



HighQuest
P A R T N E R S

Assessment of Agricultural Development in the Black Sea Region (Russia and Ukraine)

Prepared for the United States Soybean Export Council

July 15, 2011

Executive Summary- Current Situation in Russia

- Russia is a major producer of wheat, sunflowerseed and barley, but historically, soybean production has been relatively limited due to harsh weather conditions, low yields, and low net returns for farmers growing soybeans.
- Soybean production in Russia has increased substantially over the last ten years as Russia have seen substantial growth in its animal protein industry.
- However, soybean production has not kept pace with animal protein production so the region has had to rely on imported soybean meal to meet its needs.
- As the Russian government continues to strive for self-sufficiency in its animal protein production, it is highly likely that despite increased soybean plantings and production, imports of soybean meal will continue to rise.
- Currently, Argentina is the major importer of soybean meal into Russia, representing 52% of the market, while Brazil and Paraguay are the major importers of soybeans.
- Most of the soybeans imported into Russia are purchased by Sodrugestvo, a 3,000 MT/day processing facility located in Kaliningrad on the Baltic Sea. The Black Sea region is not a major importer of soybeans as this region produces sufficient quantities of soybeans to meet its processing capacity.

Executive Summary- Current Situation in Ukraine

- The situation and opportunity for U.S. exporters of soybeans and soybean meal is different from the situation in Russia.
- Animal protein production, particularly poultry, has increased substantially over the last ten years, but Ukraine produces sufficient quantities of soybeans and soybean meal to meet this demand.
- Currently, Ukraine is a net exporter of approximately 700,000 MT of soybeans per year and is a player in the North African and Middle Eastern export markets.
- The country is a net importer of soybean meal as crush capacity in the country is not able to meet the demand from the animal protein industry, but imports have declined over the past five years due to increases in domestic soybean meal production.
- Brazil is the major exporter of soybean meal to Ukraine followed by Germany and the Netherlands, but the U.S. has increased its market share in a declining market.

Executive Summary- Opportunities for U.S. soybeans and soy products in Russia

- The opportunity to export soybean meal from the U.S. to Russia is greater than the opportunity for export soybeans.
 - As Sodrugestvo, the primary crusher in Russia, has off-take agreements in place with soybean producers in Brazil and Paraguay, unless a new destination soybean processing facility is developed in the Black Sea region is developed, the opportunity to ship U.S. soybeans will be limited.
- However, the export of soybean meal to Russia represents an attractive opportunity.
 - Domestic soybean meal production levels are far below domestic demand, with the gap likely to increase as GDP per capita continues to increase and consumers increase the amount of animal protein in their diet.
 - At the same time, while Russia's domestic crush capacity has expanded considerably, it is all located primarily in the northern regions of the country whereas the animal protein production expansion is occurring in the Black Sea region.
 - Therefore, it is expected that soybean meal imports into the Black Sea region will increase substantially over the next decade.
 - Currently, Argentina, Germany and the Netherlands are the major importers of soybean meal into Russia with the U.S. being a very small player in this market.
 - However, as sheer demand increases in the region, it is likely that the U.S. can pick up some of this additional demand, especially since crushers in Germany and the Netherlands are shifting from crushing soybeans to rapeseed due to the additional value-add that rapeseed oil offers in biodiesel consumption.

Executive Summary- Opportunities to export U.S. soybeans and soy products to Ukraine

- It will be very difficult for U.S. soybean exporters to make headway in Ukraine as the country is a net exporter of soybeans and production is expected to increase throughout the projection period.
- In fact, Ukraine could become a competitor for the U.S. in the expanding Middle Eastern and North African markets due to its lower transportation costs into these markets.
- While the Ukrainian soybean meal import market is also relatively small, there are some opportunities that the U.S. could pursue assuming that the 20% VAT that the Ukrainian government has guaranteed to reimburse processors remains unpaid.
 - Processing capacity has increased substantially over the last three years since the Ukrainian government stated that it intended to allow processors to retain the 20% VAT tax for internal improvements.
 - However, as these reimbursements have not been made, the operating margins that processors have realized are far lower than their expectations.
 - The result has been a significant loss of margins for these processors which have led many to the edge of bankruptcy.
 - Should this trend continue, there is a strong possibility that total soy processing capacity in Ukraine could decline in the near future at the same time that livestock and poultry production continue to increase, resulting in a substantial increase in soybean meal import volumes.

Executive Summary- USSEC's role in increasing U.S. soybean meal exports to Russia

- The key questions regarding prospects for U.S. exports of soybean meal to Russia is whether the U.S. can become competitive with Argentina in this market and whether livestock and poultry producers in southern Russia appreciate the value of higher protein content soybean meal vs. buying solely on price.
- One way that the U.S. can become more competitive with Russia in the Black Sea region is to improve agricultural trade relations with Russia.
 - Currently, the U.S. and Argentina have to pay a 5% import duty and 10% VAT tax on all soybean meal imports into the Black Sea region.
 - If the U.S. could negotiate a trade agreement with Russia that would eliminate the 5% import duty it would reduce the cost of U.S. soybean meal in Russia by \$18/MT assuming a price of \$360/MT and make the U.S. extremely competitive in the expanding Black Sea import market.
 - USSEC can play an extremely important role by pushing the U.S. government to improve relations with Russia.
- If no improvements in trade relations can be negotiated with Russia, USSEC should focus its efforts on promoting the value of its higher protein meal to Russian feed millers and integrated poultry and swine producers through conferences and workshops.
 - Russian feed millers and integrated poultry and swine producers currently make their purchasing decisions based on price alone and are not as concerned about quality.
 - They do not consider that a higher protein content soybean meal means that they can reduce the quantities of ingredients require to feed their livestock and poultry production while generating product better results in the end product.
 - USSEC needs to assist these livestock and poultry producers that a higher protein content soybean meal is more beneficial to them in the long run than a lower priced, lower protein content soybean meal through conferences, individual workshops and field studies to increase U.S. soybean meal exports to the Black Sea region.

