

Russian Federation

Analysis of the Agribusiness Sector in Southern Russia

Please address comments and inquiries to:

Investment Centre Division
Food and Agriculture Organization of the United Nations (FAO)

Viale delle Terme di Caracalla . 00153 Rome . ITALY

E-mail: Investment-Centre@fao.org

Web site: www.fao.org/tc/tci.htm

FAO Web site: www.fao.org

Report n° 09/005 EBRD-RUS



**Food and Agriculture Organization
of the United Nations**



**European Bank
for Reconstruction and Development**

Russian Federation



Analysis of the Agribusiness Sector in Southern Russia



**Food and Agriculture Organization
of the United Nations**



**European Bank
for Reconstruction and Development**

TABLE OF CONTENTS

Currency and Abbreviations	vii
Acknowledgements	viii
Executive Summary	ix
1 Introduction	1
2 General agriculture and agro-food situation in Russia	3
3 Agro-food policy measures	11
3.1 Domestic support policy.....	13
3.2 Agro-food trade policy.....	15
3.3 Soaring food prices ad hoc policy.....	18
4 Overview of the agri-food sector in Southern Russia	19
5 Grain food chain in Southern Russia	28
5.1 Primary production.....	28
5.1.1 Output and yield.....	28
5.1.2 Producers structure.....	30
5.1.3 Marketing.....	33
5.1.4 Major problems.....	34
5.2 Traders and processors.....	36
5.2.1 State of the art.....	36
5.2.2 Major problems.....	38
5.3 Infrastructure.....	38
5.4 Case study of cereal value chain.....	40
6 Meat food chain in Southern Russia	42
6.1 Primary production.....	42
6.1.1 Animal stocks and output.....	42
6.1.2 Producers structure.....	44
6.1.3 Marketing.....	46
6.2 Processing.....	47
6.3 Investments.....	49
6.4 Retailing.....	50
6.5 Major problems of the value chain.....	52
7 Survey results	53
7.1 General survey design.....	53
7.2 Sample description.....	53
7.3 Growth in the last 2–3 years.....	55
7.3.1 Perspectives on the growth.....	59
7.4 Market structure development.....	63
7.5 Value chain constraints.....	64
7.6 Policy estimates.....	66
8 Conclusions and recommendations	71
Annex 1 - List of persons met	74
Annex 2 - Statistical and background information	75
References	94

LIST OF FIGURES

Figure 1.	Annual changes of agricultural production in Russia, %	3
Figure 2.	Production of selected crops in Russia, million tonnes.....	4
Figure 3.	Correlation between areas under grain and sunflower seeds in Russia	5
Figure 4.	Livestock inventories in Russia, million heads, as on 1 January.....	5
Figure 5.	Production of major livestock products in Russia, million tonnes	6
Figure 6.	Livestock and poultry productivity in Russia.....	6
Figure 7.	Capital investments in the agro-food sector in Russia, constant prices of 1995, billion RUR.....	7
Figure 8.	Foreign investments in agriculture in Russia, million USD.....	7
Figure 9.	Annual changes in food industry production in Russia, %.....	8
Figure 10.	Agro-food trade in Russia, million USD.....	9
Figure 11.	Consolidated budget expenditures in agriculture in Russia, million RUR.....	11
Figure 12.	Producer support estimates (PSEs) in selected countries, %.....	11
Figure 13.	Structure of the consolidated agricultural budget in Russia.....	12
Figure 14.	Share in the federal budget spending for agriculture for the state programmes supporting preferential credit and leasing in Russia.....	14
Figure 15.	Southern Federal Okrug of the Russian Federation	19
Figure 16.	Livestock inventories in selected regions of Southern Russia, by the end of year.....	21
Figure 17.	Meat production in Southern Russia, slaughter weight, '000 tonnes	21
Figure 18.	Production of major products by type of farm in Southern Russia, 2006	23
Figure 19.	Distribution of large farms in Southern Russia by area (ha), 2005	23
Figure 20.	Number and average size of small family farms in Southern Russia, 2006.....	24
Figure 21.	Distribution of small (family) farms in Southern Russia by area (ha), 2005, %	24
Figure 22.	Structure of grain production in Southern Russia, 2006, %.....	28
Figure 23.	Comparison of cereal output and export in Southern Russia, million tonnes	28
Figure 24.	Cereal yields in Southern Russia, 100 kg per hectare	29
Figure 25.	Distribution of Rostov large farms by cost of cereal production, 2000.....	30
Figure 26.	Share of marketed cereal output (in physical terms) directly exported by farms, 2006, % ...	34
Figure 27.	Cereal product output in Southern Russia, '000 tonnes	37
Figure 28.	Elevators in Southern Russia, 2006.....	39
Figure 29.	Principle value chain in wheat, case study in Rostov oblast, September 2007	40
Figure 30.	Livestock production in Southern Russia, carcass weight, '000 tonnes.....	42
Figure 31.	Cattle and pig inventories in Southern Russia, '000 heads	42
Figure 32.	Poultry inventories in Southern Russia, '000 heads, as on 1 January	43
Figure 33.	Meat import dependence of Southern Russia, net import as % of gross output.....	43
Figure 34.	Share of large farms in meat production in Southern Russia, %.....	44
Figure 35.	Concentration of large farms by cattle stocks in Southern Russia	45
Figure 36.	Concentration of large farms by pig stocks in Southern Russia.....	45
Figure 37.	Meat and meat product output in Southern Russia, '000 tonnes	47
Figure 38.	Russia's Imports of pedigree beef cattle by breed and by country, 2006	49
Figure 39.	Russia's Imports of pedigree pigs by breed and by country, 2006.....	50
Figure 40.	Structure of meat and meat product consumption in Southern Russia, 2004.....	50

Figure 41. Respondents' structure by position.....	53
Figure 42. Respondents' structure by years in the market	54
Figure 43. Respondents' structure by regional experience of work, no. of responses	54
Figure 44. Respondents' structure by sectors.....	55
Figure 45. How the market has developed over the last 2–3 years, % of responses.....	55
Figure 46. Market development in the previous 2–3 years, % of responses.....	56
Figure 47. Growth factors by sector, no. of responses.....	56
Figure 48. Decline factors, no. of responses	57
Figure 49. Effect of imports on the market, % of responses.....	57
Figure 50. Effect of exports on the market, % of responses	58
Figure 51. Effect of imports on the market, by sector, % of responses	58
Figure 52. Effect of exports on the market, by sector, % of responses.....	58
Figure 53. Domestic market perspective in 2–3 years, no. of responses	59
Figure 54. Domestic market perspective in 2–3 years, by sector, % of responses	60
Figure 55. Domestic market perspective in 10 years, no. of responses	60
Figure 56. Domestic market perspective in 10 years, by sector, % of responses	60
Figure 57. Driving forces for domestic market development in the next 2–3 years, no. of responses ...	61
Figure 58. Driving forces for domestic market development in the next 10 years, no. of responses	62
Figure 59. Driving forces for domestic market development in 2–3 years, by sector, % of responses ...	63
Figure 60. Market structure development, no. of responses	64
Figure 61. Market structure changes, by sector, % of responses	64
Figure 62. Limiting elements of the food chain, by sector, % of responses	65
Figure 63. Ranking of types of policy, weighted rank of responses	66
Figure 64. The importance of administrative policy measures for market development, weighted rank of responses	67
Figure 65. The importance of administrative policy measures for market development, by sector, weighted rank of responses.....	67
Figure 66. The importance of trade policy measures for market development, weighted rank of responses.....	68
Figure 67. The importance of trade policy measures for market development, by sector, weighted rank of responses.....	68
Figure 68. The importance of macroeconomic policy measures for market development, weighted rank of responses	69
Figure 69. The importance of macroeconomic policy measures for market development, by sector, weighted rank of responses.....	69
Figure 70. The importance of agri-food policy measures for market development, weighted rank of responses.....	70
Figure 71. The importance of agri-food policy measures for market development, by sector, weighted rank of responses	70

LIST OF TABLES

Table 1.	Production of selected food products in Russia, ‘000 tonnes	8
Table 2.	Budget spending for the Russia’s State Programme on Development of Agriculture in 2008–2012, billion RUR	13
Table 3.	Structure of bound import tariffs in selected countries	15
Table 4.	Meat import TRQs in Russia, 2003–2007.....	16
Table 5.	Cereal export taxes in Russia, %.....	20
Table 6.	Major characteristics of selected territories of the Southern Federal Okrug of the Russian Federation, 2005.....	20
Table 7.	Agricultural budget, 2005	25
Table 8.	Structure of agricultural budget, 2006–2007	25
Table 9.	Policy measures in selected regions of the Southern Federal Okrug of the Russian Federation, 2007.....	26
Table 10.	Cereal exports from Southern Russia, million tonnes.....	28
Table 11.	Seed production and plant breeding units in Southern Russia, number of units.....	30
Table 12:	Rostov oblast: comparison of operation of average surveyed agroholdings and average area farm enterprise, 2001	30
Table 13	Top agroholdings in Southern Russia	33
Table 14.	Channels of cereal marketing in Southern Russia, share of each channel in overall output (in physical terms), 2006, %	33
Table 15.	Top cereal traders in Southern Russia.....	36
Table 16.	Characteristics of cereal port terminals in Southern Russia.....	38
Table 17.	Calculated net return on wheat in two value chains.....	41
Table 18.	Channels of meat marketing in Southern Russia, share of each channel in overall output (in physical terms), 2008, %	46
Table 19.	The biggest meat processing companies in Southern Russia.....	48
Table 20.	Main investment projects in the pig industry in Southern Russia.....	49
Table 21.	Retail channels of meat and meat products in Southern Russia, % of total meat supply	51
Table 22.	Major retail chains in Southern Russia, 2007	51

CURRENCY AND ABBREVIATIONS

AVE	Ad Valorem Equivalent
CIS	Commonwealth of Independent States
FOB	Free on Board
GDP	Gross Domestic Product
GPS	Global Positioning System
IFI	International Financial Institutions
PSE	Producer Support Estimates
R&D	Research and Development
MOA RF	Ministry of Agriculture of the Russian Federation
RUR	Russian Ruble
TRQ	Tariff-rate Quota
VAT	Value Added Tax
WTO	World Trade Organization

ACKNOWLEDGEMENTS

This study was commissioned by the European Bank for Reconstruction and Development (EBRD) and carried out by the Investment Centre of the Food and Agriculture Organization of the United Nations (FAO), under the co-operation agreement between the two institutions. The FAO team was led by Eugenia Serova, Senior Advisor to the Director, Investment Centre Division. It included Olga Shick and Alexander Tarasov, Agricultural Economists. The report was reviewed by D'mitry Prikhodko, Agricultural Economist, FAO, and Heike Harmgart, Economist, Office of the Chief Economist, EBRD.

The FAO team would like to extend its warm thanks for the kind assistance received from all the government and private sector representatives who kindly shared time with the team, in particular I. Antjokhina, Deputy Head, Financial Department, Ministry of Agriculture; S. Batkibekov, Head, Department of Prognosis, Ministry of Economic Development; M. Mamikonyan, President, Russian Meat Union; S. Yushin, President, Russian Meat Association; V. Korbut, Vice President, Russian Grain Union; A. Sizov, Grain Market Analyst, SovEcon; V. Petrichenko, Grain Market Analyst, WJ; D. Rylko, Agricultural Market Analyst, IKAR. The FAO is also grateful to N. Karlova, Agri-food Markets Analyst, Agrico; V. Loginov, Chairman, State-owned Corporation Souzplodimport; N. Koleda, Manager, Mill Company Kovsh, Rostov-upon-Don; and Kh. Porksheyev, Chairman, Kolkhoz named after Shoumyan, Rostov oblast, for their helpful inputs.

Special thanks are extended to A. Scherbachenko and V. Tzymbal, Managers of Agrokholding Aksay, Rostov oblast. The collaboration with E. Titorenko, Head, Land Tenure Department, and A. Kolesnikov, Head, Marketing Department, Ministry of Agriculture of the Rostov oblast, was highly appreciated.

EXECUTIVE SUMMARY

Agriculture plays an important role in Russia and in particular in the Southern Federal Okrug. This region has tremendous comparative advantages in agricultural production, with some of the world's best and most expensive land for arable farming and long agricultural traditions. However, agriculture in the region faces important challenges. The sector's productivity remains low compared to most developed economies. The reform process in the agricultural sector is not yet completed. Agribusiness value chains have suffered from significant under financing. Finally, the investment climate in rural areas is not business-friendly: finance is difficult to access, the quality of infrastructure is poor, and conventional market institutions are not developed.

Highlights of the agricultural sector in Russia and Southern Russia

Russia's agriculture at a glance

Relatively slow pace of growth¹. After a speedy recovery following the crisis of 1998, in the last six years, Russia's agriculture has experienced a fairly slow pace of growth – 2.7% a year on average. Between 1999 and 2001, the sector benefited from the devaluation of the ruble but the effects of the devaluation quickly faded away. During that period, the most advanced companies, both in the primary and downstream sectors, could use this window of opportunity to expand, while others continued to decline.

Recovery of the grain and livestock sectors. While crop production remains highly dependant on weather conditions and world price levels, Russia is enjoying clear comparative advantages on domestic and world markets for the production of some particular crops. Grain remains Russia's major crop and, among cereals, wheat has the largest cultivated area. In the livestock sector, the situation is notably worse. Animal inventories and total production are still below pre-transition levels. However, the productivity of animals is steadily growing and now exceeds that of the Soviet period.

Growing private and public investment in agriculture. The development of the agri-food sector attracts private capital investment, which has been growing since 1998. Government support for agriculture has also increased dramatically in the last few years with the launch in 2006 of a two-year National Project for agri-food sector development and its continuation through a five-year state programme for agri-food sector development in 2008–2012.

Good performance of the food industry. The food industry performs much better than primary agriculture. It is one of the most attractive sectors for foreign investment. Food demand increases at a faster rate than average real incomes. The consumption of foodstuffs with high-income elasticity is growing particularly rapidly.

1.- The studies was implemented in the begining of 2008.

Agri-food trade is intensifying. Russia's agri-food trade is growing steadily. 2007 saw a record trade turnover. Although exports are increasing faster than imports, Russia remains a net importer of agri-food commodities. In the period of growth recovery, grain has become Russia's major agri-food export. Despite the introduction of Tariff-Rate Quotas (TRQs), meat continues to be Russia's major agri-food import.

Emergence of large agroholdings. With respect to farm structures, the main trend is a severe polarisation opposing large farming enterprises to small family farms. Agroholdings are huge agricultural operations, sometimes vertically integrated with the upstream and/or downstream sectors, and are a distinctive feature of Russia's agri-food sector. The largest agroholdings can operate on up to 200–300,000 hectares. These agroholdings are important drivers to the development of agri-food value chains.

Limited state support. State support to agriculture in Russia is still modest in comparison with other developed countries. Due to the federal nature of the Russian state, the majority of state support to agriculture (up to 80%) originates from the budgets of federal entities. As in other transition economies, input subsidies, including interest rate subsidies, are the main support measures to the agri-food sector, both at federal and regional levels. On average, border measures are rather modest in comparison with OECD countries. The most important border measures are the export taxes on cereals and sunflower seed, a changeable import duty for raw sugar, as well as TRQs for meat

Government intervention in reaction to soaring food prices. During the surge of food prices in 2006–2007, under the political pressure of an election year, the Russian government applied additional measures to limit exports and control food prices, with fairly ineffectual results.

Main features of Southern Russia's agriculture

Southern Russia is the most fertile agricultural region of the country. The southern part of Russia is the most fertile area of the country and, historically, it has always been used for agricultural production. The region not only has a favourable climate and soil conditions for farming, but it also has an advantageous geographical location between major Russian waterways (the Don and Volga rivers), it is connected to major Russian Black Sea and Azov Sea ports and has relatively good railway and road connections.

Regional per capita income is below national average. In this Study, four major territories of the Southern Federal Okrug were analysed: the Krasnodar and Stavropol krajs and the Rostov and Volgograd oblasts. These four regions provide more than 16% of Russia's gross agricultural output and contain more than 18% of the total arable land of the country. This is a densely populated area, contributing to around 7% of national GDP. It is also an agricultural region: 25–35% of the regional economic product come from agriculture, compared with a national average of less than 10%. Since the main part of the economically active population is involved in agriculture, with relatively low wages, the average per capita income of the region is below the national average.

Prominence of crop production. The agriculture of Southern Russia is mostly specialised in crop production. However, since the mid-2000s, livestock production has started to grow at a higher rate than crop production. Cereals and sunflower seeds are the major cash crops in the area: Southern Russia is the major producer of these crops in the country. Horticulture is also relatively well developed across the region (vineyards in the Rostov oblast and the Krasnodar krai, tea plantations in the Krasnodar krai). The Stavropol krai and some areas of the Volgograd and Rostov oblasts specialise in sheep rearing.

Large and vertically integrated farms. Agricultural production is dominated by large farms (the biggest in Russia), a large number of which are vertically integrated with food and/or trade companies. The largest agroholdings are also concentrated in these regions. Cash crops are mostly produced on large and super large farms. At the same time, half of meat and milk production originates from rural households (individual plots).

The grain value chain in Southern Russia

Southern Russia is the main cereal producing area in the country. The four regions under consideration provide one-third of Russia's gross cereal output. Two-thirds of the regional cereal output consists of wheat, of which 98% is winter wheat. Rice occupies a marginal share of total cereal output in the region. However, Southern Russia produces almost 90% of all Russian rice. It is also the major cereal exporting region of the country.

Leading role of agroholdings in cereal production. On average, cereal yields have fallen notably since Soviet times. They also differ significantly across the region. Cereals are mostly produced on large farms/enterprises (around 80%). The large cereal producers of the region distinguish themselves not only by their size but also by their performance. Some of them are very modern companies with relatively high yields, sales and profitability. The most common type of cereal producers in the region are agroholdings; which occupy 9–12% of total arable area and produce between one-third and a half of the regional cereal output. Agroholdings have enough means at their disposal to comply with international standard requirements.

Most sales of cereals are conducted on the spot market. The cereal value chain in Southern Russia is rather simple. Around 75–85% of total marketed cereals are sold by producers to traders and/or to processors (mills, mixed feed manufacturers and so on). A relatively high share of cereals (10-17%) is used as payment-in-kind to farm workers and for land rent, or is sold to farm workers at below-market prices. The shape of the food chain at this level is very much determined by the existence of agroholdings, which in most cases are vertically integrated and include several adjacent elements of the food chain (processing, trading and transportation). Cereals are first transferred within the company. Outside of the company, forward contracts for cereal deliveries are hardly used and therefore deals are usually conducted on the spot. Warehouse receipts are also not widespread. Grain traders normally operate like speculators.

Sales of cereals are concentrated in the hands of a few traders. In each region, cereal purchases are conducted by around 50 traders, among which up to three lead the market. These leading traders were also the biggest exporters of Russian grain in the 2005/2006 season.

Processing companies are running at under capacity. Cereals have always been produced in Southern Russia and therefore many processing facilities were built in this region during the Soviet era. However, the output of all major grain-based products has decreased since the late 1980s and processing plants are running today at just 30–45% of their capacity. Due to the underutilisation of assets, the profitability of processing companies in this sector is very low. Most of them urgently need modernisation and are looking for financing. This is especially true of the flour business.

Lack of export infrastructures. The physical infrastructure of the cereal food chain in Southern Russia is the most advanced in the country. The Soviet Union was a huge net importer of grain and therefore all major sea port grain terminals were import oriented. It took a lot of time to build new export oriented port infrastructure on the Black Sea. In spite of these investments, the total port capacity of the region is still not sufficient: in the last two years the port capacity was overused, in some cases more than two fold.

Storage capacity is enough but outdated. The total capacity of elevators in the region exceeds the total regional demand for storage of cereals. The major problem of the cereal storage system is its out-of-date equipment and low productivity.

The meat value chain in Southern Russia

Meat production is slowly picking up. The four regions under consideration provide around 15% of the gross meat output of Russia. Today, these regions produce less than a half of what they used to produce in the pre-reform period. During the Soviet era, Southern Russia was a net exporter of meat; however, in recent years, the region has been becoming more and more dependant on meat imports.

Since 2006, meat output has started to increase due to growth in pork and broiler production. Historically, cattle have never been raised for meat production in Russia. However, in Southern Russia, cattle raised for meat production is more widespread than in the rest of the country. Within the framework of the National Project, regions in Southern Russia acquired breeding cattle to launch intensive beef production.

Recovery of large meat farms. After the beginning of the reforms in the early 1990s, because of the collapse of large farms, livestock production shifted notably to household farms. The large farm meat sector started to recover after the 1998 crisis, a recovery which accelerated with the start of the National Project. In the Krasnodar krai, the share of large farms in meat production has nearly been restored. In the Stavropol krai, it has exceeded the level reached during the Soviet period. However, in the Rostov and Volgograd oblasts, it is still low, corresponding to around one-third of the gross meat output of the region. Although the share of meat production in household farms is rather high in Southern Russia, 80–95% of rural household farms keep neither cattle nor pigs.

Concentration of commercial meat production. Commercial livestock production is highly concentrated, with more than 50% of all cattle in the region concentrated on farms with more than 1,000 head of cattle. However, the highest level of concentration is observed in the poultry sector. The meat industry is also highly vertically integrated.

Sales contracts are hardly used. Large farms sell beef and pork mainly through three channels: abattoirs (often integrated with meat processing and packing plants), private intermediaries and social institutes such as hospitals, schools, orphanages and so on, in which cases sales are normally arranged as state procurement. Contracts are hardly used and nearly half of deals are made in cash.

Household farms do not comply with food safety standards. Two-thirds of the meat produced in household farms is consumed by the members of the households themselves. The rest is sold almost exclusively on town and village markets and, to a very small extent, to slaughterhouses. Due to the need to comply with veterinary and sanitary regulations, meat processing plants do not like to collect meat from household farms.

Emergence of a few meat industry leaders. Meat processing plants have experienced reduced demand and have suffered from tremendous underutilisation, which is the major cause of low profitability. Most companies were put at a disadvantage by a lack of means for modernisation, which was requested to increase compliance with standards on the domestic market. However, the depreciation of the ruble in 1998 resulted in a sharp reduction in meat imports and allowed industry leaders to modernise their facilities and equipment. By that point, several leading companies had entered the meat market in Southern Russia. They progressively consolidated small processors and intensively invested in the

fattening industry, as well as in mixed feed facilities and the production of crop ingredients for feed. The biggest meat companies had their own trade houses for wholesale business and, in some cases, retail outlets (corporate chains).

Significant investments in the pork industry. During the implementation of the National Project (2006–2007), around 100 million rubles (c. USD 4 million) were invested in primary pig production in the four regions covered under the Study. The National Agency for agricultural leasing, Rosagroleasing, delivered nearly 20,000 head of pedigree animals and 9,000 units of equipment to the pork industry throughout the region. This will likely lead to a serious growth in pork production in the near future.

Most local meat sales are made outside of conventional retail networks. The share of meat reaching retailers is not significant. Imported meat is normally used for processing. Retailers mainly buy processed meat products: sausages, salamis, and so on. Though it is growing, the share of conventional retail outlets in meat trade is still negligible. Although food retailing is quite developed in the region, meat products, and especially fresh meat, are not well represented on the shelves of conventional retail outlets. This is probably due to a combination of two factors: the traditional pattern of meat sales and consumption on the one hand and the budget constraints of the population on the other hand.

Conclusions and recommendations

Cereal and meat value chains are rapidly developing in Southern Russia. Private and public investment in these sectors has notably increased in the last 2–3 years and is likely to significantly grow in the near future. Full realisation of potential, however, is constrained on the one hand by the incomplete transition process in the agriculture and agri-food sectors and on the other hand by some current policy measures which could hamper development of the sector. Due to the federative nature of the Russian state, some constraints can be lifted only at the federal level, while other problems can be settled at the regional level. This Study has revealed a number of such problems which could be serious bottlenecks to value chain development in the cereal and meat industries in Southern Russia.

General constraints to the development of agri-food value chains in Southern Russia

Issues related to land tenure. The land tenure issue is a general bottleneck to primary agriculture. The federal legislation on land and land transactions should be urgently corrected in order to ease access to land for investors in agriculture. The land sharing system provided a fairly good mechanism for land privatisation during the early stages of transition. Nowadays, this system of shares deters land acquisition by investors and therefore hampers financial inflow into agriculture. It should be replaced by a more rational scheme of share transfers, along with the securing of property rights for the rural population. Transaction costs of land deals (rental, acquisition, and other transactions) are, in many cases, prohibitive, which is also a constraint on investment. For that reason, land legislation is to be changed towards more transparent, efficient and coherent land registration and land turnover mechanisms.

Lack of investment in human capital. Another general problem of agri-food chains is a severe lack of qualified labourers and managers. The country needs an ambitious and urgent reform of the

entire system of education, training, and extension. Previous efforts to reform this system were clearly insufficient. Business circles indicate that the lack of skilled workers and managers is one of the most serious problems preventing development of agri-food chains.

Low levels of investment in R&D. Connected with deficiencies of the education system is the problem of R&D. Both the cereal and meat industries complain about the unacceptable state of the breeding industry. The launch of a state programme of support for the purchase of pedigree animals met with a huge demand from the grass-roots level. Several decades of neglect in the Soviet era and during the transition period and, in the 1930s–50s, direct damage to agricultural applied science led to a generation gap in research schools. Massive public investment into R&D is urgently needed, along with governmental support to private investment in R&D. The option of inviting prominent leaders from foreign research schools could be considered. It was previously done in the 17th and 18th centuries in Russia and led to the establishment of world renowned Russian schools of mathematics and other sciences.

Inconsistent policy measures. On the policy side, there is a general problem both at the federal and regional levels: support of particular sectors often lacks coherence when only one or two elements of the value chain are supported while others immediately become extremely narrow bottlenecks to the whole chain. For instance, huge support for the fattening industry in the last two to three years was not coupled with adequate parallel measures addressed at the development of slaughterhouses. This is currently a serious constraint for the meat industry, especially with the dominance of households in meat production.

Lack of compliance with international standards. The next problem in the meat value chain, which market actors are not yet aware of, is the lack of compliance with international standards. This Study did not address this issue as it was based mainly on interviews with market actors, analysts and policy makers who are driven by short-term objectives. However, standards regulation and control in the meat sector is dramatically underdeveloped and, with the improvement of living standards, will undoubtedly develop into a serious problem. Governmental policy should be pro-active in this regard.

Inefficiencies in the utilisation of subsidies. The major part of governmental budgetary support to agriculture comes in the form of input subsidies, among which subsidised short-term and medium-term credit programmes dominate. However, the Study shows that financial constraints and limited access to credit are the major bottlenecks faced by the cereal and meat industries. This tends to prove that current governmental support is not sufficient. As budgetary spending for these programmes is fairly big, this could mean that the general orientation of subsidy distribution schemes and their application procedures are not efficient.

Unfavourable general business environment. Value chain development is seriously affected by the general business environment in the country, which includes the political and social situation, corruption and some other general issues. The experts interviewed for the poll conducted for this Study indicated a lot of the problems in this field. However, these issues were not covered by this Study and are not specifically addressed in this conclusion.

Specific constraints affecting the cereal value chain

The cereal value chain, in addition to the issues that have already been listed, faces the following problems:

- The cereal market is very well developed in Russia in comparison with other product markets. However, there is still an urgent need to establish efficient agricultural price risk management mechanisms such as futures markets, warehouse receipts, and forward contracts.

- The consequences of the development of agroholdings are still not clear. Though there are advantages to this type of cereal operators, there are also many disadvantages, including monopsonic effects, manageability, cost of protection from theft, social risks in rural areas, and so on.
- Because of large volume of exports and difficulties to raise finance, cereal processors suffer from a lack of modernisation of their assets. Local processors cannot compete with exports and therefore suffer a shortage of raw produce.
- The most often reported problem of the cereal infrastructure in Russia, including in the south, is a shortage of specialised rail wagons (hoppers) for cereal shipments.

Specific constraints affecting the meat value chain

Specific constraints limiting the development of the meat value chain include:

- First and foremost among the problems of the meat value chain in Southern Russia is a tremendous need for modernisation of equipment, both at the farm level and in primary and secondary processing. The out-of-date assets of the industry prevent it from the complete utilisation of raw produce, therefore reducing efficiency and lowering the quality competitiveness of products on the domestic market.
- The meat value chain urgently needs a network of small and modern slaughterhouses which would allow the collection of raw meat from households and secure the timely delivery of quality raw produce to the packing plants, which currently tend to import raw produce from abroad.

Need for investment from both private and public sources

All the above problems would gain from a more intense policy dialogue between private actors and public authorities, at the federal and regional levels. While some constraints can be solved by private investment alone, others constraints, to be lifted, will require substantial investment from public sources. In certain cases, for instance investment in human capital, Public-Private Partnerships (PPPs) could also be promoted. Issues requiring a decisive involvement of public authorities include land tenure: a strong political determination will be needed in order to rectify the recently adopted land legislation. An example of issues that can be more immediately solved by private actors is the modernisation of fattening farms and processing plants in both the meat and cereal chains.

1. INTRODUCTION

This Study was commissioned by the European Bank for Reconstruction and Development (EBRD) and carried out by the Investment Centre Division of the Food and Agriculture Organization of the United Nations (FAO), under its cooperation with the EBRD. Its objective was to assess the remaining transition challenges affecting the development of agri-food value chains in Southern Russia. The EBRD required this analysis to establish priorities for future interventions, inform investment decisions and identify relevant topics for policy dialogue.

Due to constraints in time and resources, the Study concentrated on two value chains in Southern Russia: the cereal and the meat value chains (including the beef, pork and poultry sectors). The four biggest areas in the Southern Federal Okrug were covered by this Study, namely the Krasnodar krai, the Stavropol krai, the Rostov oblast and the Volgograd oblast. The Study included an informant poll, with 106 questionnaires returned, to assess the development of the cereal and meat industries in the four above regions. Two case studies were carried out in the Rostov area for an in-depth description of the value chains both in the cereal and the meat industries. Finally, a number of interviews were conducted in the Moscow and Rostov oblasts with market analysts, policy makers and the business community. The Study is also based on the review of existing literature and official statistics.

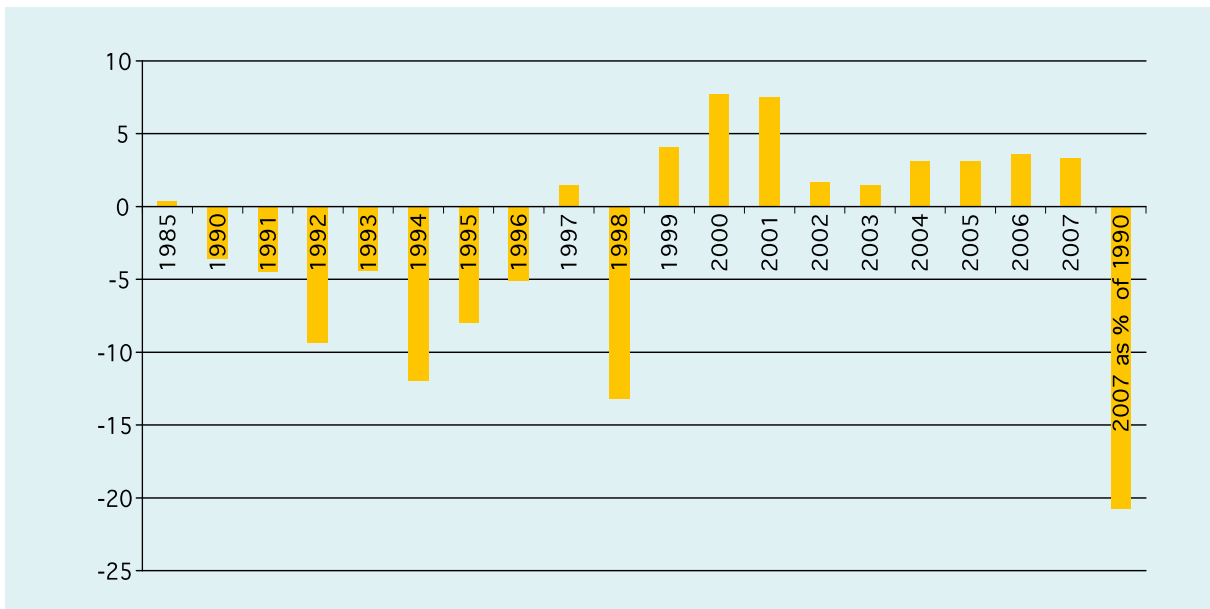
The first section of the Study describes the general situation in the Russian agri-food sector, including major trends in recent years, an overview of agricultural policy and ad hoc governmental measures in reaction to soaring food prices. The second section is a general overview of agri-food development in Southern Russia. The third and fourth sections focus on the analysis of the cereal and meat value chains and the identification of major bottlenecks. The results of the poll are presented in a separate section. The paper ends with a series of conclusions and recommendations.

The audience of the Study includes federal and local government authorities, local and international investors, agricultural specialists and development practitioners, as well as International Financing Institutions (IFIs). Within the EBRD, the Study is intended to inform both the Agribusiness team and the Office of the Chief Economist (OCE).

2. GENERAL AGRICULTURE AND AGRO-FOOD SITUATION IN RUSSIA

After a period of rapid growth and recovery immediately after the 1998 crisis, agriculture in the last six years has demonstrated a fairly low rate of growth: 2.7% a year on average (**Figure 1**). The growth occurs mostly due to the increase in crop production, however in recent years livestock has also demonstrated some animation. Agriculture has recovered by about 80% compared with the pre-reform level (*ibid*). Imports recovered speedily after a short period of fall after 1998, although trade balance remained negative. This means that the major factor behind the rapid growth in 1999–2001 has been exhausted.

Figure 1. Annual changes of agricultural production in Russia, %



Source: Rosstat data

Strengthening of the ruble reduced the competitiveness of domestic agro-food products on the internal market; the position of exports was also weakened on world markets. Growth of input prices (in particular of energy and fuel) reduces the profitability of the sector. Nowhere in the world is agriculture included in the arbitrage of overall economy capital, but in the post-communist economy agricultural enterprises remained the only source of subsistence for millions within the rural population. Therefore, despite tremendous losses experienced over several consecutive years, failing producers do not exit the market.

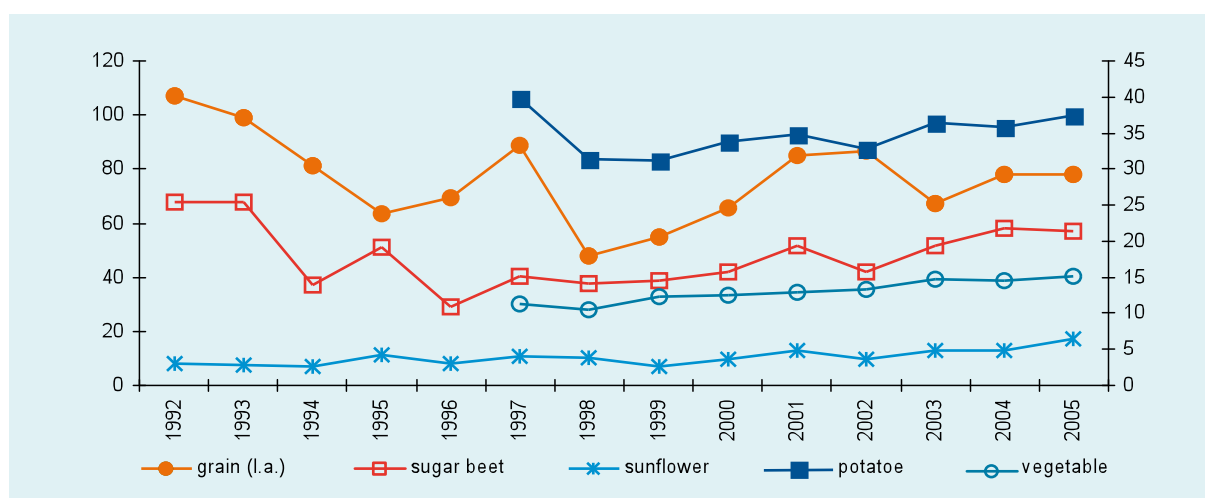
Nonetheless, there have been positive trends in Russia's agro-food sector in the last few years. One can observe the dramatic bifurcation of both primary and processing sectors. Some producers are actively developing, modernising, and attracting investment, while others are becoming more and more marginalised. For various reasons these failing units do not claim bankruptcy, which would be necessary from the point of view of balanced development. Therefore, failing producers contribute to the average indicators of sector performance, making them worse than they would be if insolvent producers sank en masse.

Another emerging trend is a regional specialisation in agriculture. For example, under the Soviet economy grain was produced on almost all of the country's arable land; the share of gross grain output of the Krasnodar, Rostov, Stavropol, and Volgograd regions was about 21%. In the last three years, this share has increased to 30%. Other regions have specialised in milk production, which was even more evenly distributed among the regions during the Soviet era. The indicators of output growth, productivity and producers' performance are better in specialised regions than in the rest of the country.

Crop Production

Crop production is very vulnerable and is heavily dependant on weather conditions and price levels. Some individual crops prove their comparative advantage on the domestic and world markets and demonstrate rapid recovery and modernisation, while at the same time the production of other crops is shrinking. The production of sunflower, sugar beet, vegetables, and potatoes continues to grow at a high rate. Output of these products exceeds the Soviet level (**Figure 2**). The radical change in the sugar trade regime has led to a remarkable growth in sugar beet production. In 2006, its output increased by more than 25%. Sunflower production has continued to expand since the very beginning of the reforms, however, this has mostly been extensive growth due to area expansion. Sunflower yield has grown increasingly since 2001. Sunflower producers increased the use of high quality hybrids and mineral fertilizers, and started to apply modern technologies.

Figure 2. Production of selected crops in Russia, million tons

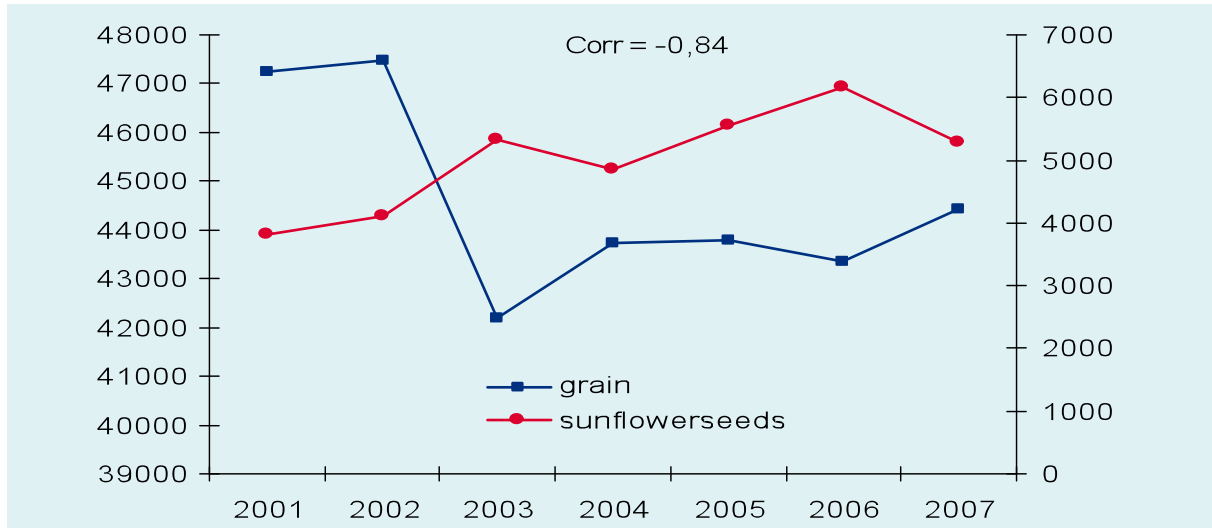


* l.a. – left axes

Source: Rosstat data

Sunflower and grain production compete for land, and acreage under these two crops is significantly negatively correlated (**Figure 3**). Very often, sunflower is planted over cereals which were damaged during the winter period.

Figure 3. Correlation between areas under grain and sunflower seeds in Russia



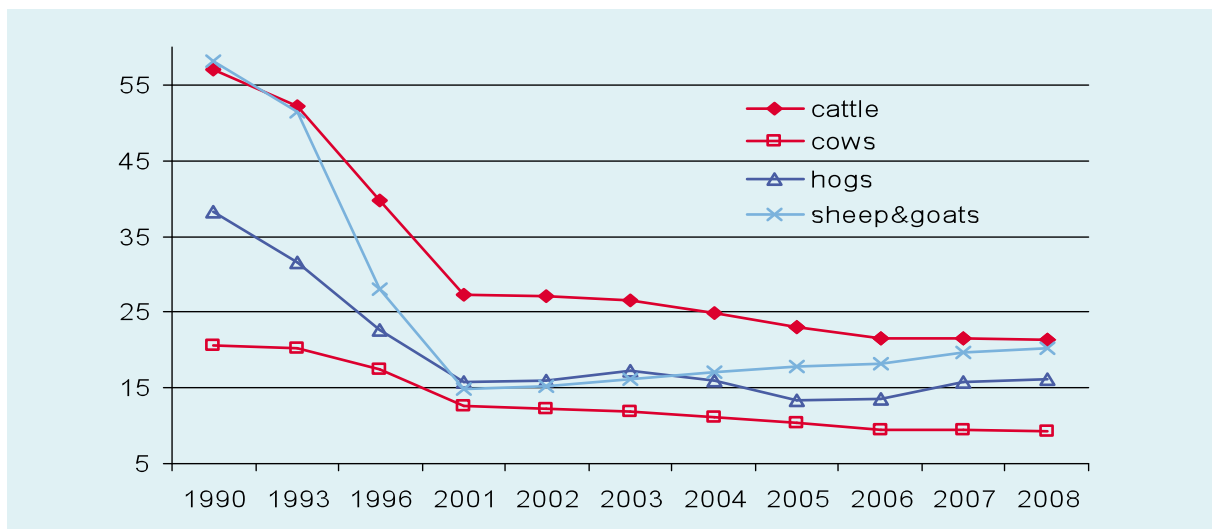
Source: Calculated from Rosstat data

Grain remains the main crop in Russia’s agriculture sector and wheat is still a major cultivated cereal. The structure of cereal production is unsteady from year to year, but one of the notable trends is a decrease in the share of rye and a certain increase in the share of maize.

