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Foreword

Deloitte acknowledges our appreciation for the participants in our survey connected with our research project Snapshot of the Russian agricultural market in 2017. We would like to thank all the participants for their time and interest in this undertaking.

Your expert opinions have not only helped us identify issues, developments and growth drivers in the Russian agroindustry in 2017, but have also helped us detect significant trends, providing a real view of annual changes in the agroindustry.

We are pleased to present the full version of the research report. The main conclusions of this report will be published by leading Russian media outlets.

We look forward to inviting you to take part in our next survey.

If you have any questions regarding this research, please do not hesitate to contact us.

Rinat Khasanov
Director
Agribusiness
Deloitte CIS

Mikhail Ksenofontov
Institute for National Economic Forecasting of the Russian Academy of Sciences (INP RAN)

Over the last 10-15 years, the active growth in the agroindustry has been underpinned by the initially weak capacity as regards meeting the demand, as well as by fast growing household and public income. Russia has almost reached the supply saturation point for core agricultural commodities and products. Given the current stage of development of Russian agribusinesses and the Russian agroindustry as a whole, a growth in production when assessed within “the more the better” framework can no longer be seen an efficient versatile measure.

Agribusinesses have to adapt themselves to increasingly stricter constraints on the demand side. Such constraints seem to be more related to a relatively high level of satisfaction of consumer needs, in terms of natural units, rather than to purchasing power. In this context, avoiding overproduction, building a case for greater capacity of the traditional markets and expanding into new ones should become a key focus for economic policy.
Introduction

Definitions
We are pleased to present the findings of our annual research report Snapshot of the Russian agricultural market prepared by Deloitte CIS. This is the third time we have conducted our research in Russia. The opinions provided by the respondents have enabled us to identify major concerns, key drivers and development priorities for the Russian economy, including a comparative analysis of the existing trends.

The survey was held in September 2017, with 50 experts providing their responses. This report has been prepared by the Deloitte CIS Research Centre in Moscow.

Survey goal
Provide a comprehensive view of the trends in the Russian agroindustry

Survey objective
Assess the developments and future prospects of the industry

Methodology
Responses have been collected via the online questionnaire form and face-to-face interviews. Our comprehensive analysis included the following approaches:
• Identification and examination of general market trends
• Comparative analysis of the market data trends
• Multifactor analysis of the findings to obtain a deeper understanding of hidden specific features and integrate the findings

Sampling
The survey was performed on a random sample of respondents from a closed, highly specialized population. The final sample included 50 respondents.
Key findings

251 RUB billion
Profit before tax (crop production and animal farming in 2016)

32% 11%
Product profitability in the key agricultural segments in 2016

87%
Subsidies share in companies’ profit in 2014–2016

Total subsidies issued in 2013–16

825 RUB billion

Wheat price forecast by IPN RAN for 2018 with a barrel of oil at USD 50

183 USD/tonne

87%
Share of agricultural producers’ operational profit in the structure of Russian wheat export prices in 2016

Growth in corn exports (in monetary terms, 2016 vs 2015)

43%

38%
Food as a share of total household spending in 2017

-0,08
Efficiency of government support to the agroindustry, according to respondents (on a scale of -1 to +1)

Companies with a positive view of the situation in the industry

78%

More stable legislative and regulatory policies

The strongest driver of competitiveness

Top three strategies for agribusinesses in 2017

1 Cost reduction
2 Higher production output
3 Expansion into new markets

Top three technologies implemented by agribusinesses

1 Direct supply chain
2 Accumulation of genetic data
3 Precision farming
In 2016 the share attributable to agriculture and fishery output in the national GDP continued to grow, up by 0.1 pps in nominal and real terms.

The real term YoY GDP growth in agriculture remained at 3 percent, unchanged from 2015.

Source: Russian Federal Statistics Service, the Russian Central Bank
Fixed capital investment increased by 21 percent in 2016 YoY. Agricultural producers saw their margins go down by 4 pps for crop production and 5 pps for animal farming.

Despite the decreased profits in the animal farming sector, the aggregate profit (Figure 3) generated by the agroindustry in 2016 remained unchanged from 2015, at RUB 333 billion (2015: RUB 334 billion), boosted by profits in the crop production and fishing segments. Translated into US dollars at the CBR’s annual average exchange rates for 2015 and 2016, annual profits for 2016 decreased by 9 percent.

Over the last three years government subsidies accounted for 87% of the profits of agro-industrial companies, so it is too early to discuss any full payback of agro-industrial projects, as subsidies remain a key factor in agro-industrial investment decision making.
In 2016, the Russian market witnessed an increase in grain production by 13 percent, a more than threefold growth from the same period in 2015.

In 2016 total meat output on the Russian market grew by 1 percent from 2015. Domestic production showed a growth of 4 percent while imports were down by 17 percent.

In 2016 total milk output on the Russian market was down by 3 percent from 2015 due to a decrease in imports by 12 percent. Milk imports accounted for 18 percent of the market in 2016.

Crop production was a key driver of growth in the agro-industry for some years, however this year the situation is different. Despite the record harvest (up approximately 13% from last year), it has not offset a decline in prices (from 10% to 25% depending on the type of crop), which means that revenue and profit in the sector in 2017 will be worse than last year. On the other hand, this will result in a lower cost of animal feed, thus leading to lower pork and poultry prices at the end of 2017 and into 2018. So cattle farmers may expect higher profits in 2017.