Executive Summary- USSEC's role in increasing U.S. soybean meal exports to Ukraine

- USSEC can play a significant role in increasing U.S. soybean meal exports to Ukraine by undertaking promotional and marketing efforts in the event that the domestic soybean processing industry begins to decline due to the unresolved VAT issue.
- Crop profitability is dependent upon being able to export to the international marketplace as domestic prices in Ukraine are maintained artificially low due to imposition of export duty taxes. Therefore, in a perfect world soybean producers would prefer to sell their soybeans to the export market.
- As processors begin to feel squeezed by the delayed reimbursement of VAT payments, there will be opportunities for the U.S. to sell more soybean meal into Ukraine's dynamic poultry and livestock industries. At the same time, the Ukrainian government has shown a willingness to drop GMO restrictions on soybeans and soybean meal in times of supply shortages.
- Therefore, USSEC needs to promote the advantages of GMO soybeans and identify and market U.S.- origin soybean meal to the major feedlots and feed millers in Ukraine in anticipation of a decline in domestic processing capacity.

Assessment of Agricultural Development in Russia's Black Sea Region

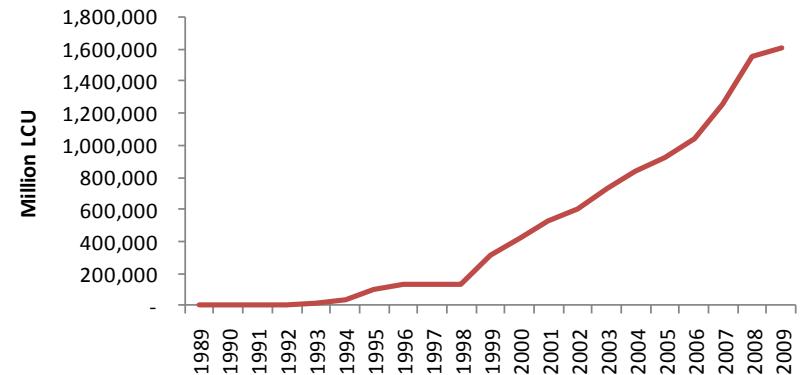
Key agricultural regions of southern Russia



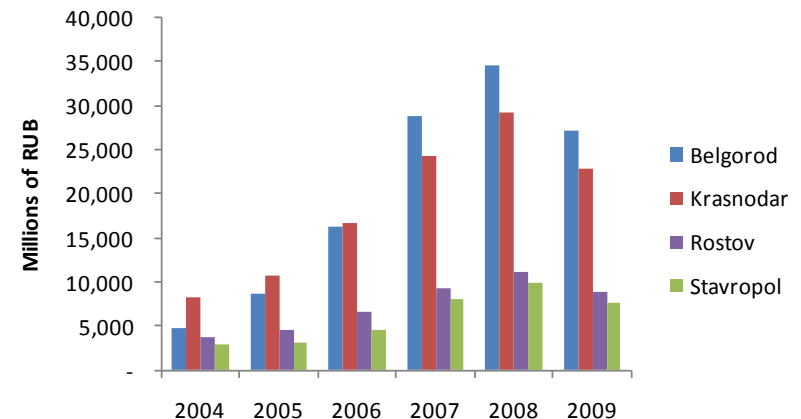
Improved investment climate in Russian agriculture

- Russia's agricultural investment climate has improved over the last decade, particularly in the central and southern federal districts. Changes in the economic and institutional environment, particularly regarding issues over land titles, have resulted in a more dynamic agricultural market which is attracting investment capital.
- The economic boom from 2000 - 2008 had a positive impact on Russia's agricultural sector due to a boost in commodity trade (particularly exports of wheat), a favorable environment in international capital markets and lower energy prices.
- As agricultural production continues to increase throughout southern Russia, opportunities attracting investment capital are expected to increase. Increased levels of investment in the agro-industrial sector demonstrate how the region has begun to renew its asset base to meet growing domestic demand for food (particularly animal protein) and export opportunities.
- Despite the increased level of investment, commodity value chains in Russia remain underdeveloped and continue to require additional capital. The infrastructure required for production (irrigation systems and power systems), storage and transportation of grains from the interior to ports will require substantial improvement.