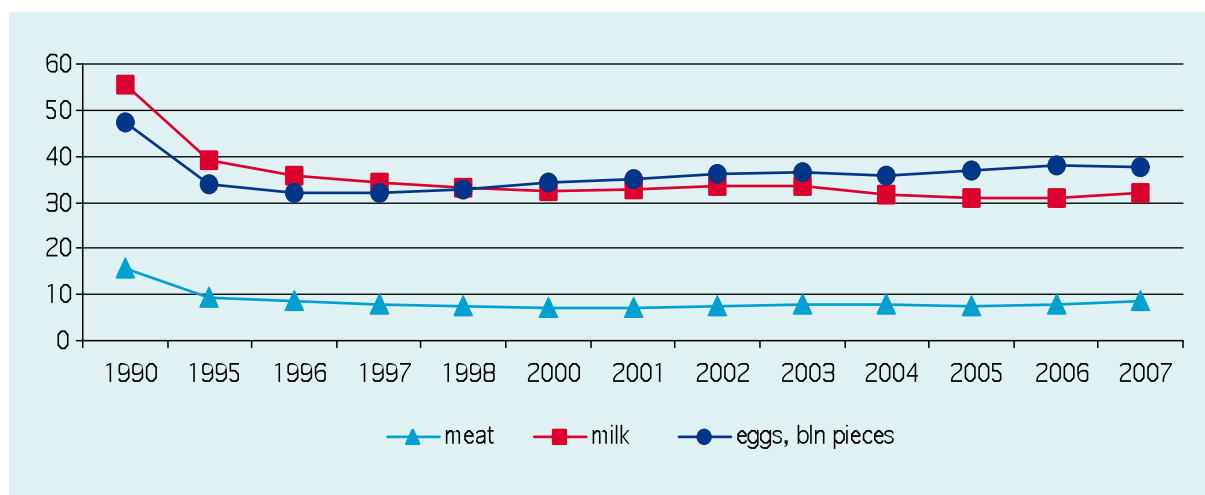
Livestock Sector

In the livestock sector the situation is noticeably worse than in crop production. Animal inventories and production are still significantly below pre-reform levels (Figure 4 and Figure 5).

Figure 4. Livestock inventories in Russia, million heads, as on 1 January



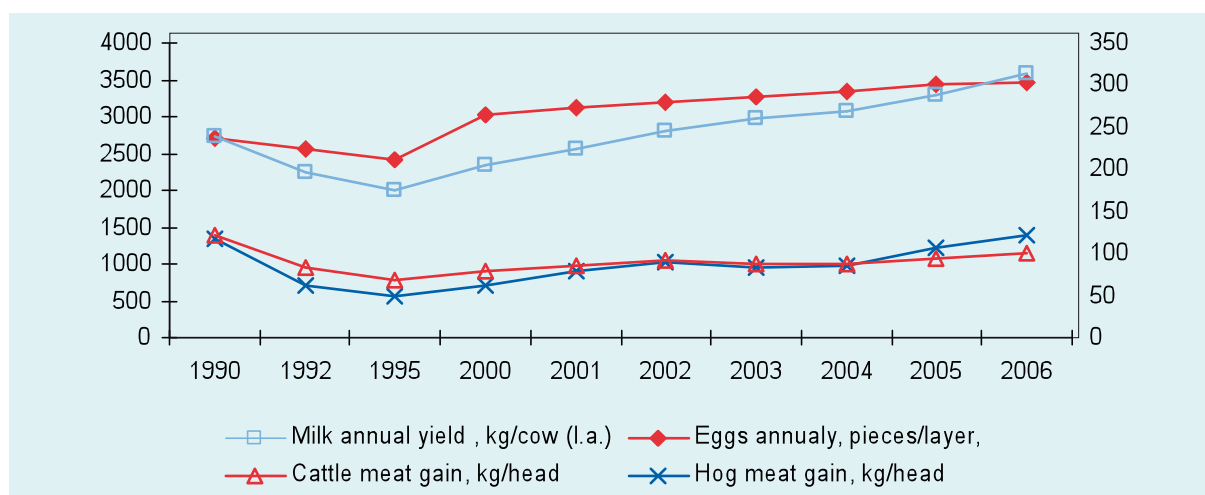
Source: Rosstat data

Figure 5. Production of major livestock products in Russia, million tonnes*


* - live weight

Source: Rosstat data

Despite the fall in animal stocks, the productivity of animals is steadily growing and has exceeded that of the Soviet period (**Figure 6**). Poultry production has been growing at a very high rate for around a decade (14–17% a year). In response to the government policy supporting livestock breeding in the last three years, output and inventories in pig and sheep sectors have started to grow.

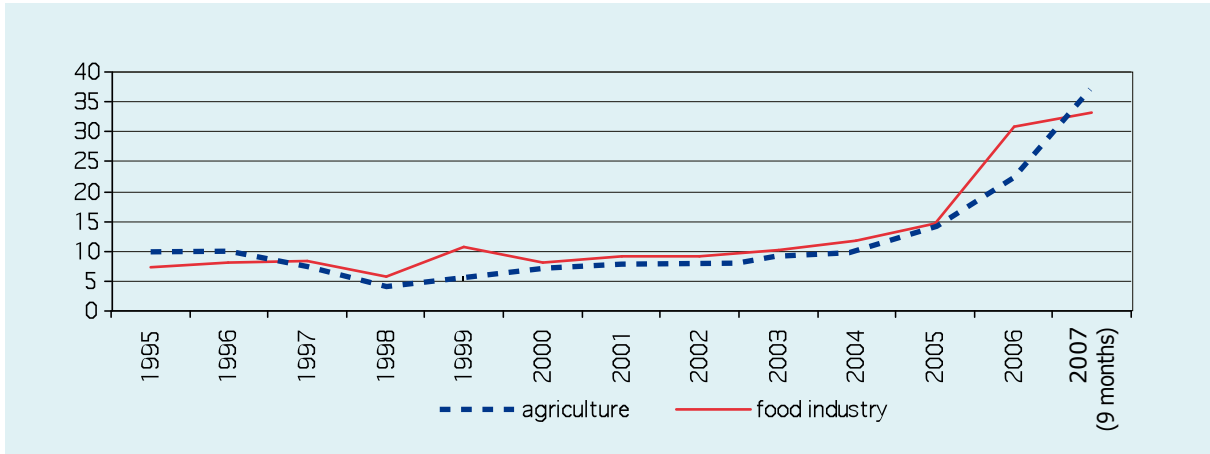
Figure 6. Livestock and poultry productivity* in Russia


* l.a. – left axes

Source: Rosstat data

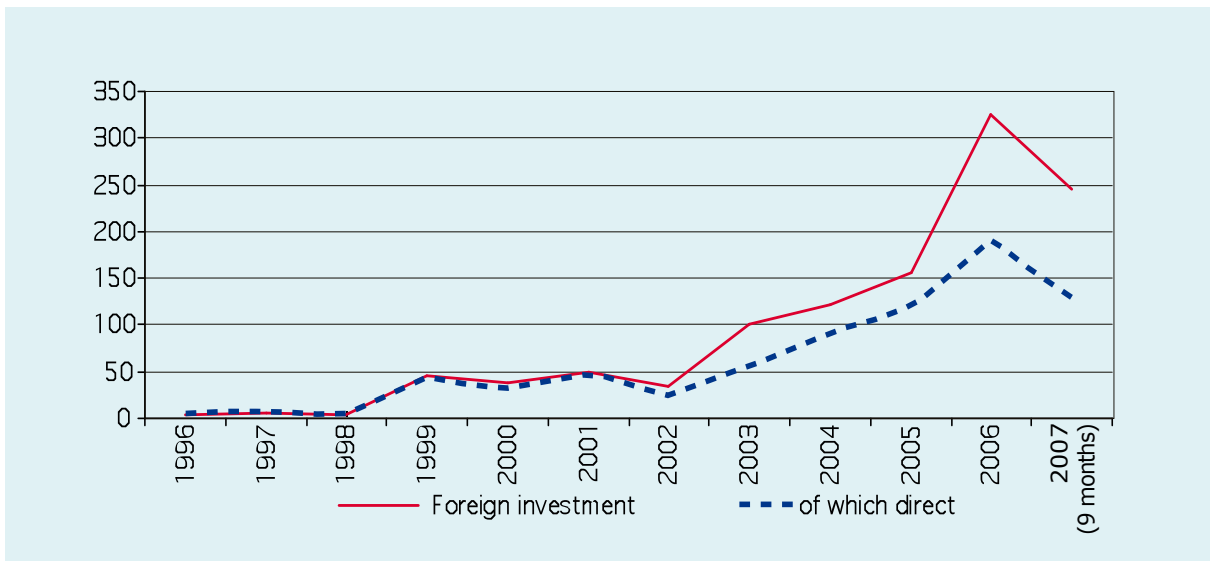
Since 1999 the financial state of agriculture has progressively improved; the share of insolvent farms has declined little by little, and overall sector net return has increased. This has mainly been caused by the growth in the agro-food sector after the 1998 crisis. During this period capital investments increased (**Figure 7 & Figure 8**). Since that time two massive companies of farm debts rescheduling has been undertaken, which also greatly contributed to an improvement in the financial state of farms.

Figure 7. Capital investments in the agro-food sector in Russia, constant prices of 1995, billion RUR



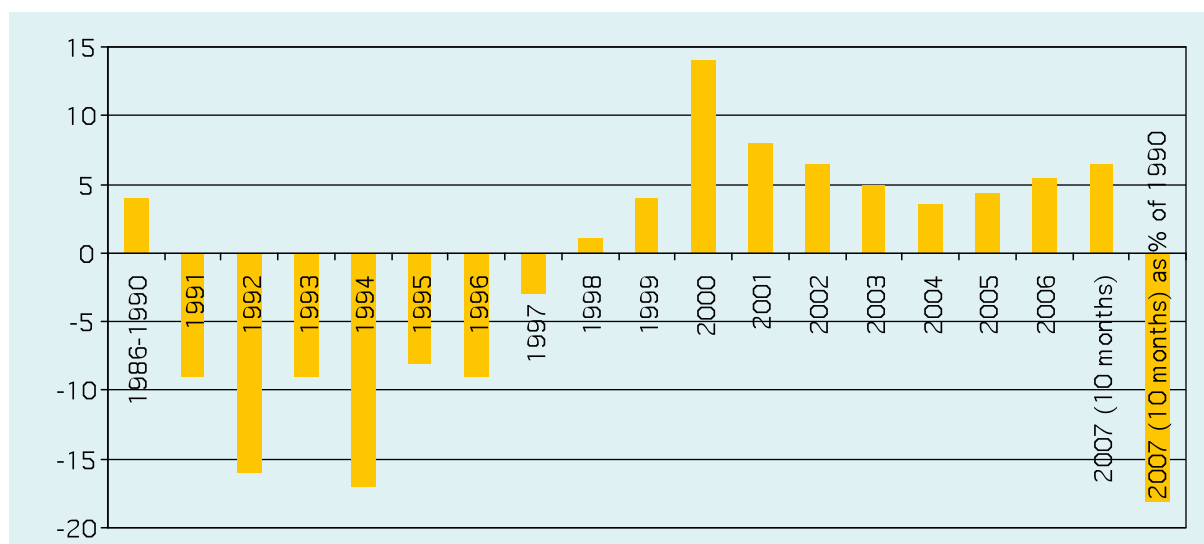
Source: Rosstat data

Figure 8. Foreign investments in agriculture in Russia, million USD



Source: Rosstat data

The food industry is performing rather better than primary agriculture – its growth is still strong. **(Figure 9).**

Figure 9. Annual changes in food industry production in Russia, %


Source: Rosstat data

Like the various sub-sectors in agriculture, sub-sectors in the food industry demonstrate quite different trends. Production of some food commodities has exceeded the pre-reform level, e.g. production of vegetable oil and white sugar. For some products the production level is almost fully recovered, e.g. for sausages, pasta, and margarine (**Table 1**). Growth in meat and dairy products is limited by purchasing power, but these sub-sectors are also growing notably.

Table 1. Production of selected food products in Russia, '000 tonnes

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007
Meat	6,484	2,370	1,193	1,284	1,456	1,677	1,698	1,827	2,100	2,500
Sausages	2,283	1,293	1,052	1,224	1,468	1,700	1,832	1,957	2,100	2,400
Butter	833	421	267	271	279	285	271	277	274	n.a.
Dairy (in liquid milk equivalent), million tonnes	20.8	5.6	6.2	6.7	7.7	8.5	8.7	9.5	10	10
Vegetable oil	1,159	802	1,375	1,281	1,197	1,598	1,867	2,206	2,600	n.a.
White sugar	3,758	3,155	6,077	6,590	6,165	5,841	4,852	5,588	5,800	6,100
Flour, million tonnes	20.7	14	12.1	12	10.9	11.2	10.8	10.2	10.2	10.1
Groats	2,854	1,418	932	994	951	890	893	926	966	1,100
Pasta	1,038	603	704	764	821	874	950	982	1,028	n.a.
Margarine	808	198	462	515	536	542	561	630	677	n.a.

n.a. – not available

Source: Rosstat data

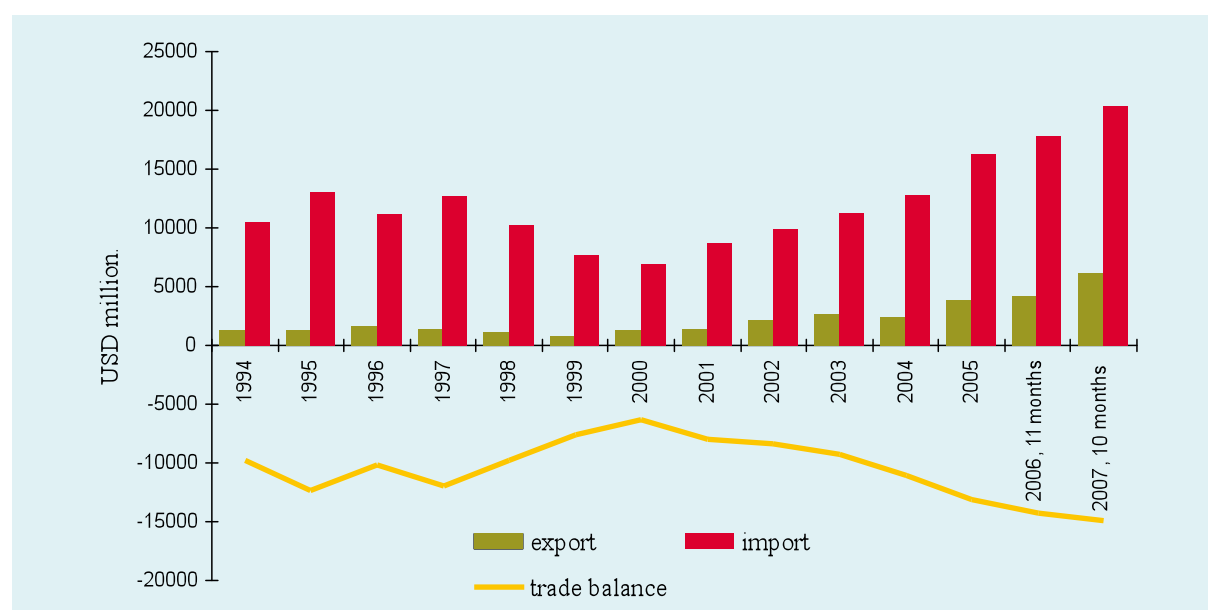
Food demand has increased at a faster rate than the average real income of the population. Consumption of fruits and cheese has grown most quickly, that is, foodstuffs with high income elasticity. Poultry sales have also grown rapidly, more rapidly than meat sales in total. The major structural trend in the food

industry of the last four to five years is a consolidation of assets: major companies of the sector tend to acquire smaller producers in the regions and/or merge with big companies.

Another significant trend in the food industry is a vertical integration along the food chain. Following the severe decline in raw produce imports after the 1998 crisis, many agribusiness companies became interested in domestic supplies of primary agricultural products. However, they found that domestic markets are severely underdeveloped; collection of raw produce is costly and goes hand-in-hand with high business risks. Therefore, many of these companies have started to expand their business control over how the produce is farmed. Over the last three years this trend has continued in the Russian agro-food sector.

The Russian agro-food trade is steadily growing. A record high trade turnover of more than 26 billion USD was recorded in January–October 2007. In spite of increased agri-food exports, imports continue to dominate, and Russia remains a net-importer of agro-food products. The expansion trend of the agro-food trade deficit, which started in 2000, still continues (**Figure 10**).

Figure 10. Agro-food trade in Russia, million USD*



*- excl. trade with Belarus
Source: Customs data.

Grain has become Russia's main agro-food export during the period of recovery growth, leaving behind traditional exports such as fish and seafood. In 2007 grain accounted for 42% of total agro-food exports. In recent years a massive private and public investment has been made in the grain export infrastructure, especially in the area of export seaports. Russia continues to be a net exporter of wheat and wheat flour.

Oilseeds, mostly sunflower seeds, have been a major export crop in Russia since the very early 1990s. In the beginning of the 2000s, vegetable oil exports started to expand due to the development of the domestic oil extracting industry. In 2005 Russia became a net exporter not only of sunflower seeds but also of sunflower oil. The new trend in crop exports is an expansion of the export of rapeseeds and rape oil in response to growing world demand and strong world prices.

Together with traditional raw crop exports, the export of value-added items such as bread and bakery commodities, dairy, and chocolate has started to grow. The share of these exports, however, remains marginal.

After the introduction of meat TRQs in 2003, meat imports decreased, but by 2005–2006 they had already fully recovered. Moreover, meat import exceeds the TRQ levels with regular duties being applied to out-of-quota imports. Meat continues to be the major item of Russia's agro-food import, making up 20%.

In 2004 a radical change in sugar trade controls led to a serious decline in sugar imports and the expansion of domestic sugar beet production. Share of sugar and sugar-containing commodities in overall agro-food imports fell significantly.

The main trend in the structure of agriculture is the severe polarisation of large farming enterprises and small family farms. The performance of the heirs of collective and state farms differs significantly. If one considers the frequency distribution curve of cost of production for any major agricultural product and any region, it will possess a well-articulated right tail ²⁾. Up to 50% of output originates from the upper 20% of household plots, which are presumably market-oriented, commercial producers who do not register as family farms in order to avoid taxation and to obtain concessions from an adjacent, large-scale, "mother" farm³.

New land legislation (Land Code and Law on Farmland Turnover) came into force in 2001–2002. This legislation dramatically increased transaction costs on the farmland market and land turnover farm has actually been paralyzed since that time. Law on Farmland Turnover was amended several times and corrected in order to ease transaction procedures, but the situation has not change noticeably.

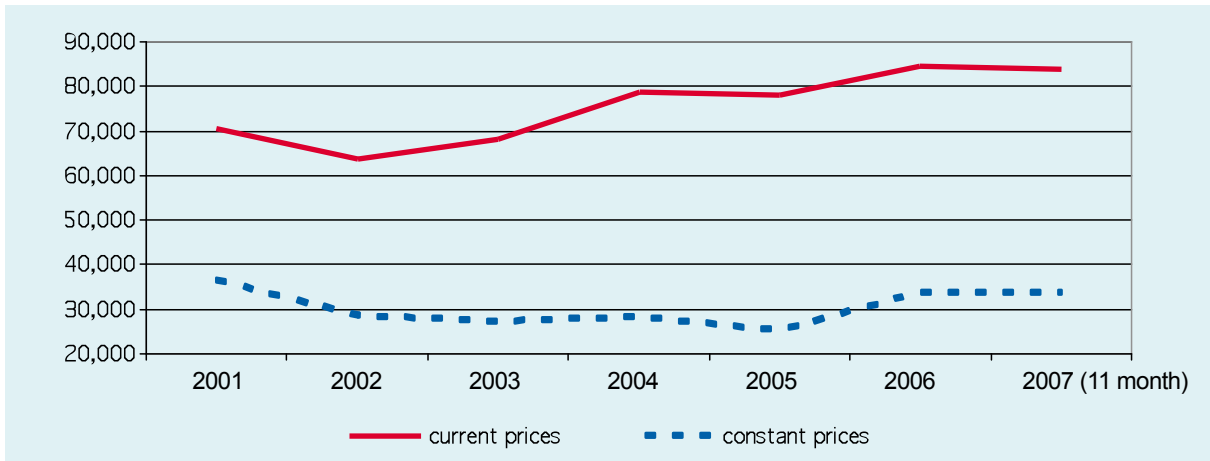
2.- (Serova and Shick, 2006)

3.- (Serova and Tikhonova, 2006)

3. Agro-food policy measures

In the 2000s budget support for agriculture has grown in current terms. But a share of agricultural spending both in gross agricultural output and in total consolidated budget has steadily decreased (Figure 11).

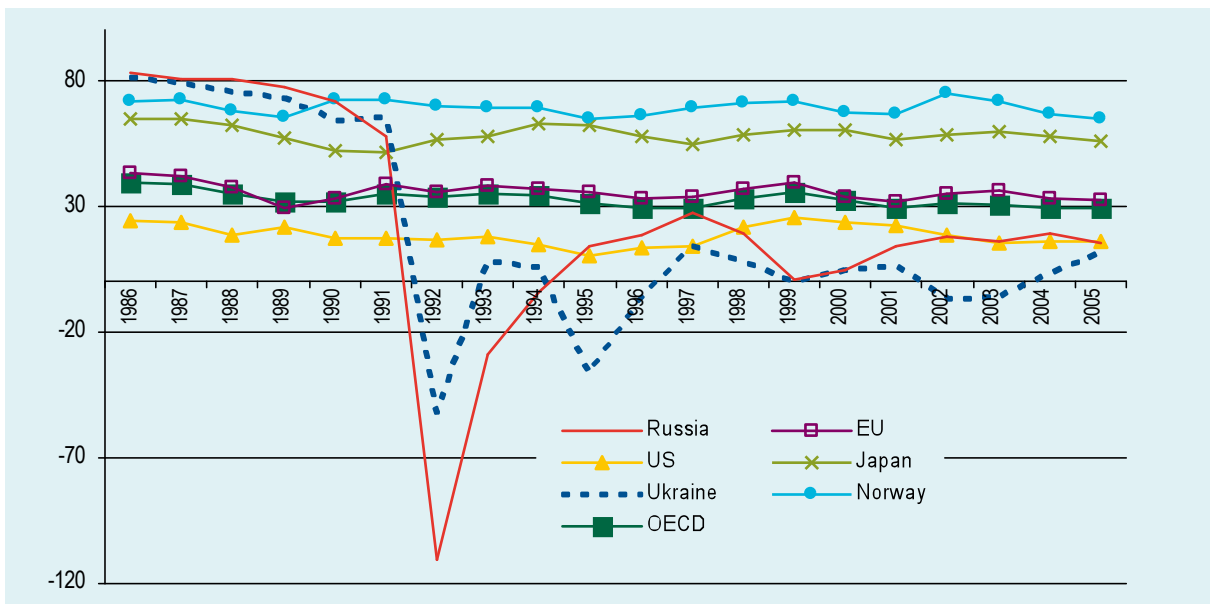
Figure 11. Consolidated budget expenditures in agriculture in Russia, million RUR



Source: Compiled from www.minfin.ru

In general, support for agriculture in Russia is still modest in comparison with other countries (Figure 1).

Figure 12. Producer support estimates (PSEs) in selected countries, %

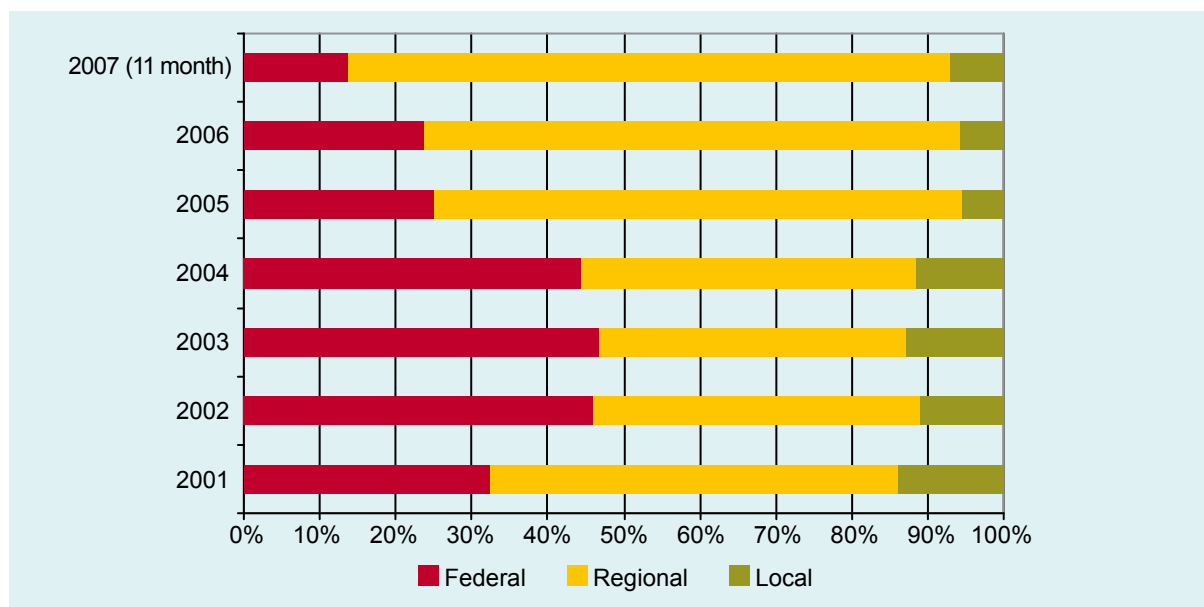


Source: Compiled from <http://www.oecd.org/dataoecd/55/42/38525360.xls> and <http://www.oecd.org/dataoecd/12/6/37002611.xls>

In 2004–2007 there were several significant changes in agro-food policy in Russia. The major change dealt with the distribution of federal and regional authority in agricultural policy. In accordance with the laws of July 2003 and December 2004, agricultural subsidies were defined as the exclusive authority of

the subjects of the Federation. From 1998, when the share of the federal budget in the overall agricultural budget was at its lowest (24%), this share steadily grew until 2004. After the introduction of new rules this share fell to 14% (Figure 13).

Figure 13. Structure of the consolidated agricultural budget in Russia



Source: Compiled from www.minfin.ru

This new system of budget support for agriculture is causing a growing inequality between the regions. Northern areas, which are richer but less favourable for agriculture, are benefiting, while Southern Russia, which is facing budget deficits but is rich in agriculture, is losing out.

By the end of 2005, an ambitious programme of four national priority projects was launched. It included modern healthcare, high-quality education, accessible and comfortable habitation for people, and efficient agriculture. The agriculture project was supplementary to the regular agricultural policy; some of the project measures and regular policy measures overlap (e.g. credit subsidies), some measures were newly introduced. Therefore the adoption of this National Project has increased the budget spending for agriculture. The Project had a two-year timeline, and its total budget amounted to 30 billion RUR (more than 2 billion USD), which adds up to about 20% of the federal budget spending on agriculture per year. The Project consists of three major sub-projects:

(1) Accelerated development of the livestock sector:

- Support for eight-year investment credit for green field construction and the radical modernisation of existing breeding farms;
- Improved availability of pedigree animals and equipment for livestock farms in the framework of the existing federal leasing of pedigree animals programme. In addition, 1 billion rubles was provided for the purchase of equipment;
- Stable TRQs for meat imports and import duties on livestock products for 2006–2009, with the lifting of import duties on equipment destined for livestock farms;

(2) Support of smallholder farms:

- Subsidising of 95% interest for bank credits for small family farms and households;
- Support of small farm and household cooperatives;
- Development of the land mortgage system in rural areas;

(3) Providing accessible habitation for recent graduates and their families in rural areas:

- 30% subsidy from the federal budget and 40% subsidy from the regional budgets for rural employers who provide habitation for recent graduates and their families.

In 2006–2007 the National Project was incorporated into a new legal tool as part of the agri-food policy. At the very end of 2006 a new law on agriculture was adopted which set a legal framework for agricultural policy in the country. According to the Law, every five years the government must adopt a detailed State Programme on policy measures in support of agriculture and of the agri-food market regulation. This Programme must specify the measures in detail, give the total budget allocation for each measure, and describe the indicators for estimating the success of each measure. Also, the Law envisages the annual report of the Minister of Agriculture on Programme Implementation and the independent expert evaluation procedure at the end of the Programme.

Table 2. Budget spending for the Russia's State Programme on Development of Agriculture in 2008–2012, billion RUR

Programme Divisions	2008	2009	2010	2011	2012	Total 2008–2012	2012 as % of 2007
Rural development	7.34	19.03	25.12	29.6	31.28	112.37	570
General services for agriculture	9.86	12.92	13.78	14.66	15.33	66.55	330
Support of priority sectors in agriculture	13.73	15.41	14.11	14.37	15.04	72.66	180
Financial stability of farms	44	51.28	65.62	64.94	66.85	292.69	150
Market regulation	1.36	1.36	1.36	1.43	1.5	7.01	115.4
Total	76.3	100	120	125	130	551.3	200

Source: RF MoA

3.1 Domestic support policy

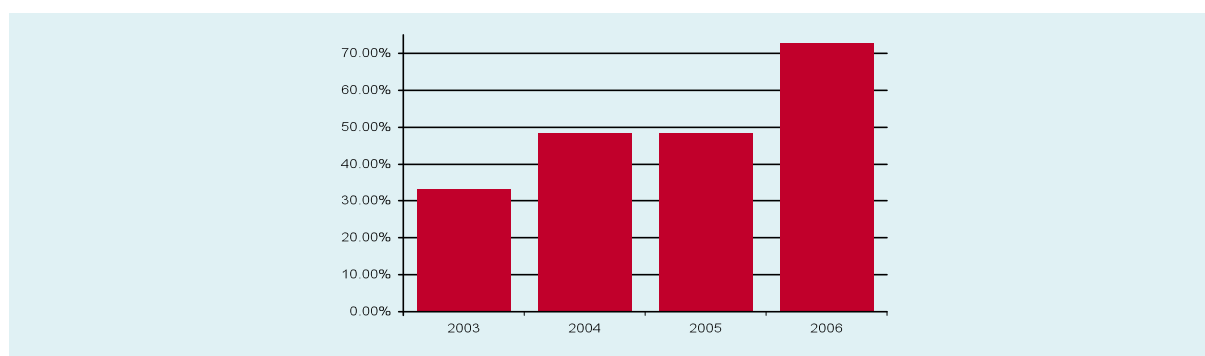
Input subsidies. Credit interest rate subsidising is the largest and most effective programme of the past few years. This programme provides partial compensation for the interest paid on credit for farms, farm cooperatives and some agribusiness companies. The federal budget compensates two-thirds of the interest paid by the debtor, but no more than two-thirds of the Central Bank refinancing rate; the subsidy is paid only in the event of timely interest repayment. Credit subsidies are paid for one-year and three-year loans and, since 2005, for five-year and eight-year loans (the last was introduced by the National Project on Agriculture).

Machinery and cattle leasing is another large input programme. The state-owned leasing company Rosagroleasing regularly gets federal budget funds for leasing operations. This company is supposed to

purchase machinery and pedigree cattle and lease them to agricultural producers at preferential rates.

Figure 14 depicts the share of federal budget spending for the state support for preferential credit and leasing. This share also includes subsidies for short-term loans and for leasing animals, therefore, the Figure does not necessarily reflect the dynamics of government spending to support technical modernisations of agriculture, but it does give a certain understanding of the growing importance of these two programmes in the federal budget. In 2006–2008, 8.3 thousand units of various machinery and equipment were supplied to agriculture under the state leasing programme⁴ – 20–33% of total deliveries of farm machinery. Around 17% of total state funding for agricultural leasing was used for deliveries to individual farmers⁵.

Figure 14. Share in the federal budget spending for agriculture for the state programmes supporting preferential credit and leasing in Russia



Source: Compiled with Data of MoA

Partial compensation (50%) of insurance payments is provided to agricultural producers who have signed an insurance contract with any Russian insurance company. The programme is valid for grain crops, oilseeds, sugar beet, rice, flax and soybean.

Livestock breeding subsidies are paid for the maintenance of highly productive breeding stock on specially certified pedigree-breeding farms.

Compensation of elite seed costs is paid for agricultural producers who have purchased elite seeds of grain crops, rice, soybean including F1 hybrids, rapeseeds, flax, hemp, and corn, including F1 hybrids produced locally.

In northern and mountainous areas, partial compensation is paid for the cost of transportation of feed culture seeds and fodder crops seeds.

Maintenance of perennial crops includes partial compensation of the costs of set-up and maintenance. This subsidy is paid for orchards, berry plantations, vineyards, hop gardens, tea plantations, and horticulture nursery gardens. The areas under these plants should be over a certain size. Compensation is paid as a fixed rate per hectare.

Since 2005, subsidies have been paid in the form of inter-budget transfers for livestock breeding, elite seeds and credit interest rate, insurance payment compensation, and partial compensation for the costs of transportation of feed and seeds to farms located in northern and mountainous regions.

4.- Information of the MoA

5.- http://www.agro_ru

The Federal Soil Fertility Enhancement Program includes (1) state capital investment in arterial irrigation and drainage system reconstruction, soil condition monitoring, research and development, and (2) partial compensation to the producers of the costs of irrigation, drainage and chemical melioration, and of the costs of mineral fertilizers.

Output subsidies. The major output programme at the federal level is grain intervention, which has been implemented since 2001 with an objective to eliminate the volatility of grain prices. In 2004–2006 the government conducted wheat and rye purchase interventions, and in 2007, sale interventions. The scheme of the interventions was changed every year. However, the major element of the interventions is the purchase of cereals on the six authorised commodity exchanges located in the major grain producing regions. Purchases are implemented at the auctions with fixed starting prices. The total sum for these governmental purchases is fixed in the annual budget. Import and export operations during these interventions are not normally regulated.

There are some marginal output subsidy programmes at the federal level. Flax and hemp subsidies are paid to producers and primary processors of flax and hemp. The budget spending for this programme is marginal. Per-head subsidies on reindeer, sheep and goats were cancelled in 2005.

At the regional level, dairy and meat programmes continue to be widely applied. Very often they take the form of per-unit subsidies for primary producers.

Writing off of farm debts. In 2004–2007 a massive programme of farm debt annulment was implemented.

Rural development. The federal rural development programme for 2002–2010 co-finances regional efforts in rural development from the federal budget. This financing targets in particular: programmes on housing, schools, hospitals and polyclinic construction; electric power lines, gas systems and water pipes in rural areas; provision of telecommunication services; and road construction.

3.2 Agro-food trade policy

Significant reduction in agro-food imports after the crisis of '98 inspired recovery growth in Russia's agriculture sector. Since the imports were restored, the government tends to facilitate recovery growth with various border measures. In recent years meat TRQs have been introduced, cheese and alcohol imports restricted, and phytosanitary limitations widely applied. The growth in trade protectionism in the agro-food sector was limited by WTO negotiations.

The trade regime regarding agri-food commodities remains rather liberal, however (**Table 3**).

Table 3. Structure of bound import tariffs in selected countries

	Russia*	USA	EU	Japan	Brazil	Mexico	Kenya	India
Mean	13.5	11.9	20.5	80.1	35.6	44.4	100	116
Median	10	3.8	10.9	12	35	36	100	100
Minimum	0	0	0	0	0	0	100	10
Maximum	100	378.7	218.5	2,553.6	55	450.7	100	300
Standard deviation	14.0	33	29.4	203.3	11.2	42.1	0	52.5
No. of tariff lines	2,602	1,769	2,200	1,806	942	1,080	665	690

* - actual import duties in 2004.
Source: AFE, IPC (2005)

In spring 2003 TRQs for beef and pork and an absolute quota for poultry were introduced. Since 2006 the poultry meat import quota has been replaced by a TRQ) (Table 4). Russia applies three TRQs for agri-food commodities; currently the members of the WTO apply more than 700 TRQs in total, and EU-15 alone uses 87 TRQs⁶.

Table 4. Meat import TRQs in Russia, 2003–2007

	2003	2004	2005		2006	2007
			Since January	Since June		
<i>Beef – fresh or chilled</i>						
TRQ. '000 tonnes	11.5*	27.5	27.5		27.8	28.3
Within-quota tariff	15%, but not less than 0.2 euro/kg	15%, but not less than 0.2 euro/kg	15%, but not less than 0.2 euro/kg	15%, but not less than 0.2 euro/kg	15%, but not less than 0.2 euro/kg	15%, but not less than 0.2 euro/kg
Above-quota tariff	60%, but not less than 0.8 euro/kg	60%, but not less than 0.8 euro/kg	60%, but not less than 0.8 euro/kg	40%, but not less than 0.53 euro/kg	55%, but not less than 0.7 euro/kg	50%, but not less than 0.65 euro/kg
<i>Beef – frozen</i>						
TRQ. '000 tonnes	315**	420	430		435	440
Within-quota tariff	15%, but not less than 0.15 euro/kg	15%, but not less than 0.15 euro/kg	15%, but not less than 0.15 euro/kg	15%, but not less than 0.15 euro/kg	15%, but not less than 0.15 euro/kg	15%, but not less than 0.15 euro/kg
Above-quota tariff	60%, but not less than 0.6 euro/kg	60%, but not less than 0.6 euro/kg	60%, but not less than 0.6 euro/kg	40%, but not less than 0.4 euro/kg	40%, but not less than 0.55 euro/kg	52.5%, but not less than 0.53 euro/kg
<i>Pork</i>						
TRQ. '000 tonnes	337.5**	450	467.4		476.1	484.8
Within-quota tariff	15%, but not less than 0.25 euro/kg	15%, but not less than 0.25 euro/kg	15%, but not less than 0.25 euro/kg	15%, but not less than 0.25 euro/kg	15%, but not less than 0.25 euro/kg	15%, but not less than 0.25 euro/kg
Above-quota tariff	80%, but not less than 1.06 euro/kg	80%, but not less than 1.06 euro/kg	80%, but not less than 1.06 euro/kg	80%, but not less than 1.06 euro/kg	60%, but not less than 1.0 euro/kg	60%, but not less than 1.0 euro/kg
<i>Poultry</i>						
Quota	744***	1,050	1,050		1,130.8	1,171.2

6.- <http://www.ers.usda.gov/Briefing/WTO/TRQ.htm>

Within-quota tariff	25%, but not less than 0.2 euro/kg	25%, but not less than 0.2 euro/kg	25%, but not less than 0.2 euro/kg	25%, but not less than 0.2 euro/kg	25%, but not less than 0.2 euro/kg	25%, but not less than 0.2 euro/kg
Above-quota tariff	-	-	-	-	60%, but not less than 0.48 euro/kg	60%, but not less than 0.48 euro/kg

* - since 01.08.2003 - ** - since 01.04.2003 - *** - since 30.04.2003 - Source: Customs legislation of the Russian Federation.

After meat, sugar has been the second most important focus for border measures in Russia in recent years. By the end of 2003 the previous system of quotas distributed at auction was lifted and a variable import levy was introduced for raw sugar. White sugar is the subject of seasonal import duties.

Until 2004 grain export was free of charge, but in 2004 the government became concerned by a high rate of increase in bread prices. In order to slow down these prices it introduced temporary export taxes for wheat and rye (**Table 5**), the first time this had happened during the reform period. In 2007 grain export taxes were re-established (see below). Since 2003 rice import has been the subject of regulation: a combined duty was introduced for rice and rice products.

Export duty is quite a rare tool in trade regulation; however, 22 current members of the WTO apply them for the export of agri-food commodities (**Box 1**). In the event of soaring food prices, transitional and developing countries often impose export limitations, including export duties⁷. Russia is not an exception in this regard.

Table 5. Cereal export taxes in Russia, %

	Since 16.01.2004	Since 01.05.2004	Since 12.11.2007	Since 29.01.2008
Wheat	0.025 euro/kg	0%	10%, but not less than 0.022 euro/kg	40%, but not less than 0.105 euro/kg
Rye	0.025 euro /kg	0%	0%	0%
Barley	0%	0%	30%, but not less than 0.07 euro/kg	30%, but not less than 0.07 euro/kg

Source: Customs legislation of the Russian Federation.

