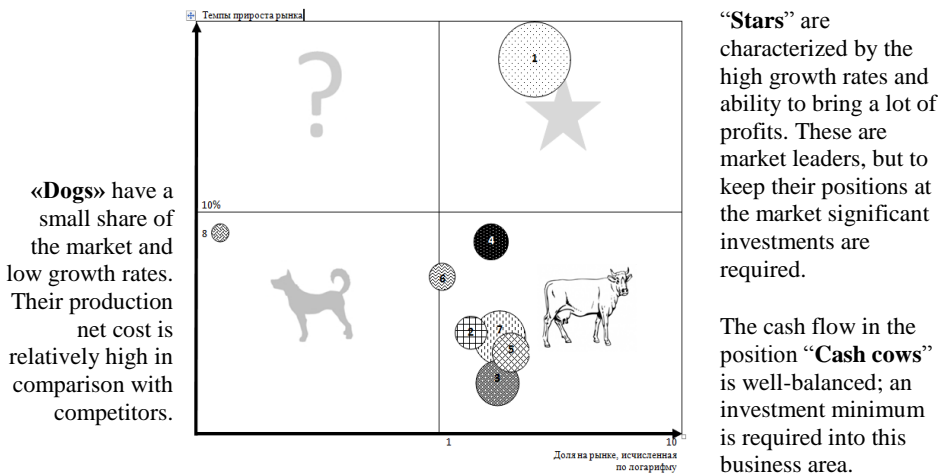
Based on the data we ranked commodity groups, the analysis of which shows that the share of the total capacity in the market grain is leading, the outsider is fish and fish products. However, according to the combination of other indicators in the end, grain is assigned only the 7th place in the ranking and fish – the 1st place. The second place is occupied by the group of "Fruits and Berries», the 3rd - "Vegetables and melons food», the 4th - "Meat», the 5th - "Potato» the 6th - "Eggs and egg products, the 8th - " Milk and dairy products "(Table 1).

For the final decision about the prospects of a particular industry it is necessary to analyze the strategic positions of the commodity investment group of agricultural products by creating a BCG matrix.

The group "Dogs" or "lame ducks" includes fish and fish products having a small market share and low growth. Typically, the cost of production is relatively high, compared to the competition. If these are not related products that are needed to maintain the range, the best solution would be to remove them from the range, or at least, the complete cessation of investments into these products.

Table 1 - Ranking of commodity group of agricultural produce according to the system of market indicators*

	Share of total market capacity, %	Ranking indicator	Self-sufficiency of the Stavropol Territory, %	Ranking indicator	Import dependency of the Stavropol Territory, %	Ranking indicator	Level of import of the Stavropol Territory, %	Ranking indicator	Level of export of the Stavropol Territory, %	Ranking indicator	Coefficient of openness of agricultural market	Ranking indicator	Share of imports in volume of sales, %, %	Ranking indicator	Level of satisfaction of physiological needs of the population, %	Ranking indicator	Sum of ranking	Place in the rating
Grain	42,2	1	366,02	8	1,28	8	6,86	7	77,06	1	0,79	2	-1,68	8	143	8	43	7
Meat and meat products	3,9	6	106,78	6	18,74	5	28,32	5	32,5	2	0,59	4	28,28	5	84,92	4	37	4
Milk and milk products	12,5	3	107,08	7	4,52	7	5,2	8	11,5	5	0,164	7	5,22	7	60,72	3	47	8
Potato	9,1	5	72,28	3	23,94	4	29,08	4	0,6	8	0,426	5	28,88	4	118,56	7	40	5
Vegetables and melons	10,2	4	73,98	4	31,34	3	37,4	3	12,5	3	0,666	3	36,98	3	100,76	5	28	3
Fruit and berries	3	7	48,2	2	45,94	2	53,98	2	4,04	7	1,16	1	53,86	2	39,14	2	25	2
Eggs and egg products	18,6	2	95,44	5	14,06	6	15,7	6	11,66	4	0,286	6	15,72	6	106,94	6	41	6
Fish and fish products	0,5	8	26,42	1	64,54	1	76,18	1	7,18	6	0,79	2	75,62	1	36,8	1	21	1



For «**Stars**» - try to keep or increase the business share at the market.

For «**Cash cows**» - try to keep or increase the share of their business at the market.

For «**Dogs**» - be satisfied with their position, either to reduce it, or close out this type of business

Denotation:

1. Grain
2. Meat and meat products
3. Milk and milk products
4. Potato
5. Vegetables and melons
6. Fruit and berries
7. Eggs and egg products
8. Fish and fish products

The group of “cash cows” is represented by meat and meat products, milk and dairy products, potatoes, vegetables and food melons, fruits and berries, eggs and egg products. This is the business area, which in the past received a relatively large share of the market. But over time, the relevant industry growth slowed markedly. As usual, the “cash cow» were “stars” in the past, which now provide a sufficient profit in order to keep their competitive market position. The cash flow in these positions is well balanced, as the investments into such business area require the absolute minimum.

Positions held by the individual business areas in the strategic space, defined by the BCG model, dictate the choice of well-defined areas of action. For the “stars” it is to try to maintain or increase their share of the business market. For the “cash cows» it is to try to maintain or increase the proportion of their business in the market. For “dogs» it is to be satisfied with their position, or reduce it, or eliminate this type of

business.

Comparing the results of the evaluation of investment strategic positioning and market demand the following priority sub-sectors for the business development are identified: fruit growing, vegetable growing on the open ground and in a greenhouse, poultry meat production, sheep and cattle breeding and the traditional branch of the Stavropol Territory - grain production. The most promising sector in the province is the poultry meat production (especially turkey-breeding). Further priorities are as follows: sunflower cultivation and processing, vegetable growing in the closed and open soil, horticulture, cultivation and processing of soybeans, dairy and beef cattle, meat sheep production.

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