Net Output of the Agricultural Sector in Russia



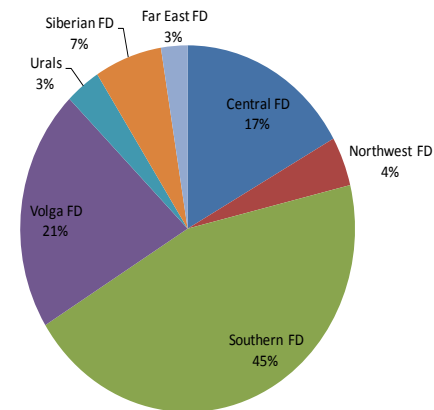
Investments in Fixed Assets of AIC



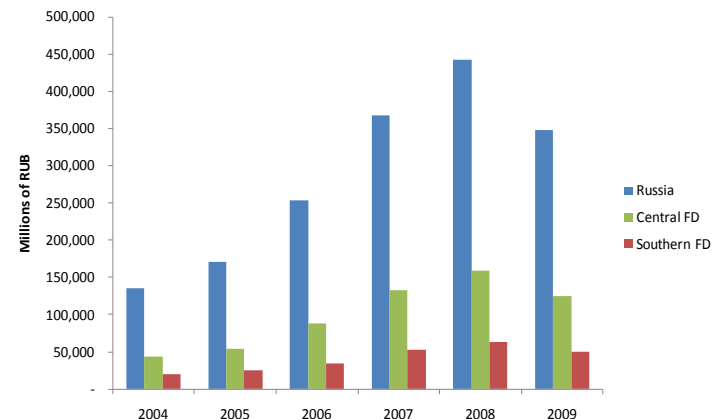
Current amount of investment and future capital demand

- Russia's Black Sea region represents the largest share of capital expenditures for agriculture in the federal budget as the region's economy is highly dependent on agricultural output. Capital expenditures for agriculture from the federal budget were significantly higher in the southern federal district than in any other region, reaching 2.2 billion rubles in 2007 (45% of the national agricultural budget).
- The federal budget for the state-run Agricultural Development Program amounted to R107.6 billion (\$3.6 billion) in 2010, R79.4 billion (\$2.6 billion) of which was spent on interest rate subsidies. Beginning in 2009, the Russian government has increased spending on agriculture in an effort to increase farmers' access to commercial capital. These funds are allocated to the dairy and meat industries, the acquisition of domestic agricultural equipment and the construction of additional grain elevators. The government also has subsidized the cost of chemicals and fertilizer inputs.
- The Russian Ministry of Agriculture is responsible for channeling a third of federal subsidies to local provinces in an effort to maximize capital efficiency. The major agricultural regions, including Krasnodar, Rostov and Orenburg, established co-financing agreements with the Ministry in 2010. Other government initiatives include providing agricultural education, professional training and investment in applied research that totaled nearly 17 billion rubles in 2009.

Share of Capital Expenditures on Agriculture for the Federal Budget



Investments in Fixed Assets of Agro Industrial Complexes in Russia



Source: Rosstat

Investment in major agricultural regions

- Krasnodar has been the beneficiary of the bulk of investments in fixed assets in the southern region of Russia.
 - Krasnodar accounts for more than 7.5% of the country's agricultural output.
 - The state's agro-industrial complex is the foundation of the regional economy with 4,150 operational enterprises, 760 large-scale producers and 870,000 personal subsidiary plots.
 - Krasnodar has attracted additional investments due to efficient market access for inputs and effective farm ownership structure. Farms with good managerial capabilities and improved access to output markets have greater internal financing capacity which in turn provides them with better access to sources of investment capital.

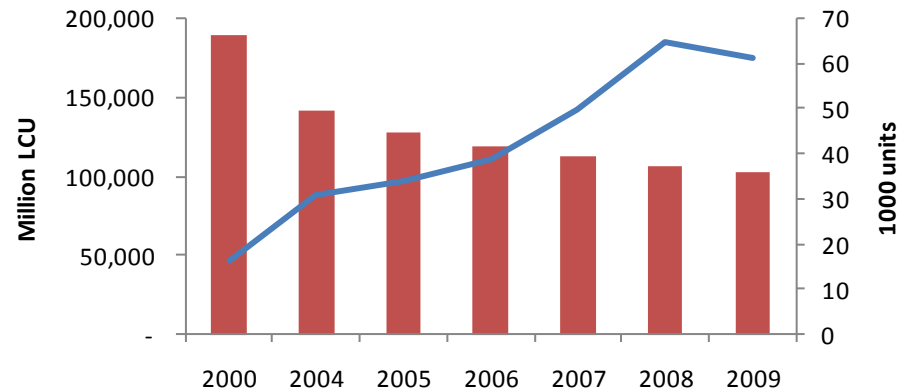
Sectors requiring additional investment

- Physical infrastructure and commercial networks for storing, transporting and loading grain at ports for export require investment. Rural infrastructure, including road and rail transportation, reliable power supplies, and irrigation facilities, is particularly weak in Russia. While most of the government support for improving agricultural infrastructure has been directed towards agricultural machinery, equipment and input supplies, even these assets are in need of additional investment.
- The National Priority Project implemented in 2005 was aimed at improving health, education, housing and agriculture during the energy-fueled economic boom. Although public investments have increased substantially in the agricultural sector, investment in capital assets, such as agricultural machinery and equipment, compound feed milling operations and grain storage facilities, has not kept pace with the rising demand for food, opportunities to export commodities into the international markets and the government's objective of replacing food imports with domestic production.
- In response to the need for replacing outdated facilities, the government is subsidizing interest rates on loans used to modernize farms and feedlots, purchase pedigree genetic stocks and construct new barns. The intensive investments made in poultry and livestock operations have resulted in a lag in the development of compound feed operations. In response to high feed input prices, many poultry and pork facilities have vertically integrated to produce feed for their own feed operations. Nevertheless, the feed sector remains highly inefficient and lacks sufficient access to protein meals derived from grains and oilseeds due to the lack of government support required to stimulate domestic production of these crops. Of the 400 compound feed millers operating in Russia, the majority were built in the 1960s and currently require significant upgrades to compete efficiently with global standards.
- Many growers have accumulated significant levels of debt which has precluded their ability to use their landholdings as collateral in order to secure operating loans. While large, well capitalized holding companies have become an important source of financial support enabling farms to borrow additional capital, many of these companies have shorter investment time horizons and will only provide support to growers when agricultural commodity price levels are high.