Box 1. Worldwide regulations against export duties

Export duties are principally imposed for fiscal reasons or used as a means to restrict exports of a particular product in order to reserve the domestic supply for local industries. They resemble import tariffs in that their primary effect is on the price of traded goods. However, this price effect generally also impacts on trade volumes, which contributes to the tendency to discuss export duties under the category of export restrictions. Export duties appear to be used only rarely, although there have been cases in a relatively large number of countries.

The WTO disciplines on export duties are not clearly defined. On the other hand, quite a number of regional trade agreements contain provisions prohibiting such measures.

Source: OECD, 2003

7.- EBRD, 2008

3.3 Soaring food prices ad hoc policy

In reaction to soaring food prices in 2007, the Russian government introduced several policy measures. The necessity of these measures was supported by forthcoming parliamentary (in December 2007) and presidential (March 2008) elections.

In October 2007, several Producer Unions (Poultry, Dairy, Vegetable Oil products), the Agrarian Commission of the Entrepreneurs of Russia, the two biggest Russian Dairy companies, and several of the largest retailers signed an agreement with the RF Ministry of Agriculture on fixing retail prices of staple food products (bread, skimmed milk, kefir, sunflower oil and chicken's eggs) at the level of 15 October 2007. Agreement was valid till 31 January 2008. Later it was expanded till 1 May 2008, with some increase in prices.

In order to curb grain prices on the domestic market, temporary export taxes for wheat and barley (**Table 5**) were introduced from November 2007 until April 2008. In December 2007 the tax for wheat was increased (ibid.); these taxes will be in force until 30 April 2008. These duties are not applied to exports to the Custom Union (Belarus and Kazakhstan). In February 2008 the Government imposed a temporary ban on exports to Belarus and Kazakhstan; the ban will be in place from 15 March until 30 April 2008.

On 15 October 2007, import duties for dairy products were reduced for 6 months from 15% *ad valorem* equivalent (AVE) to 5% AVE.

In mid-December the government adopted a list of food and agricultural commodities the export of which can be temporarily restricted or banned; this list includes mainly dairy products, cereals and flour, oil seeds and vegetable oils.

4. Overview of the agri-food sector in Southern Russia

The southern part of Russia is the most fertile area of the country and has historically always been used for agricultural production. In accordance with the current Russian administrative division, Southern Russia is a Southern Federal Okrug, which consists of 13 territories (of which eight are national republics) (Figure 15). In this paper we consider only four major territories of the Okrug: Krasnodar and Stavropol krais and Rostov and Volgograd oblasts. These four regions provide more than 16% of the gross agricultural output of Russia, a share which is steadily growing (in 1991 it was below 14%), and they contain more than 18% of the total arable land of the country.

Figure 15. Southern Federal Okrug of the Russian Federation



Source: http://wikitravel.org/en/Image:Southern_Russia_regions_map.png

This is a densely populated area, providing around 7% of national GDP. It is traditionally an agricultural area and agriculture has a 20–35% share of the regional economy, while the national share is below 10%. Since the major part of the economically active population is involved in agriculture, which pays relatively lower wages, the average per capita income in the region is below the national average (Table 6).

Table 6. Major characteristics of selected territories of the Southern Federal Okrug of the Russian Federation, 2005

Indicator	Units	Southern Federal Okrug	Krasnodar krai	Stavropol krai	Volgograd oblast	Rostov oblast
Territory	‘000 sq.km	591.3	75.5	66.2	112.9	101
	% of Russia	3.5	0.4	0.4	0.7	0.6
Population	‘000 per.	22,777.2	5,101.1	2,701.2	2,620	4,276
	% of Russia	16	3.6	1.9	1.8	3
Income p.c.	RUR/month	6,803.8	7,220	6,587.3	7,911.5	7,541.4
	% of Russia	66.8	70.9	64.7	77.7	74.1
Regional GDP	M RUR	1,298,788.1	371,177.5	147,018.6	205,844.2	264,067.2
	% of Russia	7.2	2.1	0.8	1.1	1.5
Agriculture	M RUR	367,871	116,282	52,159	39,792	68,945
	% of Russia	21.5	6.8	3.0	2.3	4.0
Share of agriculture in GDP	%	28.3	31.3	35.5	19.3	26.1

Source: Compiled from http://www.gks.ru/bgd/regl/B07_14p/IssWWW.exe/Stg/d01/01-02-1.htm

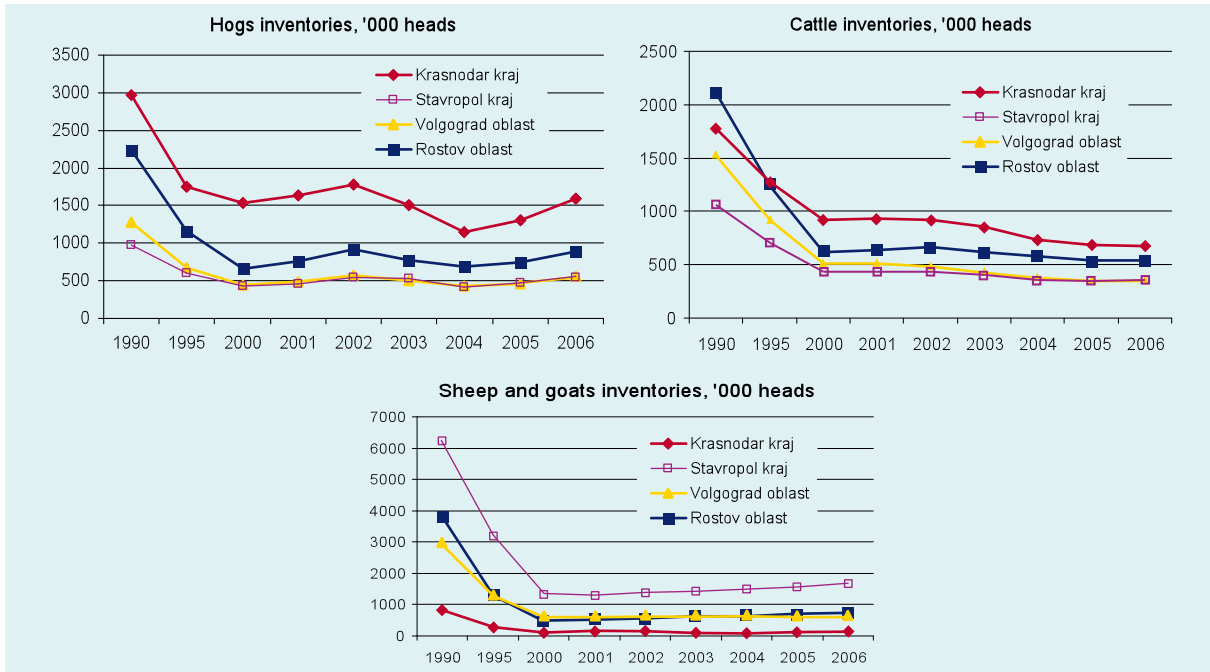
Agriculture in Southern Russia is specialised mostly in crop production, which makes up 63–64% of the gross agricultural output of each territory concerned. During the reform period the share of the livestock sector in total agricultural production in Russia (as in all transitional economies) decreased significantly, but it still accounts for 47–48% of total agricultural production in the country on average. Since the mid-2000s, however, livestock production has started to grow at a higher rate than crop production.

Cereals and sunflower seeds are the major cash crops in the area. Horticulture is also relatively well developed across the region; there are vineyards in Rostov oblast and Krasnodar krai. In Krasnodar krai there are tea plantations. Stavropol krai and some zones of Volgograd and Rostov oblasts are traditionally specialised in sheep rearing.

Krasnodar krai, Rostov oblast and Stavropol krai correspondingly take the first, second and third positions in cereal production in Russia (Volgograd oblast takes the eighth position) and all together these four regions produce one-third of Russian cereals. In sunflower seeds the first position is taken by Rostov oblast, the second by Krasnodar krai, and the third by Volgograd oblast. The four regions provide 60% of the country's sunflower seed output.

The livestock sector is lagging behind crop production in Southern Russia. However, the last few years have seen some signs of recovery in this sector as well. Although cattle inventories continue to fall, pig and sheep stocks grew in all four territories. As in the rest of the country, animal productivity is growing: thus, milk yield per cow has almost doubled since 1995 in all four regions and has exceeded Soviet levels.

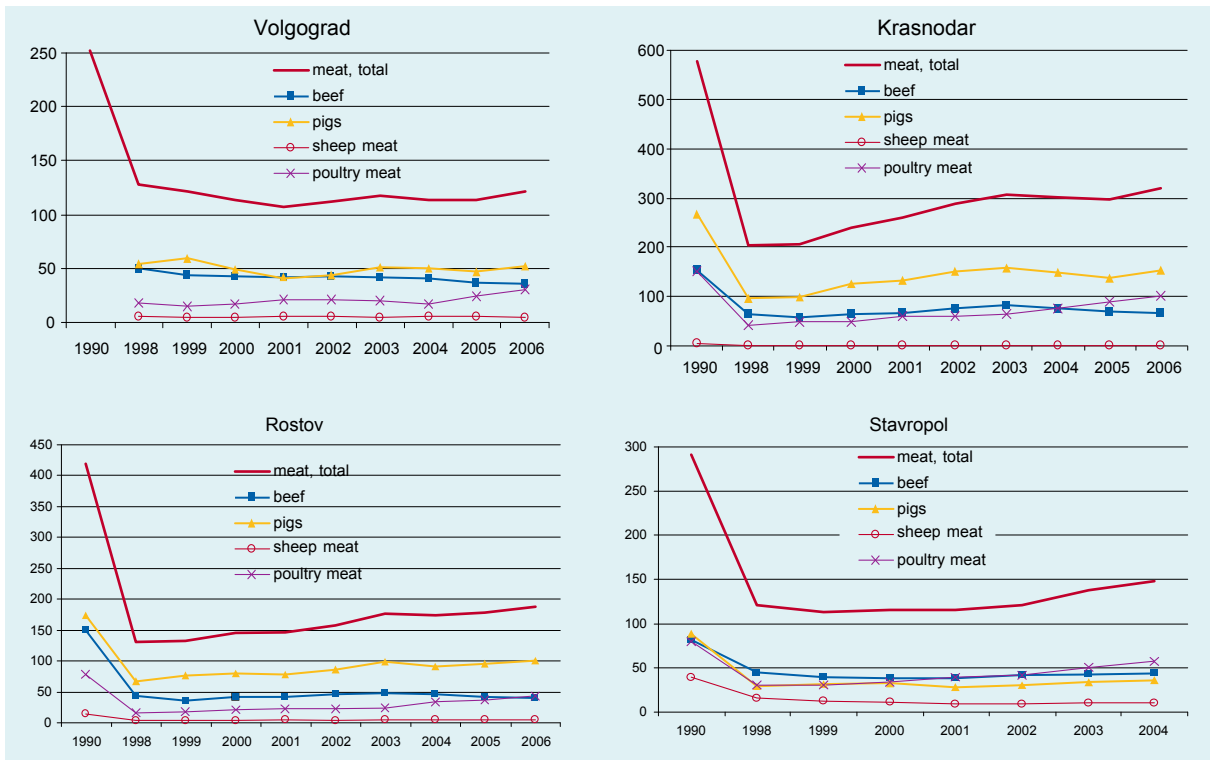
Figure 16. Livestock inventories in selected regions of Southern Russia, by the end of year



Source: Compiled from Rosstat data

Pig, sheep, and especially poultry meat production is growing across the entire area (Figure 17).

Figure 17. Meat production in Southern Russia, slaughter weight, '000 tonnes



Source: compiled from data of the corresponding regional statistic agencies

At the same time, the share of the four regions under consideration in Russian meat and milk gross output has remained almost constant over the last 2 decades, at 15–16% and 10–11% correspondingly.

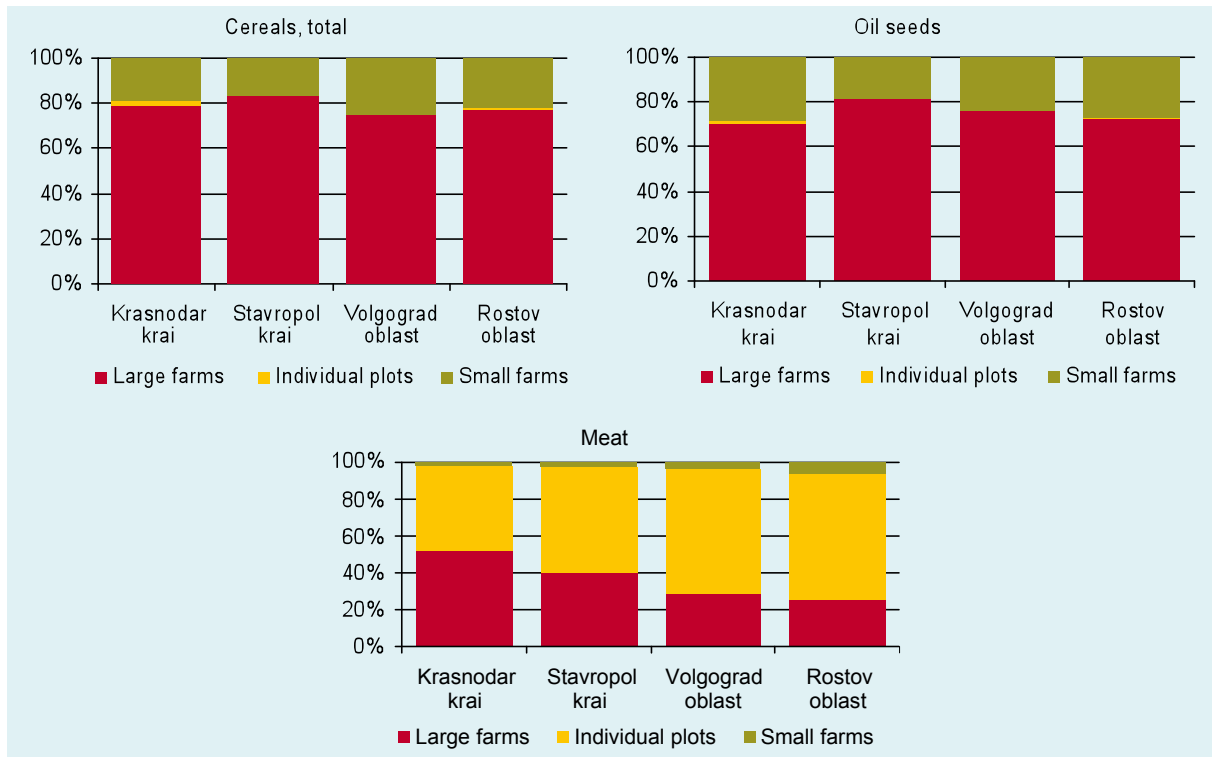
The structure of agriculture is similar in all four regions: production is dominated by large farms, a large number of which are vertically integrated with food and/or trade companies. The cash crops are mostly produced on the large and super large farms. At the same time meat and milk are mostly produced in rural households (on individual plots) (**Figure 18**).

Box 2. Farm structure in Russia

As in many other post-communist countries, Russia's agriculture is based on three types of production units: (1) large farm enterprises, the successors of kolkhozes and sovkhozes and various derivative farming companies; (2) small family farms, which are presumably run and possessed by one family and (3) individual household plots of the rural and, to a minor extent, the suburban and urban population (tiny plots of land presumably used for subsistent food production and with some sale of surplus beyond family needs). The types of agricultural production units are mainly defined in a legal sense by their form of registration. Large farms are incorporated in one form or another; small farms are specifically registered as such, and individual plots being exempt from both business registration and taxation are defined in terms of the documented allotment of a physical plot of land. Weak legal and statistical definitions of these three types of farming entities do not allow them to be distinguished by their physical size and economic turnover. Thus, in Russia there exist small farms operating three to five thousand hectares and employing 50 to 100 or more workers, which makes them comparable in size to a typical Russian incorporated farm. On the other hand, there are family farms with no land under cultivation or pasture, but which are registered as family farms and count as such in the statistics. In accordance with data from the last Agricultural Census (2006), more than 30% of small farms in Russia run more than 2.00 hectares of farmland while 17% have no land at all. In addition, there is little difference in actual ownership between these two types. A "large" farm can be controlled by a single individual while a "family farm" is not atypically owned as a partnership or even owned jointly and severally by unrelated persons. As households are exempt from taxation, many market-oriented small farms pretend to be individual plots although in reality they cultivate substantial plots of 50–100 hectares of arable land.

Source: Serova, 2008

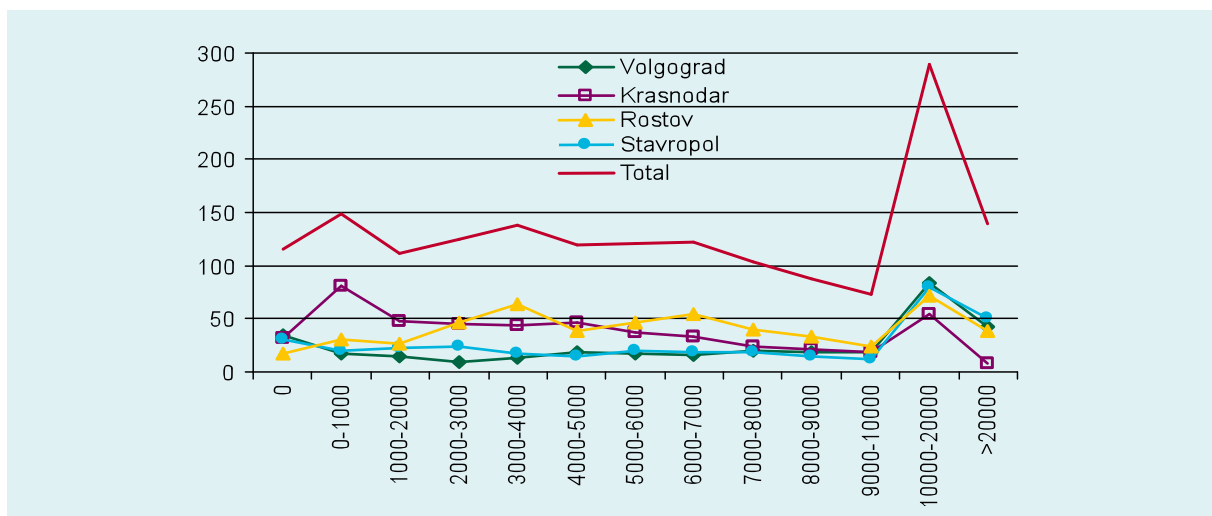
Figure 18. Production of major products by type of farm in Southern Russia, 2006



Source: compiled from data of the corresponding regional statistic agencies

The large farms in the selected regions are the biggest in the Russian Federation: almost 28% of all large farms cultivate farmland area of more than 10,000 hectares (**Figure 19**). And these large and super large farms provide almost half the sales and profit of large farms: 55–60% of grain output, 75% of meat gain.

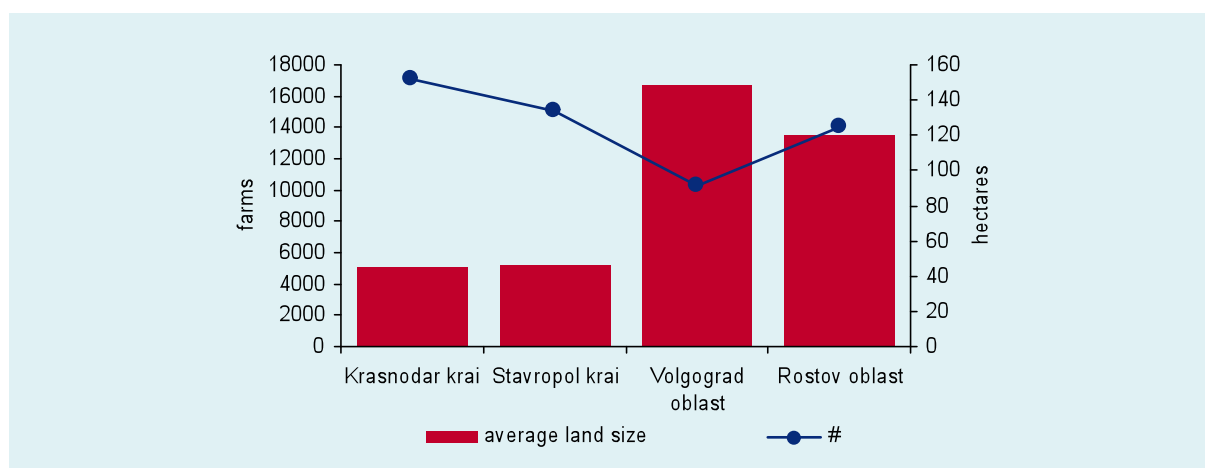
Figure 19. Distribution of large farms in Southern Russia by area (ha), 2005



Source: compiled from data of the corresponding regional statistic agencies

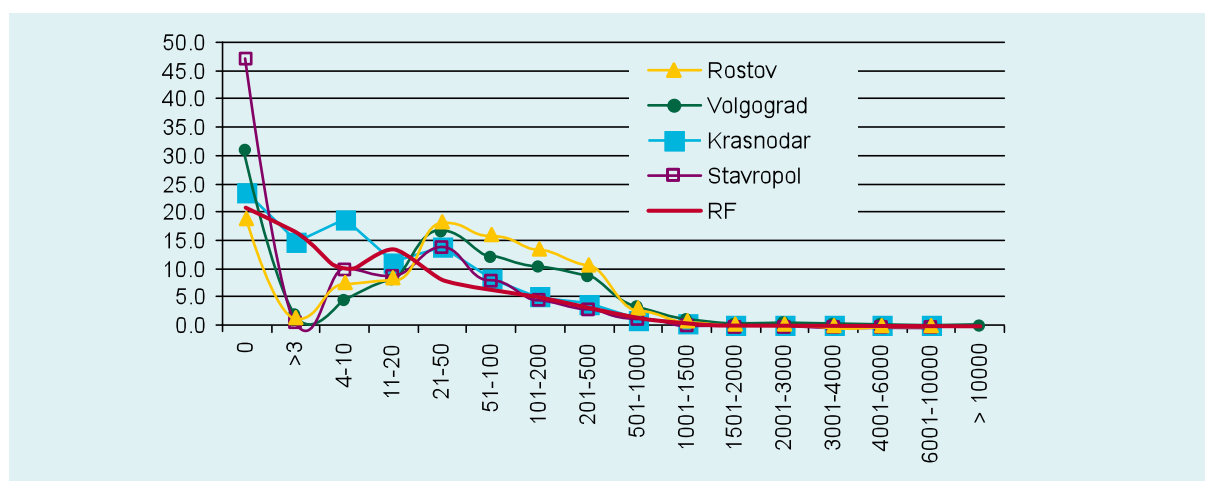
Small family farms in the region are also not very small. The average size of this type of farm in Rostov and Volgograd oblast is about 150 hectares, while the national average is 80 hectares (in the two other regions the average size of family farms is about 45 hectares) (**Figure 20**). In the last five years the number of family farms has steadily decreased while the average size has increased by 1.2 to 1.5 times. The share of small family farms operating above 50 hectares varies from 18% in Krasnodar and Stavropol kraia to almost 45% in Rostov oblast and above 37% in Volgograd oblast, while in Russia as a whole this share is 22% (**Figure 21**).

Figure 20. Number and average size of small family farms in Southern Russia, 2006



Source: Compiled from Rosstat data

Figure 21. Distribution of small (family) farms in Southern Russia by area (ha), 2005, %



Source: Agricultural Census data, Rosstat

The four regions under consideration not only have favourable climate and soil conditions for farming, but they also have a relatively favourable geographical location. The regions are located along major Russian waterways – the Don and Volga rivers. They have connections to the major Russian Black Sea port in Novorossiysk city; sea-river vessels can go from the Caspian Sea up to Volgograd city and from the Azov Sea up to Rostov-upon-Don city. The region has relatively good railway connections and highways.

Another comparative advantage of the region is its educational base: there are at least three nationally well-ranked universities preparing experts for agriculture – the Kuban and Stavropol agricultural universities and the Rostov state university.

The national agri-food policy was described in section 1. However, in accordance with Russian legislation, agri-food policy comes under the jurisdiction of the regional authorities. In the majority of cases, regional administrations duplicate the measures of the national policy with supplementary budget spending in accordance with the capacity of the regional budgets. Nevertheless, there is a notable difference in regional policy.

Thus, the level of support to agriculture from regional budgets differs in each of the four regions under consideration, although in all regions it is above the national average level (**Table 7**).

Table 7. Agricultural budget, 2005

	Share of agriculture in regional budget	Share of agricultural budget in gross regional product	Expenditures on agriculture per 1 RUR of regional agricultural output	Expenditure on agriculture per person employed, '000 RUR
Stavropol	6.3%	1.0%	3.2%	5.0
Krasnodar	4.2%	0.5%	1.8%	3.8
Rostov	4.4%	0.6%	2.7%	4.9
Volgograd	6.6%	0.7%	4.1%	6.4
RF	2.6%	0.4%	5.2%	n.a.

Source: Regional budget laws. 2006–2007 (Consultant Regions database). data of Rosstat

The structure of agricultural expenditure also differs from region to region: Stavropol and Krasnodar kraises spend a major part of their agricultural budgets on subsidies to producers. The Rostov budget is allocated mostly for general services of which the biggest share belongs to the rural development programmes. Volgograd oblast supports the development of social infrastructure in rural areas. As is commonly recognised, transitional economies suffer most of all from lack of infrastructure, therefore one can conclude that the last two regions have a more rational structure of agricultural budget spending than the previous two. Among the different subsidies in all regions, the major part falls upon input subsidies (compensation for production costs) – this is common particularity of agricultural subsidies in transitional economies (**Table 8**). On the other hand, Rostov and Volgograd oblasts use a policy tool known as the budget loan, which is explicitly prohibited by the National Budget Code (**Table 9**).

Table 8. Structure of agricultural budget, 2006–2007

	Stavropol	Krasnodar	Rostov	Volgograd
Administrative costs	17.0%	21%	36%	22%
Infrastructure	3.0%	6%	8%	19%
Veterinary and phytosanitary measures	0.6%	1%	1%	0%
Research	0.3%	1%	0%	0%
Education	0.1%	0%	2%	1%
Miscellaneous	2.1%	5%	26%	2%

	Stavropol	Krasnodar	Rostov	Volgograd
General services	23.1%	34%	73%	45%
Product subsidies	3.3%	4%	6%	0%
Costs compensation	61.5%	58%	16%	41%
Miscellaneous	12.2%	4%	5%	14%
Subsidies	76.9%	66%	27%	55%
Total	100.0%	100%	100%	100%

Source: Regional budget laws. 2006–2007 (Consultant Regions database)

The measures applied by all the regions under consideration are mostly input subsidies. In the 2000s interest rate subsidies demonstrated their high efficiency in the support of both producers and processors. Therefore, this tool has become widespread among all regions of the Russian Federation, including among those under our consideration (Table 9).

Regional administrations are allowed to transfer some of the policy measures together with corresponding budget subventions to the municipalities. Thus, policy can differ not only from region to region, but from municipality to municipality (Table 9).

Table 9. Policy measures in selected regions of the Southern Federal Okrug of the Russian Federation, 2007

Type of measure	Stavropol	Krasnodar	Rostov	Volgograd
<i>Regional administration</i>				
Input subsidies	Leasing of machinery and animals at preference rates	Interest rate subsidies (2/3 of Central Bank refinancing rate) to private leasing companies, providing machinery, trucks, equipment for farms and processing enterprises	Budget loans to: <ul style="list-style-type: none"> ● farm cooperatives ● dairy plants for modernisation ● farms for purchase of fuel 	Budget loans to small family farms
	Interest rate subsidies for 1-, 3-, 5-, 8-year loans (2/3 of Central Bank refinancing rate)	Interest rate subsidies for farm cooperatives (2/3 of Central Bank refinancing rate)	Subsidies to the equities of farm cooperatives	Interest rate subsidies for: <ul style="list-style-type: none"> ● farm cooperatives (2/3 of Central Bank refinancing rate) ● farms ● service enterprises ● processors enterprises procuring flour and grain ● others
	Compensation of 30% of insurance cost (crops and livestock)	Partial compensation of crop insurance cost	Partial compensation of crop insurance cost	Partial compensation of crop insurance cost (7–11%)

Type of measure	Stavropol	Krasnodar	Rostov	Volgograd
	Subsidy for diesel	Subsidy for diesel	Subsidy for diesel (per hectare of crops)	Subsidy for diesel used for feed crops and orchards
	Partial compensation of costs of purchasing breeding animals and semen	Partial compensation of costs of purchasing breeding animals and semen	Partial compensation of costs of purchasing breeding animals and semen	Partial compensation of costs of purchasing breeding animals and semen
		Partial compensation of fertilisers and other chemical costs	Partial compensation of fertilisers and other chemical costs	Partial compensation of chemical costs
		Subsidies for arrangement of vineyards, tea plantations, and orchards		Subsidies for arrangement of vineyards, tea plantations, and orchards
		Partial compensation of high quality seeds		Partial compensation of high quality seeds
		Partial financing of soil improvement work	Partial financing of soil improvement work	
			Partial compensation of costs of soil tests	
Output subsidies		Sugar beet seeds	Sheep (subsidy per head)	Meat, eggs, milk, freshwater fish
<i>Municipalities</i>				
Input subsidies	Partial compensation of fertiliser and other chemical costs	Partial compensation of fertiliser and other chemical costs	Partial compensation of fertiliser and other chemical costs	
	Partial compensation of cost of energy for on-farm irrigation		Partial compensation of cost of purchasing spare parts, animals, seeds, feed, fuel	
			Partial compensation of crop insurance cost	
Output subsidies	Subsidies for milk and eggs	Subsidy for animal products		
	(Only in 2006) Subsidies for pork and beef	Subsidy for flax and hemp		
		Subsidy for production of high quality seeds		

Source: Compiled with Source: Regional budget laws, 2006–2007 (Consultant Regions database)

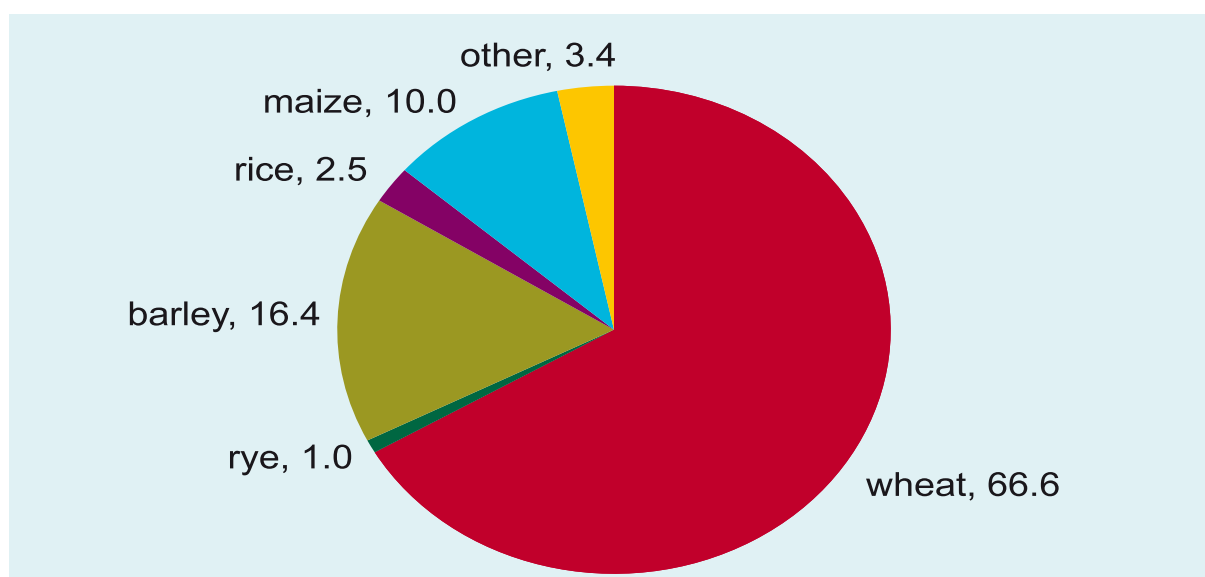
5. Grain food chain in Southern Russia

5.1 Primary production

5.1.1 Output and yield

As was stated above, Southern Russia is the major cereal producing area in the country. The four regions considered provide 1/3 of gross cereal output (**Table 1 of Annex 2**). Two-thirds of the regional cereal output falls to wheat, of which 98% is winter wheat. Rice occupies a marginal share of the total cereal output of the region, however, Southern Russia provides almost 90% of all Russian rice (mostly in Krasnodar krai⁸) (**Figure 22**).

Figure 22. Structure of grain production in Southern Russia, 2006, %



Source: Compiled from Rosstat data

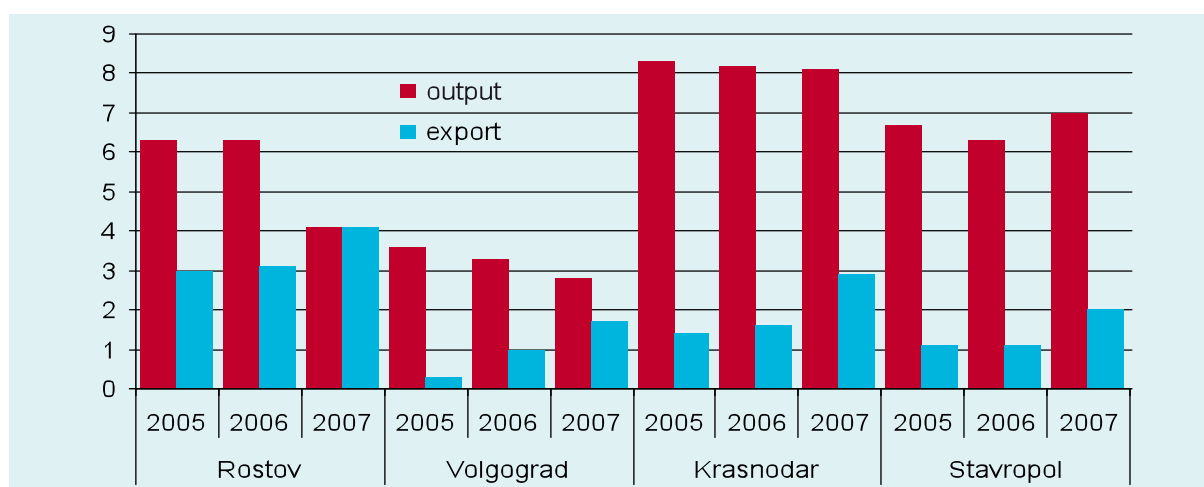
Southern Russia is the major cereal exporting region of the country (**Table 10**). The export is not correlated with output dynamic (**Figure 23**), meaning that cereal export potential is not a residual amount after satisfaction of domestic needs, as is sometimes stated.

Table 10. Cereal exports from Southern Russia, million tonnes

	2005	2006	2007
Rostov oblast	3	3.1	4.1
Volgograd oblast	0.3	1	1.7
Krasnodar krai	1.4	1.6	2.9
Stavropol krai	1.1	1.1	2
Total four regions	5.8	6.8	10.7
Russia	12.3	11.2	14.4*
Share of four regions in total Russian export	47.2%	60.7%	74.3%

WJ estimate - Source: Compiled from Rosstat data and data of corresponding regional statistical agencies

8.- Rice is also produced in Rostov and Astrakhan oblasts, and a very marginal quantity in the Far East

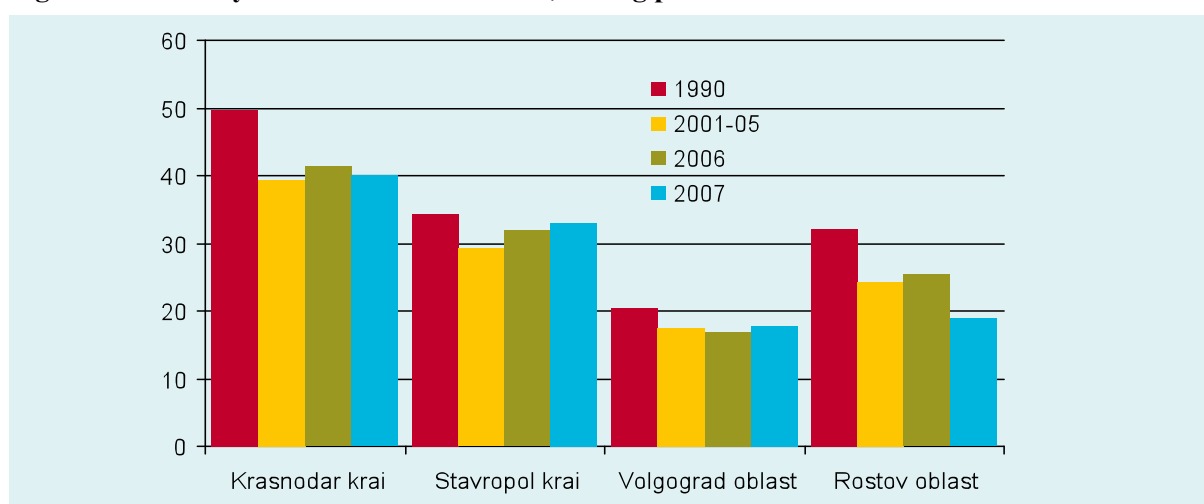
Figure 23. Comparison of cereal output and export in Southern Russia, million tonnes*


* Export is presented with annual volumes (compiled of exports from two consecutive trade seasons), so it is not very correct to compare it with the annual output.

Source: Compiled from Rosstat data and data of corresponding regional statistical agencies

Being oriented strongly towards exports and on shipment into the European part of Russia, the cereal producers and traders in the regions concerned are not particularly anxious about railway prices and participate only to a limited extent in governmental programmes of intervention into the cereal market.

Average cereal yields have fallen notably since the Soviet era and differ significantly across the region: the sparsely populated Volgograd area has lower yields than the Krasnodar and Stavropol areas (**Figure 24**). Later in this paper the huge differentiation by productivity and efficiency among producers will be explained. The best producers have much higher yields than the regional average yield aggregate. Thus, in 2004–2006 15 top cereal producers in Krasnodar krai and seven top producers in Stavropol krai had average cereal yields of above five tonnes per hectare; the eight top producers in Rostov oblast produced more than three tonnes per hectare; and the top five producers in Volgograd oblast produced more than 2.5 tonnes, which is well above the corresponding regional average yields (**Table 14 of Annex 2**).

Figure 24. Cereal yields in Southern Russia, 100 kg per hectare


Source: Compiled from Rosstat data

Yield is very much determined by the quality of seeds used on the farms. From the Soviet era there are more than two dozen plant breeding units in the region and more than 40 elite seed producing farms (**Table 11**). There is federal and regional governmental policy supporting elite seed purchases. However, the deterioration of plant breeding systems and the lack of public and private investments into R&D, together with low enforcement of legislation on the protection of intellectual rights have led to a deficit of high quality, regionally adjusted seed for cereal production.

Table 11. Seed production and plant breeding units in Southern Russia, number of units

	Rostov	Volgograd	Stavropol	Krasnodar
Seed producing farms	8	10	9	14
Plant breeding units	4	4	4	10

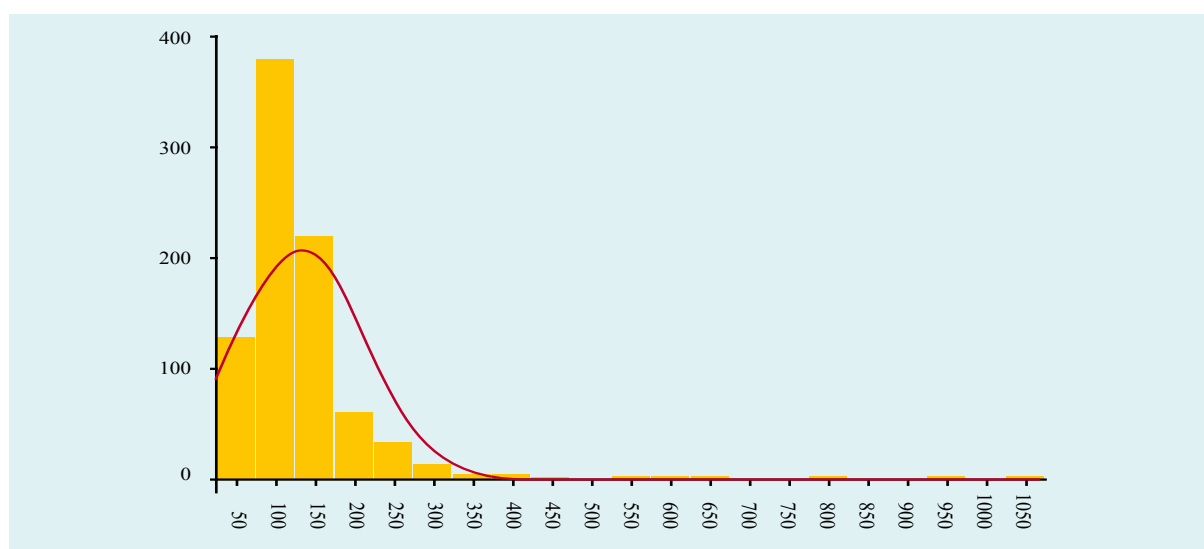
Source: Data of Rostov Institute of Agricultural Economics

5.1.2 Producers structure

Cereals are mostly produced on large enterprises (around 80% – see **Figure 18**) and small farms, which in cereal production are normally are not very small.