Rinat Khasanov
Agribusiness Services
Leader, Deloitte CIS
Total consumption of grains also saw a 9 percent growth (vs a 2 percent growth in 2015). Domestic consumption and exports grew by 8 percent and 10 percent, respectively.

Total meat consumption increased by 1 percent. Domestic consumption, which is 97 percent of the total consumption, was characterised by a similar growth. Exports were up by 59 percent. However, they are more than four times lower when compared meat imports in weight terms.

In 2016 total milk consumption decreased by 3 percent. Domestic consumption, which accounts for 90 percent of total consumption, is also down by 3 percent.

Over the last several years we have noted a trend toward a decline in dairy product consumption, especially milk intensive ones, such as cheese and butter. In 2016, per capita milk consumption decreased by 2.3% to 233.3 kg, while the WHO recommendation is 325 kg. This is due primarily to higher prices of dairy products and declining disposable income. Commodity milk production is actively growing, albeit with the first signs of excessive production already evident. We expect that demand for raw milk will continue to slow next year, which may lead to a decline in prices. This may have a negative effect on the development of the sector unless additional measures are taken to boost demand.

Andrey Danilenko,
Chairman of the Management Board, Soyuzmoloko
Domestic consumption

Food products in overall consumer spending (%)

Food products account for 38 percent of overall consumer spending. Meat products, alcohol, vegetables, milk and pastries are the most popular food products.

Share of top five food products in overall consumer spending (%)

Meat products

Alcohol

Vegetables, including potato

Milk and dairy products

Confectionery products

Source: Russian Federal Statistics Service, the Russian Central Bank and the Russian Ministry of Agriculture
Retail price* structure for staple foods

The cost of commodities makes the largest contribution to the retail price structure of staple foods. Commodity costs are highest for beef accounting for 62 percent of the retail price, respectively. Commodity costs are lowest for wheat flour, accounting for 30 percent of the retail price. Government gains the biggest profit (in tax) from 1 kg of beef — RUB 30.

* Average price per kg in Russia
** Processing is provided by producer, the income icon indicates poultry breeding costs.
Foreign trade

In 2016, total agricultural imports into Russia decreased by 12 percent from 2015. Total exports grew by 11 percent.

Imports (USD million)

<table>
<thead>
<tr>
<th>Item/country</th>
<th>2016 USD million</th>
<th>2015 USD million</th>
<th>2016 Thousand tonnes</th>
<th>2015 Thousand tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banana</td>
<td>999</td>
<td>1,356</td>
<td>789</td>
<td>130</td>
</tr>
<tr>
<td>Ecuador</td>
<td>981</td>
<td>1,332</td>
<td>896</td>
<td>1,209</td>
</tr>
<tr>
<td>Soybeans</td>
<td>976</td>
<td>2,282</td>
<td>940</td>
<td>2,178</td>
</tr>
<tr>
<td>Paraguay</td>
<td>429</td>
<td>1,006</td>
<td>459</td>
<td>1,085</td>
</tr>
<tr>
<td>Brazil</td>
<td>413</td>
<td>946</td>
<td>252</td>
<td>550</td>
</tr>
<tr>
<td>Frozen cuts (cattle)</td>
<td>767</td>
<td>248</td>
<td>1,092</td>
<td>306</td>
</tr>
<tr>
<td>Tobacco</td>
<td>761</td>
<td>129</td>
<td>789</td>
<td>130</td>
</tr>
<tr>
<td>India</td>
<td>201</td>
<td>32</td>
<td>250</td>
<td>37</td>
</tr>
<tr>
<td>Palm oil</td>
<td>647</td>
<td>885</td>
<td>641</td>
<td>887</td>
</tr>
<tr>
<td>Indonesia</td>
<td>513</td>
<td>736</td>
<td>516</td>
<td>747</td>
</tr>
<tr>
<td>Tangerines</td>
<td>607</td>
<td>758</td>
<td>623</td>
<td>783</td>
</tr>
<tr>
<td>Morocco</td>
<td>182</td>
<td>204</td>
<td>162</td>
<td>177</td>
</tr>
<tr>
<td>Turkey</td>
<td>175</td>
<td>255</td>
<td>186</td>
<td>276</td>
</tr>
<tr>
<td>Cheese</td>
<td>604</td>
<td>156</td>
<td>605</td>
<td>151</td>
</tr>
<tr>
<td>Belarus</td>
<td>531</td>
<td>139</td>
<td>480</td>
<td>123</td>
</tr>
<tr>
<td>Frozen pork</td>
<td>576</td>
<td>233</td>
<td>825</td>
<td>250</td>
</tr>
<tr>
<td>Vine</td>
<td>513</td>
<td>288</td>
<td>485</td>
<td>276</td>
</tr>
<tr>
<td>Italy</td>
<td>136</td>
<td>62</td>
<td>131</td>
<td>61</td>
</tr>
<tr>
<td>France</td>
<td>94</td>
<td>40</td>
<td>95</td>
<td>43</td>
</tr>
<tr>
<td>Spain</td>
<td>75</td>
<td>55</td>
<td>65</td>
<td>48</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>492</td>
<td>465</td>
<td>681</td>
<td>671</td>
</tr>
<tr>
<td>Morocco</td>
<td>165</td>
<td>126</td>
<td>91</td>
<td>67</td>
</tr>
<tr>
<td>China</td>
<td>106</td>
<td>86</td>
<td>114</td>
<td>86</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>92</td>
<td>98</td>
<td>57</td>
<td>65</td>
</tr>
</tbody>
</table>

Source: Russian Federal Customs Service.
Exports

The structure of Russian agricultural exports remains stable, with wheat, sunflower oil and corn as the three key products.