Infrastructure constraints in Russia's Black Sea Region

- The lack of adequate transportation infrastructure and grain elevator capacity is a major constraint for the expansion of crop production in the region. Fixed assets of agricultural producers have also depreciated at a much faster rate than the rate at which they are replaced, resulting in substantial losses during planting and post-harvest process. Over 70% of agricultural machinery currently in operation is estimated to require replacement..
- Strong demand for agricultural machinery from both crop and livestock/poultry producers supported by the Russian government's protectionist policies has supported growth in Russia's domestic machinery sector. In 2007, 79% of Russia's fleet of agricultural machines was produced domestically.
- Russia's Black Sea region experienced rapid modernization over the last four years with outdated machinery being replaced with new machinery and implementation of new agronomic techniques. However, the recent economic and financial crisis, high price volatility, and the 2010 drought have slowed the pace of agricultural growth and development. If Russia has a successful harvest season in 2011 and crop prices remain high, renewed efforts to modernize production systems is expected to occur.

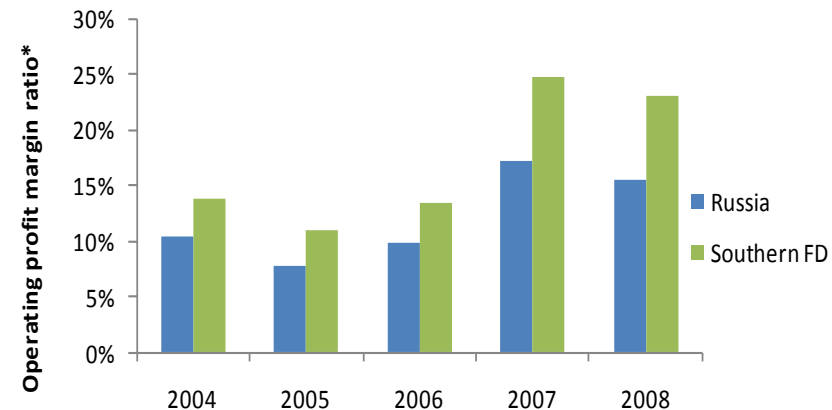
Agricultural Output and Equipment Inventories in Krasnodar



Role of the public sector in Russian agriculture

- Since the breakup of the Soviet Union, 75% of the national economy has privatized. However, the Russian state remains a major shareholder in many private businesses. Both federal and state government support played an integral role in the expansion of the agricultural sector which increased 87% in nominal terms from 2005 to 2007.
- The current state-financed development program aims to improve rural development, increase the competitiveness of domestic agriculture production and regulate agricultural markets with a projected spending of more than 550 billion rubles. Larger agricultural enterprises have been the primary beneficiaries of the program, receiving the bulk of the subsidized credit of 335.8 billion rubles and an additional 59.5 billion rubles for the acquisition of machinery and equipment.
- Only two commercial banks, state-owned Rosselkhozbank and Sberbank, have extensive rural branch networks which enable them to provide financing to the agricultural sector. This limits access to financing for many growers. The Russian government provides roughly t\$10 billion per year to the sector through bank loans. An additional \$1 billion of the federal budget is used to subsidize interest payments for farmers.

Profitability of Agricultural Organizations in Russia



*includes government subsidies

Source: Rosstat

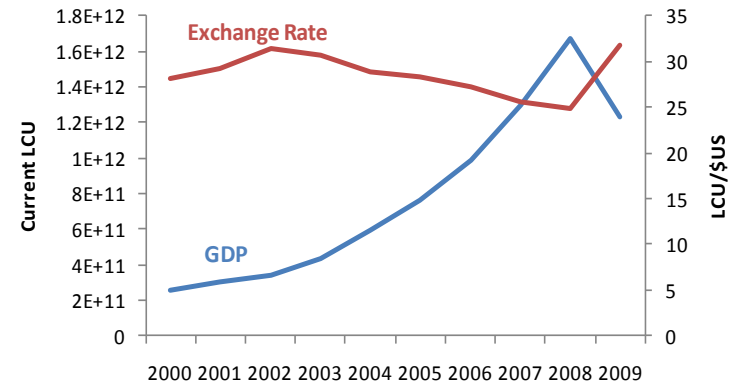
Role of the private sector in Russian agriculture

- As the agricultural sector continues to vertically integrate, private investors are playing an increasingly important role in financing this trend. While the profit potential for both small and large scale producers in southern Russia has attracted considerable investment, many prospective investors continue to view the sector with skepticism and consider it a high risk activity that has been burdened with credit losses. Foreign investment totaled \$2 billion in 2007/08. Unclear land tenure issues and bureaucratic obstacles have resulted in the private sector shifting its focus to controlling land resources as opposed to financing the working capital requirements of efficient agricultural production.
- Notable events include the IPO of Black Earth Farming, which raised \$250 million and NY-based NCH Capital which raised \$1.2 billion of institutional money to invest in Russia, Ukraine and Romania. Eight other investments were also made, totaling \$100 million per project. Compared to the other CIS countries such as Ukraine, Russia is not as advanced in terms of attracting international private capital via IPOs. Although Russia has a number of agricultural companies in the IPO pipeline, currently there are only 2 publicly-traded Russian companies operating in the agricultural sector.
- Within the last six months, PepsiCo and Danone have acquired the two largest dairy companies in Russia for approximately \$3 billion each. Rusagro, a large sugar and pork producer, recently completed a \$300 million IPO in London.