The large cereal producers in the region are highly differentiated not only by size but also by performance. There are several very modernised and advanced companies with relatively high yields, sales and profitability (**Table 14 of Annex 2**). On the other hand there are marginal producers which are still in business because of weak bankruptcy legislation enforcement and the supportive policy of local administrations. **Figure 25** depicts an example of the distribution of large farms by cost of cereal production in 2000 in Rostov oblast. This distribution has a very long right tail. And this situation is typical for all regions of Russia. This figure demonstrates a very high level of enterprise differentiation, showing that a lot of farms are sustained for years with minimal and sometimes negative margins. The output of these farms is negligible and can easily be captured by the leading farms. Due to the supportive policy, however, they can continue producing cereals and depriving the most efficient producers of a share of the market.

Figure 25. Distribution of Rostov large farms by cost of cereal production*, 2000



* - RUR of costs per tonne of cereals (horizontal axes)

Source: (Serova and Shick, 2006)

Box 3. Agroholdings in Russia

In the middle of the 1990s research into Russian agriculture from various sources began to register an emergence of a new organisational form of farming which was quite different from the main type of agricultural producers in all post-Soviet economies (Rylko, Jolly, Serova, Khramova, Uzun, Koester, etc). This emergence became especially evident after the 1998 crisis, after which a recovery growth in the agri-food sector had begun. The term “agroholdings” is already assigned in official Russian practice for these forms of farming, and this phenomenon unites a number of quite different agricultural companies, established in different ways and motivated by different incentives. Moreover, sometimes the structure of these forms differs dramatically. Not all are organised as holding companies, and not every case is coupled with vertical integration along a supply chain.

These companies are big, much bigger than traditional Soviet farm enterprises, and their current heirs, farm operations, are established with capital arrived from outside the primary sector. The capital sometimes comes from the downstream sector when the processor invests into the farms supplying raw produce. Sometimes it comes from the upstream sector when the supplier tends to control the buyer of inputs. And very often the capital originates from entirely outside the agri-food sector – mainly from the most profitable sectors of the Russian economy such as energy, finance, or metallurgy. In some cases several farm enterprises are held by a single holding company, but it can also be a sole huge farm enterprise. Sometimes such companies are organised under the control and with the participation of regional and/or local administrations, however in the majority of cases it is purely a private initiative. Management structure also differs tremendously from company to company. Land tenure issues can be arranged differently: huge areas can be in ownership of a company, but more often than not land shares are rented.

What distinguishes these new operators from the traditional farm enterprises is not only, or even predominantly, the scale of operation, but a notable inflow of investment into the primary sector, new types of management, new technologies, the commercial orientation of the business and aggressive behaviour in the markets.

Source: Serova (2007)

In cereal production in Southern Russia the huge enterprises, named “agroholdings” (see **Box 3**), are the most widely spread. According to expert estimates they occupy 9–12% of the total arable area of the corresponding region and produce one-third to one-half of regional cereal output.

The performance of these holdings is not always better than the average enterprises in the region (this is shown in a case study in Rostov oblast – see **Table 12**). But very often this is caused by deferred return on investments, most of which were made at the beginning of the 2000s. Over time, the productivity and efficiency of the holdings will normally increase above the regional average.

The consequences of the emergence and operation of agroholdings are still not clear. Without doubt, their emergence and development brought a notable flow of capital investment into the sector, which they had been deprived of for almost a decade. This investment allows the modernising of primary agriculture as well as of the downstream sector and market infrastructure. The agroholdings are the major purchasers of modern machinery and equipment for farms; they introduce the most advanced technology. Moreover, farm operations are extending from south to north, allowing the increased use of existing field machinery: companies move their tractors and harvesters from their southern farms to the north in accordance with local field work seasons. That decreases production costs *ceteris paribus*. Agroholdings bring to the farming sector new management skills; they train farm personnel, sending people for training to the main educational centres in Russia and abroad.

The agroholdings have enough means at their disposal to maintain quality and standards control and to comply with international standards requirements.

Due to the abovementioned merits, coupled with a huge scale of production which allows them to amass commercially more competitive commodities, the agroholdings have greater market power both inside the country and abroad, and they have better access to financial resources because of better collaterals.

The agroholdings follow a capital-intensive pattern of development. Modernisation of the farming business increases labour productivity and correspondingly decreases demand for labour in rural areas. Moreover, faced with the too costly control over workers in the large-scale farm enterprises, agroholdings tend to substitute labour with machinery (wide-cut machinery, automatic equipment, GPS-based technologies, etc). This tactic leads to a growth in unemployment in rural areas. The Soviet era left the heavy burden of a severe lack of non-agricultural jobs in rural areas, therefore labourers who have been laid off from farms can find no alternative employment in the villages, and the sheer vastness of most Russian regions does not give the option of commuting between townships for work. As a result, the more agroholdings develop their business, the more unemployment is seen in the rural areas of their operation. This causes social tension, which is only aggravated by a growing inequality of income among village dwellers. Half of surveyed agroholdings complain about pilfering and vandalism of their farms. Many of them operate their own guard services, some pay external guards. Some companies develop social programmes in the villages where they operate, in order to maintain the peace. Regardless of how companies try to solve this problem, our estimate shows that corresponding spending makes up around 10% of total production costs, which means a 10% loss in competitiveness.

Another visible problem of the agroholdings is over-investment. External investors into the agro-food sector typically show world class standards in the technological development of their farming businesses. However, these technologies are introduced into an economical environment where labour and land are extremely cheap. The marginal increase in productivity of these technologies is below their marginal costs. So, allocative efficiency of farms belonging to the agroholdings is low. Of course, this can be a short-term effect and in the mid-term, investment into high technology will pay off. However, the agroholdings are currently faced with huge competition from the best traditional farms.

Traditional agricultural economy proceeds from the axiom that the farming sector is non-monopolistic in principle. How the agroholdings function in practice disproves this postulate. In particular on the regional level, the biggest agroholdings monopolise the main agri-food markets with all the demerits of a monopoly.

Table 12: Rostov oblast: comparison of operation of average surveyed agroholdings and average area farm enterprise, 2001

Per one average operation	Units	Agroholdings	Farm enterprises
		#=14	#=949
Land in use	Thousand hectares	31.6	6.0
Wheat area	Thousand hectares	18.2	1.3
Wheat output	Thousand tonnes	98.6	3.8
Wheat yield	100 kg/hectare	29.4	29.9
Wheat production cost	1000 RUR/tonne	1.2	1.1

Source: (Serova, 2007)

The list of the top three agroholdings in each of the regions considered is presented in **Table 13**.

Table 13 Top agroholdings in Southern Russia

Region	Share of holdings in agricultural land of the region, %	Top three holdings in the region
Rostov oblast	9.4	1. Agrosoyuz “Yug Rusi” – 200,000 hectares 2. Yugtransitservis – 120,000 hectares 3. ASTON – 45,000 hectares
Volgograd oblast	11.6	1. MT-AGRO – 150,000 hectares 2. GETEX – 120,000 hectares 3. Gelio-Pax – 78,000 hectares
Stavropol krai	11.9	1. Novaya Agrarnaya sistema (New agricultural system) – 120,000 hectares 2. Agros – 120,000 hectares 3. Agriko – 100,000 hectares
Krasnodar krai	12.0	1. Agrocomplex – 140,000 hectares 2. Agroholding “Kuban” – 76,000 hectares 3. AgroGuard – 61,000 hectares

Source: Data of Rostov Institute of Agricultural Economics

5.1.3 Marketing

The value-added chain in cereals in South Russia is rather simple: around 75–85% of total cereal sales are marketed by producers to traders and/or to processor (mills, mixed feed manufacturers and so on). The relatively high share of cereals is used as a payment-in-kind for farm workers, as payment for land rent and sales to workers at below-market prices) – 10–17%. Barter deals with cereals are still widespread in Krasnodar and Stavropol kraies – 6–7% of total cereals sales by enterprises (**Table 14**). This way of marketing was widespread in the second part of the 1990s when commodity credit was one of the major tools of the governmental credit policy in agriculture. This practice was later lifted and barter deals seriously declined. However, in these two regions cereals are still used for purchases of inputs (and possibly for paying taxes, which can also be considered as barter).

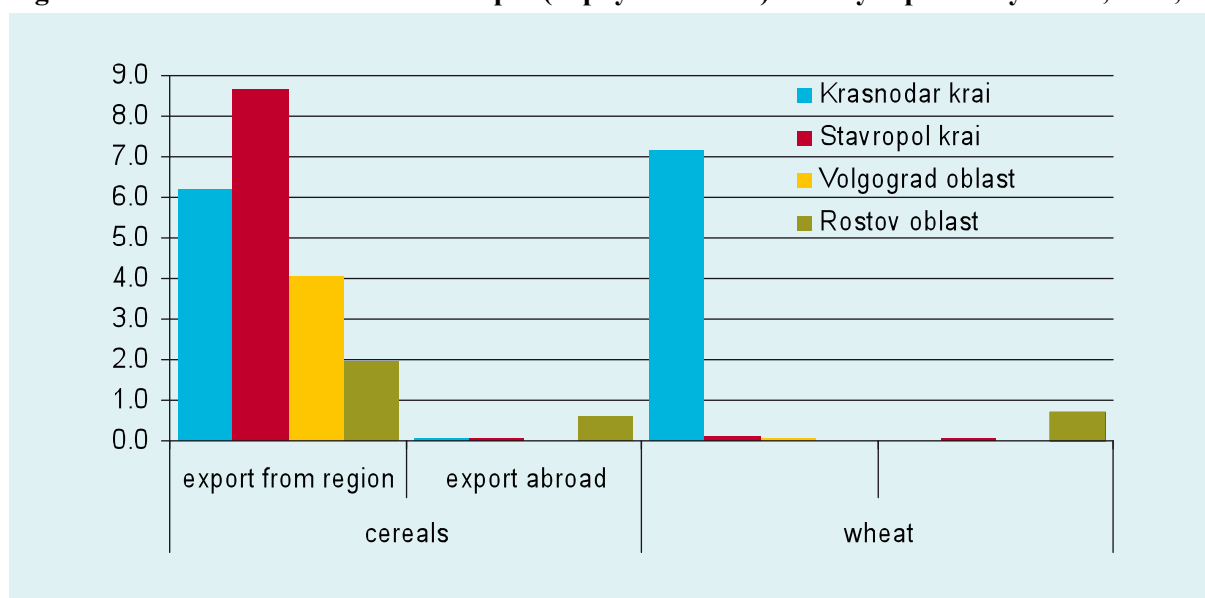
Table 14. Channels of cereal marketing in Southern Russia, share of each channel in overall output (in physical terms), 2006, %

	Processors, traders	Workers	Barter deals
Krasnodar krai	84.5	9.9	5.6
Stavropol krai	76.0	16.8	7.1
Volgograd oblast	84.9	14.0	1.1
Rostov oblast	80.5	17.6	1.9

Source: Compiled from Rosstat data

Cereal producers in the entire region mostly market their product to local operators. Despite Southern Russia being the major cereal exporting region of the country, a very marginal share of farms export their product directly abroad (**Figure 26**). One can assume that these are mainly agroholdings who conduct export operations directly.

Figure 26. Share of marketed cereal output (in physical terms) directly exported by farms, 2006, %



Source: Compiled from data of Rostov Institute of Agricultural Economics

The shape of the food chain at this level is very much determined by the existence of huge holdings in agriculture. In the majority of cases, these holdings are vertically integrated and include several adjacent elements of the food chain (production, processing, trading, and transportation). So, cereals from farms go to the processing and/or trading units of the same holdings. However, studies show⁹ that agroholdings tend to keep major units (including agricultural units) as their profit centres, which means that the farms of the holding are not obliged to deliver their produce to units of the same holding, but are free to choose any profitable channel for marketing. Nevertheless, cereals are actually mainly marketed inside the holdings.

Outside of the holdings, forward contracts for cereal deliveries are rarely encountered: the deals are conducted on the spot. Warehouse receipts are hardly used. Cereal trade middlemen normally operate like speculators (buying for re-selling), not like brokers (marketing for a commission). All of this creates a very risky environment on the cereal market. Many years of efforts to establish a futures market and to introduce warehouse receipts have ended in failure. Due to this, cereal profitability at the farm level varies dramatically: from 20 to 150% in the last 15 years. Only big and super big trade operators can persist on this market.

5.1.4 Major problems

On the producer level there are several problems in the cereal food chain.

Land tenure. Due to the specific nature of Russia's land reform (see **Box 4**) access to land for the investors is coupled with high monetary and time expenses. Many land shareholders, especially in the southern part of the country where land has truly high value, wait for an opportunity to sell their plots at higher prices. In the four densely populated regions under consideration, the highest prices for land are

9.- Serova and Khramova (2000, 2003), Serova (2008)

offered not by agricultural investors but by developers or individuals for housing. Therefore, investors in agriculture face the difficulty of accumulating land for establishing farms. Cereal production, for example, is undoubtedly hampered by this fact.

New legislation, adopted in the early 2000s imposed very sophisticated and extremely bureaucratic procedures of land consolidation and registration¹⁰. This has also become a serious obstacle to investment into cereal production.

In the survey more than 17% of cereal food chain experts indicated that land tenure is a problem in the sector (see below).

Box 4. Land tenure in Russia

The preconditions of the reform prohibited land restitution of the kind that took place in many Eastern and Central European countries in transition. Instead, the major instrument of Russian reform was land sharing based on the allocation of conditional land shares, which were not indicated on the ground, to the rural population. This fragmentation of land ownership was not coupled with the fragmentation of farming operations: the big farm enterprises were preserved but had to rent small land shares from their holders. Moreover, in the late 1990s huge agribusiness companies entered Russia's agricultural sector and rented hundreds of thousands of hectares for cultivation.

Agricultural growth started to recover after 1998, but a severe contradiction between the system of fragmented land tenure and the prevailing large-scale farm structure remained. For agribusiness investors, the process of gaining access to land had become costly and prolonged, hampering the growth of investment and, consequently, growth in the agri-food sector.

The complicated systems of land registration laid a foundation for rent-seeking activity in land administration across the country, aggravating the problem of high transaction costs in the farmland market. On the other hand, the land share system provided the millions of rural dwellers with an additional source of income that was crucial given the severe fall in living standards stemming from these forms in the countryside. The objective of increasing the efficiency of agriculture by consolidating land ownership thus contradicts the objective of protecting the civil rights of millions of land shareholders who were allotted their shares in the early 1990s.

Source: (Serova, 2008)

Interviews with cereal producers in Southern Russia, as well as with cereal experts in Moscow, have revealed that another serious constraint on cereal production is a dramatic collapse of the plant breeding system in the country. The producers complain about a lack of appropriate varieties adjusted to the local conditions. High quality seeds are in deficit.

Labour quality is a universal problem for the Russian economy and agriculture in particular. The latest studies in this field show that crop production is more capital intensive than livestock production and farm managers in this sector occasionally report a deficit of qualified labourers¹¹. Our survey in Southern Russia showed that the quality of labourers and management is considered as a limitation for sector development by 9% and 6% of experts correspondingly (see below).

The wide spread of agroholdings in cereal production in Southern Russia creates a number of problems described above.

10.- Shagaida, 2004

11.- Bogdanovsky, 2008

5. The cereal market is very well developed in Russia in comparison with other product markets. However, the establishment of efficient agricultural price risk management solutions such as futures markets and warehouse receipts is still urgently needed.

5.2 Traders and processors

5.2.1 State of the art

In each of the four regions under consideration cereal procurements are conducted by around 50 traders. However, in each region there are several major traders. **Table 15** presents the top three traders operating in the corresponding region. In 2006 these were the biggest exporters on the Russian cereal market and all together they counted for nearly three-quarters of national cereal exports in the season 2005/2006.

A problem specific to grain traders during this transitional period is the problem of the double certification of wheat for export. All cereals in Russia are subject to internal certification (based on gluten content). Cereals dedicated for export must be certified by internationally accredited surveyors, which certificates are not accepted by national authorities. The Russian government has made several steps towards the elimination of this double certification system and the problem will most probably be settled in 2008.

Conventional risk management tools such as commodity exchanges, forward contracts, and warehouse receipts are very much underdeveloped in the region as well as in the country as a whole. However, the risks are seemingly not so high for cereal companies, which have sufficiently strong incentives to invest in these tools.

Table 15. Top cereal traders in Southern Russia

Region	Name of trading company	Rank in national ranking of cereal exporting companies, 2006*	Export value, '000 tonnes, 2006
Rostov oblast	YugTransitService	3	1,200
	Yug Rusi	-	650
	ASTON	6	570
Volgograd oblast	Gelio-Pax-Trade	-	300
	International Grain Company	1	300
	Luis Dreifus-Vostok	5	100
Stavropol krai	Luis Dreifus-Vostok	5	500
	International Grain Company	1	460
	Stavropol Grain	-	154
Krasnodar krai	International Grain Company	1	1,500
	Rosinteragroservice	2	1,100
	Cargill-Yug	4	600
	Lada-Gelendgik-Transe	-	460

* Source: "APK-inform Russia", №37 11 Sept. 2006.

Cereals have always been produced in Southern Russia and therefore many processing facilities were built here during Soviet times. The indubitable leader in cereal processing is Krasnodar krai, while Volgograd oblast is very much lagging behind (**Figure 27**). However, the output of all major grain-based products decreased from the late 1980s and the planned capacity of processing plants used today is typically at 30–45%. Due to overcapacity, the profitability of the companies in this sector is very low, and the companies urgently need modernisation and are looking for investment.

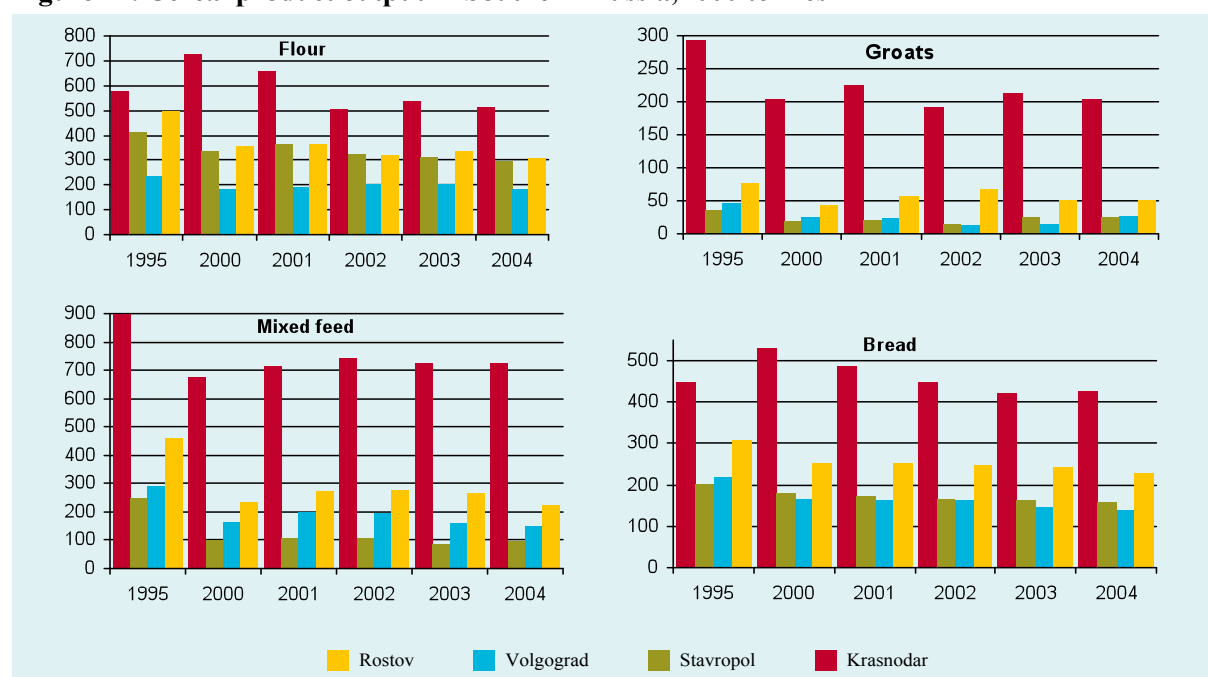
This is especially true for the flour business. In the first years of the reforms, small-scale mills were built in almost every village, which decreased the business of conventional mill plants. Later on, the majority of local cereal output started to go to export, and mills now face a severe deficit of grain for processing. A large part of cereal production goes via vertically integrated channels, which decreases the open market further. In addition, in line with a growth in income among households and shifting consumer preferences, demand for bread is steadily falling. Due to this, most mills, which remain from the Soviet era, are in a very depressed state. The handling infrastructure of these mills is a most restricting problem. Also the majority of mills face a lack of liquidity for grain procurements; governmental and regional credit programmes are mostly oriented towards agricultural producers, not to processors (see above). Borrowed funds are also restricted for the mills as their potentially collateralised assets are much depreciated.

The most advanced mills see their prospective development in the niche markets of special varieties of flour (macro and micro nutrients enriched, and so on). This development also requires serious modernisation and related investment, as well as a specific grain supply.

It should also be taken into consideration that in the Soviet era major cereal processing facilities and elevators were combined in the same production unit (*kombinats*). During the privatisation process, new owners were mainly seeking elevators, but together with the elevators they obtained mills, mixed feed facilities, and groat-producing capacities. Some of them tried to modernise this business, but the market for mixed feed and flour was not very developed at that time. This was one of the reasons for the degradation of these assets. Another tactic of the new private owners was to develop an adjoining business; thus, one of the first private grain companies in Russia entered the livestock business (they needed to develop demand for their high quality mixed feed)¹².

For many years mixed feed production was in disarray because of a dramatic fall in livestock and poultry inventories. In the wake of somewhat increased dynamism in the livestock sector, the mixed feed business has started to grow as well.

Figure 27. Cereal product output in Southern Russia, '000 tonnes



Source: Compiled from Rosstat data

5.2.2 Major problems

To summarise what has been discussed in the above sections, it should be stated that the major problem which traders face is the underdeveloped market institutes and most of all the efficient agricultural price risk management institutes, such as commodity exchanges, futures markets, warehouses receipts, and forward contracts.

Cereal processors suffer from a lack of modernisation of their assets, a restricted raw product market in Southern Russia because of intensive export, and a deficit of finance for procurements.

5.3 Infrastructure

The physical infrastructure of the cereal food chain in Southern Russia is the most advanced in the country.

The Soviet Union was a huge net-importer of grain and, therefore, the grain terminals of all major sea ports were import oriented. Although it took a long time to build the new export port infrastructure on the Black Sea, the total port capacity of the region is still not sufficient: during the two last years the capacity has been exceeded, in some cases by more than two-fold (**Table 16**). This was the situation when the Ukraine restricted the export of cereals, which led to Ukrainian ports being made available for Russian exporters.

Table 16. Characteristics of cereal port terminals in Southern Russia

Port, terminal	Ownership structure, %		Estimated annual capacity for cereal exports '000 tonnes	Volume of actual exports, '000 tonnes	
	Share of state	Private share		2006	2007
Novorossiysk	20%+1,820 stocks	79.6	4,000.0	4,084	6,622
Eisk	25.5	74.5	450.0	418	912
Rostov	25.5	74.5	350.0	755	791
-«Yug Rusi»	-	100	450.0	632	1,026
- ASTON	-	100.0	150.0	326	500
Taganrog	25.5	74.5	185.0	390	400
-TSPZ	-	100	30.0	030	050
-«Priazovie»	-	100	30.0	50	050
Azov	-	100	2,000.0	825	403
Tuapse	25.5	74.5	300.0	610	810
Temryuk	-	100	290.0	150	130
Kavkaz	-	100	300.0	150	130
Olya (Astrakhan oblast)	-	100	500.0	Under construction	

Source: Data of Rostov Institute of Agricultural Economics

The regions under consideration “inherited a huge network of both linear elevators, and flat storage facilities, which still form the skeleton of the grain and oilseed handling and storage system. This system is quite adequate in terms of total storage capacity, technical C&D and storage conditions, especially

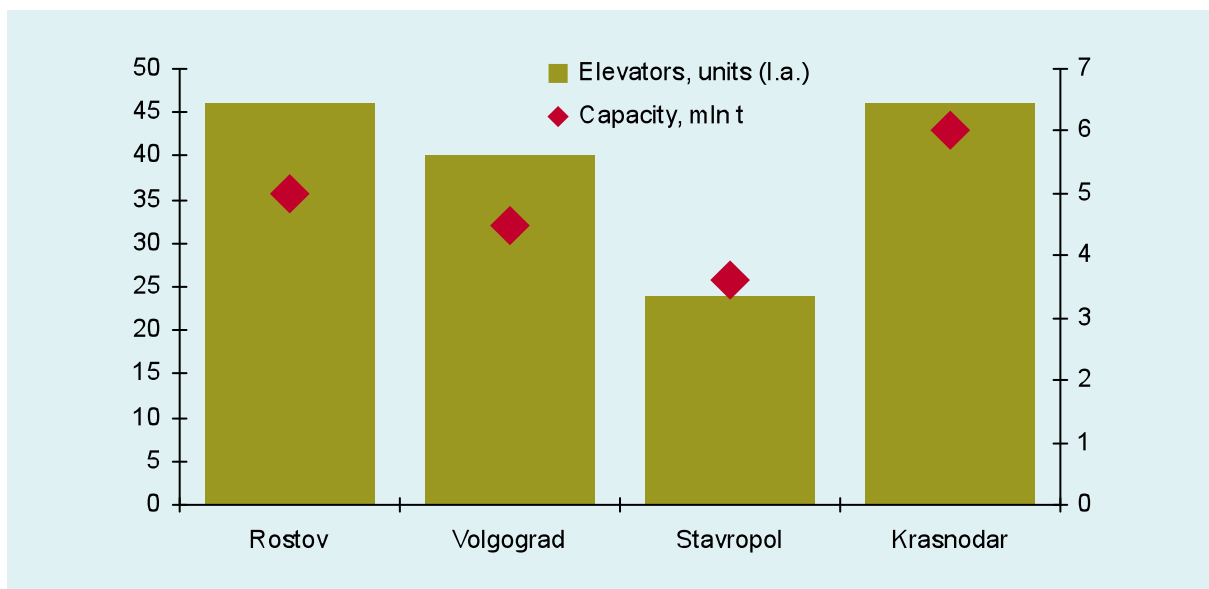
bearing in mind the recent efforts by private companies to modernise and renovate the “stuffing”, such as dryers, cleaners, norias, thermo sensors, etc.”¹³

The total capacity of elevators in the region exceeds the total regional need for the storage of cereals. In 2006 the total capacity of elevators was more than 19 million tonnes (**Figure 28**), while the gross cereal output of the four regions concerned was below 25 million tonnes (**Table 1 of Annex 2**). The majority of elevators in Russia were privatised in 1993. The pricing policy of the new owners forced local producers to seek on-farm storage. In recent decades almost all big cereal producers in the region have built their own storage facilities. The quality of these facilities is lower than on conventional elevators, but massive on-farm storage has allowed a notable reduction in price seasonality: big producers can postpone cereal marketing during the season in such a way as to reduce supply to the market during the harvesting period, which will smooth seasonal price fall. The underdevelopment of financial tools enabling producers to borrow against these cereal stocks does not allow all producers to follow this tactic.

At the same time, the conventional elevators are faced with serious overcapacity and loss of business reputation among producers. The majority of elevators are utilised as a transit storage point for the export trade.

“The weakest point of the [...] grain handling and storage system is low technical and economic efficiency: high energy consumption, extremely low labour productivity, insufficient separation/blending capacity, low speed of grain ingress and egress, and outdated systems of quality control. This system was quite adequate for the economic and technological conditions of the 1970s–80s, but was both physically and morally outdated by the turn of the millennium. For example, the typical off-loading daily capacity of a linear elevator [...] is about 1000 tonnes, or times lower than for modern country elevators in developed countries.”¹⁴

Figure 28. Elevators in Southern Russia, 2006*



* L.a - left axes

Source: Data of Rostov Institute of Agricultural Economics

13.- Rylko, 2008

14.- Rylko, 2008

Taking into account that this region is closely located to sea ports and is focused on the export of its cereal, transport (railway) infrastructure does not play as big a role as in the rest of the country. The most frequently reported problem of the cereal infrastructure in Russia, including in the south, is the deficit of a specialised wagon fleet for cereal shipment (hoppers). “Russia inherited from the USSR a huge park of 48 thousand hoppers, of which 33.5 thousand are still functional today. However, according to the Russian Railway Agency, only 13.5 thousand hoppers have been deployed under grain and oilseed transportation, the rest are reserved for other bulky items such as cement, construction sand, alumina, etc.”¹⁵ The biggest traders have started to obtain their own hoppers, but supply in the country is not sufficient. The transport infrastructure problem was indicated by 13% of the cereal sector experts who participated in our survey (see below).

5.4 Case study of cereal value chain

In order to trace cereal flow along the value chain and to estimate transaction costs, a case study was made in Rostov oblast, demonstrating cereal transactions during the peak season of sales – in September 2007. Wheat, as the most widely produced cereal in the area, was selected for the study.

The producer was a large cereal producing enterprise. In September it sold 3,600 tonnes of wheat to two traders and to one elevator. The transactions to traders were done under the terms FOB vessel and the producer paid 0.03 RUR/kg for shipment. The elevator bought at FOB warehouse and the producer paid 0.1 RUR/kg for shipment. 100 tonnes of wheat were sold to the elevator at 6,100 RUR/tonne, 1,500 tonnes at 5,800 RUR/tonne and 2,000 tonnes at 6,300 RUR/tonne to different traders.

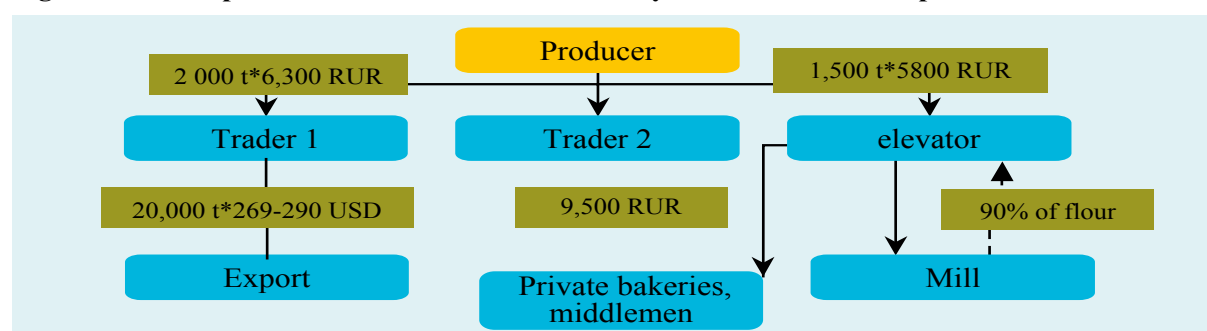
Not one deal was arranged with a formal contract.

During September the second trader bought 20,000 tonnes of wheat from 6 producers under the terms FOB vessel. Prices of purchases were growing over the months from 5,800 to 6,500 RUR/tonne. All purchased wheat was supplied for export under four contracts and was exported via the Azov and Eisk ports. Prices of export contracts varied from 6,800 to 7,350 RUR/tonne (269–290 USD/tonne). The trader also ran additional costs after purchase from the producers: for transfer and handling; for obtaining standards, quarantine and fumigation certificates and related costs; for customs duties. These costs came up to 0.24 RUR/kg.

The elevator purchased wheat from 20 suppliers at prices varying from 5,800 to 6,300 RUR/tonne. Each of the suppliers paid shipment to the elevator. All purchased wheat was supplied to the mill under tolling conditions: as payment for processing, the mill left 10% of the total flour output. The elevator sold flour to small private intermediates and bakeries at a price of 9,500 RUR/tonne.

The mill and bakeries were not available for the case study.

Figure 29. Principle value chain in wheat, case study in Rostov oblast, September 2007



15.- ibid

The case study allows computing the net return per tonne of wheat in two marketing channels (**Table 17**). The trader exported wheat at 6,800–7,350 RUR/tonne (269–290 USD/tonne) and purchased it from producers at 5,800 to 6,300 RUR. One can assume that wheat sold at 290 USD was purchased at the most expansive price, that is, 6,300 RUR. The net return for the trader will be the final price in RUR (7,337) reduced by the producer price (6,300 RUR) and related transaction costs (240 RUR), that is, 797 RUR/tonne.

Another marketing channel is via the elevator. The elevator bought wheat at 6,100 RUR and milled it in a tolling scheme at a local mill enterprise. The output of flour from wheat is about 75%. The mill took 10% of flour output for processing. This means that the actual price of flour for the elevator was $0.75 \cdot 0.90 \cdot 9,500 \text{ RUR} = 6,412.5 \text{ RUR}$. The elevator did not report on the cost of handling and processing of the purchased wheat, but it cannot be more than 3–4% of the wheat price (not more than 230 RUR/tonne). So, the net return of the elevator is about 312 RUR.

The case study proves that cereal export transactions are significantly more profitable than marketing on the domestic market. It explains why a major part of the cereal output of the region goes for export. It also explains the existence of a cereal deficit for local mills and elevators, and their overcapacity and lack of finance for investment in modernisation. Also the case study reveals that the tolling scheme of marketing which was widespread in the 1990s still persists. Altogether it means that the market is pretty far from perfect and market institutions need to be developed further.

Table 17. Calculated net return on wheat in two value chains

Value chain	Producer-trader-export	Producer-elevator-mill-bakery
Producer sale price	6,300	5,800
Transaction costs of purchaser	240	n.a.
Flour output	X	75%
Cost of milling	X	10%
Sale price of purchaser in USD	269–290	X
Exchange rate	25.3	X
Sale price of purchaser in RUR	6,805.7–7,337	9,500
Net return	265.7–797	612.5 (~312)

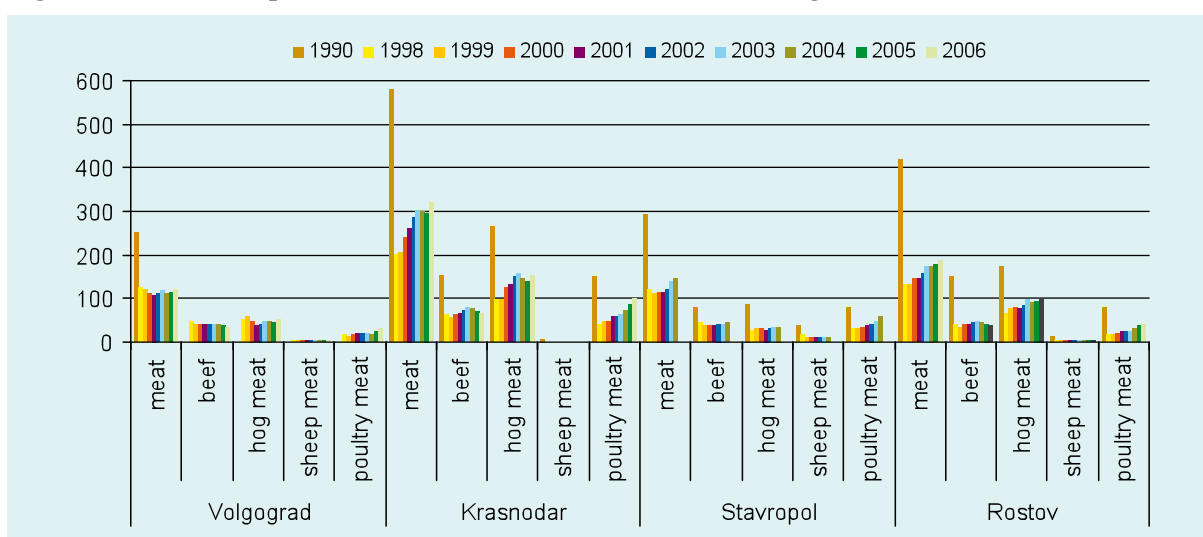
6. Meat food chain in Southern Russia

6.1 Primary production

6.1.1 Animal stocks and output

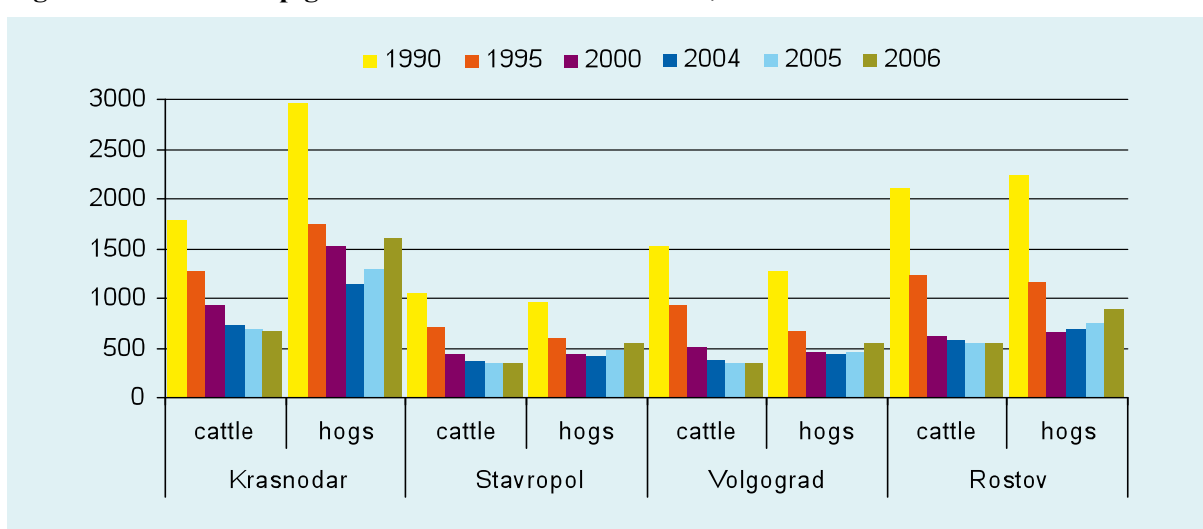
The four regions under consideration provide around 15% of Russia's total meat output. In the middle 1990s this share had fallen, but after the 1998 crisis meat production started to grow and by 2006 the region had restored its share in the national gross output. Today almost all the regions concerned produce a half of what was produced during the pre-reform period. In Volgograd oblast meat production is stagnating rather than growing, but Krasnodar krai and Rostov oblast have entered the national list of top regions with the highest rate of growth in meat production (Figure 30).

Figure 30. Livestock production in Southern Russia, carcass weight, '000 tonnes



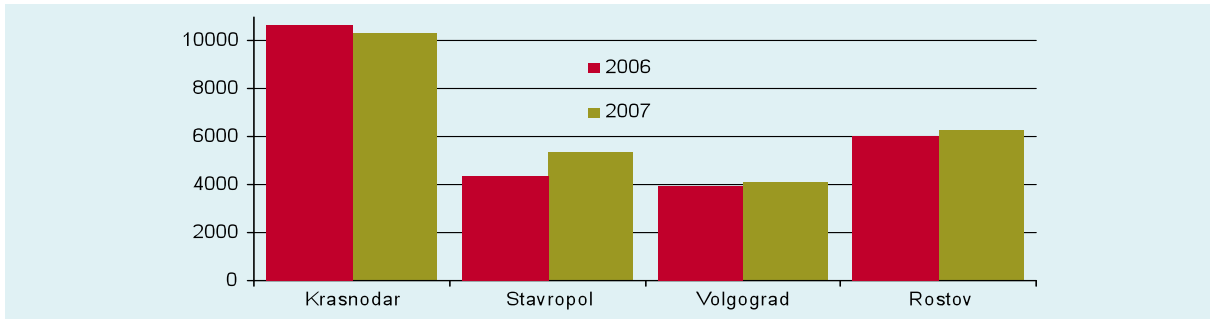
Source: Compiled from Rosstat data

Figure 31. Cattle and pig inventories in Southern Russia, '000 heads



Source: Compiled from Rosstat data

Figure 32. Poultry inventories in Southern Russia, '000 heads, as on 1 January



Source: Compiled from Rosstat data

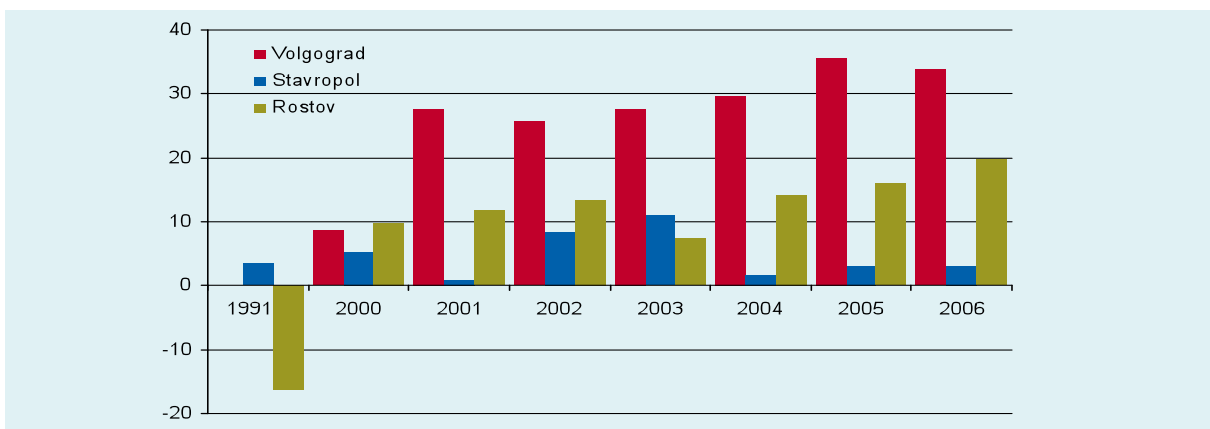
As is seen from the Figure, total meat output is expanding due to an increase in pork and poultry meat production (Figure 30). Pork and poultry (Figure 31 and Figure 32) inventories are noticeably growing in the region.