In 2016, wheat exports grew by 7 percent in monetary terms. Exports of sunflower oil and corn went up by 21 percent and 43 percent, respectively.

North Africa (Egypt and Sudan), the Middle East (Turkey, Iran, Lebanon, Saudi Arabia and Yemen) and the South Caucasus (Azerbaijan, Georgia and Armenia) are currently the main export destinations for Russian grains.

Most exports are transported via Black Sea and Azov Sea ports.

Turkey, Egypt, Iran, China and the CIS countries (particularly, Central Asian countries such as Kazakhstan, Uzbekistan and Tajikistan) are the main export destinations for vegetable oil.

<table>
<thead>
<tr>
<th>Item/country</th>
<th>USD million 2016</th>
<th>Thousand tonnes 2016</th>
<th>USD million 2015</th>
<th>Thousand tonnes 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4,171</td>
<td>25,146</td>
<td>3,915</td>
<td>21,106</td>
</tr>
<tr>
<td>Egypt</td>
<td>989</td>
<td>5,824</td>
<td>841</td>
<td>4,532</td>
</tr>
<tr>
<td>Turkey</td>
<td>419</td>
<td>2,627</td>
<td>565</td>
<td>3,108</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>280</td>
<td>1,860</td>
<td>146</td>
<td>892</td>
</tr>
<tr>
<td>Nigeria</td>
<td>244</td>
<td>1,412</td>
<td>169</td>
<td>866</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>189</td>
<td>1,135</td>
<td>235</td>
<td>1,233</td>
</tr>
<tr>
<td>Sunflower oil</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,439</td>
<td>1,791</td>
<td>1,191</td>
<td>1,446</td>
</tr>
<tr>
<td>Turkey</td>
<td>431</td>
<td>564</td>
<td>467</td>
<td>605</td>
</tr>
<tr>
<td>Egypt</td>
<td>184</td>
<td>243</td>
<td>101</td>
<td>133</td>
</tr>
<tr>
<td>China</td>
<td>107</td>
<td>129</td>
<td>40</td>
<td>45</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>107</td>
<td>130</td>
<td>105</td>
<td>123</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>103</td>
<td>115</td>
<td>92</td>
<td>98</td>
</tr>
<tr>
<td>Corn</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>855</td>
<td>5,329</td>
<td>599</td>
<td>3,697</td>
</tr>
<tr>
<td>South Korea</td>
<td>155</td>
<td>936</td>
<td>216</td>
<td>1,368</td>
</tr>
<tr>
<td>Turkey</td>
<td>127</td>
<td>838</td>
<td>151</td>
<td>900</td>
</tr>
<tr>
<td>Iran</td>
<td>120</td>
<td>704</td>
<td>28</td>
<td>175</td>
</tr>
<tr>
<td>Netherlands</td>
<td>95</td>
<td>569</td>
<td>25</td>
<td>133</td>
</tr>
<tr>
<td>Lebanon</td>
<td>63</td>
<td>409</td>
<td>23</td>
<td>137</td>
</tr>
</tbody>
</table>

HS categories used: imports — 100199, 151211, 151219, 100590, exports — 080390, 120190, 020230, 240120, 151190, 080520, 040690, 020329, 220421, 070200.
Grain exports: highlights and main logistic channels

Main logistic channels:

The Krasnodar, Stavropol, Rostov and Volgograd Regions

minor ports in the Azov and Black Sea Basin (offshore transshipment in the Kerch Strait may also occur)

Turkey, Egypt and other countries in the Middle East and North Africa

The Krasnodar, Stavropol, Rostov and Volgograd Regions and areas in the Black Earth Region

deep-water ports in the Azov and Black Sea Basin

almost all countries with sea access

Transportation by road

Agribusinesses/traders (reselling may also occur)

Transportation by railway

Ports

Freight

Buyers

Agricultural producers:
The margin of grain production varies greatly across producers, depending on soil quality, climate, environment and the technological maturity/size of a producer. According to SPARK-Interfax data, margins of certain large grain producers from export-oriented regions varied from 15 percent to 50 percent in 2015–16, with an average margin of 35 percent in 2015 and 30 percent in 2016.

Logistic companies:
ZAO RusAgroTrans is the largest railway carrier for grain commodities. In 2016, it had a negative margin (-2 percent).

In 2015 the margin was positive (6.6 percent).

Railway transportation costs depend on the route. According to estimates by RusAgroTrans, grain commodity transportation rates for the route “Kavkazskaya Station (the Krasnodar Region) — Novorossiysk”, including costs related to port documentation and transshipment services, were RUB 2,640 per tonne (USD 46 per tonne at a USD/RUB exchange rate of RUB 57 in 2015); RUB 2,845 per tonne (USD 44 per tonne at a USD/RUB exchange rate of RUB 65) in 2016; RUB 2,444 per tonne (USD 43 per tonne at a USD/RUB exchange rate of RUB 57). Given the expert estimates of port-related costs of USD 21 per tonne for 2016, railway carrier services were at about USD 23 per tonne.