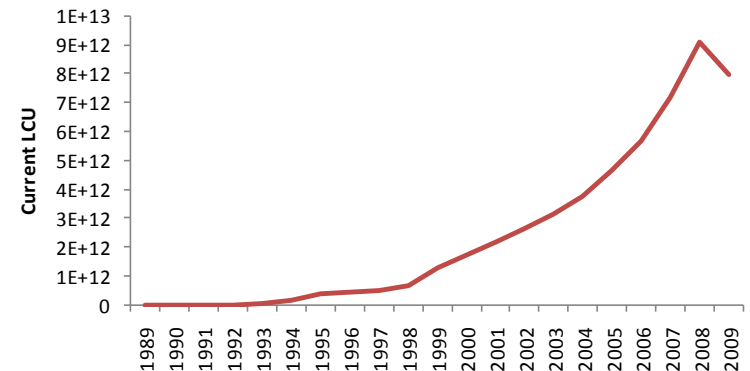
Effects of the 2008 economic and financial crisis on Russian agriculture

- The economic and financial crisis in 2008 caused a reversal of two macroeconomic trends in Russia's agricultural sector. A fall in GDP and depreciation of the ruble due to massive capital outflows stunted the continued growth of meat and vegetables imports, which had experienced a boom prior to the downturn. From 2000 to 2008 meat imports grew 78% in volume while the ruble appreciated over 100% against the dollar, providing an incentive for consumers to buy competitively priced imports. Renewed GDP growth and real appreciation of the ruble is expected to revitalize import demand, although not at the same rate as before the crisis. In addition to reduced GDP growth, high levels of investment in domestic agricultural production have resulted in a substantial decrease in import growth. From 2004 to 2007, both agriculture production and the domestic food processing industry experienced real investment growth of 275% and 175%, respectively.
- The financial crisis of 2008 constrained external funding for major agricultural banks which limited the ability of producers to access bank credit. Russia's banking sector continues to be overwhelmed by a number of structural weaknesses that made it particularly vulnerable during the recession. Roughly 40% of the system assets were concentrated in only 3 state-owned banks, which discouraged competition and reduced the sector's efficiency, leading to a severe crisis of confidence and liquidity in Russia's financial system. This forced the government to cut its budget which limited financial support for producers and resulted in the scaling back of rural infrastructure projects.

Exchange Rate and GDP in Russia



Imports of Goods and Services

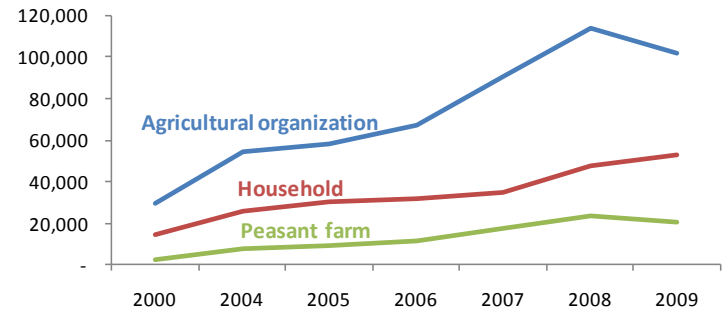


Source: World Bank, Rosstat, HighQuest Analysis

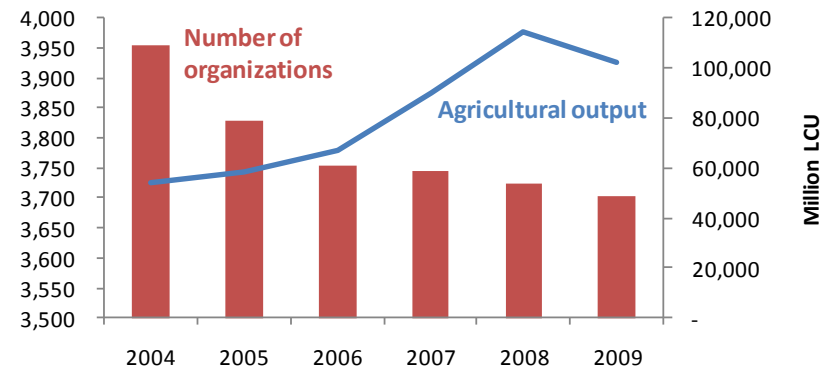
Consolidation of Russia's agricultural sector

- Russia's agricultural sector is consolidating due to its highly competitive and supply dominated environment. Large, vertically integrated farms which control a majority of the market, are partnering with processors, multinationals and retailers. These producers have several advantages: fewer transaction costs, better access to financial markets, superior knowledge of changing market conditions and more efficient infrastructure. Larger farms that generate higher sales per unit benefit from lower per unit adjustment costs.
- While smaller household farms are still widespread and produce more in aggregate value, they have been slower to adapt to restructured markets. Surveys indicate that this may be due to negative attitudes regarding collective farming systems during the communist era. These smaller operations also lack bankability due to weak ownership structures and insufficient legal and organizational protection. However, in response to the increasingly competitive environment, some have recognized the advantages of active participation in marketing or purchasing cooperatives. Vertical coordination of household farms is becoming more common. The economies of scale and technological advances of large corporate farms are likely to outweigh small scale agriculture over the long-term as markets continue to vertically integrate.