Specialised beef cattle raising has historically never developed in Russia. Beef was always a “byproduct” of dairy cattle.¹⁶ However, from the start of the reform, both on federal and regional levels, much effort was made to build up this sector. In Southern Russia, specialised beef cattle is more widespread than in the rest of the country: if in 2006 in Russia beef cattle made up on average a little more than 4% of total cattle inventories, in Stavropol krai this share reached 32%, in Rostov oblast 26%, in Volgograd oblast 22%, and only in Krasnodar 1%¹⁷ (this is natural as Krasnodar krai is mostly densely populated and does not have as much pasture land as the other three regions).

In the framework of the National Project, Southern Russian regions acquire pedigree cattle for launching intensive beef production. Thus, in 2006 Krasnodar krai got almost 5,000 heads of pedigree animals from Australia and France; Stavropol krai got nearly 180 heads from Hungary; in the first quarter of 2007 Rostov got more than 500 heads of pedigree animals from Austria and Germany.¹⁸

In the Soviet era, Southern Russia was a net-exporter of meat, however in recent years the region has become more and more dependant on meat imports. Due to higher household incomes, Volgograd oblast depends on imports for almost 30% of its meat requirement, while in Stavropol, where incomes are lower and there is a higher share of rural population, meat net imports are marginal (Figure 33).

Figure 33. Meat import dependence of Southern Russia, net import as % of gross output



Source: Compiled from data of Rostov Institute of Agricultural Economics

16.- This is why, together with growth in milk yield, cattle stocks started to decrease, causing a fall in beef production.

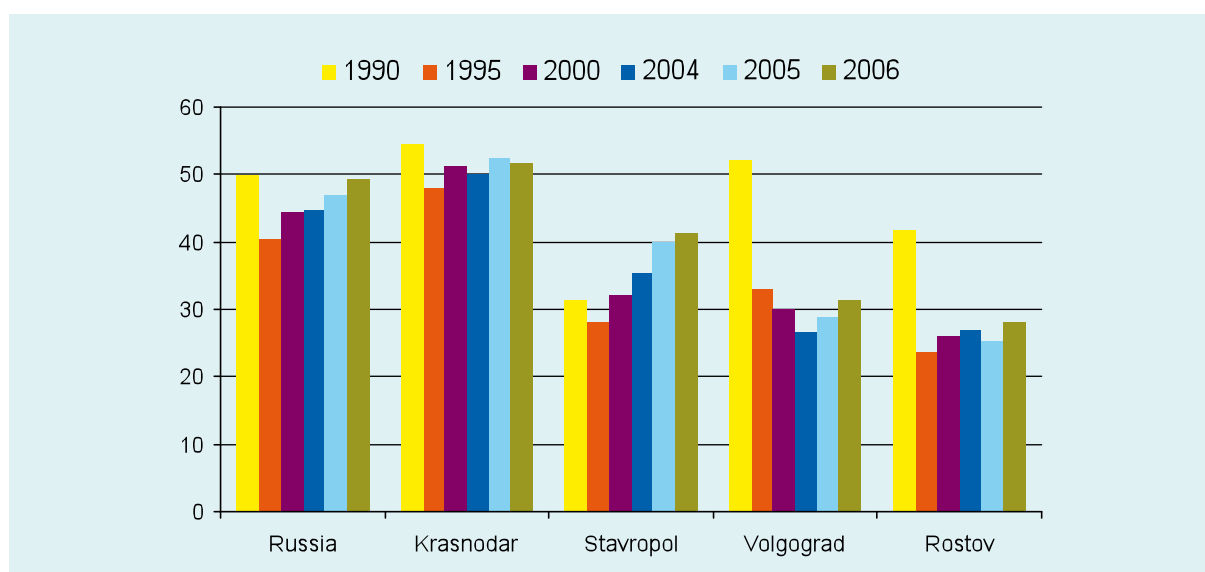
17.- Compiled from Agricultural Census data

18.- IKAR data

6.1.2 Producers structure

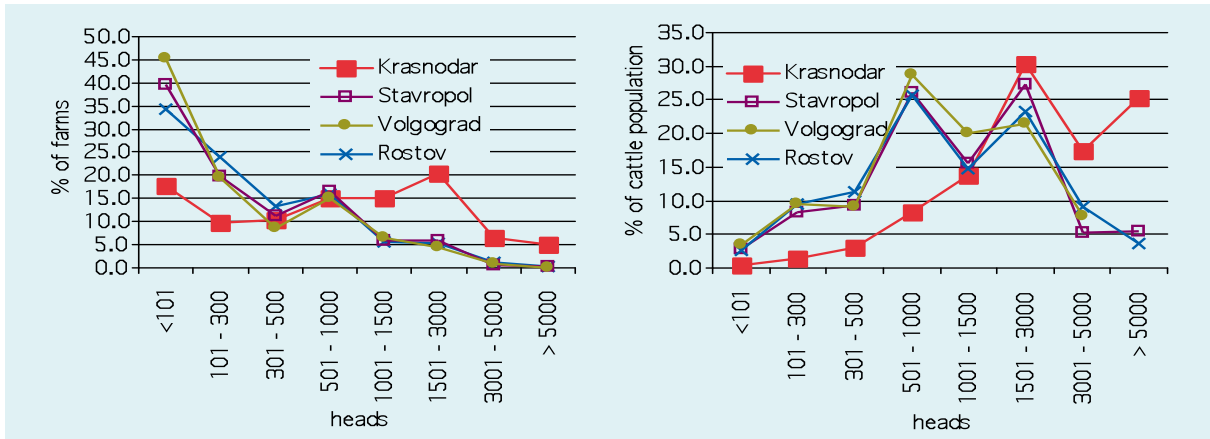
After the start of the reforms in the early 1990s, livestock production notably shifted to households in rural areas. Meat production in subsistent farms could not and did not grow significantly, but large farm meat production fell into disarray and its share was drastically reduced. After the 1998 crisis, the large farm meat sector started to revive; and this was especially accelerated with the start of the National Project. In Krasnodar the share of large farms in meat production has nearly been restored; in Stavropol it has even gone beyond levels seen during the Soviet period; and only in Rostov and Volgograd oblasts is it still low and making up around one-third of the total meat output of the region (**Figure 34**).

Figure 34. Share of large farms in meat production in Southern Russia, %

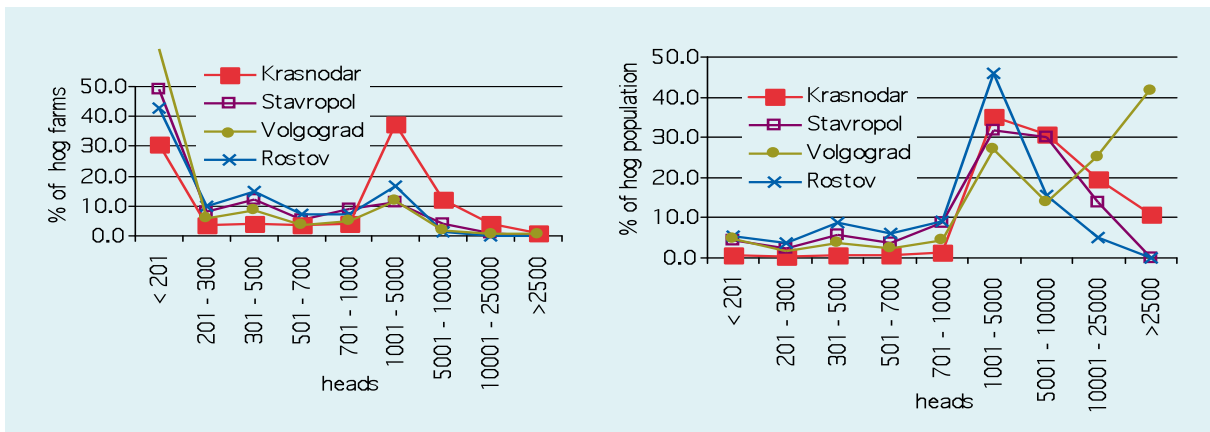


Source: Compiled from Rosstat data

The growth of the share of large farms in meat production is coupled with an increased concentration in the industry. More than 50% of cattle in the region are concentrated on huge farms with more than 1,000 heads per farm. In Krasnodar krai, concentration is even higher: more than 85% of regional cattle are on farms with more than 1,000 heads and 25% of cattle are on farms with more than 5,000 heads (**Figure 35**). In the pig sector, the concentration exceeds that of the cattle sector: in Rostov oblast 66% of the pig population is located on farms with more than 1,000 heads, and in Krasnodar krai this figure reaches 97%. In Krasnodar krai almost one-third of the pig population lives on farms of above 10,000 heads (**Figure 36**). Two top pig farms in Volgograd oblast keep 40% of the total pig population of the large farms of the region and make up 77% of pork sales (**Table 15 of Annex 2**).

Figure 35. Concentration of large farms by cattle stocks in Southern Russia


Source: Compiled from Agricultural Census data

Figure 36. Concentration of large farms by pig stocks in Southern Russia


Source: Compiled from Agricultural Census data

The meat industry is also highly vertically integrated as was shown for cereals, above. Three top national leading holdings in the meat industry have livestock operations with 1,000,000 to 1,500,000 pigs (*Mirotorg*, *Cherkizovo*, *Nukleus*). However, their livestock farms are mostly located in Belgorod, Lypetsk, Penza, Ulianovsk, Tambov, and Vologda oblasts. Only one major producer has operations in Southern Russia – *Russkaya Svinina* (Russian Pork, number seven in the national ranking). This holding has 300,000 pigs in Rostov oblast.

The highest level of concentration occurs in the poultry sector. The top six broiler producers in Krasnodar krai and the one biggest broiler enterprise in Stavropol krai provide 70% of total poultry meat sales in their respective regions. The top five broiler enterprises in Rostov oblast make up more than 40% of total poultry meat sales (**Table 16 of Annex 2**).

Although the share of meat production in households is rather high in Southern Russia, 80–95% of rural households keep neither cattle nor pigs. The rural households which keep animals have rather small operations: one-third of households in Stavropol krai to near 60% in Krasnodar krai keep only one to two heads of cattle and one-fifth to one-third of households keep one to five pigs.¹⁹

Share of small individual farms in meat production is really marginal.

19.- Data of Agricultural Census

Unlike pork producers, the biggest national broiler producing holdings have their poultry production operations in Southern Russia: “Resurs” Group, Stavropol Broiler (both in Stavropol krai) and Agrokomplex (Krasnodar krai).

Box 5. Major broiler companies in Southern Russia

The biggest broiler producer in Southern Russia is *Stavropol Broiler* (it is part of the APK “Agros” holding). *Stavropol Broiler* consists of three broiler enterprises, an incubator, a mixed feed plant and two meat processing plants, all located in Stavropol krai. The company produces frozen and chilled meat products under two trademarks – *Stavropol Zori* and *Blagoyar*. The company occupies a 95% stake on the Stavropol krai market, and the major part of the market is inside Southern Russia. Annual sales in 2006 reached 77 million USD.

The “Resurs” Group was established in 2002 and is a vertically integrated holding, including companies involved in the production of mixed feed and its ingredients (cereals and other crops), in the production of broilers and poultry meat products (chilled and frozen). In 2005 the gross output of meat products reached 31.4 tonnes. Meat products are presented under two trademarks: “*Zolotaya Dolina*” and “*Nezhnino*”.

The major Russian importer of poultry meat *Optifood* has invested around 45 million USD in its own poultry business in Southern Russia, with a planned capacity of 40 thousand tonnes of meat per year.

Source: www.kommersant.ru

6.1.3 Marketing

Large farms sell beef and pork mainly through three channels: meat-packing plants, private intermediates and social institutes such as hospitals, schools, orphanages and so on (this is normally arranged as state procurement). Contracts are rarely used and nearly half the deals are made in cash. For this study, six case studies were implemented in February 2008 to investigate the marketing structure in the meat sector in Rostov oblast. The results are presented in **Table 18**. Due to the scope of production, the sampled farms were not specialised in livestock and poultry and were typically diversified (mixed) large farms. These farms usually use sales of meat as a tool for maintaining cash flow, which is why their share of cash deals is so large. As a point of reference, the marketing of cereals was also observed on these farms, and in this case the share of cash deals was significantly less – at a level of 18%.

The six farms sampled marketed only 56% of their beef and 67% of pork, on average; the rest was used on-farm. This is typical behaviour for non-specialised large enterprises, which use some of their livestock output to provide meals for labourers and to sell to labourers and pensioners at reduced prices, as well as for payment-in-kind.

Table 18. Channels of meat marketing in Southern Russia, share of each channel in overall output (in physical terms), 2008, %

	Beef	Pork
Number of farms	3	3
Average annual meat output, tonnes	221	323
Market channels, % in physical terms:	100	100
Meat packing plant	81.1	76.7
Private intermediates	16.2	23.3
Social institutes	2.7	0

	Beef	Pork
Payment arrangements		
In cash	44.6	23.1
Through bank account	55.4	76.9
Presence of contract	No	No

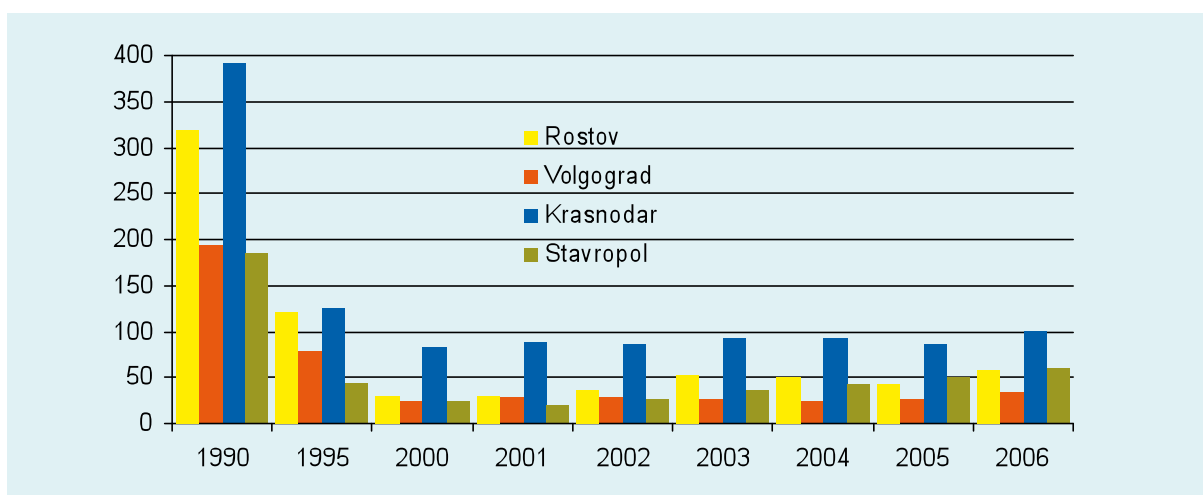
Source: Results of case study on 6 large farms in Rostov oblast

As mentioned above, nearly half the beef and pork produced in the four regions is produced in households. In 2003, the national average share of meat sold by households reached about one-third of gross output.²⁰ In Southern Russia this share can be slightly larger because household farms are traditionally more developed and more market-oriented. Almost all meat produced in households goes to town and village markets, with a very small amount going to slaughterhouses. Due to standards compliance constraints, meat packing plants do not like to receive meat from households. The main problem for this segment of the value chain is a lack of small, modern slaughterhouses, which can collect, slaughter and perform the initial processing of beef and pork from fragmented small family producers and which can thus deliver marketable quantities of meat to meat packing plants.

6.2 Processing

Processing facilities in the region were still quite developed during Soviet times. In line with a fall in income of the population and an increase in imports, meat production declined strongly against the pre-reform level (**Figure 37**). Meat packing plants were faced with a reduction in demand and suffered from tremendous overcapacity: in some cases processing facilities were closed down, especially in Volgograd oblast. Overcapacity was the major cause of low profitability, and companies lacked all means for modernization, which was needed in order to increase compatibility with the domestic market.

Figure 37. Meat and meat product output in Southern Russia, '000 tonnes



Source: Compiled from Rosstat data

The depreciation of the ruble in 1998 released the domestic market from its massive meat imports and allowed local industry leaders to invest in radical modernisation. By now, several leading companies had

20.- Rosstat

appeared on the meat market in Southern Russia, which progressively consolidated small processors and invested intensively in the fattening industry. As our survey shows (see below), meat market experts expect further consolidation in this business. The region's biggest meat companies are presented in **Table 19**. As is seen from the data, the biggest meat packing plants in each region are the monopolies and are the subjects of anti-trust legislation.

All these companies are vertically integrated and have in their structure not only processing facilities but also fattening farms, and often also mixed feed facilities as well as the production of crop ingredients for feed. The biggest meat companies either have their own trade houses for wholesale business, or, in some cases, retail outlets (corporate chains).

Table 19. The biggest meat processing companies in Southern Russia

Company	Share on the regional market, %	Capacity, tonnes of meat products per day
<i>Rostov oblast</i>		
Group of companies TAVR	35.8	120
Novocherkassky meat plant	n.a.	n.a.
VEPOZ	n.a.	n.a.
<i>Krasnodar krai</i>		
Sochi meat plant	40.0	110
Tikhoretzky meat plant	n.a.	n.a.
Kanevsky meat plant	n.a.	n.a.
<i>Stavropol krai</i>		
Pyatigorsky meat plant	45.0	87
Nevinomyssky meat plant	n.a.	n.a.
Stavropol	n.a.	n.a.
<i>Volgograd oblast</i>		
Volgograd meat plant	60.0	100

Source: Data of Rostov Institute of Agricultural Economics

Box 6. Group of companies TAVR

The TAVR Group of companies is the largest meat processor in Southern Russia. The group includes two meat packing plants in Rostov-city, two meat packing plants in Rostov oblast, a TAVR trade house, and a large fattening farm, *Batayskoye*. *Batayskoye* is the largest pig fattening enterprise in the oblast; it has a full pig fattening cycle, around 2,000 hectares of crops, and its own feed plant. Before 2006 *Batayskoye* was the only large specialised pig fattening enterprise in Rostov oblast (from four in existence in 1990), and produced only 600 tonnes of pork annually. In 2006 TAVR made a serious investment in this enterprise (10–15 million euros) which would provide the holding with high quality raw meat for its processing facilities.

Source: www.tavr.ru, IKAR

6.3 Investments

During the years of implementation of the National Project (2006–2007), around 100,000,000 RUR (~4,000,000 USD) were invested in primary pig rearing in the four regions under consideration (Table 20). The National Agency for leasing for agriculture *Rosagroleasing* delivered nearly 20,000 pedigree animals to the region, as well as 9,000 units of equipment for the fattening industry. All that will lead to a serious growth in production in the near future.

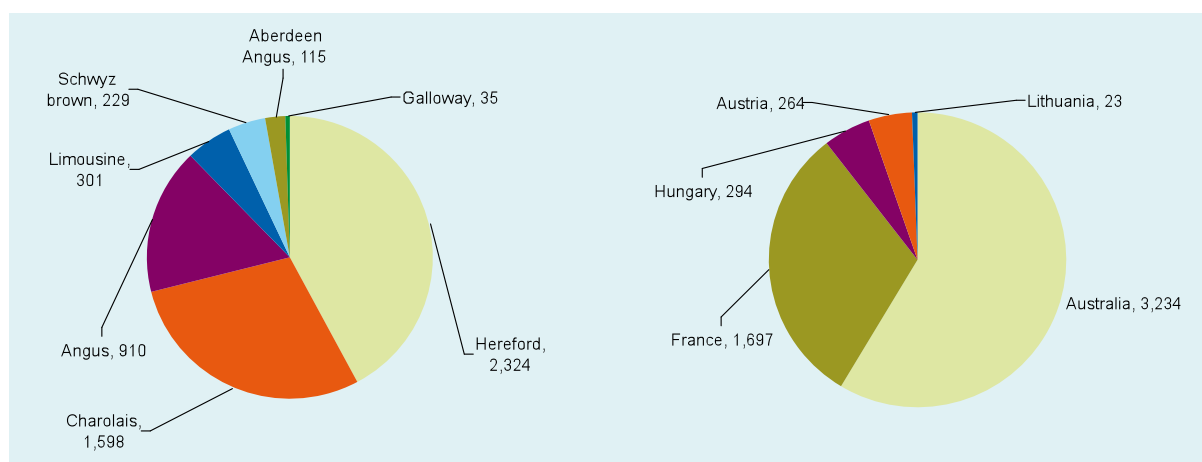
Table 20. Main investment projects in the pig industry in Southern Russia

Region	Name of the investor	Financed by National Project	Year of implementation	Investment, million RUR	Size of operation (no. of pigs)
Rostov	“TAVR” together with «Big Dutchman»	+	2006–2007	10–15	100,000
Rostov	“Russian pork”	-	2006–2008	-	2*100,000
Krasnodar	”Industrialny”	-	Planning	-	1,500 sows
Krasnodar	OOO “Venzy Zarya”	+	2006–2008	35	57,000
Krasnodar	OOO “Niva Priazovia”	+	2006–2008	194	30,000
Krasnodar	OOO “New agrarian technologies”	+	2006–2007	205	1,400 sows
Krasnodar	OOO kolkhoz “Pobeda”	+	2006–2007	150	25,000
Krasnodar	“Avtoban”	+	2006–2007	57.3	12,000
Stavropol	OOO “Agrico”	-	2006 + planning	-	80,000 + 320–350

Source: IKAR, Agrico

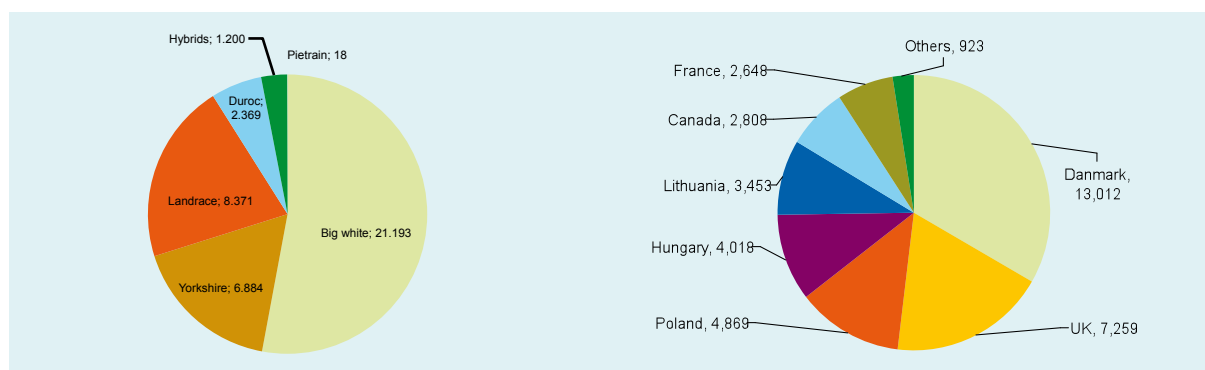
During the implementation of the National Projects, a lot of pedigree animals were imported to Russia. There is no data on the regional distribution of these imports, but the national structure of pedigree animal deliveries by breed and country gives some idea about the future profile of the Southern Russia pig and cattle industry (Figure 38).

Figure 38. Russia's Imports of pedigree beef cattle by breed and by country, 2006



Source: IKAR

Figure 39. Russia's Imports of pedigree pigs by breed and by country, 2006



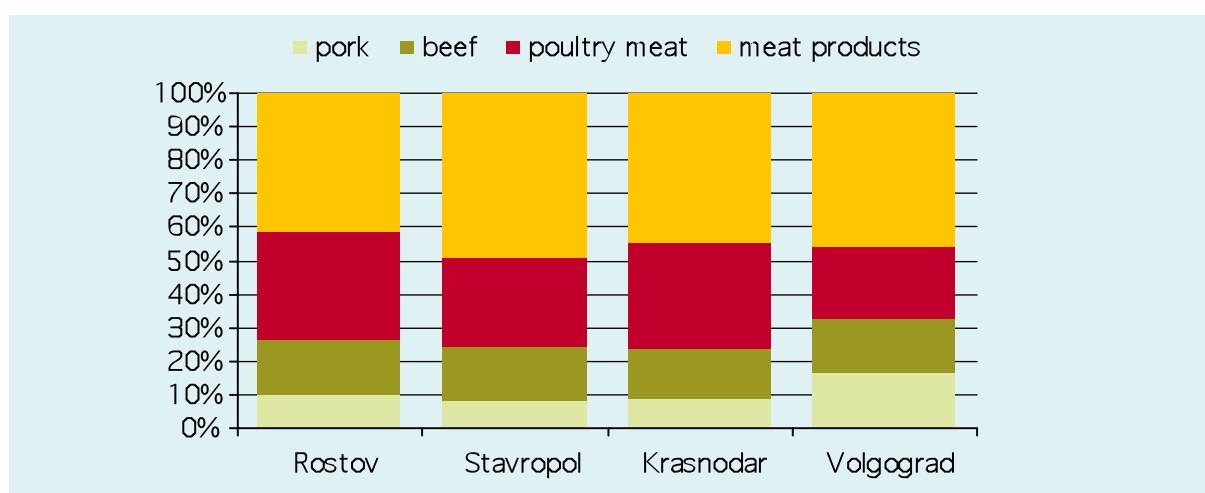
Source: IKAR

Imports of pedigree animals in 2006, at the start of the National Project, had increased almost ten-fold. This trend also demonstrates a serious crisis within the national livestock breeding industry. In Southern Russia there are around 100 breeding farms which are supposed to provide pedigree animals for the commercial farms. The most advanced producers, however, tend to buy imported animals.

6.4 Retailing

The share of meat reaching the retailer is not very big. Around half of gross meat output of the region originates from households, which sell no more than 30–40% of their output on the open market. The rest is consumed within the family or sold on the inter-village market. As was shown above, even non-specialised large enterprises market only 60–70% of their output. So roughly 60% of gross meat output goes to conventional retail. Imported meat is normally used for processing. **Figure 40** depicts the structure of meat consumption in Southern Russian regions. As is seen from the figure, 50–60% of meat is consumed as fresh (chilled) meat, but in view of the aforesaid, this meat comes to a large extent from subsistence production and not through retail outlets. Therefore, retailers mostly sell meat products: sausages, semis, and so on.

Figure 40. Structure of meat and meat product consumption in Southern Russia, 2004



Source: Compiled from IKAR data

Moreover, as is shown in **Table 21**, the share of conventional retail outlets is still negligible, though growing (the fall of the share in retail sales of meat in Rostov oblast was caused by a general fall in meat output in the oblast in 2006).

Table 21. Retail channels of meat and meat products in Southern Russia, % of total meat supply

	Rostov	Volgograd	Krasnodar	Stavropol
<i>2004</i>				
Conventional retail outlets	8.5	0.1	8.5	1.2
Town markets	42.5	79.0	33.4	61.8
<i>2005</i>				
Conventional retail outlets	2.6	0.4	17.9	1.5
Town markets	64.8	81.9	23.1	61.9
<i>2006</i>				
Conventional retail outlets	3.0	4.6	18.5	1.7
Town markets	43.4	75.3	25.7	61.2

Source: Data of Rostov Institute of Agricultural Economics

At the same time food retail chains are well developed in the area: each region has 12 to 18 chains (**Table 22**). *Magnit* and *Pyateroichka* are nationwide and they are top food chains in the region. Stavropol krai is the most rural region among the four regions considered and therefore big retailers are not much represented there. However, even there *Magnit* has 40 outlets.

Table 22. Major retail chains in Southern Russia, 2007

Region	Number of food retail chains	Three top chains	Number of outlets in chain
Rostov oblast	18	Magnit	70
		In two steps	20
		Pyaterochka	10
Volgograd oblast	15	Magnit	56
		Radezh	40
		Pyaterochka	40
Stavropol krai	14	Magnit	40
		Troyka	18
		Narodny	16
Krasnodar krai	12	Magnit	80
		Pyaterochka	35
		Tabris	20

Source: Data of Rostov Institute of Agricultural Economics

Thus, food retail is quite well developed in the area but meat products, and especially fresh meat, are not well represented on the shelves of conventional retail outlets. This is most probably due to a combination of two factors: the traditional pattern of meat sales and consumption and budget constraints among the region's population.

6.5 Major problems of the value chain

First and foremost, a major problem faced by the meat value chain in Southern Russia is a tremendous need for the modernisation of equipment both at the farm level and in primary and secondary processing. Out-of-date assets in the industry prevent the complete utilisation of raw products, which reduces efficiency, and lowers the quality competitiveness of products on the domestic market. The major underlying causes of this situation are a lack of investment over a long period, and partial mismanagement.

The meat value chain urgently needs a network of small, modern slaughterhouses which would allow the collection of raw meat from households and would secure timely deliveries of quality raw produce to the packing plants, which currently tend to import raw produce from abroad.

Livestock farms are faced with a lack of pedigree animals, which have been imported abroad on a massive scale since 2006. However, the producers complain of a lack of domestically bred pedigree animals, which are better adjusted to local conditions. The breeding industry requires significant improvement, which should be an objective of public investment.

Qualified human resources to enable value chain development are also limited; however, the meat industry is most in need of qualified managers rather than ordinary labourers.

Unsatisfactory land tenure in the countryside is also a constraint on industry development. Many fattening farms have their own feed production which requires access to land.

7. Survey results

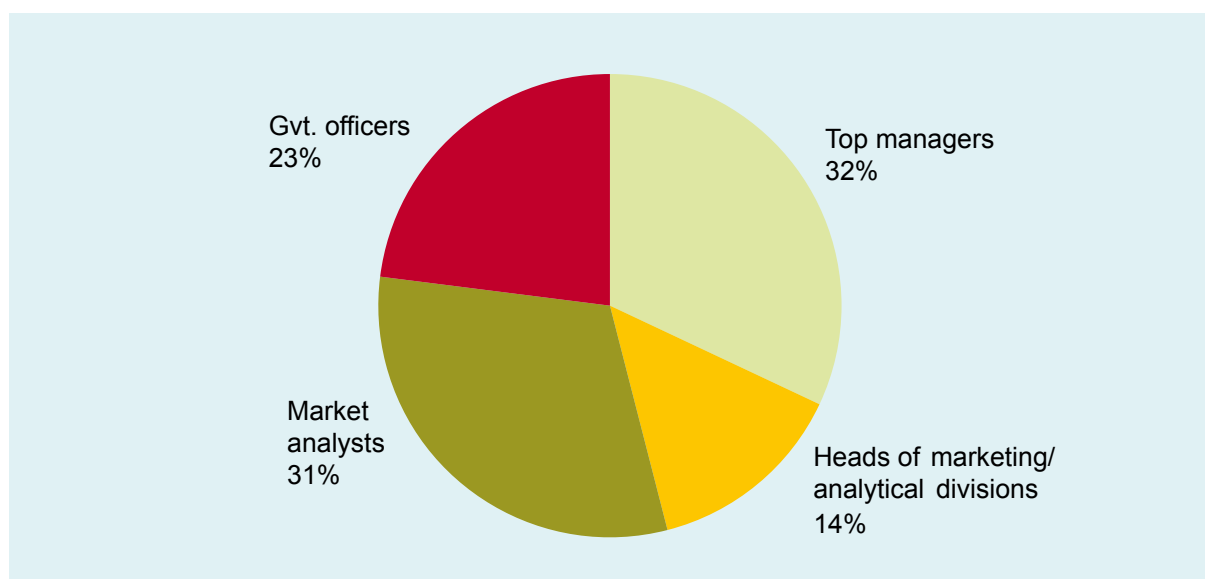
7.1 General survey design

In order to estimate the perspective and major constraints of cereal and meat sectors in Southern Russia, the authors conducted an expert poll among 74 representatives of various branches of the agri-business (heads of companies and of the marketing/analytical divisions of companies), independent analysts, and government officers in the four regions under consideration. The poll was implemented in February of 2008. There was a formal questionnaire (see Annex) covering four groups of issues: (1) estimates of previous development trends in the sector (speed of growth, driving forces and hurdles for this growth); (2) the outlook for the sector's short- and mid-term development (growth-fall-stagnation in domestic and world markets, driving forces for these markets, sector structure perspective); (3) major constraints in the sector along the food chain, and; (4) estimates of the impact of domestic policies on the sector (macro, trade, administrative and agri-food policies). The poll was anonymous, the respondents were expected to answer all the questions presented (there was no option of "do not know" among the available responses), one respondent could fill in several questionnaires depending on the number of markets in which he/she was an expert, therefore 74 experts filled in a total of 106 questionnaires. The poll covers four branches: cereals, pork, poultry and beef.

7.2 Sample description

The sample is almost equally represented by market analysts, company management, and government officers (Figure 41).

Figure 41. Respondents' structure by position



The majority of the respondents represent companies with Russian capital. Less than one-quarter of them have been working in their relevant market for fewer than five years, the largest number of experts

have been involved in the agri-business for 5–15 and the last group of experts were involved in their sector even before the start of the reforms (Figure 42.). Thus, the expertise of the sampled respondents is rather high. However, the majority of the sampled respondents have experience only on the Russian markets and, to a certain extent, in the markets of the CIS (Figure 43).

Figure 42. Respondents' structure by years in the market

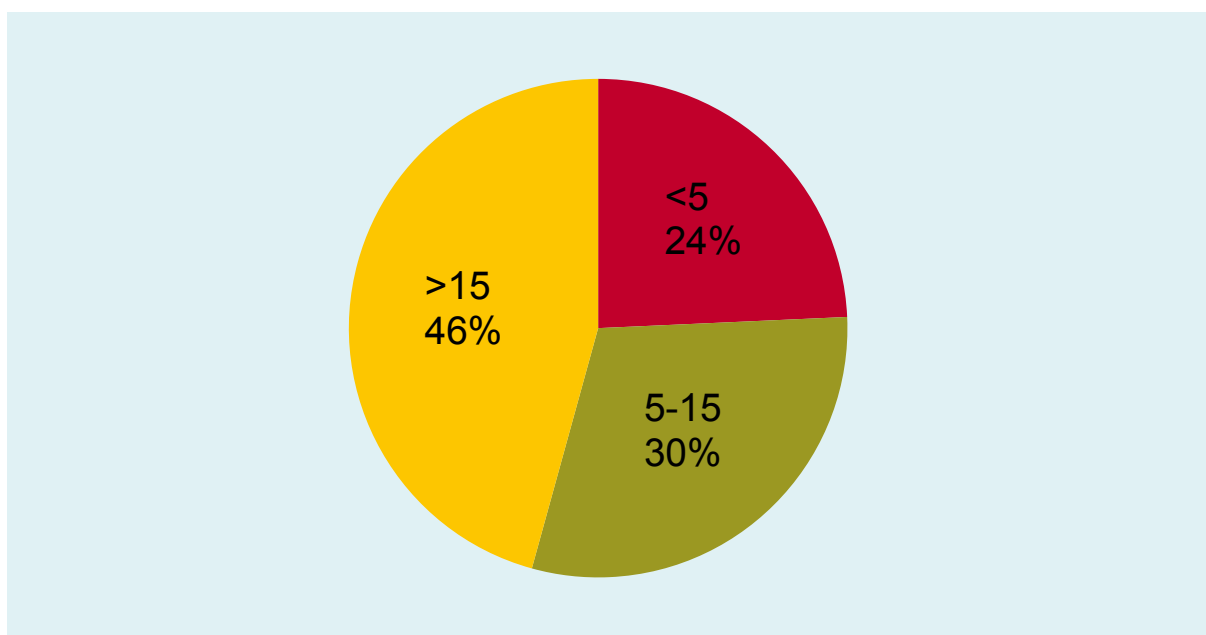
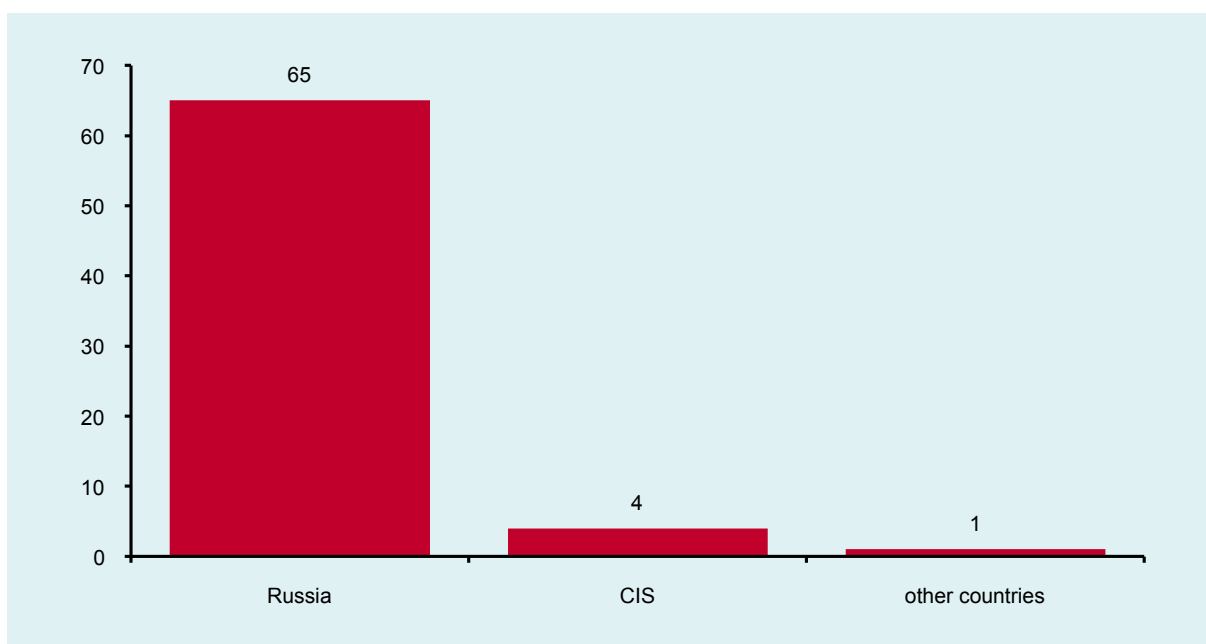
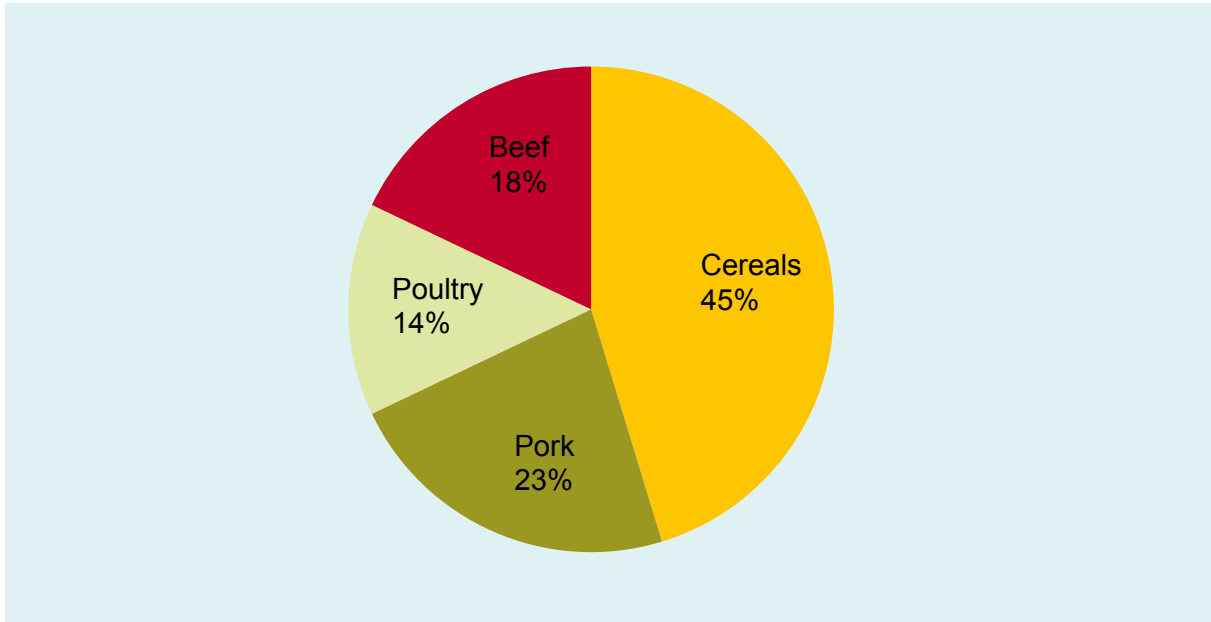


Figure 43. Respondents' structure by regional experience of work, no. of responses



As was noted above, the sample of experts was taken from four major industries: the cereal industry, the beef and pork industries, and the poultry industry (Figure 44).