Transportation by road can be competitive against railway transportation for distances of up to 600-800 km.
Other logistic channels:

- The Stavropol Region
- Azerbaijan
- The Volgograd, inland harbours on the Volga River or Caspian ports
- Iran
- The Central Federal District, primarily the Black Earth Region
- Baltic ports, mainly Central Africa and Latin America, primarily Nigeria and Mexico

Ports:
Deep-water ports for the transshipment of grain exports: Novorossiysk (PAO Novorossiyskiy Kombinat Khleboproduktov, with a transshipment volume of 3.5 million tonnes in 2016); AO KSK, with a transshipment volume of 3.3 million tonnes, AO Novorossiysk Grain Terminal, with a transshipment volume of 3.2 million tonnes; Taman (OOO Taman Zernovoy Terminalny Kompleks, with a transshipment volume of 2.7 million tonnes; Tuapse (AO Tuapse Zernovoy Terminal, with a transshipment volume of 1.8 million tonnes).

Transshipment rates offered by these ports have only slight differences, staying currently in a range of USD 15–20 per tonne. Specifically, Novorossiyskiy Kombinat Khleboproduktov charges USD 17 per tonne; the grain terminal KSK charges USD 20 per tonne and USD 15 per tonne for larger volumes.

Margins earned by grain transshipment providers can be obtained by analysing financial statements. This analysis shows that margins can vary significantly, from 20 percent through to 80 percent. Therefore, an average margin for deep-water ports is about 74 percent and it is 35 percent for shallow-water ports. It should be noted that these are somewhat rough estimates because these ports act as export channels for a wide variety of shipments other than grain.

Traders:
Margins earned by the largest grain exporters vary significantly (-2.0–6.2 percent), with an average margin of about 1.5–2.0 percent. In addition, large traders generally work directly with smaller resellers such as Trade House RIF, rather than with agricultural producers. As a result, trader margins that are estimated based on financial statements of the incumbents may be underestimated due to the fact that such estimates do not include a full picture of grain resales.

There are few pure exporters among companies because many of them are diversified businesses engaged in the production and processing of oilseeds; exports of vegetable oils; the production and processing of grain, etc., with oilseed production continuing as a core business for certain companies such as Artis-Agro, Russian Oils and Sodurzhestvo Trade House.

Freight services:
Freight rates for grain shipments can vary depending on (i) the vessel type (e.g. shipments via the Azov Sea and the Black Sea can be carried by vessels with a deadweight of 5,000–7,000 tonnes and 43,000–60,000 tonnes, respectively) and (ii) demand, with an average freight rate of USD 10–15 per tonne for vessels with higher carrying capacity and USD 20 per tonne for vessels with lower carrying capacity.
Below is an analysis of income distribution in grain export channels in 2016:

1. Exports via the Black Sea: Grain is shipped from the Krasnodar or Stavropol Regions by railroad or trucks to deep-water ports in the Black Sea.

2. Exports via the Azov Sea: Grain is primarily transported by truck from the Rostov Region to shallow-water ports, with about half of the shipments being further transshipped offshore to Handysize and Panamax vessels in the Kerch Strait.

Customer price structure for exports in 2016

**FOB Novorossiysk + Freight**

- Profit: 48% USD/tonne
- Costs: 20% USD/tonne
- Agribusinesses/traders (reselling may also occur): 0%
- Transportation by road: 0%
- Transportation by railway: 0%
- Ports: 0%
- Freight: 2%
- Traders: 8%
- Buyers: 0%

Total: 182 USD/tonne

**FOB Rostov + Freight**

- Profit: 55% USD/tonne
- Costs: 24% USD/tonne
- Agribusinesses/traders (reselling may also occur): 0%
- Transportation by road: 0%
- Transportation by railway: 0%
- Ports: 0%
- Freight: 0%
- Traders: 11%
- Buyers: 0%

Total: 163 USD/tonne
Sunflower oil exports: highlights and main logistic channels

Main logistic channels:
- **Agribusinesses** (Sunflower seeds) → Oil extraction plants (OEP) + transshipment terminals working in cooperation with oil extraction plants → Turkey, Egypt, Iran, China or other countries with sea access

Other logistic channels:
- **Agribusinesses** (Sunflower seeds) → Sunflower oil → The CIS countries or China

- **Processing providers:**
  - Margins earned by processing providers vary significantly by oil extraction plant, depending on the local market characteristics, which primarily includes competition for feedstock among processing providers and feedstock prices. This segment is characterised by processing capacities significantly exceeding the feedstock supply. According to experts, the industry had an average EBITDA margin of 8 percent in 2015–16. Based on our estimates, the average margin for processing services is about 7 percent.

- **Agricultural producers:**
  - Cost efficiency of sunflower farming varies from farmer to farmer, depending on the climate and environment, soil quality and technological maturity. According to estimates by the Russian Ministry of Agriculture, the average cost efficiency in Russia was 56 percent in 2016. As a result, with the existing shortage in feedstock and alternative options to supply sunflower seed for processing or export, the distribution of margins across the sunflower oil export supply chain has shifted more to agricultural producers.