Agricultural Output by Farm Category in Krasnodar



Number of Agricultural Organizations and Agricultural Output in Southern Russia



Source: Rosstat

Reforms to encourage agricultural modernization

- While the Russian government has implemented several market-based initiatives including privatization, reductions in producer supports and currency devaluation since the breakup of the Soviet Union, the state continues to play a major role in agriculture. Its policy objectives include financial support for agriculture and state intervention in both grain markets and international food trade.
 - The 2008-2012 program allocates over 550 billion rubles to Russian agriculture, a significant portion of which is being directed to increase Russia's competitiveness through modernization of large agricultural enterprises. Large producers benefited from 335.8 billion rubles in subsidized credit in 2008 and 60 billion rubles for the acquisition of machinery and equipment. This support enabled 75% of large farms to remain profitable through 2008.
 - Russia's Ministry of Agriculture aims to give large farms the right of first refusal to lease registered land, impose increased fines for land that is improperly used, enable local governments to claim ownership of unwanted land and implement a unified system of state monitoring of agricultural land.
- Grain Market Intervention
 - Customs and tariffs have been applied to the domestic grain market. The government has also intervened through state purchases of commodities which provide a floor price for producers when domestic price levels fall below a certain level. In the case of a poor harvest, the government sells its grain stockpiles to the domestic market in order to reduce wholesale prices. These price stability measures are intended to minimize market volatility and ensure that domestic grain production continues to be a profitable business.
- International Food Trade Policy
 - In an effort to reduce imports and develop a self-sufficiency in domestic food industry, the Russian government has implemented protectionist food policies and increased financial support to domestic producers of sugar and meat products. A combined tariff and quota system (TRQ) places lower tariff rates on imports under the quota and higher tariffs on imports above the quota. This applies to the beef, pork and poultry industries. Because domestic producers in these sectors have been increasing their share of domestic consumption, the government lowered the import quotas in 2010.

Land market reform challenges

- Domestic farm policies need to be reexamined and eventually reformulated to reflect the ongoing organizational changes in the agricultural sector.
- Many inconsistencies in land market information systems and property rights prevent commercial banks from investing in agricultural production which compels producers to collateralize non-agricultural assets to raise capital and exposes them to significant financial risk.
- New legislation needs to be passed to enable farmers to use land as collateral to obtain loans from banks and the government needs to:
 - develop an enforceable system of grain warehouse receipts;
 - legalize lien rights;
 - expand collateral registration offices in rural areas and
 - create a better crop insurance program to attract investors.
- With a more sophisticated land market mechanism that allows banks to assess land productivity, agricultural producers will have a stronger financial and social safety net which will provide them with the confidence to develop more efficient production systems.

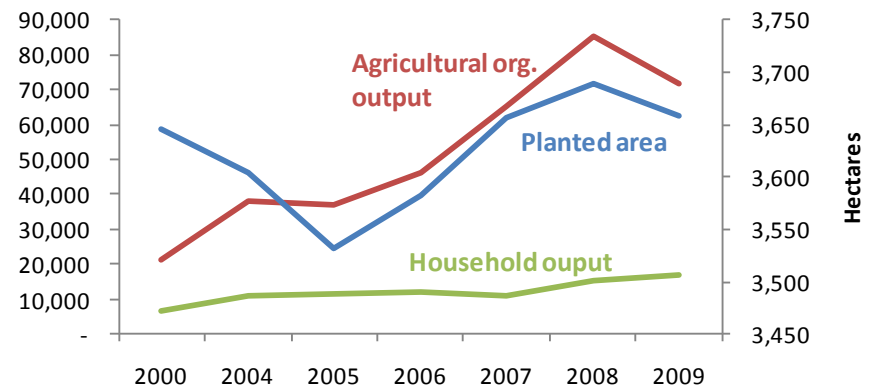
Impact of Russian Government on the agricultural sector

- The Russian government plays a very active role throughout the Russian agricultural sector. In addition to providing substantial subsidies and investment capital to the sector, the government has created several enormous state-owned companies to accelerate the growth and development of the agricultural sector.
- The major agricultural players include the United Grain Company (UGC), which was established to dominate Russian grain trading and establish Russia's reputation as one of the largest and most influential agricultural producers in the world.
- Other companies include Rusagrotrans, the national grain shipping company; Rosagroleasing, the national equipment leasing company; Rosselkhoz mash, the national tractor company; and Rosselkhozbank, the national agricultural Bank. These large industrial companies receive substantial financial support from the Russian government.
- Agriculture is a top priority of Russia's leaders which include the President (Mr. Medvedev), the Prime Minister (Mr. Putin) and Deputy Prime Minister (Mr. Zubkov- a former cooperative farm director). The following points justify their reasons to make agriculture a priority:
 - Agriculture is one of the few economic sectors in which Russia can be competitive on a global basis as well as a major exporter. This also supports the government's objective of diversifying Russia's economy and moving away from its heavy dependence on energy and mineral exports.
 - Agriculture is viewed as an issue of national security. Russia currently imports large quantities of its foodstuff needs and most of it is meat. The government wants Russia to become self-sufficient in both sectors and is willing to invest significantly to ensure that this happens.