Figure 44. Respondents' structure by sectors



7.3 Growth in the last 2–3 years

It is not surprising that 70% of respondents pointed out a growth in their markets in the last 2–3 years (**Figure 45**). A steady rate of recovery growth has been observed in the entire Russian economy and agri-food sector since 1999. The result shows that the official data is true on average for every agri-food market under consideration. Only 16% of experts noted market stagnation and 14% noted a fall. The fall was mostly indicated by experts in meat markets and especially on beef

Figure 45. How the market has developed over the last 2–3 years, % of responses

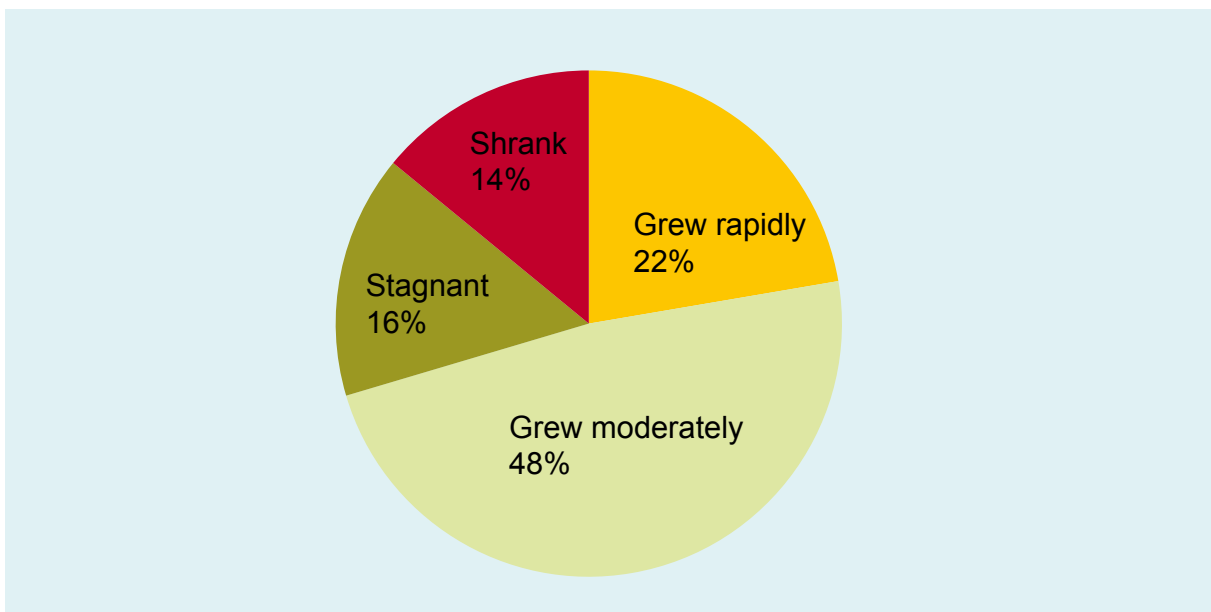
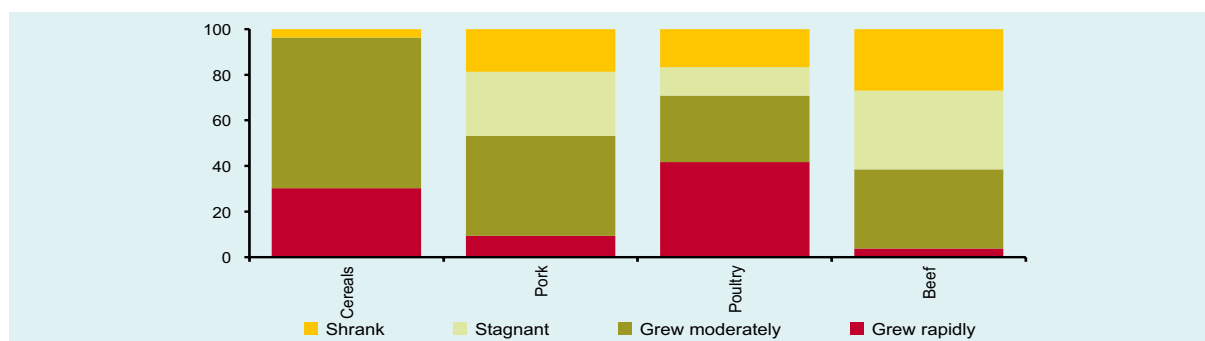
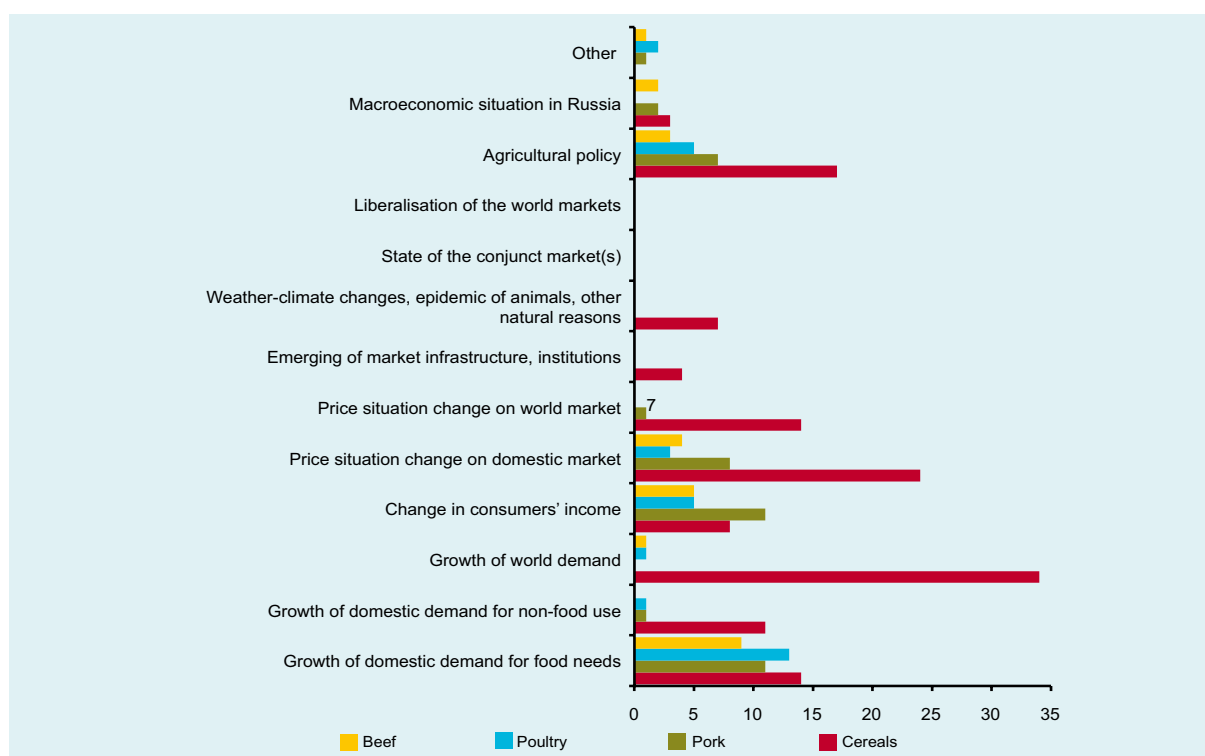


Figure 46. Market development in the previous 2–3 years, % of responses



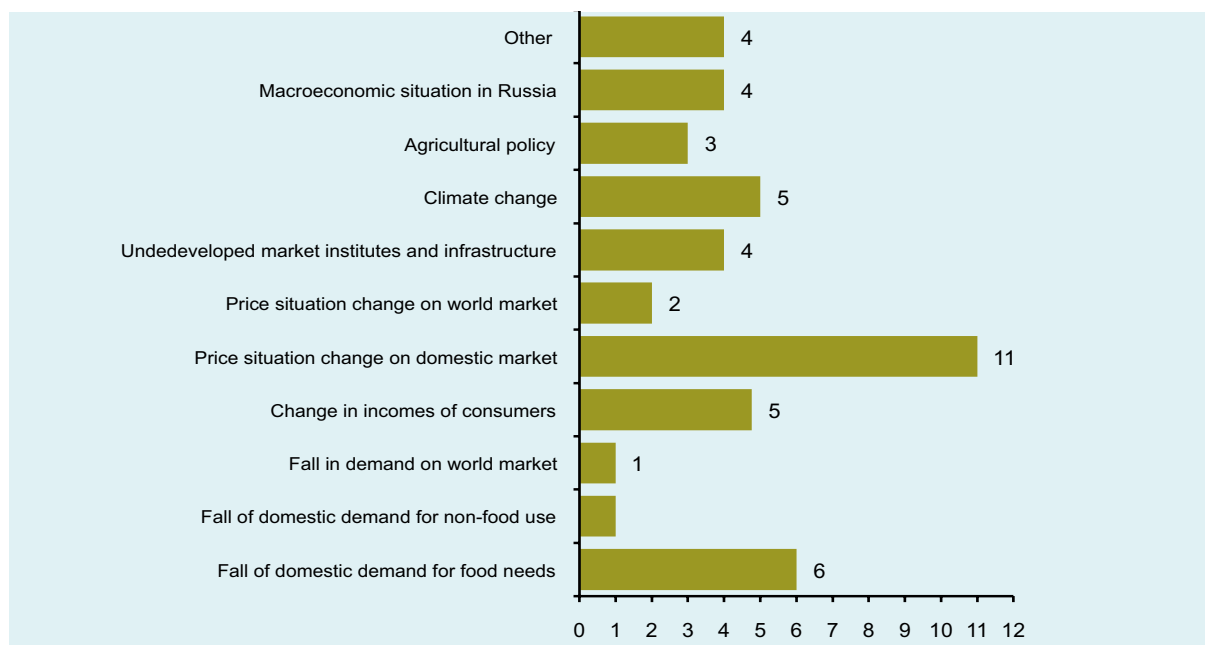
Despite sector specificity, the respondents were agreed in their assessment of the factors behind the growth observed on these markets (Figure 47). Almost all of them explain the growth by increases in domestic food demand, household income and domestic prices. This means that in the previous 2–3 years agri-food markets were demand driven. The world price situation and domestic agri-food policy were the next most important factors behind growth. The actors on Russia’s agri-food markets hardly noticed such externalities as weather, livestock and poultry epidemic diseases, world market liberalisation, or the macroeconomic situation inside Russia. It is worth noting that during the last 2–3 years there were several outbreaks of livestock and poultry epidemic diseases in the world and in Russia (avian flu, for instance, significantly damaged the poultry industry in Southern Russia). Russia’s economy also suffered from an outbreak of Dutch elm disease and from severe depreciation of the ruble, but the results of the survey show that, at least for their actors, these factors did not greatly affect the agri-food markets.

Figure 47. Growth factors by sector, no. of responses



Those who indicated a fall in their market explained it mainly by a decrease in domestic demand (Figure 48).

Figure 48. Decline factors, no. of responses



The Russian agribusiness establishment is very much concerned with restoring agri-food imports after a significant fall in 1998–1999. It is mostly the meat sector which is affected by this growth in imports. This was proved by the results of the survey: only 30% of respondents stated that imports did not affect development in their sector, and these are mainly cereal companies (Figure 49, Figure 51). Export influenced sectors, on the other hand, showed less development than import influenced sectors, and most development was seen in the cereal sector (Figure 50, Figure 52).

Figure 49. Effect of imports on the market, % of responses

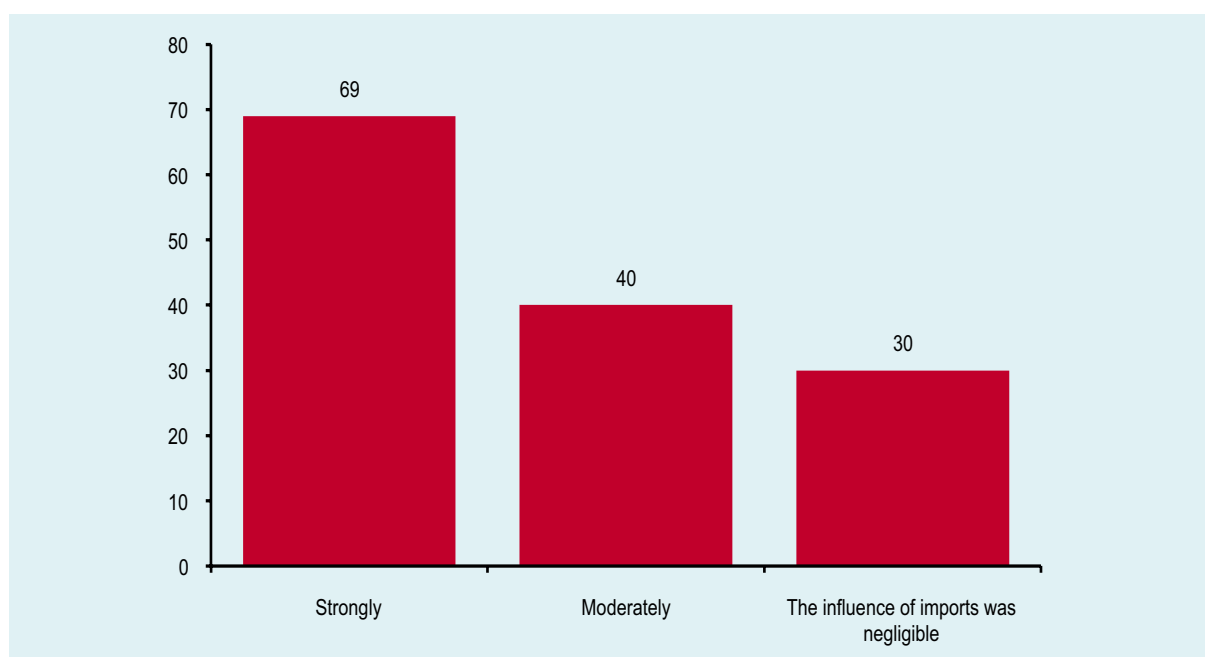


Figure 50. Effect of exports on the market, % of responses

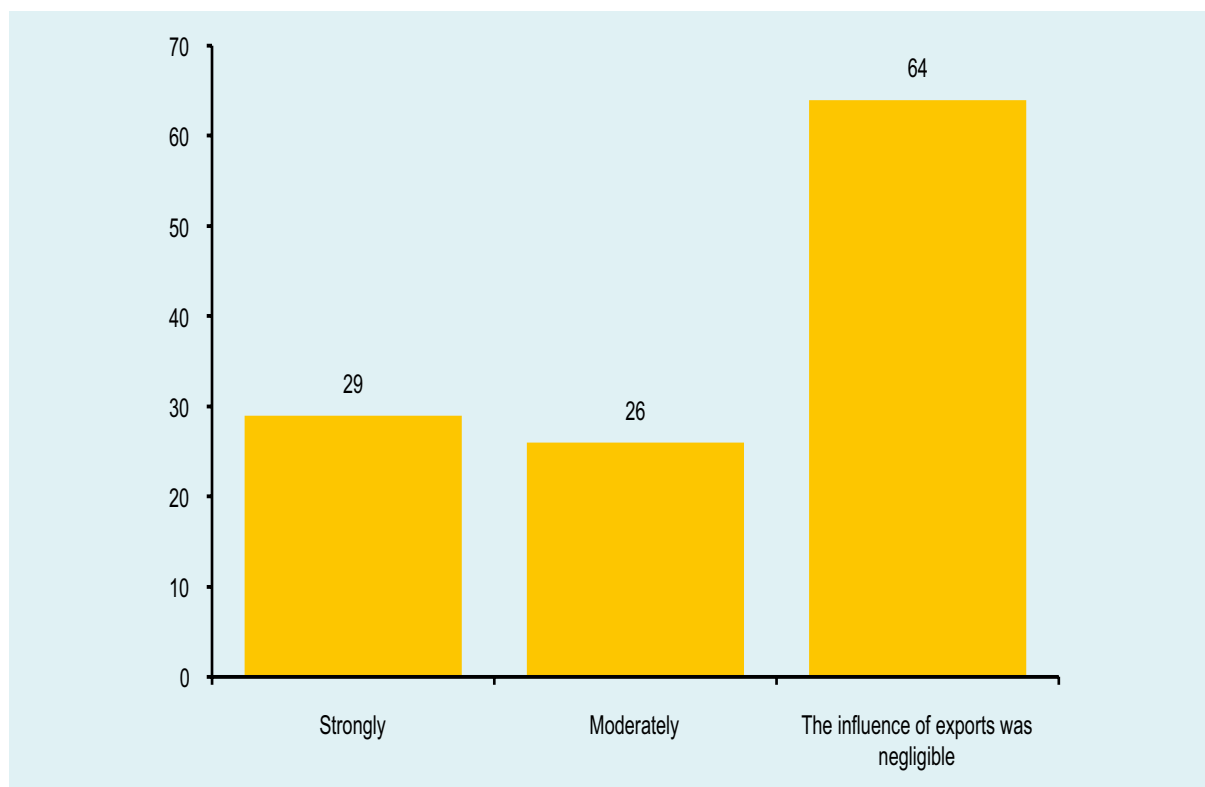


Figure 51. Effect of imports on the market, by sector, % of responses

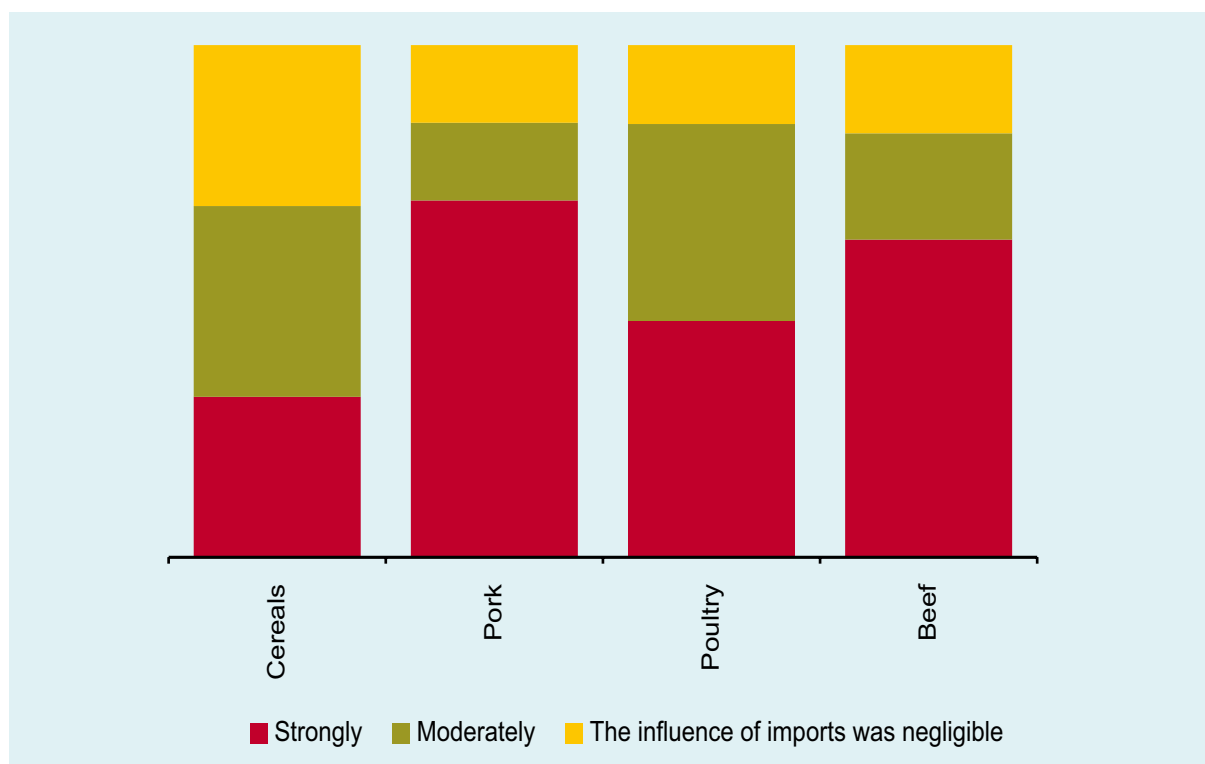
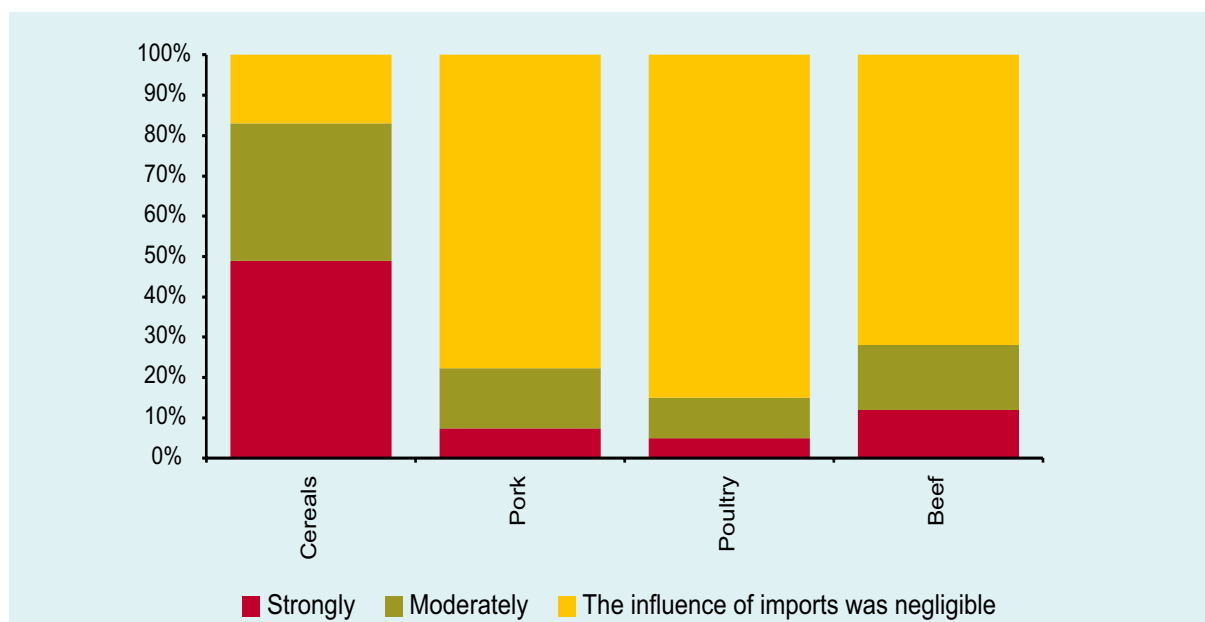


Figure 52. Effect of exports on the market, by sector, % of responses


7.3.1 Perspectives on the growth

The experts were asked about their forecast of the short-term (2–3 year) and medium-term (10 year) market perspectives. A majority of the respondents predicted growth in the agri-food markets. However, the absolute dominance of the answer “gradual increase of the market” could reveal a certain lack of confidence among the experts and perhaps this answer seemed to them the most neutral (**Figure 53** and **Figure 55**). Nevertheless, the optimistic outlook of the market actors towards market growth could positively affect their investment strategy in the near future.

The experts are most optimistic regarding the cereal and poultry sectors, while in the pork and beef sectors 20 to 25% of respondents foresee stagnation and even decline.

These sector perspective estimates are very important for the assessment of future investment strategies for agribusiness: previous experience proves that investment increases in sectors with more optimistic expectations of business.

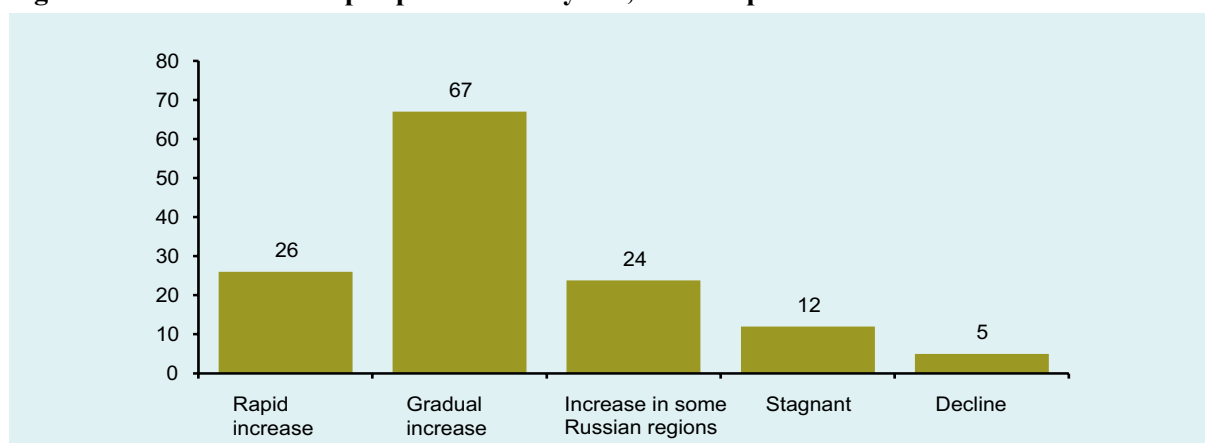
Figure 53. Domestic market perspective in 2–3 years, no. of responses


Figure 54. Domestic market perspective in 2–3 years, by sector, % of responses

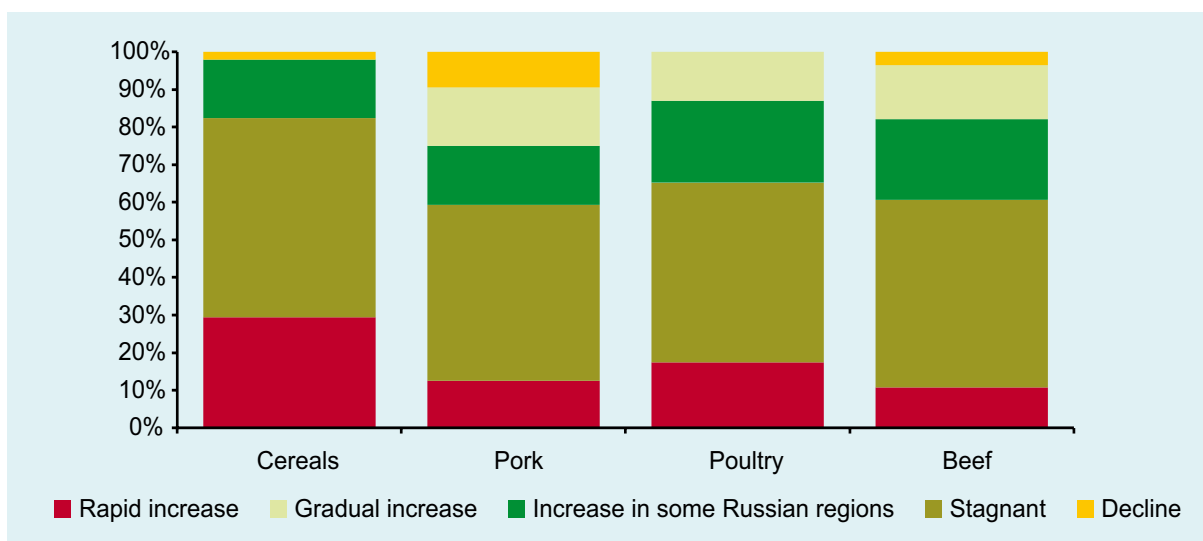


Figure 55. Domestic market perspective in 10 years, no. of responses

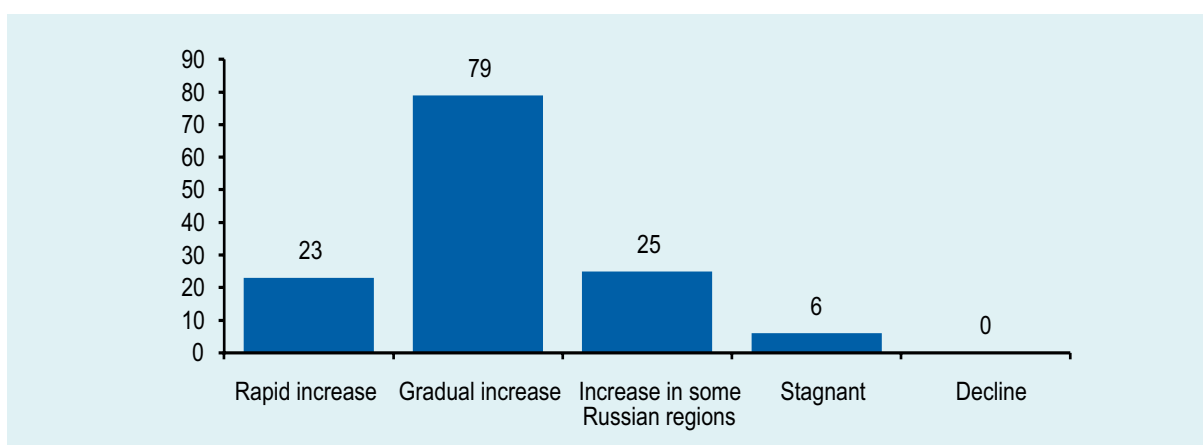
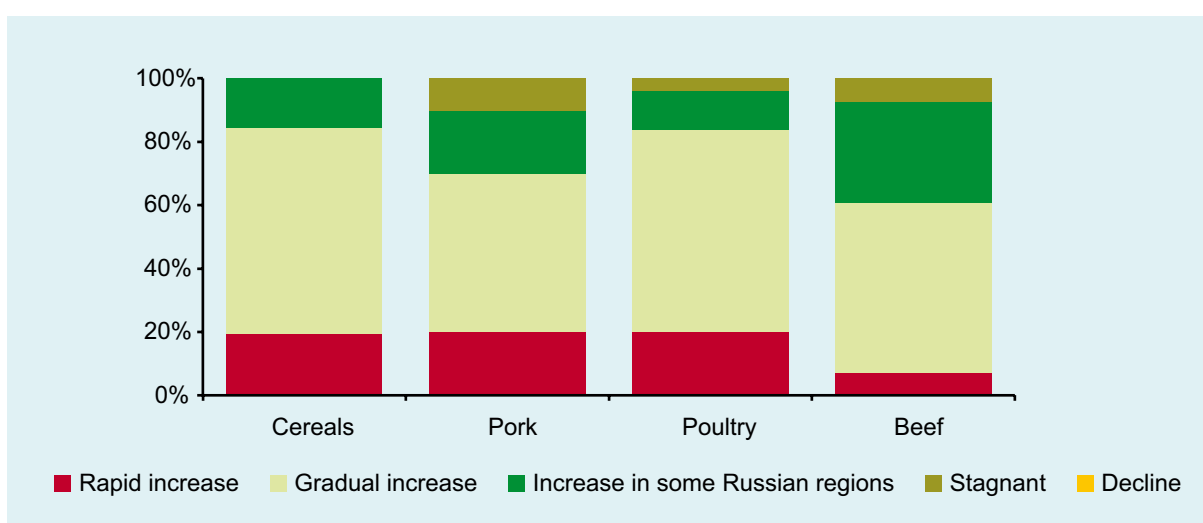
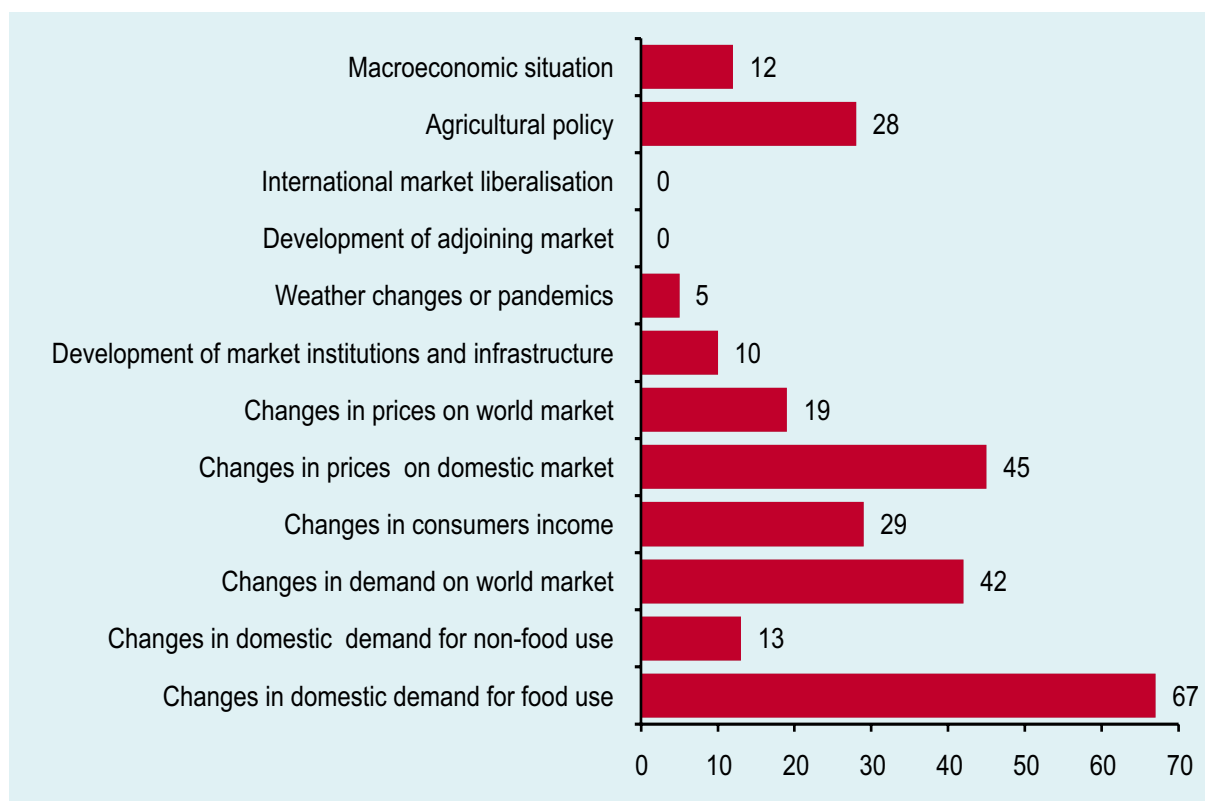


Figure 56. Domestic market perspective in 10 years, by sector, % of responses



In the near future, the experts indicate a continuation of the same market driving forces which have been determining the market situation in the previous 2–3 years. They consider domestic demand as a major factor for growth, caused by income increase and expansion in non-food use of cereals (mainly due to growth in the livestock sector). At the same time the experts foresee a growth in external demand in anticipation of an increase in agri-food exports (**Figure 57**).

Figure 57. Driving forces for domestic market development in the next 2–3 years, no. of responses



In the medium-term perspective, the experts still rely on an increase in demand on the domestic and international markets (**Figure 58**). It is notable that for the 10-year perspective almost half of the respondents pointed out the importance of agri-food policy. This means that market actors expect a decision from the government relating to the agri-food sector, a decision which will show results a decade from now. In other words, the erroneous policies of today could remain hurdles to market development for another 10 years or more.

Cereal market experts are naturally anticipating growth in demand firstly on world markets, and secondly on the domestic market. The meat sector, meanwhile, and especially the beef industry, relies upon growth in consumers' incomes, as meat is a commodity with extremely high income elasticity on the Russian market.

Figure 58. Driving forces for domestic market development in the next 10 years, no. of responses

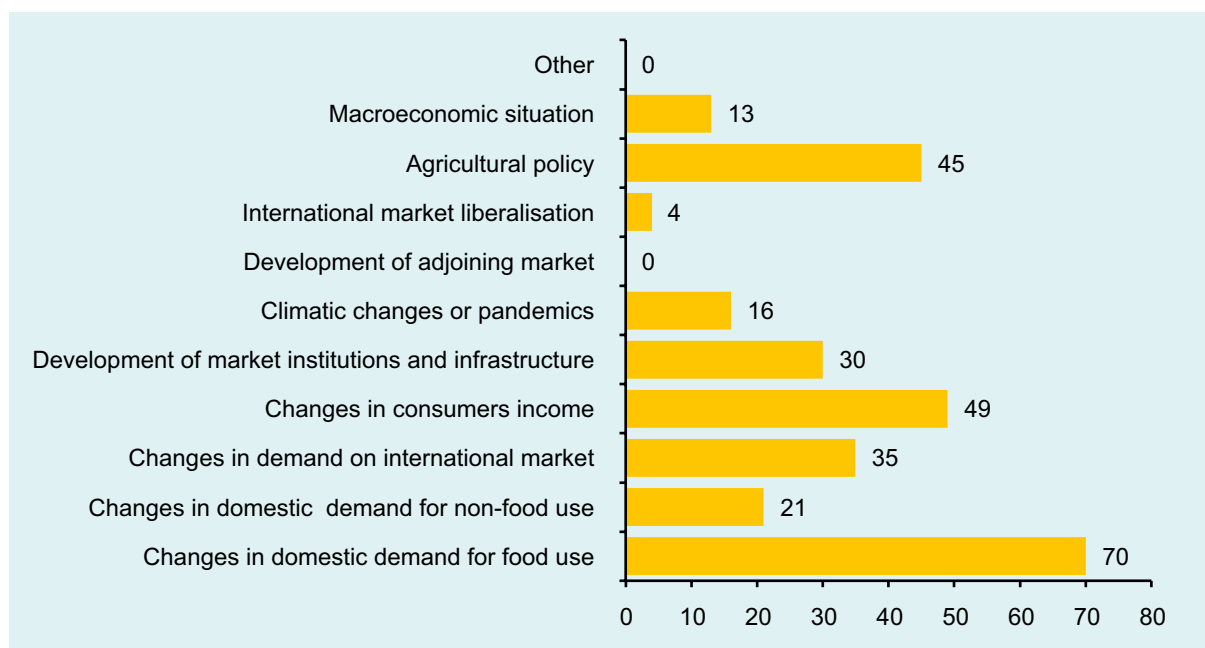
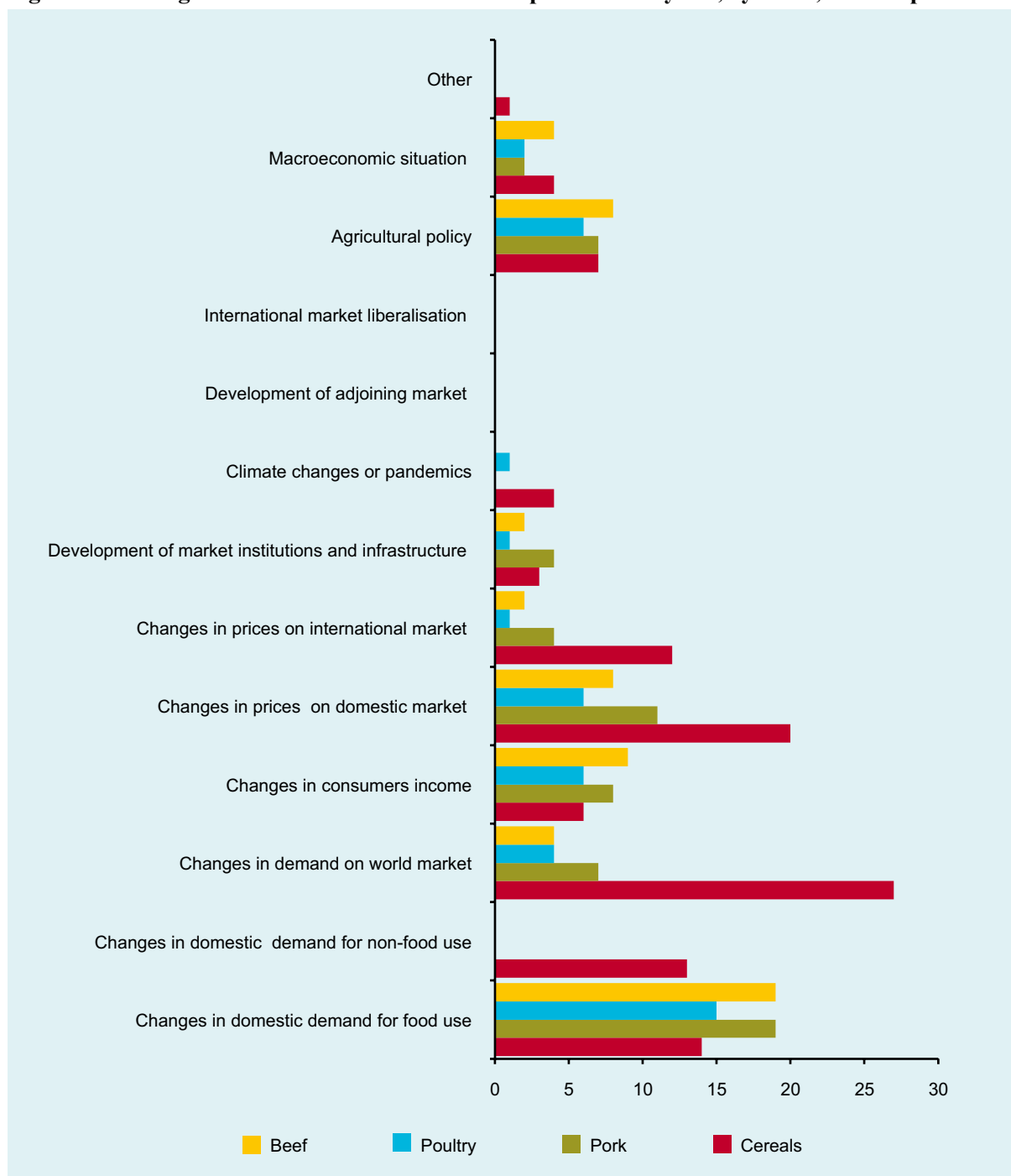


Figure 59. Driving forces for domestic market development in 2–3 years, by sector, % of responses



7.4 Market structure development

Among the future changes in market structure foreseen by the majority of experts in all the sectors concerned is the increasing specialisation of companies and, to a lesser extent, a concentration of industry in certain regions. This will be a notable change following the period of universal, diversified agribusiness companies which emerged during the secondary privatisation process in the late 1990s. The

experts anticipate a continuation of consolidation among companies, rather than growth in the number of producers. Nevertheless, new producers are still likely to emerge in the beef sector, according to the survey data.