- **Customer price structure for exports**
  - 37% Profit, 47% Costs, 9% Freight, 7% Buyers

**Bulk transportation of sunflower oil is dominating export shipments. It accounted for about 70 percent (1.23 million tonnes) in 2016.** Unlike with grain exports, sunflower oil exports are distinctly characterised by the absence of clearly defined traders in the export channel. Shipments are generally handled by large processing providers or their trade houses without engaging with wholesale intermediaries. There are only a few instances when exports are channeled via companies that are not engaged in oil processing (e.g. International Grain Company). Another important aspect is that almost all major processing providers engaged in exports have their own export terminals and/or have an interest in the share capital of specialist companies. In addition, many players (e.g. Aston, Yug Rusi and Efko) have their own trucks or vessels to transport oil and also run their own large facilities that cultivate oil-bearing crops.

**Mikhail Ksenofontov**
Institute for National Economic Forecasting of the Russian Academy of Sciences (INP RAN)
Wheat prices: forecasts by experts

Forecast methodology proposed by IPN RAN:
Below is a description of a potential forecast methodology for global wheat prices. Stage 1 uses a linear regression model to estimate future prices against a reference to the global grain market — American wheat. To arrive at prices for exports from Russia, Stage 2 involves a number of assumptions about a potential discount rate for exports of Russian wheat, as compared to prices for American wheat. Stage 3 is focused on determining prices in the domestic grain market, using the netback approach and making assumptions about changes in costs for transportation and port transshipments.

The regression analysis above helps identify key factors that should be added to the linear regression equation to estimate future prices for American wheat. These factors are:

- Ratio of global annual wheat consumption to global carry-over stock at year end;
- Average annual price for Brent crude oil.

It is further assumed that oil prices are impacted by FRS policies with the effect of a stronger or weaker US dollar. The ratio of global annual wheat consumption to year-end wheat stocks has been selected as it provides a better approximation, compared to year-end global stocks or, for instance, the reverse ratio of year-end stocks to global annual wheat consumption. This is due to the fact that this ratio takes into account a growth in global wheat consumption that was seen throughout the retrospective period.

Below is the linear regression equation for estimating average annual prices for American wheat:

\[
Y = 41.6 + 19.14 \times X_1 + 1.72 \times X_2,
\]

Where: Y is the average annual FOB price for American wheat HRW no.1 (USD/tonne)
X1 is the ratio of global annual wheat consumption to global wheat stocks at the end of a crop year
X2 is the average annual price for Brent crude oil (USD/barrel).

This model has a coefficient of multiple correlation of 0.94 and a coefficient of determination of 0.88. Therefore, the model allows for quite a good approximation. It should be noted that the model does not look at American wheat export prices within a specific year while providing rather rough estimates of potential average annual export prices. Average monthly prices on the global grain market are subject to volatility and driven by multiple short-term factors that are not addressed by the model.

Building scenarios is a key component to forecasting export prices for wheat. Based on the analysis of historical trends in the global consumption of wheat and wheat stocks, the consumption demonstrates a steady growth while wheat stocks remain volatile.

The consumption-to-stocks ratio varied within a range of 2.8 (higher stocks) to 4.5 (lower stocks), with an average ratio of 3.5 over the last 20 years. It can be expected for the forecast period that the growth in global consumption of wheat will continue at historical rates while 2017 will see a significant increase in global wheat stocks due to record-high yields globally. However, subsequent years will see this growth lag behind the growth in global consumption, partially due to a high base effect. This means that the consumption-to-stocks ratio can be expected to decrease to 2.7 in the short term, with a potential subsequent growth. Both of these scenarios are based on the assumption that the consumption-to-stocks ratio will continue to increase gradually to reach 3.5 by 2025.

The scenarios differ in the forecast trends for oil prices. Scenario 1 assumes that average annual prices for Brent oil will see a moderate growth of up to **USD 60 per barrel** by 2025 while Scenario 2 is based on the assumption that oil prices will decrease down to **USD 40 per barrel** by 2025.

Source: INP RAN, the EIU
To arrive at export prices for Russian wheat, it can be assumed that the trend of price discounts that have been decreasing against prices for American wheat over the recent years will continue. Although the difference between prices will remain significant in 2017 (5–10 USD per tonne) due to the crop failure in the USA and the record-high yields in Russia in 2016–17, it will continue to decrease to reach nil by 2025. As a result, the rough estimates for average annual export prices for Russian wheat (Grade 4) would be at 172–177 USD per tonne (FOB, Novorossiysk) and 150–155 USD per tonne (FOB, Rostov).

Given the emerging shipment and transshipment rates for grain, domestic prices will be at 140–145 USD per tonne in the Krasnodar Region (according to RusAgroTrans, logistic costs for shipments from the Kavkazskaya station are at USD 42 per tonne). Similar estimates can be made for other regions and other periods.

Forecasts by other experts:
The Economist: In Q3 2017, the global wheat markets were quite unstable. A growth in prices driven primarily by droughts in some regions in the USA and Canada was subsequently offset by high yields in the Black Sea region, mainly in Russia. Despite the strong global supply and harsh competition for available market shares, prices for wheat produced by the key farming regions decreased by about 5 percent. Profits earned by producers in the USA fluctuated due to supply chain issues caused by hurricanes, overloaded capacities of ports in the Persian Gulf and heightened concerns over the future of crops in Australia and Argentina, opening additional potential opportunities for exports. Increased demand and logistic solutions have acted to strengthen export quotations in the Black Sea Region, especially in Russia where the port of Novorossiysk is planning to expand its capacities, probably this season. In addition, some farmers have announced that they have received sufficient funds to settle their short-term liabilities, with the result that a number of producers are reluctant to sell their products at current prices. Russian exports are expected to remain high throughout the season while strong export competition is likely to slow down a growth in prices next year. Given the assumption that yield forecasts will not deteriorate, the EIU expects that export prices for HRW (12%, FOB Gulf) will decrease during 4Q 2017 and 1H 2018, with a subsequent slight growth.