Conversion rate of underutilized cropland

- On a national level, arable land has decreased over the past 20 years by 7% while crop production has increased 6%. Yield growth (not expanded acreage) has accounted for the vast majority of output growth. This is especially true for large, vertically integrated enterprises that invest in more productive seeds and innovative technologies and adopt efficient agronomic practices. About 30 large-scale agro holdings currently operate in Russia, 5 of which manage over 200,000 hectares of land.
- Wheat is the primary crop being produced on new arable land; barley, rapeseed, sunflower and soybeans have gained share as well. It is estimated that Russia could bring about 10 million hectares of new arable land into production if the required investment capital can be attracted to the sector.

Planted Area of Crops vs. Agricultural Output in Krasnodar

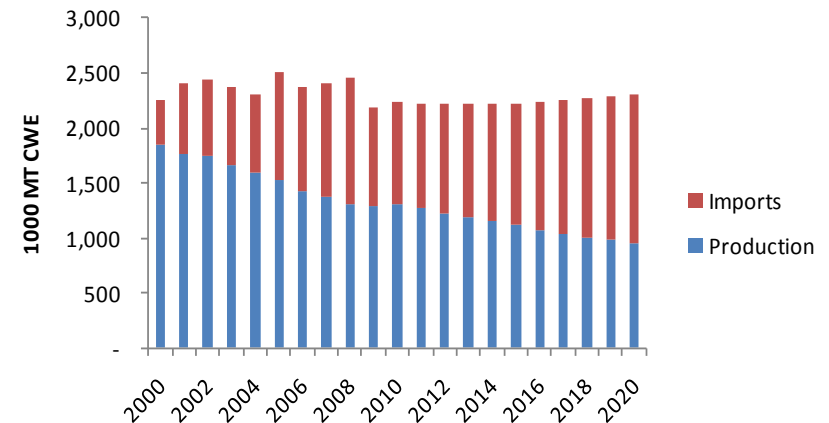


Source: Rosstat

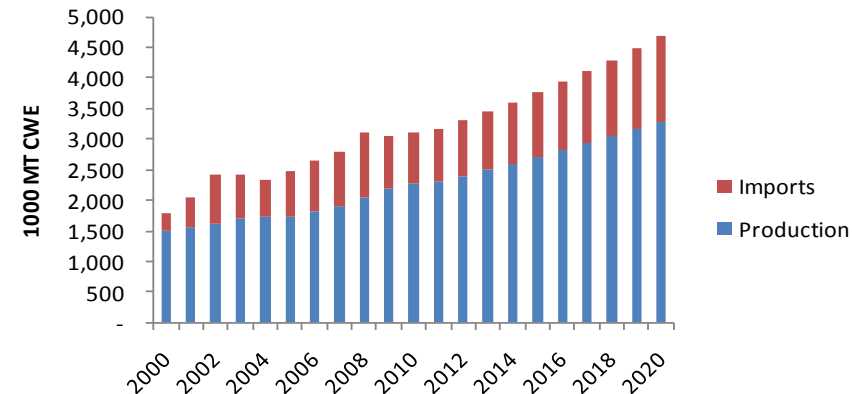
Implications of domestic livestock and poultry demand

- Domestic demand for livestock products and poultry has increased significantly due to increasing standards of living and government support. As a result, demand for protein feeds has exceeded the domestic supply of oilseeds, resulting in an increase in oilseed imports. The USDA projected a 20% increase in soybean imports of 1.3 MMT in 2010 to meet livestock and poultry producer demands. (Most of the increase will be imported by the Sodrugestvo soybean crushing facility in Kaliningrad on the Baltic Sea.)
- Reliance on beef and veal imports to satisfy domestic demand has increased by a 10-year CAGR of 4.04% while domestic production has decreased 3.20% over the same period. The appreciation of the ruble and high GDP growth enabled Russian consumers to purchase relatively inexpensive foreign beef and veal that had previously been unavailable during the Soviet period.
- Russia has become increasingly self-sufficient in the supply of poultry and pork for domestic consumption. Import controls and increased public sector investment have encouraged very strong growth in domestic poultry and swine production. While production of poultry has experienced a 10-year CAGR of 17.3%, imports decreased 7.3% over the same period. Swine production also grew by a 10-year CAGR of 4%. The growth of these industries has driven the increased demand for raw materials used to produce compound feed.