The foreign investments are expected mostly in the cereal and poultry sectors, and this fact reflects the current trends in foreign investment to agribusiness in the region (**Figure 60** and **Figure 61**).

Figure 60. Market structure development, no. of responses

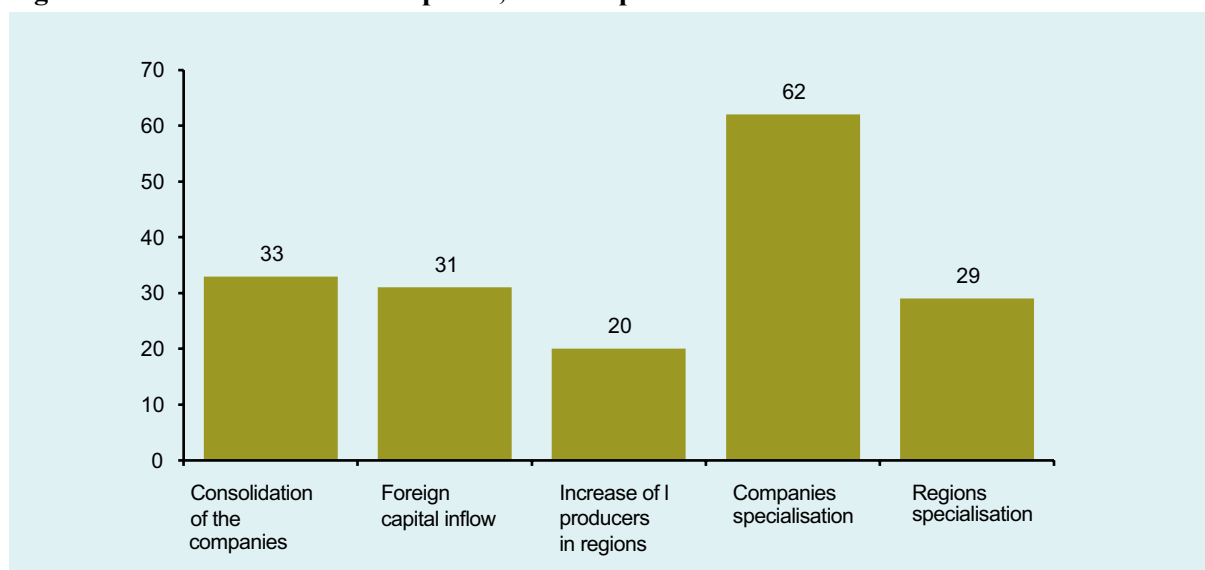
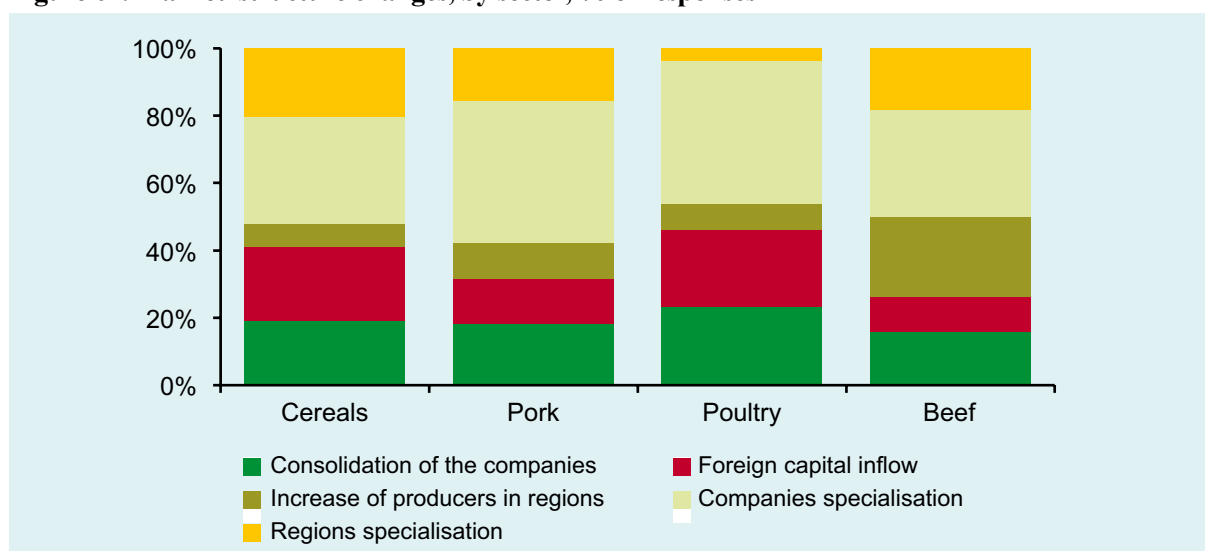


Figure 61. Market structure changes, by sector, % of responses



7.5 Value chain constraints

Bottlenecks in the value chain are supposed to be different in each of the sectors under consideration. However, limited access to credit was indicated as a constraint by the same share of experts in each sector. One can assume that the problem of the supply of physical inputs, which was also identified, is

coupled with a lack of finance rather than with a lack of appropriate inputs on the corresponding markets. Therefore, this identified constraint can also be attributed to limited access to financial resources.

Not only does the cereal sector face problems from current land tenure, as described above, but meat sector companies also struggle with a lack of sound land tenure in rural areas.

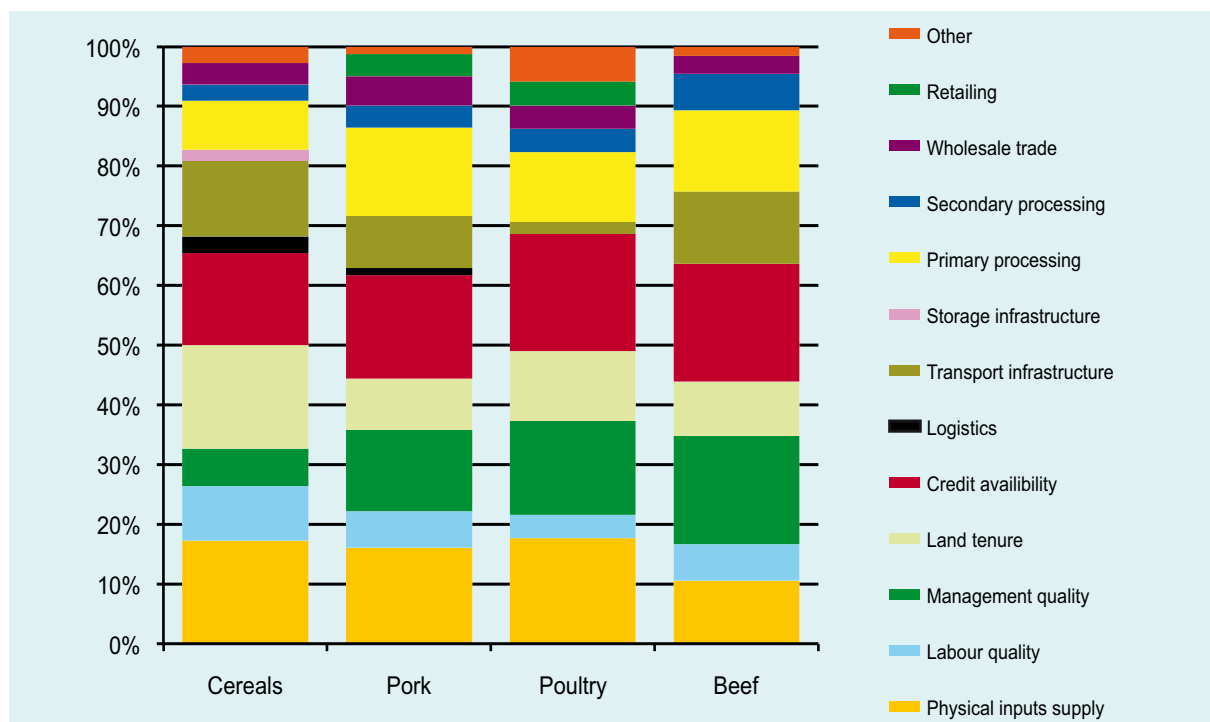
Qualified labour is another bottleneck in Russian agri-business. While cereal companies are mostly faced with a lack of skilled labourers, meat companies need qualified managers. Larger and more advanced cereal companies are investing in expensive modern machinery and are looking for skilled drivers who can operate this machinery properly; for huge land operations managers are not needed in large numbers. The meat industry is less advanced in terms of the modernisation of equipment, operations in the industry are smaller and more management intensive, therefore meat companies mostly struggle with a shortage of managers – skilled labour will be their next problem.

Red meat companies indicated primary processing as a bottleneck, which is most probably a reaction to a shortage of slaughtering facilities. Poultry businesses normally have slaughter facilities on broiler plants and are less dependant on external processing, which is why experts in the broiler industry more seldom complain about underdevelopment in primary processing.

The transport problem in the cereal value chain was described above. This problem was fully reflected in the results of the survey: 13% of industry experts ranked it a critical bottleneck. It is interesting to note that the beef industry also faces a transportation problem. There are assuredly no specialised vehicles for cattle transportation because this sector is just starting to emerge in Russia.

And finally, it is worth noting that the retailing problem is mentioned only by pig fattening and poultry industry analysts and to a very limited extent. This is possibly a result of a continuing lack of competition on the final product markets. (Figure 62)

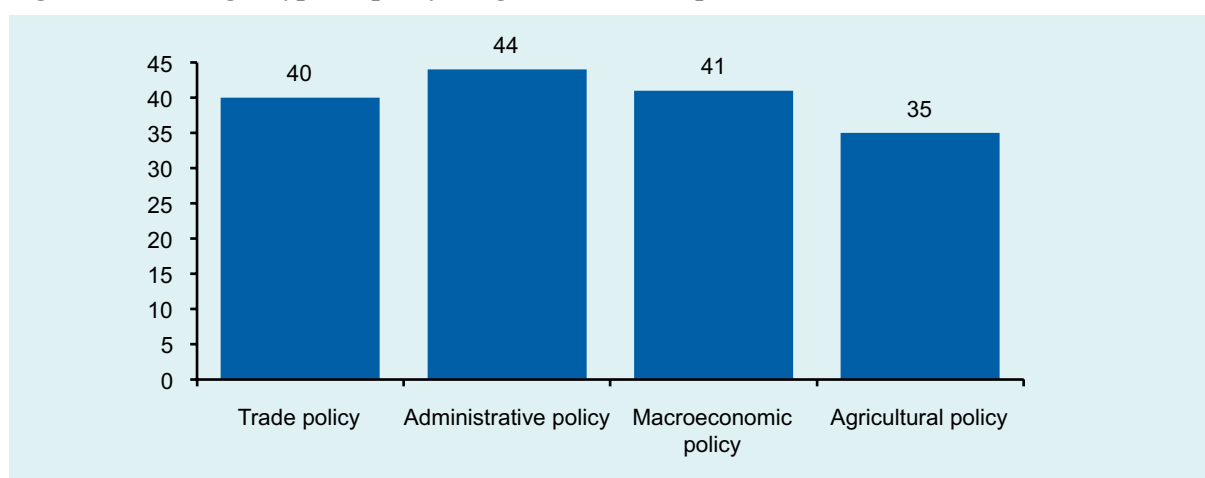
Figure 62. Limiting elements of the food chain, by sector, % of responses



7.6 Policy estimates

The experts were asked to estimate the most important policy measures for market development. These measures were grouped into four clusters forming one of four types of federal policy: macroeconomic, trade, administrative and agri-food policies. The experts were first asked to rank groups of policies and later individual measures of each policy from the point of view of the effect of development within the sector (they were supposed to indicate the three most critical issues). Figure 64 depicts the aggregated ranks of these four policy groups (aggregated rank of policy $j = N_1^j + 1/2N_2^j + 1/3N_3^j + 1/4N_4^j$; where N_i^j – number of experts, ranked type of policy j with rank i). As is shown in **Figure 63.**, administrative policies are most important for our experts while agricultural policies are least important.

Figure 63. Ranking of types of policy, weighted rank of responses



Among the administrative measures, the most important measure pointed out by the experts was a reduction in the excessive use of administrative control over businesses. Administrative control over business has notably increased over the past few years and has created a serious barrier against sector development. The recommendation most often extended was to reduce a “corruption tax” which is connected to the problem of over control.

Improving bankruptcy procedure and land tenure are the second most important issues for the experts. The cereal industry is the most concerned with bankruptcy regulation, and this proves a fact that bankruptcy is heavily linked with land tenure: for investors in cereal farming, the bankruptcy procedure is the easiest way to access farming land. Meat industry experts are significantly less concerned with bankruptcy issues.

New land legislation, which came into force in 2002–03, set up tremendous transaction costs on the land market, which literally stopped the agricultural land market.

Figure 64. The importance of administrative policy measures for market development, weighted rank of responses

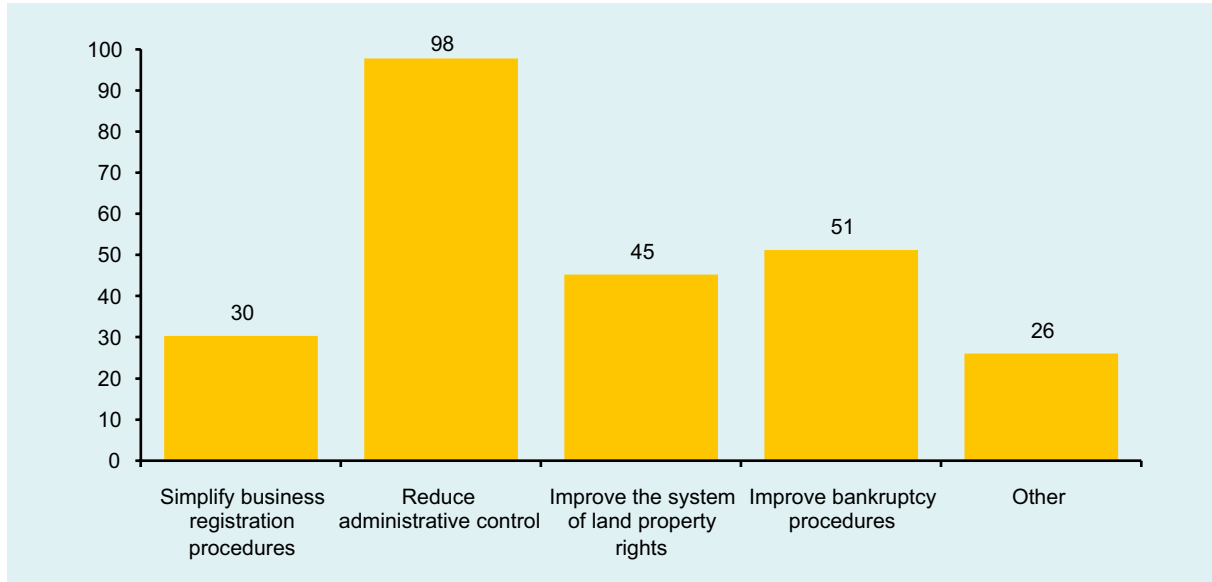
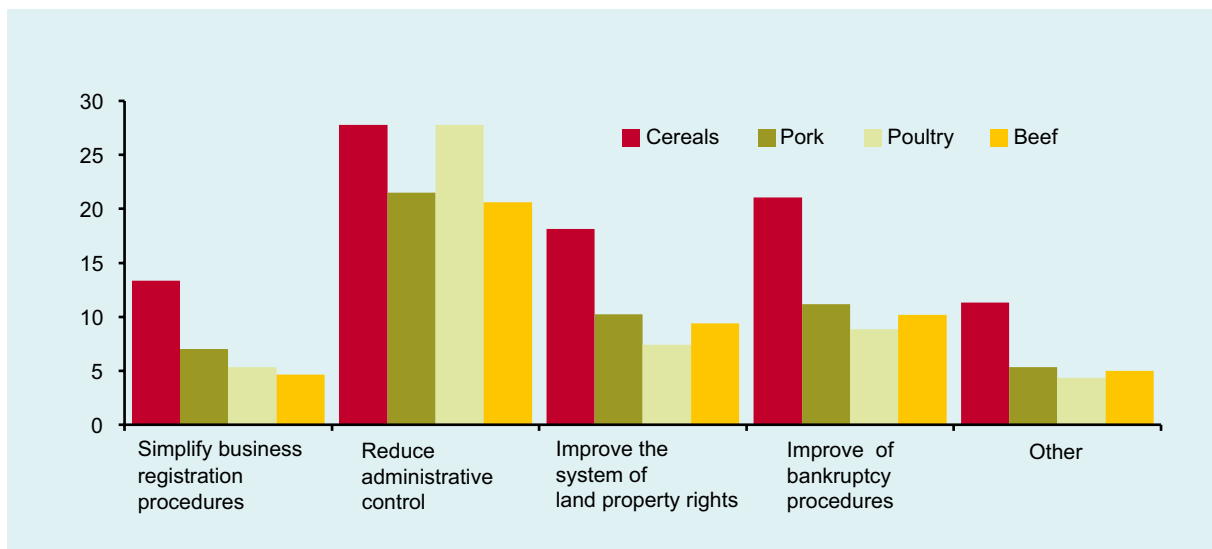


Figure 65. The importance of administrative policy measures for market development, by sector, weighted rank of responses



As was mentioned above, import invasion is considered by market actors to be a serious hurdle for the industry. At the same time, export taxes negatively affect the cereal industry. This is why an increase in import protection and the abolishment of export taxes are considered by experts in general to be the most important measures in trade policy (Figure 66).

The cereal industry is naturally mostly concerned with export taxes and is seeking export subsidies. What is less evident is the interest of cereal industry experts in increasing import protection; the sector most likely to receive protection from imports is rice production, which is concentrated in Krasnodar krai (Figure 67).

Meat industry experts would like to increase the level of import protection in their industry, but they seem to be satisfied with the current TRQ mechanism applied to meat imports.

Another national trade policy issue which is important to the respondents is Russia’s accession to the WTO. In accordance with views commonly shared in the agricultural establishment, accession to the WTO will be a serious constraint on agricultural development²¹. Changes in Russia’s negotiating position in the WTO are considered by experts to be of the same importance as export-import regulations.

Figure 66. The importance of trade policy measures for market development, weighted rank of responses

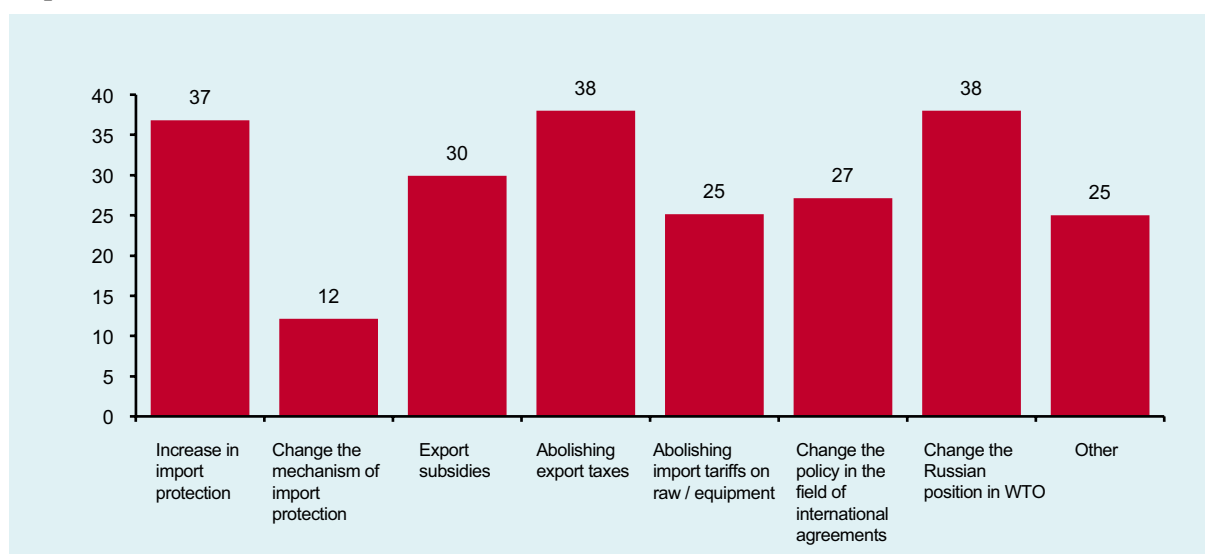
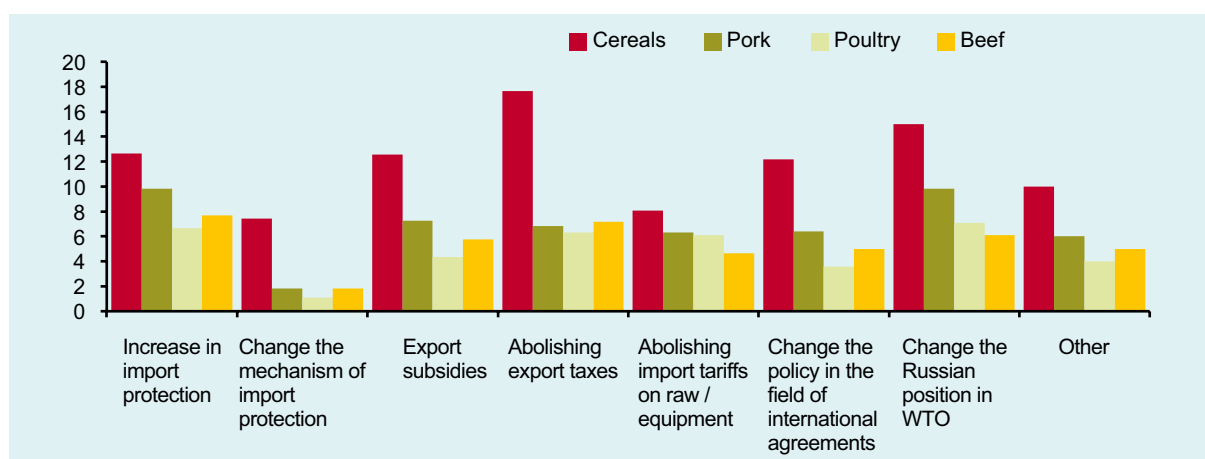


Figure 67. The importance of trade policy measures for market development, by sector, weighted rank of responses



Within macroeconomic policy the experts are mostly concerned with strengthening of the ruble which creates hurdles against exports and opens the domestic market for imports (**Figure 68**). It’s notable that poultry producers are the least worried about strengthening of the ruble: this proves what has been discovered by many research studies – that imported poultry (mostly frozen chicken legs) does not

21.- Studies show that agriculture cannot be a loser after accession (e.g. Serova and Karlova,2005)

compete with domestic poultry products (mostly chilled and fresh whole chicken and chicken parts).

The second worry of the experts is the tax system. Among responses received, the most often heard are recommendations to simplify the existing tax system, especially the system of reimbursement of VAT to exporters (which is more relevant to the trade policy). Besides this, several respondents are concerned about the low level of contract enforcement, the low level of security for investors, and the underdevelopment of other legal institutes.

Figure 68. The importance of macroeconomic policy measures for market development, weighted rank of responses

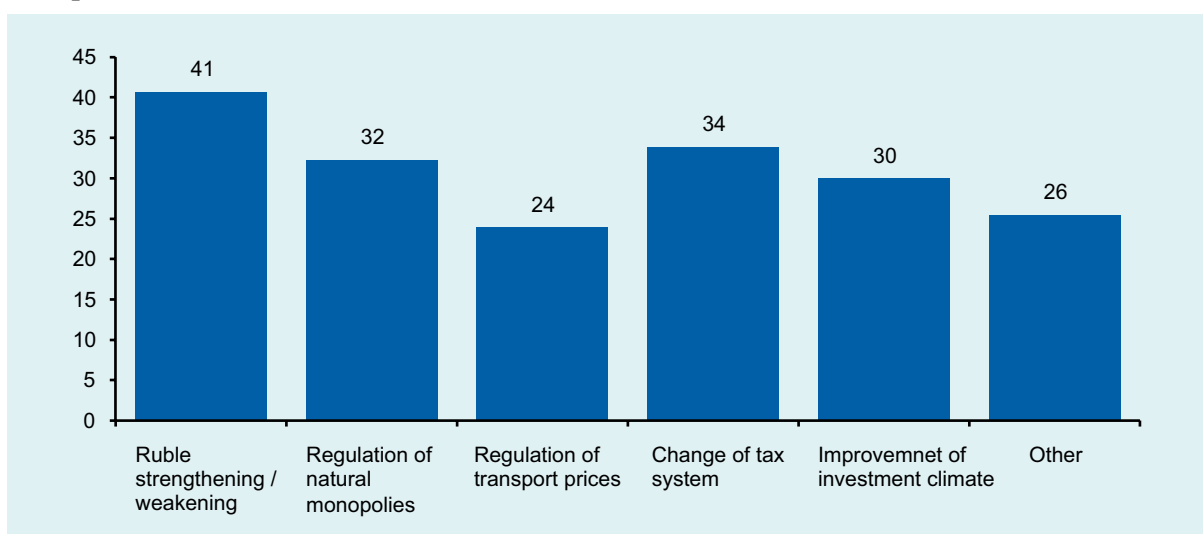
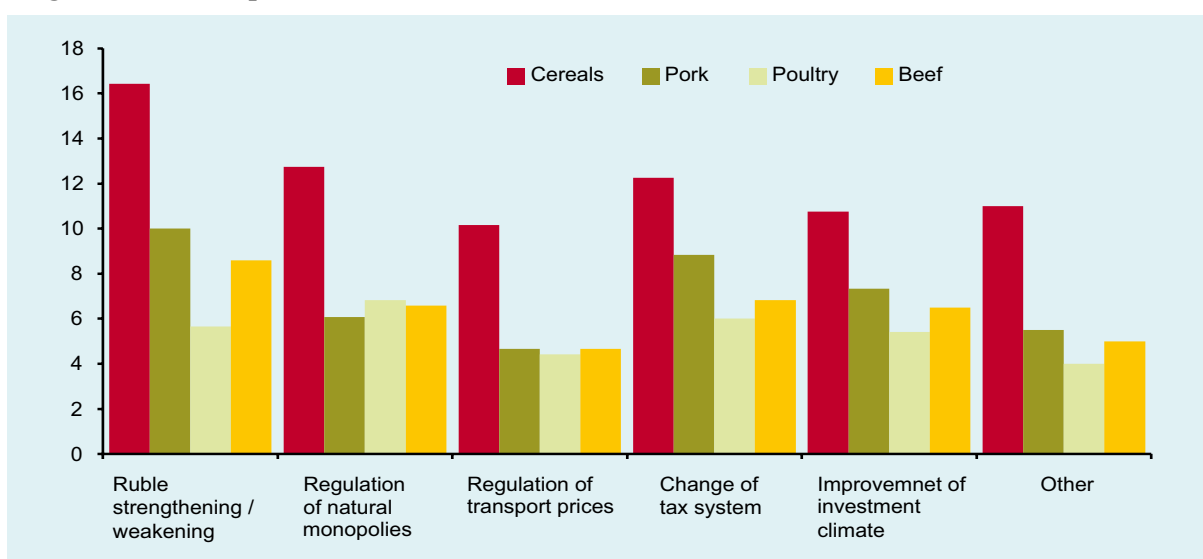


Figure 69. The importance of macroeconomic policy measures for market development, by sector, weighted rank of responses



In the majority of cases, the experts consider agri-food policy as budget spending (**Figure 70**). As the Figure depicts, requests for increases in budget spending—regardless of the particular mechanisms of this spending—have a rather high weighted rank among the experts sampled. However, two years?

experience of the National Project convinced the experts of the usefulness of governmental support of private investments. Since the cereal industry did not get this support under the National Project, the experts ranked this measure as the most important for them.

As was shown above, the experts sampled consider limited access to credit resources as the major constraint, it is therefore to be expected that they ranked the necessity to change the current scheme of credit support very highly.

Although the need for public investment is ranked as the fourth most important measure in the agricultural policy, some of the respondents pointed out the necessity for rural infrastructure development, in particular of roads, and the need to invest in agricultural education and research.

Figure 70. The importance of agri-food policy measures for market development, weighted rank of responses

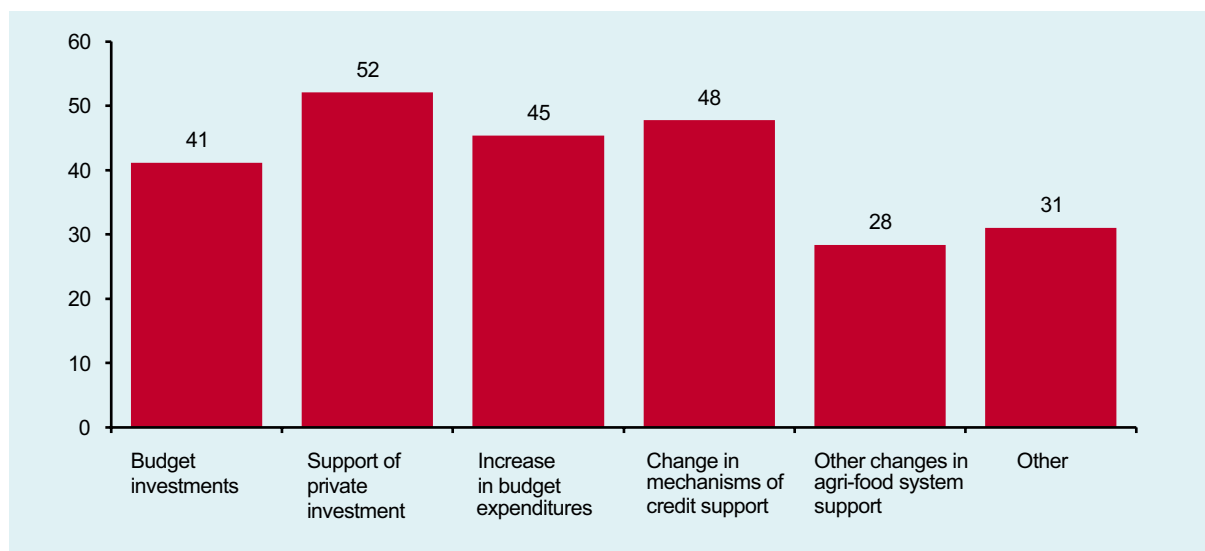
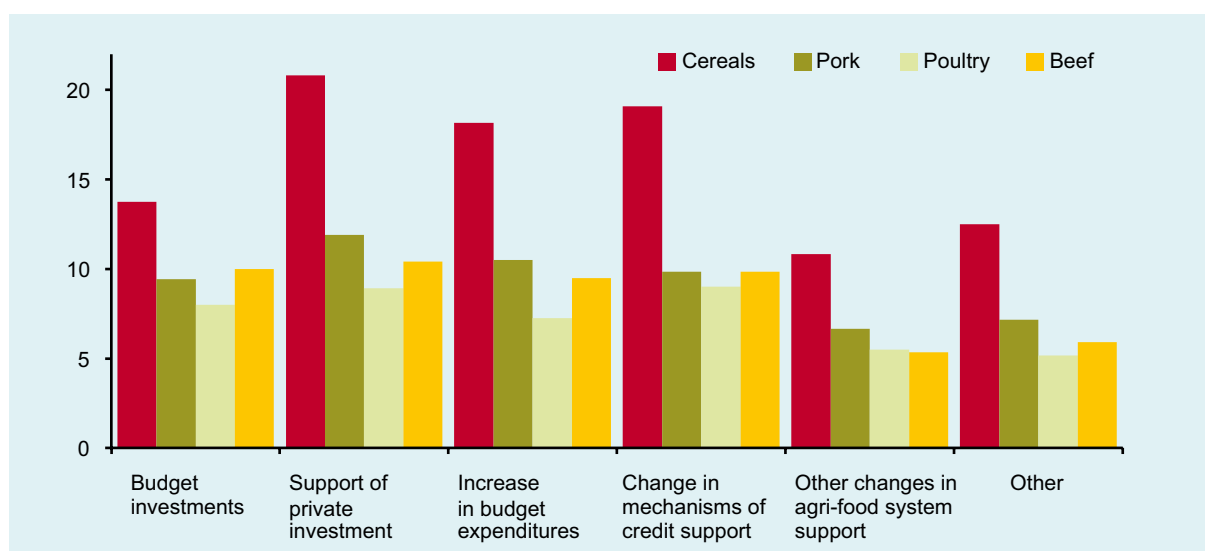


Figure 71. The importance of agri-food policy measures for market development, by sector, weighted rank of responses



8. Conclusions and recommendations

Cereal and meat value chains are rapidly developing in Southern Russia. Private and public investment in these sectors has notably increased in the last 2–3 years and is likely to significantly grow in the near future. Full realisation of potential, however, is constrained on the one hand by the incomplete transition process in the agriculture and agri-food sectors and on the other hand by some current policy measures which could hamper development of the sector. Due to the federative nature of the Russian state, some constraints can be lifted only at the federal level, while other problems can be settled at the regional level. This Study has revealed a number of such problems which could be serious bottlenecks to value chain development in the cereal and meat industries in Southern Russia.

General constraints to the development of agri-food value chains in Southern Russia

Issues related to land tenure. The land tenure issue is a general bottleneck to primary agriculture. The federal legislation on land and land transactions should be urgently corrected in order to ease access to land for investors in agriculture. The land sharing system provided a fairly good mechanism for land privatisation during the early stages of transition. Nowadays, this system of shares deters land acquisition by investors and therefore hampers financial inflow into agriculture. It should be replaced by a more rational scheme of share transfers, along with the securing of property rights for the rural population. Transaction costs of land deals (rental, acquisition, and other transactions) are, in many cases, prohibitive, which is also a constraint on investment. For that reason, land legislation is to be changed towards more transparent, efficient and coherent land registration and land turnover mechanisms.

Lack of investment in human capital. Another general problem of agri-food chains is a severe lack of qualified labourers and managers. The country needs an ambitious and urgent reform of the entire system of education, training, and extension. Previous efforts to reform this system were clearly insufficient. Business circles indicate that the lack of skilled workers and managers is one of the most serious problems preventing development of agri-food chains.

Low levels of investment in R&D. Connected with deficiencies of the education system is the problem of R&D. Both the cereal and meat industries complain about the unacceptable state of the breeding industry. The launch of a state programme of support for the purchase of pedigree animals met with a huge demand from the grass-roots level. Several decades of neglect in the Soviet era and during the transition period and, in the 1930s–50s, direct damage to agricultural applied science led to a generation gap in research schools. Massive public investment into R&D is urgently needed, along with governmental support to private investment in R&D. The option of inviting prominent leaders from foreign research schools could be considered. It was previously done in the 17th and 18th centuries in Russia and led to the establishment of world renowned Russian schools of mathematics and other sciences.

Inconsistent policy measures. On the policy side, there is a general problem both at the federal and regional levels: support of particular sectors often lacks coherence when only one or two elements of the value chain are supported while others immediately become extremely narrow bottlenecks to the whole chain. For instance, huge support for the fattening industry in the last two to three years was not coupled with adequate parallel measures addressed at the development of slaughterhouses. This is currently a serious constraint for the meat industry, especially with the dominance of households in meat production.

Lack of compliance with international standards. The next problem in the meat value chain, which market actors are not yet aware of, is the lack of compliance with international standards. This Study did not address this issue as it was based mainly on interviews with market actors, analysts and policy makers who are driven by short-term objectives. However, standards regulation and control in the meat sector is dramatically underdeveloped and, with the improvement of living standards, will undoubtedly develop into a serious problem. Governmental policy should be pro-active in this regard.

Inefficiencies in the utilisation of subsidies. The major part of governmental budgetary support to agriculture comes in the form of input subsidies, among which subsidised short-term and medium-term credit programmes dominate. However, the Study shows that financial constraints and limited access to credit are the major bottlenecks faced by the cereal and meat industries. This tend to prove that current governmental support is not sufficient. As budgetary spending for these programmes is fairly big, this could mean that the general orientation of subsidy distribution schemes and their application procedures are not efficient.

Unfavourable general business environment. Value chain development is seriously affected by the general business environment in the country, which includes the political and social situation, corruption and some other general issues. The experts interviewed for the poll conducted for this Study indicated a lot of the problems in this field. However, these issues were not covered by this Study and are not specifically addressed in this conclusion.

Specific constraints affecting the cereal value chain

The cereal value chain, in addition to the issues that have already been listed, faces the following problems:

- The cereal market is very well developed in Russia in comparison with other product markets. However, there is still an urgent need to establish efficient agricultural price risk management mechanisms such as futures markets, warehouse receipts, and forward contracts.
- The consequences of the development of agroholdings are still not clear. Though there are advantages to this type of cereal operators, there are also many disadvantages, including monopsonic effects, manageability, cost of protection from theft, social risks in rural areas, and so on.
- Because of large volume of exports and difficulties to raise finance, cereal processors suffer from a lack of modernisation of their assets. Local processors cannot compete with exports and therefore suffer a shortage of raw produce.
- The most often reported problem of the cereal infrastructure in Russia, including in the south, is a shortage of specialised rail wagons (hoppers) for cereal shipments.

Specific constraints affecting the meat value chain

Specific constraints limiting the development of the meat value chain include:

- First and foremost among the problems of the meat value chain in Southern Russia is a tremendous need for modernisation of equipment, both at the farm level and in primary and secondary processing. The out-of-date assets of the industry prevent it from the complete utilisation of raw produce, therefore reducing efficiency and lowering the quality competitiveness of products on the domestic market.
- The meat value chain urgently needs a network of small and modern slaughterhouses which would allow the collection of raw meat from households and secure the timely delivery of quality raw produce to the packing plants, which currently tend to import raw produce from abroad.

Need for investment from both private and public sources

All the above problems would gain from a more intense policy dialogue between private actors and public authorities, at the federal and regional levels. While some constraints can be solved by private investment alone, others constraints, to be lifted, will require substantial investment from public sources. In certain cases, for instance investment in human capital, Public-Private Partnerships (PPPs) could also be promoted. Issues requiring a decisive involvement of public authorities include land tenure: a strong political determination will be needed in order to rectify the recently adopted land legislation. An example of issues that can be more immediately solved by private actors is the modernisation of fattening farms and processing plants in both the meat and cereal chains.