### Forecast scenarios

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</thead>
<tbody>
<tr>
<td>Global wheat consumption to year-end stocks</td>
<td>3.24</td>
<td>2.95</td>
<td>2.70</td>
<td>2.90</td>
<td>3.10</td>
<td>3.25</td>
<td>3.40</td>
<td>3.50</td>
<td>3.50</td>
<td>3.50</td>
<td>3.50</td>
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<tr>
<td>Brent oil (USD/barrel)</td>
<td>52.4</td>
<td>44.0</td>
<td></td>
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<td>Scenario 1</td>
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<td>Scenario 2</td>
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<td>42.5</td>
<td>41.0</td>
<td>40.0</td>
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<tr>
<td>HRW no.1 wheat (USD/tonne)</td>
<td>194</td>
<td>174</td>
<td></td>
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<tr>
<td>Scenario 1</td>
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<td>177</td>
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### Prices HRW No. 1 FOB US Gulf
(USD/tonne)

<table>
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<tr>
<th></th>
<th>1 Qtr</th>
<th>2 Qtr</th>
<th>3 Qtr</th>
<th>4 Qtr</th>
<th>1 Qtr</th>
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Representatives of the leading agribusinesses on the state of the industry

**Opinions on the current state of the Russian agroindustry**
(Trend in the weighted index for the current state of the Russian agroindustry*)

Unlike in the previous periods, leading agribusinesses expressed a more positive view of the situation in the industry, with the index up by 27 pp. Among the companies, 78 percent note that the situation is positive or rather positive.

**Prospects of the Russian agroindustry**
(Trend in the weighted index for prospects of the Russian agroindustry*)

Prospects of the industry are perceived with reserved optimism. Even though the indicator is down by 5 pp from 2016, it remains positive. Among the respondents, 40 percent do not expect any significant changes in the industry.

**Opinions on the current state of a company**
(Trend in the weighted index for the current state of a company)

The index for opinions on the state of affairs in a company has increased significantly from last year by 29 pp. Almost 90 percent of the respondents expressed a positive or rather positive view on the position of their companies.

**Outlook for business growth**
(Trend in the weighted index for the outlook for business growth*)

While remaining positive, the business growth outlook index has declined significantly, down by 20 pp, with 14 percent of respondents indicating that the outlook may worsen.

* (a range from -1 to +1 where -1 and +1 correspond to a negative view and a positive view, respectively)
Issues facing the industry

Top issues facing the Russian agroindustry in 2017

2017

- Insufficient government support and financing: 44%
- Lack of skilled personnel: 36%
- Shortcomings of government regulation in the industry: 30%

2016

- Shortcomings of government regulation: 40%
- Currency risk: 36%
- Insufficient government support and financing: 29%

2015

- Shortcomings of government regulation: 47%
- Insufficient government support and financing: 36%
- Currency risk: 32%

The top three issues remained unchanged in 2016 and 2015.

The overall rating of the top issues facing the Russian agroindustry in 2017

- Insufficient government support and financing: 44%
- Lack of skilled personnel: 36%
- Shortcomings of government regulation in the industry: 30%
- High energy prices: 22%
- Insufficient purchasing power: 20%
- Lack of tax flexibility to account for the nature of the industry (seasonality, etc.): 18%
- Geopolitical risks (EU sanctions, food embargo, etc.): 9%
- Insufficient adoption of high technologies: 9%
- Commodity stock price fluctuation risk: 9%
- Insufficient capacities and production base: 7%
- Limited appeal of the agroindustry for external investors: 7%
- Currency risk (weaker ruble): 6%
- Corruption: 5%
- Insufficient optimisation of logistical processes: 4%

This year the overall rating of top issues features an increased importance of high energy prices (2017: 22 percent; 2016: 6 percent; 2015: nil) and insufficient purchasing power (2017: 20 percent; 2016: 13 percent; 2015: 3 percent).
The rating of domestic competitiveness drivers for the Russian agroindustry
(Weighted rating*)

Top five factors for 2017
Stable legislative and regulatory policies .............................................. 0.80
Update of the energy infrastructure ................................................. 0.79
Cost reduction ............................................................................... 0.79
Technologization ........................................................................... 0.77
Government support ....................................................................... 0.76

Among the global competitiveness drivers, stable government regulation (a rating of 0.8), lower energy costs and cost reduction (a rating of 0.79) are a particular focus for respondents.

Top three factors for 2016
Optimization of logistical processes ................................................. 0.94
Government support ....................................................................... 0.89
Availability of financing .................................................................. 0.89

Top three factors for 2015
Lower administrative barriers ......................................................... 0.69
Currency risk reduction ................................................................ 0.67
Stable legislative and regulatory policies ......................................... 0.67

In 2015 and 2016, administrative barriers and logistics were noted by respondents from the leading agribusinesses as the most important drivers, with a rating of 0.69 and 0.94, respectively. Over the last three years, stable legislative and regulatory policies have been regularly mentioned as a priority global competitiveness driver.

The rating of domestic competitiveness drivers for the companies
(Weighted rating*)

Top five factors for 2017
Cost reduction .............................................................................. 0.91
Talent upgrade ............................................................................. 0.82
Domestic demand growth ............................................................ 0.81
Technologization ........................................................................... 0.78
Implementation of new capacities ................................................... 0.78

With a rating of 0.9, cost reduction is emphasized by respondents as one of the domestic competitiveness drivers. 82 percent of the respondents note the importance of this driver.

Top three factors for 2016
Availability of financing ................................................................. 0.91
Domestic demand growth ............................................................ 0.91
Optimization of logistical processes ................................................. 0.76

Top three factors for 2015
Optimization of energy and commodities costs .......................... 0.83
Lower administrative barriers ......................................................... 0.69
Talent upgrade ............................................................................. 0.67

Another highlight from the survey is that skilled personnel has continued to grow in importance as a competitiveness driver, with a rating of 0.67 in 2015, 0.74 in 2016 and 0.82 in 2017.

This year over 70 percent of the respondents note technologisation as a new competitiveness driver for the Russian agroindustry. Given such attention from the industry, we have addressed technologisation in more detail in the Innovation and digitalization section.

* (a range from -1 to +1 where -1 and +1 correspond to a negative view and a positive view, respectively)
Development strategies

Leading agribusinesses on priority strategies for 2017

Top three strategies for 2017*

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost reduction</td>
<td>0.83</td>
<td>0.79</td>
<td>0.81</td>
</tr>
<tr>
<td>Higher production output</td>
<td>0.70</td>
<td>0.65</td>
<td>0.78</td>
</tr>
<tr>
<td>Expansion into new markets</td>
<td>0.66</td>
<td>0.76</td>
<td>0.68</td>
</tr>
</tbody>
</table>

The top five strategies have generally remained unchanged over the past three years, with cost reduction continuing as a key business growth strategy (a rating of 0.83). It should also be noted that expansion into new markets has risen in importance. This strategy was outside the top five strategies in 2015. However, it has continued to retain third place since 2016.

Overall rating of priority strategies by leading agribusinesses for 2017 in Russia

In 2017, we asked our respondents to rate the priority of investment strategy for innovative technologies. Interestingly, unlike talent investment, innovative technology strategy has a lower priority in the overall rating. However, the number of respondents who have clearly named investment in innovative technologies as their priority is higher, by +8 pp.

In 2017, respondents (43 percent) noted that their strategy horizon runs from 3 to 5 years.
Imports and exports

Staple foods: exports geography

Engaged in imports: 20%
Planning to become an importer or expand their import footprint: 24%

Government support of exports
(Trend in the weighted index**)

Even though the respondent views on government support of exports have improved by 0.23 pp since 2015, the weighted index remains negative.

Staple foods: imports geography

Engaged in exports: 41%
Planning to become an exporter or expand their export footprint: 8%

* (a range from -1 to +1 where -1 and +1 correspond to a negative view and a positive view, respectively)
Government support

Efficiency of the government’s efforts in supporting and developing the Russian agroindustry

The weighted index*

<table>
<thead>
<tr>
<th>Year</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>-0.06</td>
</tr>
<tr>
<td>2016</td>
<td>-0.15</td>
</tr>
<tr>
<td>2017</td>
<td>-0.08</td>
</tr>
</tbody>
</table>

The perceived overall efficiency of the government’s efforts in supporting the Russian agroindustry remains below average. However, 2017 has seen a growth in the weighted index of government efficiency.

Plans for increasing the share of unsubsidised financial support

Among the respondents, 43 percent reported that their companies have plans to increase the share of external unsubsidised funding via borrowings or contributions to capital.

Subsidy experience

The overall satisfaction with the process of obtaining subsidies has been declining. In 2017, respondents have less positive views on the subsidy criteria such as the completeness and availability of information on subsidies. Last year this view was positive.

The rating of the most attractive financing sources

According to respondents, loans from Russian banks and internal financing sources remain the most attractive sources.
Innovation and green agenda

Innovation and digitalisation in the agroindustry

Need for improving the economic efficiency of business via automated key processes

Technologisation and high technology have often been named by respondents as growth drivers in the previous sections. When asked about the need for automation as a key goal of digital transformation, 90 percent indicated this need.

Russian agroindustry: up to date with global trends in agriculture?

More than half of the respondents (55 percent) have replied that their companies have in place a direct supply chain where products go directly from farms to shops. More than a third of the respondents (35 percent) have indicated the use of technology for collecting and storing genetic data as part of the production process. Almost one third of the companies are planning to implement energy-saving solutions in the near future.