Annex 1 - List of persons met

- I. Antjokhina*, Deputy Head of Financial Department, Ministry of Agriculture
- S. Batkibekov*, Head of Department of Prognosis, Ministry of Economic Development
- M. Mamikonyan*, President of Russian Meat Union
- S. Yushin*, President of Russian Meat Association
- V. Korbut*, Vice-President of Russian Grain Union
- A. Sizov*, grain market analyst, SovEcon
- V. Petrichenko*, grain market analyst, WJ
- D. Rylko*, agricultural markets analyst, IKAR
- O. Shick*, agri-food policy analyst, IET
- N. Karlova*, agri-food markets analyst, Agrico
- V. Loginov*, Chairman, State owned corporation Souyzplodimport
- E. Titorenko*, Head of Land Tenure Department, Ministry of Agriculture of Rostov oblast
- A. Kolesnikov*, Head of Marketing Department, Ministry of Agriculture of Rostov oblast
- N. Koleda*, Manager of mill enterprise Kovsh, Rostov-upon-Don
- Kh. Porksheyana*, Chairman of kolkhoz named after Shoumyan, Rostov oblast
- A. Scherbachenko and V. Tzymbal*, Top managers, agroholding Aksay, Rostov oblast
- A. Tarasov*, Deputy Director, Rostov Institute of Agricultural Economics
- Several land shareholders in the rural area, Rostov oblast
- Several saleswomen in retail outlets in Rostov-upon-Don

Annex 2 - Statistical and background information

Table 1. Cereals output, '000 tonnes

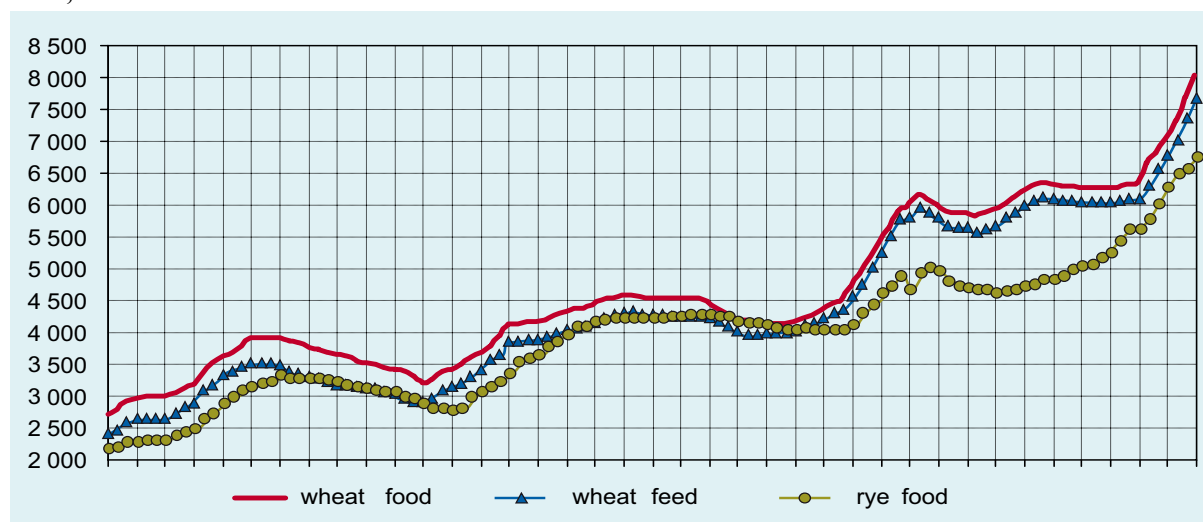
	1980–85	1986–90	1996–2000	2005	2006	2007
<i>Cereals, total</i>						
Russia	92,000	104,000	65,200	7,818.7	7,862.4	81,758
Krasnodar krai	6,988	8,222	5,458	8,298	8,239	8,126
Stavropol krai	3,657	4,866	3,399	6,705	6,281	7,001
Volgograd oblast	3,258	4,194	1,775	3,581	3,335	2,770
Rostov oblast	5,194	7,245	3,203	6,266	6,310	4,096
<i>Wheat</i>						
Russia	38,600	43,500	34,330	47,698	45,006.3	49,370
Krasnodar krai			3,337.2	5,134.5	4,613.7	5,024
Stavropol krai			2,603.5	5,623.8	5,012.67	5,773
Volgograd oblast			899.9	2,753.7	2,251.75	2,112
Rostov oblast			1,820	4,510.9	4,214.2	3,244

Source: Rosstat

Table 2. Cereals harvested area , '000 hectares

	1990	2000	2005	2006	2007
Russia	63,068	45,636	43,785	43,357.39	44,971.8
Krasnodar krai	1,976.2	1,967.3	1,952.1	2,008.02	2,164
Stavropol krai	1,792.2	1,747	1,965.3	2,004.27	2,158.4
Volgograd oblast	2,669.8	1,544.1	2,008.4	2,021.29	2,122.4
Rostov region	2,940.8	2,226.5	2,520.7	2,552.85	2,776.3

Source: Rosstat

Table 3. Weekly cereal prices in the European part of Russia, from 11 November 2005 to 22 February 2008, RUR/tonne EXW


Source: Data of WJ

Table 4. Sunflower seeds output, '000 tonnes

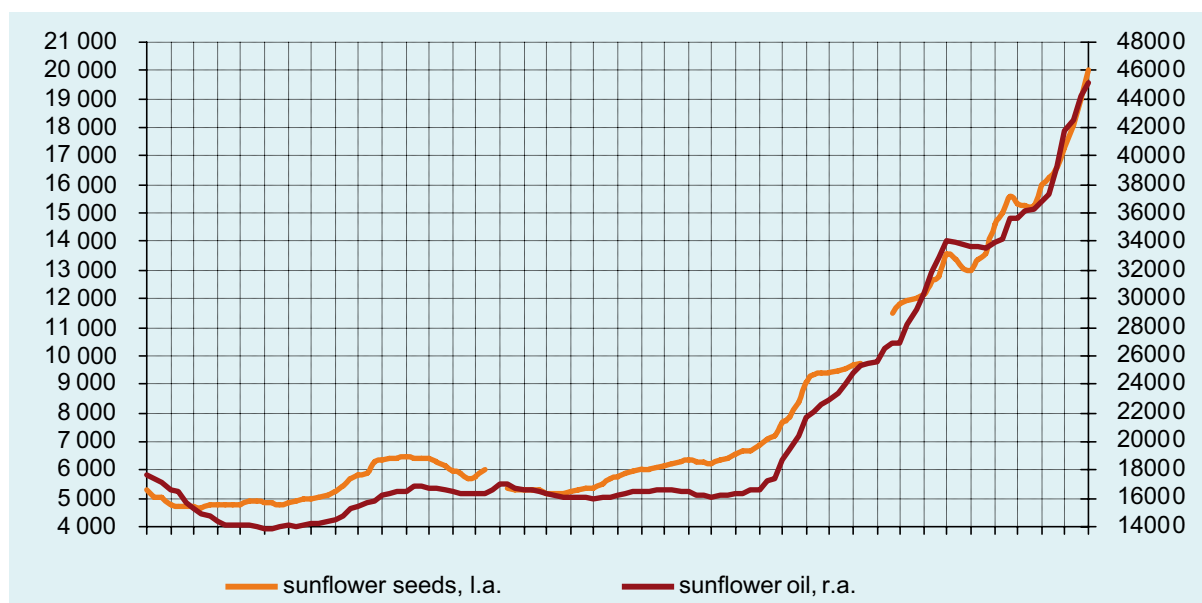
	1980–85	1986–90	1996–2000	2005	2006	2007
Russia	2,328	3,121	3,332	6,441	6,752.83	5,650
Krasnodar krai	598.6	603.9	542	1,153	1,137.48	849
Stavropol krai	209.4	262.8	244.4	427	430.37	285
Volgograd oblast	158.6	207.1	291.9	673	684.25	623
Rostov oblast	465.1	689.4	706.9	1,585	1,714.85	1,198

Source: Rosstat

Table 5. Harvested area under sunflower. '000 hectares

	1990	2000	2005	2006	2007
Russia	2,739	4,629	5,546	6,168.93	5,260.8
Krasnodar krai	308.8	398.8	574.3	546.38	447.5
Stavropol krai	187.5	307.5	273.6	312.48	231.2
Volgograd oblast	250.4	460.7	658.4	740.37	640.1
Rostov region	455.1	896.5	1,163.6	1,328.12	1,215.6

Source: Rosstat

Table 6. Sunflower seeds and sunflower oil, weekly prices in the European part of Russia, from 7 October 2005 to 22 February 2008, RUR/tonne EXW


Source: Data of WJ

Table 7. Production of meat and meat products, '000 tonnes

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2006/1990
Russia	6,483.9	2,370.1	1,193.6	1,284	1,455.8	1,677	1,776.1	1,856.6	2,185	34%
Krasnodar	392.3	125.8	83.2	88	87.3	92.5	93.3	86.4	101.4	26%
Stavropol	186.4	44	24	20.5	25.6	35.7	43	50.6	60.5	32%
Volgograd	193.3	77.9	23.4	28.6	29	26.8	23.3	27	33.7	17%
Rostov	320.4	122.4	30.6	31	37	51.8	49.8	42	59.5	19%

Source: Rosstat

Table 8. Meat consumption, kg per capita annually

	1990	1995	2000	2005	2006
Russia	75	55	45	55	58
Krasnodar	75	50	40	54	59
Stavropol	68	56	39	48	51
Volgograd	82	57	48	58	61
Rostov	76	44	36	48	52

Source: Rosstat

Table 9. Descriptions of export duties/taxes in TPR reports

Country	Commodity which is subject to export duty
Norway	Fish and fish products
Turkey	Hazelnuts
Fiji	Sugar
India	Hides, skins
Indonesia	Coconut and palm oil
Malaysia	Certain fish, birds' eggs, certain fruit and nuts, palm seeds, gum and resin, rattan, crude and semi-processed palm oil, palm kernel, animal feeds
Pakistan	Crushed and uncrushed bones, aw/wet blue hides and skins
Solomon Islands	Palm oil and copra
Sri Lanka	Tea, rubber, coconut, cashew-nuts in shell, raw hide and skins, and leather of bovine and equine animals
Thailand	Rice and glutinous rice, hides of bovine animals, rubber, fish
Burkina Faso	Livestock products
Cameroon	Cocoa, cotton, medical plants, sugar, and rubber, coffee, palm oil
Côte d'Ivoire	Coffee, raw cocoa, cola nuts
Ghana	Cocoa
Guinea	FOB value is levied on the export of all products
Kenya	Fish
Mali	Fish
Malawi	Tobacco, tea, sugar
Mozambique	Cashews

Country	Commodity which is subject to export duty
Uganda	Coffee
Antigua and Barbuda	Lobsters and fish
Brazil	All exports are subject to a tax of 30 % which can be decreased or increased up to 150% if the executive deems it necessary
Colombia	Coffee
Costa Rica	Bananas
Dominican Republic	Live fish, molluscs, crustaceans.
Guatemala	Coffee
Uruguay	Dry, salted, and pickled hides, wool

Source: Extracted from OECD,2003

Table 10. Agricultural budget, '000 RUR. Stavropol Krai, 2007

Administrative costs	148,128
Agricultural support	296,059
Partial compensations for agricultural chemical costs	270,180
Livestock	6,400
Livestock breeding	43,280
Compensation for elite seed costs	18,500
Maintenance of permanent crop plantings	26,600
Credit interest rate subsidising	237,346
Sheep breeding	64,800
Compensation for insurance costs	135,920
Credit interest rate subsidising	45,287
Credit interest rate subsidising for machinery purchasing	32,400
Interest rate subsidising for credit for livestock production development	234,188
Interest rate subsidising for credit for small farm production development	75,930
Interest rate subsidising for credit for organisations providing services for agricultural producers	31,445
Investment credit interest rate subsidising	267,662
Compensation for the cost of diesel fuel used for agriculture	212,438
Seed fund maintenance	2,255
Compensation for fertilizer costs	22,000
Leasing for agricultural producers	123,100
Cattle leasing	21,000
Social infrastructure maintenance	5,570
Anti-epizootic	17,355
Hail suppression	28,224
Regional reserve maintenance costs	13,500

Soil improvement in Stavropol Krai in 2006–2008	52,796
Seminars, competitions	10,671
Machinery inspection	4,200
Co-financing of National Project “Agricultural Complex Development”	6,535
Administrative costs on organisations for seed growing, soil improvement and pest control	16,355
Administrative costs on institutions that provide services for livestock producers	314,840
Administrative costs on organisations for information and methodological support	16,970
Regional target programme “Support to Cossack communities in Stavropol Krai in 2006–2008”	3,000
Regional target programme “Development of viticulture and vine production in Stavropol Krai in 2005–2007”	30,000
Regional target programme “Livestock breeding development in 2006–2008”	2,008
Regional target programme “Development of fruit growing in Stavropol Krai in 2006–2008”	15,000
Regional target programme “Livestock development in Stavropol Krai in 2006–2008”	1,000
Regional target programme “Small farm production development in Stavropol Krai in 2007–2009”	3,243
Regional target programme “Exhibitions and fair activities support in Stavropol Krai in 2007–2009”	3,478
Research and development	10,000
Education	2,713
Social policy: housing	30,000
Federal rural development programme for 2002–2010 infrastructure development	28,000
Investments in infrastructure development	25,000
Land titles for unused land	10,000
TOTAL	2,965,376

Source: Regional budget laws. 2006–2007 (Consultant Regions database)

Table 11. Agricultural budget, ‘000 RUR, Krasnodar Krai, 2006

Administrative costs	15,7487
Partial compensations for chemical costs	476.7
Livestock	50,074.6
Compensation for elite seed costs	7,946.1
Maintenance of permanent crop plantings	11,771.9
Subsidising of credit interest rate	411,273.8
Compensations for insurance costs	64,023.8
Machinery inspection costs	2,200
Livestock subsidies	22,974.6
Compensations for the cost of diesel fuel used for agriculture	297,435
Interest rate subsidising for credit for livestock production development	112,000
Interest rate subsidising for credit for small farm production development	101,000

Administrative costs for organisations for seed growing, soil improvement and pest control	14,420
Administrative costs for institutions that provide services for livestock producers	13,140
Administrative costs for organisations for information and methodological support	8,767
Administrative costs for institutions that provide services for livestock producers	193,682
Regional target programme “Stabilising of the sugar beet seed growing sector on Krasnodar krai in 2003–2007”	5,000
Regional target programme “Permanent crops for 2006–2010”	57,200
Regional target programme “Support for Danish technology pork livestock”	3,280
Regional target programme “Machinery leasing development programme for 2002–2006”	3,947.8
Regional target programme “Priority lines of investigation in agriculture in Krasnodar krai”	2,000
Regional target programme “Development of rice seed growing in Krasnodar krai 2006–2010”	2,250
Regional target programme “Development of the agri-food sector of Krasnodar krai in 2006–2007”. Interest rate subsidising of credit for livestock production development	25,000
Regional target programme “Development of the agri-food sector of Krasnodar krai in 2006–2007”. Interest rate subsidising of credit for small farm production development	7,350
Regional target programme “70 years of Krasnodar krai and 215 years of the settling of Cuban by Cossacks”	260
Regional target programme “Housing for 2005–2010”	21,000
Regional target programme “Open music lessons in rural schools”	3,500
Regional target programme “Rural healthcare”	3,334
Regional target programme “Rural roads”	44,910
Regional target programme “Preventive measures for some parasitical diseases in Krasnodar krai in 2004–2006”	4,298.5
Regional target programme “Cattle health (leucosis combat) 2004–2013”	994
Regional target programme “Preventive measures and liquidation of zoonoses animal disease in Krasnodar krai in 2005–2009”	12,700
Research and development (Regional target programme “Priority lines of investigation in agriculture in Krasnodar krai”)	16,350
Research and development (Regional target programme “Development of rice seed growing in Krasnodar krai 2006–2010”)	300
Federal rural development programme for 2002–2010. Miscellaneous subsidies	16,000
Federal rural development programme for 2002–2010. Subsidies for housing construction and purchases	15,000
Investments	2,500
Housing	1,650
Environment	3,605
Education	3,500

Transport cost subsidies for orphan children in rural areas	4,714
Compensation for natural disaster damage for agricultural producers	2,331.7
Seminars, competitions	13,000
Soil Improvement measures	5,170
Hail Suppression	38,000
Agricultural census administrative costs	31,121.7
TOTAL	1,818,939.2

Source: Regional budget laws, 2006–2007 (Consultant Regions database)

Table 12. Agricultural budget, ‘000 RUR, Rostov Oblast, 2007

Administrative costs	63,210.5
Partial compensation for chemical costs	20,000
Livestock	83,000
Compensation for elite seed costs	2,000
Maintenance of permanent crop plantings	2,692.5
Subsidising of credit interest rate	30,500
Compensation for insurance costs	16,800
Other agricultural production support	25,217.7
Interest rate subsidising for credit for livestock production development	120,000
Administrative costs for municipal support of agriculture	34,769
Administrative costs for institutions that provide services for livestock producers	383,687.4
Administrative costs for institutions that provide wild nature protection services	3,073.6
Regional target programme “Cattle health (leucosis combat) 2005–2011”	11,600
Federal rural development programme for 2002–2010. Miscellaneous subsidies	9,340
Federal rural development programme for 2002–2010. Subsidies for housing construction and purchases	100,000
Environmental measures	96,613.5
Purchase of buses for rural schools	25,000
Subsidies for social support to rural people	258,018.2
Social subsidies	1,907.1
Infrastructure development (municipal funds)	903
Municipal subsidies for support to agriculture and soil improvement	35,730
TOTAL	1,348,295

Source: Regional budget laws, 2006–2007 (Consultant Regions database)

Table 13. Agricultural budget, ‘000 RUR, Volgograd Oblast, 2006

Administrative costs	147,532
Partial compensation of chemical costs	7,000
Compensation for elite seeds costs	17,050

Maintenance of permanent crop plantings	26,400
Subsidising of credit interest rate	191,050
Compensation for insurance costs	261,708
Support for other agricultural production	42,960
Compensation for the cost of diesel fuel used for agriculture	268,082
Interest rate subsidising for credit for livestock production development	17,570
Interest rate subsidising for credit for small farm production development	75,540
Support for large and small farms	110,000
Support for private subsidiary plots	150,000
Livestock breeding	29,120
Sheep breeding	6,600
Subsidies for the heads and specialists of the farms	5,500
Support for non-commercial gardening unions and private plot service cooperatives	5,400
Research	8,664
Support for reforms in agriculture (ARIS)	2,000
Combating smartweed	1,408
Erosion-preventive measures	2,600
Maintenance of on-farm irrigation systems	48,872.2
Partial compensation of the cost of electricity used for irrigation	54,771
Seminars, competitions	40,331
Miscellaneous	3,500
Administrative costs for organisations for seed growing, soil improvement and pest control	1,567.4
Administrative costs for institutions that provide services for livestock producers	335,106
Administrative costs for organisations for information and methodological support	5,828.6
Agricultural census administrative costs	16,501.3
Regional target programme “Information support for real estate management and land property regulations”	4,160
Regional target programme “Development of green-house enterprise in the state-owned farm ‘Zarya’ “	23,000
Regional target programme “Development and organisation of production systems for drip irrigation”	250
Regional target programme “New technologies for rice production”	2,079
Federal rural development programme for 2002–2010. Miscellaneous	16,000
Federal rural development programme for 2002–2010. Investment in construction	40,000
Federal rural development programme for 2002–2010. Subsidies for housing construction and purchases	40,000
Rural housing	80,200

Investment	214,200
Education	26,200
Health care	4,800
TOTAL	2,333,550

Source: Regional budget laws. 2006–2007 (Consultant Regions database)

Table 14. Top cereal producers in Southern Russia, average indicators for 2004–2006

Rank in national ranking "Grain-100"	Farm name	Area under grain, '000 hectares	Cereal output, '000 tonnes	Yield, 100 kg/ha	Cost per tonne, RUR	Price, RUR/tonne	Profitability of cereals, (margin/costs) %
<i>Rostov oblast</i>							
2	Agrosojuz Yug Rusi	38.8	120.6	31.1	228.3	310.0	32.8
10	Kirovsky konnye zavod (Kirov horse plant)	10.9	54.8	50.1	203.5	316.0	55.3
20	SKVO	8.8	42.2	47.8	173.7	300.6	73.1
22	Donskoye	13.5	44.2	32.9	204.7	306.9	50.0
34	Co-op named after Angel'ev	13.3	46.2	34.7	190.1	239.9	26.2
56	Kolos	5.0	26.6	53.3	176.8	277.2	56.8
66	Horsebreeding plant Zimovnikovsky	8.5	26.8	31.6	150.2	267.7	78.2
76	Mechetinskoye	5.2	22.9	43.6	190.8	290.9	52.5
98	Tzelinny	9.4	22.1	23.5	83.9	248.9	196.5
<i>Volgograd oblast</i>							
28	Agro-Danilovka	27.8	48.6	17.5	240.8	289.2	20.1
35	Volzhsky Udarnik	15.2	41.5	27.3	169.3	230.7	36.2
44	Gelio-Pax-Agro	8.8	25.3	28.8	186.5	344.0	84.4
47	GPA-3	7.1	23.1	32.5	172.3	359.7	108.8
48	Agro-Frolovo	14.6	32.8	22.4	193.0	267.4	38.5
53	Gelio-Pax-Agro 4	6.8	23.4	34.7	186.3	353.1	89.6
99	Agro-Novonikolaevsky	10.3	25.8	25.1	222.1	282.5	27.2
<i>Krasnodar krai</i>							
1	Agrokomplex	37.4	205.5	55.0	174.8	283.7	62.3
3	Iskra	21.7	80.6	37.1	211.4	378.1	78.9
13	Agrofirm named after Il'ich	12.3	70.2	56.9	189.9	256.5	35.1
14	Solgonskoye	13.1	54.0	41.2	177.8	349.1	96.4
24	Uspensky	10.1	46.9	46.2	162.5	237.9	46.4

25	Kolkhoz "Rodina"	7.1	43.6	61.5	191.0	289.4	56.2
26	Khutorok	5.9	35.8	60.4	227.2	330.5	45.4
27	Russia	9.2	40.2	43.5	128.3	279.0	117.5
31	Progress	7.2	31.5	43.7	214.2	272.4	27.2
32	Andronovskoye	14.1	42.9	30.4	228.7	339.3	48.3
37	Krasnopolyanskoye	11.5	29.9	26.0	214.6	333.2	55.3
38	Niva	5.8	30.0	51.8	151.2	288.2	90.6
43	Kolkhoz breeding plant "Russia"	9.2	42.5	46.3	286.3	361.0	26.1
49	Znamiya Lenina	7.8	39.3	50.6	121.8	247.0	102.7
57	Zarya	6.8	29.7	43.9	216.2	277.5	28.4
60	Aspekt	6.6	29.4	44.5	258.3	362.3	40.2
61	Kolkhoz named after Lenin	6.2	34.2	55.4	236.2	316.1	33.8
65	Breeding plant "Privolnoye"	5.2	27.1	52.4	205.4	282.9	37.8
68	Breeding plant "Urozhay"	6.6	35.4	53.3	154.6	219.2	41.7
74	Kolkhoz named after Shevchenko	6.9	26.0	37.5	169.2	240.6	42.2
77	Ltd named after Luk'yanenko	7.2	28.2	39.1	258.3	327.3	26.7
78	Annastasievskaya	6.0	32.8	54.5	347.1	398.3	14.7
81	State enterprise breeding plant "Kuban"	6.2	31.0	50.4	211.5	293.0	38.6
83	Pobeda	7.1	35.6	49.9	148.7	257.2	73.0
84	Slava Kubani	3.4	18.9	55.1	245.8	307.1	25.0
87	Co-op named after Lenin	5.6	28.1	50.2	163.7	251.8	53.8
89	Breeding plant "Kuban"	5.4	33.3	61.9	211.3	260.4	23.2
93	Kuban-Lux	3.4	21.0	61.9	145.5	265.8	82.7
94	Vasyurinsky	6.1	27.1	44.3	202.8	284.7	40.4
95	Rus'	4.3	26.4	61.2	167.9	287.8	71.4
96	State enterprise breeding plant "Lenin's Way"	5.1	27.3	53.7	243.6	323.6	32.8
<i>Stavropol krai</i>							
4	Kolkhoz named after Lenin	11.8	67.3	56.9	170.9	314.5	84.1
6	Pobeda	17.5	82.7	47.2	217.9	279.0	28.0
7	Zolotaya Niva	29.4	119.4	40.7	249.0	283.4	13.8
8	Gigant	14.7	53.4	36.2	140.7	296.6	110.8
11	Breeding plant "Kazminsky"	10.7	62.6	58.2	199.6	304.0	52.3
15	Kolkhoz named after Voroshilov	11.7	58.1	49.7	201.6	292.4	45.0

16	Rus'	8.6	53.0	61.6	146.3	294.3	101.2
17	Rodina	11.0	49.5	44.8	199.2	299.4	50.3
18	Rostovanovsky	13.2	59.6	45.2	120.0	252.1	110.1
19	Sovkhoz named after Kirov	11.7	50.2	43.1	187.3	270.2	44.3
21	Breeding kolkhoz "Rostovanovsky"	8.8	46.5	52.7	174.6	264.8	51.7
23	Kolkhoz Ternovskoye	9.9	47.7	48.2	211.0	285.2	35.2
33	Kolkhoz Rodina	7.0	34.0	48.5	148.7	244.1	64.1
40	Raduga	6.9	33.5	48.3	151.9	238.7	57.6
45	Kolkhoz named after Kirov	8.2	34.1	41.8	186.8	262.3	40.4
50	Kolkhoz Niva	7.6	29.2	38.3	174.4	277.6	59.1
51	Agrofirm "Vostochnoye"	9.9	39.2	39.8	165.7	228.8	38.1
54	Svobodny trud	5.5	27.6	50.3	158.8	327.3	106.1
58	Breeding kolkhoz "Lenin's Way"	10.3	31.9	30.9	127.4	212.6	66.9
59	Kolkhoz named after Lenin (Arkzririsky county)	11.0	32.7	29.7	149.6	226.8	51.5
62	Oktyabrsky	10.9	28.7	26.4	123.4	245.7	99.1
63	State enterprise breeding plant "Bolshevik"	9.6	29.6	30.7	172.5	258.1	49.7
64	Breeding plant "Vostok"	8.4	30.3	36.1	144.9	245.9	69.7
67	Kolkhoz of 1 May	7.4	28.7	39.0	137.7	310.5	125.5
69	Urozhainoye	4.3	23.1	54.0	226.7	320.2	41.2
70	Kirovsky	9.9	32.0	32.5	174.7	245.1	40.3
72	Kalininskoye	8.7	25.5	29.2	161.3	274.8	70.4
79	Luch	4.2	23.1	54.4	184.3	314.6	70.7
80	Agrofirm "Druzhba"	7.6	25.4	33.4	193.8	266.1	37.3
82	Don	12.4	30.4	24.6	168.2	220.6	31.2
85	Breeding plant "Vtoraya pyatiletka"	11.4	35.1	30.8	117.7	203.8	73.1
86	Sablinskoye	6.9	28.9	41.9	217.5	283.6	30.4
88	Breeding plant "Lenin's Way"	8.5	27.3	32.3	145.1	249.8	72.2
90	Kamennobalkovskoye	7.7	25.6	33.4	163.5	282.9	73.0
97	Rodina	7.4	29.7	40.0	153.7	234.2	52.3

Source: Data of Rostov Institute of Agricultural Economics

Table 15. Top pork producers in Southern Russia, average indicators for 2004–2006

Rank in the national ranking "Pork-100"	Company	Annual average pig inventories, '000 heads	Meat gain, '000 tonnes	Sales, '000,000 RUR
<i>Volgograd oblast</i>				
17	Krasnodonskoye	62.1	7,719	418.0
97	8 March	4.3	587	27.4
<i>Krasnodar krai</i>				
28	Vasyurinsky	10.4	1,823	202.4
35	Lenin's Znamya	16.5	2,159	109.7
36	Agrokomplex	23.8	2,747	152.9
40	Breeding plant named after Chapayev	17.5	1,879	96.3
42	Pobeda	13.6	1,597	82.2
44	Breeding plant "Pobeda"	15.9	1,496	82.0
48	Breeding plant "Gul'kevichsky"	11.3	1,329	77.7
58	Ladozhskoye	7.5	919	57.6
61	Breeding plant "Nasha Rodina"	6.3	1,045	52.7
69	Niva Kubany	7.5	828	47.9
70	Novoalekseevskoye	12.0	1,018	50.7
71	Firm "Kavkaz"	7.0	934	44.7
72	State enterprise – breeding plant "Kuban"	5.4	786	41.1
74	Rossiia	6.2	685	35.7
75	Named after Il'ich	5.0	758	40.9
76	Kavkaz	8.7	644	36.5
80	State enterprise "Leningradskoye"	4.9	576	99.1
81	Breeding plant "Volya"	8.9	724	29.7
84	Bryukhovetzkoye	5.0	524	300.9
89	State enterprise – breeding plant "Lenin's Path"	4.2	616	35.1
92	Breeding plant "Kuban"	3.4	613	27.9
93	Niva	6.8	553	30.1
96	Agro-Soyuz	5.9	686	36.7
98	Rus	2.8	488	26.1
100	Breeding plant – kolkhoz "Rossiia"	7.5	638	32.8
<i>Stavropol krai</i>				
49	Artezianskoye	8.3	1,280	65.9
86	Kolkhoz "Ternovskoye"	7.6	804	25.6
94	Kolkhoz named after Lenin	5.0	591	27.5
95	Sovkhoz named after Kirov	5.3	635	28.4

Source: Data of Rostov Institute of Agricultural Economics

Table 16. Top poultry producers in Southern Russia, average indicators for 2004–2006

Rank in the national ranking “Poultry meat-100”	Company	Annual average poultry inventories, ‘000 heads	Meat gain, ‘000 tonnes	Sales, ‘000,000 RUR
<i>Rostov oblast</i>				
56	Poultry plant “Nadezhda”	497	7,749	280.5
87	Il’ichevskaya poultry breeding plant	181	1,987	80.6
91	Poultry plant “Krasnosulinskaya”	50	212	66.1
92	Poultry plant named after Chernikov	249	1,041	30.3
93	Poultry breeding plant “Don”	73	620	23.4
<i>Volgograd oblast</i>				
74	Fregat-Jug	319	4,523	158.3
86	Poultry plant “Kumylzhinskaya”	210	2,977	111.2
<i>Krasnodar krai</i>				
33	Agrokomplex	1,117	13,191	403.3
34	Byelorechenskaya	703	11,212	369.4
72	Kubansky broiler	240	3,187	283.7
75	Poultry breeding plant “Rodina”	292	3,424	116.6
79	Poultry plant “Primorskaya”	219	3,107	101.7
84	Poultry breeding plant “Kavkaz”	155	2,387	75.1
<i>Stavropol krai</i>				
31	Stavropol broiler	856	13,457	1,388.6

Source: Data of Rostov Institute of Agricultural Economics

Table 17. Top beef producers in Southern Russia, average indicators for 2004–2006

Rank in the national ranking "Beef-100"	Company	Annual average cattle inventories, '000 heads	Meat gain, '000 tonnes	Sales, '000.000 RUR
<i>Rostov oblast</i>				
26	Zimovnikovsky	3,152	582	38.9
<i>Volgograd oblast</i>				
57	Named after Lenin	3,137	380	20.0
<i>Krasnodar krai</i>				
3	Agrokomplex	17,266	4,180	171.5
14	Vasyurinsky	1,964	657	128.0
16	Pobeda	6,082	1,416	45.4
23	Lenin's Znamya	3,834	1,083	38.5
28	Breeding plant "Nasha Rodina"	3,373	803	29.6
37	Kolkhoz named after Lenin	3,987	981	24.9
45	Krasnoarmeysky named after Maystrenko	3,797	722	16.6
56	Khutorok	3,684	815	19.7
60	Zavodskoye	1,573	349	19.9
61	Breeding plant "Urozhay"	3,047	517	18.1
65	Breeding plant "Kuban"	1,779	352	18.5
66	Novy put	2,102	457	15.8
85	Breeding plant "Volya"	3,220	557	14.0
86	Rodina	5,291	1,252	45.0

Source: Data of Rostov Institute of Agricultural Economics

Table 18. Questionnaire for the experts on meat and cereal markets in Southern Russia

1.	Статус эксперта			
1	Руководитель высшего звена компании			
.11.1	В российской компании			<input type="checkbox"/>
<i>Б</i>	В иностранной			<input type="checkbox"/>
<i>В</i>	В совместной			<input type="checkbox"/>
2	Руководитель маркетинговой или аналитической службы компании			
.11.2	В российской компании			<input type="checkbox"/>
<i>Б</i>	В иностранной			<input type="checkbox"/>
<i>В</i>	Совместной			<input type="checkbox"/>
3	Независимый аналитик рынка			<input type="checkbox"/>
4	Государственный служащий			<input type="checkbox"/>
2.	Сколько лет Вы работаете в агробизнесе?			
1	До 5 лет			<input type="checkbox"/>
2	5-15 лет			<input type="checkbox"/>
3	более 15 лет			<input type="checkbox"/>
3.	Опыт работы			
1	В России			<input type="checkbox"/>
2	В СНГ			<input type="checkbox"/>
3	В других странах			<input type="checkbox"/>
4.	Экспертом какого рынка Вы считаете себя в большей мере			
1	зерна			<input type="checkbox"/>
2	свинины			<input type="checkbox"/>
3	мяса птицы			<input type="checkbox"/>
4	говядины			<input type="checkbox"/>
5.	Как развивался рынок в последние 2-3 года			
1	быстро рос	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	умеренно рос	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	оставался неизменным	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	сокращался	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Если на рынке наблюдался рост, то укажите основные причины роста (не более трех)			
1	Рост спроса внутри страны для продовольственных нужд	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Рост спроса внутри страны для непродовольственного использования	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Рост спроса на мировом рынке	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Изменение доходов потребителей	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Изменение ценовой конъюнктуры на внутреннем рынке	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6	Изменение ценовой конъюнктуры на внешнем рынке	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Создание рыночной инфраструктуры, институтов внутри страны	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Природно-климатические изменения (погода, пандемии)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Ситуация на смежном рынке (рынках) (укажите рынок(-и))	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Либерализация мировых рынков	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Агропродовольственная политика	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Макроэкономическая ситуация в стране	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Другое (укажите)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Если на рынке наблюдался спад, то укажите основные причины спада (не более трех)				
1	Сокращение спроса внутри страны для продовольственных нужд	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Сокращение спроса внутри страны для непродовольственного использования	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Сокращение спроса на мировом рынке	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Изменение доходов потребителей	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Изменение ценовой конъюнктуры на внутреннем рынке	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Изменение ценовой конъюнктуры на внешнем рынке	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Недостаточность рыночной инфраструктуры, институтов	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Природно-климатические изменения (погода, пандемии)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Ситуация на смежном рынке (рынках) (укажите рынок(-и))	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Либерализация мировых рынков	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Агропродовольственная политика	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Макроэкономическая ситуация в стране	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Другое (укажите)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Оцените, насколько импорт влиял на внутреннее производство за 2-3 прошедших года				
1	Сильно	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Умерено	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Влияние импорта ничтожно	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Оцените, насколько экспорт влиял на внутреннее производство за 2-3 прошедших года				
1	Сильно	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Умерено	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Влияние экспорта ничтожно	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Перспективы роста рынка в ближайшие 2-3 года				
1	Будет быстро расти	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	2	Будет умеренно расти	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3	Будет расти в отдельных регионах РФ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4	Останется неизменным	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5	Сократится	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 1.		Перспективы роста рынка в ближайшие 10 лет				
	1	Будет быстро расти	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	Будет умеренно расти	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3	Будет расти в отдельных регионах РФ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4	Останется неизменным	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5	Сократится	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.		Что будет двигателем рынка в ближайшие 2-3 года				
	1	Изменение спроса внутри страны для продовольственных нужд	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	Изменение спроса внутри страны для непродовольственного использования	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3	Изменение спроса на мировом рынке	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4	Изменение доходов потребителей	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5	Изменение ценовой конъюнктуры на внутреннем рынке	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6	Изменение ценовой конъюнктуры на внешнем рынке	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	7	Создание рыночной инфраструктуры, институтов	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	8	Природно-климатические изменения (погода, пандемии)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	9	Ситуация на смежном рынке (рынках) (укажите рынок(-и))				
	10	Либерализация мировых рынков	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	11	Агропродовольственная политика	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	12	Макроэкономическая ситуация в стране	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	13	Другое (укажите)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.		Что будет двигателем рынка в ближайшие 10 лет				
	1	Изменение потребительского спроса внутри страны для продовольственных нужд	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Изменение спроса внутри страны для непродовольственного использования	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	Изменение спроса на мировом рынке	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3	Изменение доходов потребителей	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4	Создание рыночной инфраструктуры, институтов	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5	Природно-климатические изменения (погода, пандемии)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6	Ситуация на смежном рынке (рынках) (укажите рынок(-и))	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	7	Либерализация мировых рынков	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	8	Агропродовольственная политика	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	9	Макроэкономическая ситуация в стране	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	10	Другое (укажите)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.		Как будет меняться структура сектора в России				
	1	Консолидация компаний	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	Приход (рост участия) иностранного капитала	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3	Рост локальных производителей	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4	Усиление специализации компаний	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5	Усиление специализации регионов	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6	Другое	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.		Какие элементы в продовольственной цепи являются в настоящее время сдерживающими (укажите 3 наиболее значимых препятствия)				
	1	Производство материально-технических ресурсов для производителей (укажите, каких в наибольшей степени)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	Качество рабочей силы	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3	Качество менеджмента	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4	Земельные отношения (законодательство, структура земельной собственности, качество системы земельной регистрации и др.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5	Доступность финансовых ресурсов	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6	Уровень развития логистики	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	7	Уровень развития транспортной инфраструктуры (укажите, каких элементов – специализированного подвижного состава, дорог, портов, подъездных путей и пр.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	8	Уровень развития складской инфраструктуры	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	9	Уровень развития первичной переработки (укажите подробнее)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	10	Уровень развития вторичной переработки (укажите подробнее)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	11	Уровень развития оптовой торговли (укажите подробнее)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	12	Уровень развития розничной торговли (укажите подробнее)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	13	Другое (укажите)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.		Укажите, какая политика является наиболее значимой для развития сектора Ранжируйте блоки мер от 1 до 4 (1- наименее важный, 4 – наиболее важный блок), а затем мероприятия внутри блоков (1- наименее важное мероприятие)				
Блок 1		.12 Внешняя политика	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1	Повышение уровня защиты от импорта	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	Изменение механизма импортной защиты (укажите, каким образом необходимо изменить механизм)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3	Введение экспортных субсидий	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	4	Отмена экспортных пошлин	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5	Отмена импортного тарифа на сырье/оборудование (подчеркните нужное)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6	Изменение политики в сфере международных соглашений (укажите, каким образом)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	7	Изменение переговорной позиции по вступлению в ВТО (укажите, каким образом)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	8	Другое (укажите)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Блок 2		<i>.13 Административная политика</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1	Упрощение процедур регистрации бизнеса	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	Сокращение административного контроля над бизнесом	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3	Урегулирование прав собственности на землю	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4	Совершенствование процедур банкротства	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5	Другое (укажите)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Блок 3		<i>.14 Макроэкономическая политика</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1	Укрепление/ослабление рубля (подчеркните)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	Регулирование деятельности естественных монополий	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3	Регулирование транспортных тарифов	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4	Изменение системы налогообложения (укажите, каким образом)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5	Улучшение инвестиционного климата (укажите, каким образом, помимо уже отмеченного выше)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6	Другое (укажите)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Блок 4		<i>.15 Агропродовольственная политика</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1	Бюджетные инвестиции	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2	Стимулирование частных инвестиций (укажите, каким образом)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3	Увеличение бюджетных расходов на АПК	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4	Изменение механизмов поддержки доступа к кредитным ресурсам (укажите, каким образом)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5	Изменение других механизмов поддержки, дополнительные виды поддержки (укажите)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6	Другое (укажите)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

References

- EBRD (2008) Investing in agriculture to fight inflation./Thematic factsheet. <http://www.ebrd.com/country/sector/agri/conference/factsheet.pdf>
- BOGDANOVSKY, V. (2008) Rural and Agricultural Labor Markets. In: Russia's Agriculture in Transition. Ed. Z. Lerman. Lexington Books.
- KOESTER, U. (2003) A revival of large farms in Eastern Europe? How important are institutions? Paper delivered on the 25th Conference of IAAE, Durban, 16–22 August 2003. http://www.iaae-agecon.org/conf/durban_papers/papers/Koester.pdf (accessed 15 December 2005).
- NICHOLS, J, Eu.SEROVA, I. KHRAMOVA. (2002) Case study of grain company OGO. Taxes A&M.
- OECD (2003). Analysis of non-tariff measures: the case of export duties. 31 January 2003.
- RYLKO, D. (2008) Grain Production Potential and Future Role of CIS Countries on World Grain Markets. Mimeo.
- RYLKO, D. and JOLLY, R.M. (2005) Development of Agroholdings in Russian Agriculture. *Comparative Economic Studies*. Volume 47, #1, pp.115–126
- SHAGAIDA, N. (2004) Agricultural Land Market in Russia: Living with Constraints. *Comparative Economic Studies*. Volume 47, #1, pp.1–14.
- SEROVA, Eu. (2008) Farm restructuring in transition: Russian case. In: Food Policy for Developing Countries/ The Role of Government in Global, National and Local Food Systems. <http://cip.cornell.edu/gfs>
- SEROVA, Eu. (2007) Vertical Integration in Russian Agriculture. In: Global Supply Chains. Standards and the Poor: How the Globalization of Food Systems and Standards Affects Rural Development and Poverty. Ed. J.Swinnen. CABI.
- SEROVA, Eu. and O.SHICK. (2006) Soft Budget Constraints as a Factor of Financial Insolvency of Russian Farms. In: Sustainable Development of Agri-Food Sector insolvency as a factor of Macroeconomic Stability of Russia. Moscow (In Russian).
- SEROVA, Eu. and T.TIKHONOVA. (2006) Who is the real agricultural producer among households? In: Sustainable Development of Agri-Food Sector insolvency as a factor of Macroeconomic Stability of Russia. Moscow (In Russian).
- SEROVA, Eu. and N.KARLOVA (2005) GATT Uruguay Round Agreement on Agriculture and Impact of Russia's Entry in the WTO on Agri-Food Sector. – *Review of Ag. Economics*. Volume 27, Number 3. Fall 2005.
- SEROVA, Eu. and I.KHRAMOVA. (2003). Farms and Factors Markets in Russia's Agriculture. In: Spoor, M. (ed.) *Transition, Institutions, and the Rural Sector*. Lexington books, pp.61–80 .
- SEROVA, Eu. and I. KHRAMOVA. (2000). Emerging Supply Chain Management in Russia's Agri-Food Sector. *Discussion papers. Series: Russian Agri-Food Sector in transition*. Bonn, July #14.
- UZUN, V. (2001) Organizational Types of the Agricultural Production in Russia. In: *The Markets of Production Factor in Russia's Agriculture*. AFE, Moscow. (In Russian)