Agricultural processes and technologies implemented

<table>
<thead>
<tr>
<th>Technology</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct supply chain</td>
<td>55%</td>
</tr>
<tr>
<td>Genetic data accumulation and processing</td>
<td>35%</td>
</tr>
<tr>
<td>Precision farming</td>
<td>33%</td>
</tr>
<tr>
<td>Biotechnology</td>
<td>31%</td>
</tr>
<tr>
<td>Personalised offering</td>
<td>29%</td>
</tr>
</tbody>
</table>

Agricultural processes and technologies planned for implementation

<table>
<thead>
<tr>
<th>Technology</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy saving</td>
<td>29%</td>
</tr>
<tr>
<td>Higher processing efficiency</td>
<td>20%</td>
</tr>
<tr>
<td>Direct supply chain</td>
<td>16%</td>
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</tbody>
</table>

Most popular trends among advanced customers*

<table>
<thead>
<tr>
<th>Technology</th>
<th>Weight Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct supply chain</td>
<td>0.35</td>
</tr>
<tr>
<td>Genetic data accumulation and processing</td>
<td>-0.12</td>
</tr>
<tr>
<td>Energy saving</td>
<td>-0.16</td>
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<tr>
<td>Precision farming</td>
<td>-0.19</td>
</tr>
<tr>
<td>Biotechnology</td>
<td>-0.20</td>
</tr>
<tr>
<td>Personalised offering</td>
<td>-0.21</td>
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<tr>
<td>Higher processing efficiency</td>
<td>-0.33</td>
</tr>
<tr>
<td>Smart farms</td>
<td>-0.57</td>
</tr>
</tbody>
</table>

The weighted index* showing how much the Russian agroindustry is up to date with global trends

<table>
<thead>
<tr>
<th>Trend</th>
<th>Weight Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotion of green agenda</td>
<td>0.29</td>
</tr>
<tr>
<td>Focus on healthy food</td>
<td>0.24</td>
</tr>
<tr>
<td>Products on demand (24x7 availability)</td>
<td>-0.33</td>
</tr>
<tr>
<td>Personalised products</td>
<td>-0.43</td>
</tr>
</tbody>
</table>

A majority of the respondents (65 percent) have indicated that the trend for greener products is most popular among end consumers. Meanwhile, customised products are named among the least popular (55 percent).

While many companies note the implementation of some technologies and processes, the overall weighted index for staying up to date with global trends is negative (-0.18), indicating that agricultural processes and technology are still emerging in the Russian agroindustry.

* (a range from -1 to +1 where -1 and +1 correspond to a negative view and a positive view, respectively)
Hi-tech innovations in agriculture

Innovations implemented

<table>
<thead>
<tr>
<th>Innovation</th>
<th>Adoption Level</th>
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</thead>
<tbody>
<tr>
<td>Selected business process automation</td>
<td>29%</td>
</tr>
<tr>
<td>Cloud-based technology</td>
<td>21%</td>
</tr>
<tr>
<td>Advanced accounting systems (CRM, ERP)</td>
<td>18%</td>
</tr>
<tr>
<td>Chain of business processes automation</td>
<td>18%</td>
</tr>
<tr>
<td>Internet of things</td>
<td>12%</td>
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</tbody>
</table>

Completely automated individual business processes are the most popular innovation, with 29 percent of the respondents indicating that they have implemented it. A number of companies adopting this innovation may increase up to 64 percent over the next two years.

Innovations planned for implementation

<table>
<thead>
<tr>
<th>Innovation</th>
<th>Adoption Level</th>
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</thead>
<tbody>
<tr>
<td>Selected business process automation</td>
<td>35%</td>
</tr>
<tr>
<td>Chain of business processes automation</td>
<td>33%</td>
</tr>
<tr>
<td>Big data</td>
<td>27%</td>
</tr>
<tr>
<td>Advanced accounting systems (CRM, ERP)</td>
<td>24%</td>
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<tr>
<td>Cloud-based technology</td>
<td>14%</td>
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</tbody>
</table>

The weighted index for innovation adoption is 0.11, which corresponds to the overall innovation adoption index (0.11) we defined for leading Russian companies in 2017. Innovation adoption is highest among companies in the technology, media and telecommunication (TMT) sector (0.20).

Green agenda

Promotion of a green agenda

As part of the framework documents, a green agenda is actively implemented by 43 percent of the companies.

- A green agenda is part of our framework documents; it is actively implemented by the company.
- Even though it is not part of our framework documents, a green agenda is implemented by the company.
- A green agenda is not part of our framework documents. It is being implemented on a voluntary or nominal basis.
- A green agenda is not part of our framework documents. We are not planning to implement it.

Importance of environmental risks

While most respondents note the importance of greener products for consumers, only one third (35 percent) have indicated that environmental risks are also high on the agenda.

Efficiency of environmental risk management

Many respondents have rated environmental risk management as having average efficiency, with 57 percent indicating so.

* Please see Deloitte CFO Survey of the Leading Companies in Russia
About the respondents

**Respondents’ professional areas:**
- Management (CEO): 10%
- Finance (financial reporting, financial control, taxes, etc.): 90%

**Revenue in 2016**
- Below RUB 2 billion: 16%
- RUB 2-10 billion: 57%
- Over RUB 10 billion: 27%

**Number of employees**
- Below 500 employees: 39%
- 500-2,500 employees: 27%
- Over 2,500 employees: 34%

**Companies’ business areas:**
- Manufacturing: 4%
- Production: 33%
- Processing and sales: 78%
- Services: 2%

**Type of business ownership**
- Publicly traded/joint-stock company: 33%
- Private business (farm incorporated as OOO or run by a self-employed entrepreneur): 67%

**Business strategy horizon**
- 1-2 years: 43%
- 3-5 years: 22%
- 6-10 years: 22%
- Over 10 years: 12%
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