Beef and Veal Supply Forecast in Russia



Swine Supply Forecast in Russia

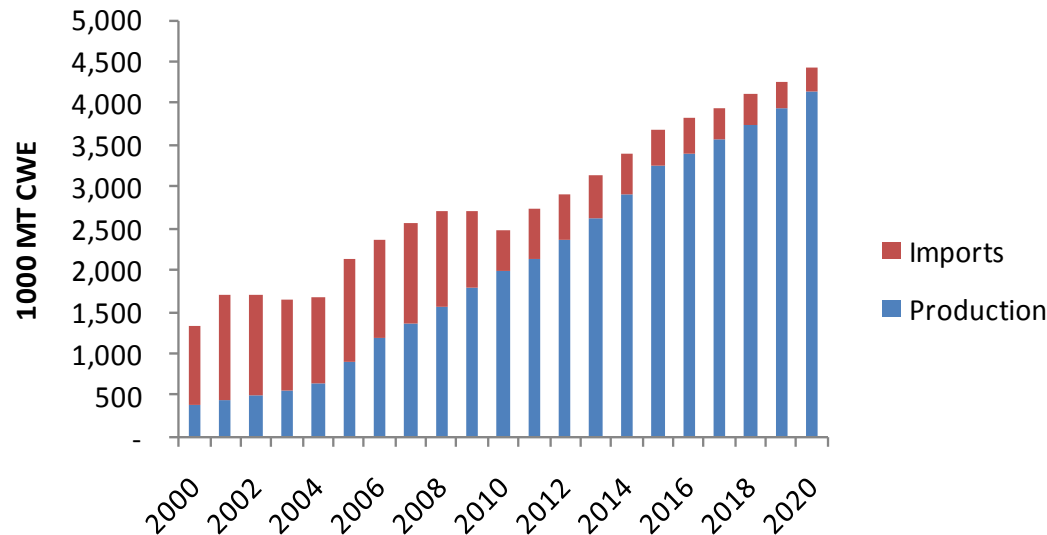


Source: USDA PSD Online; HighQuest Analysis

Implications of domestic livestock and poultry demand (cont'd)

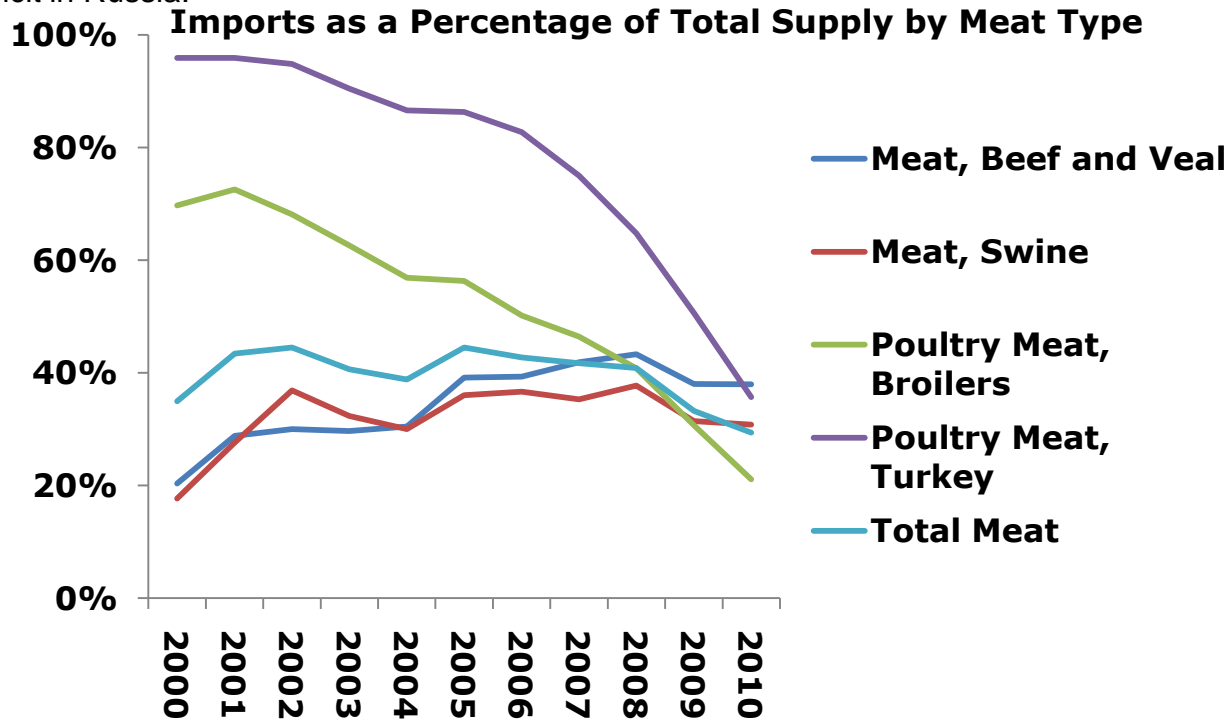
- Feed ingredient supplies are extremely tight in Russia due to the severe drought in 2010, which has had negative consequences for poultry and livestock producers. However, this is expected to be a short-term trend as growers are expected to intensify production of grain and oilseeds in response to high commodity prices. The poultry sector, which is the fastest growing sector in the Russian meat industry, is expected to grow but at a slower pace. Poultry operations have been able to limit their exposure to rising prices in the open market for feed as a majority of poultry production is undertaken by large-scale vertically integrated agricultural enterprises. This not the case for pork and beef production which remains dominated by small-scale, household producers.

Poultry Supply Forecast in Russia



US export opportunities for meat exports

- Imports as a percentage of total meat supply have declined dramatically in Russia due to government programs aimed at domestic self-sufficiency in meat production. The domestic poultry industry has been the largest benefactor. However, imports still represent a large percentage of total pork and beef consumption.
- While opportunities for US exporters of poultry products are somewhat limited in Russia due to the large increase in domestic production, beef and swine imports continue to represent a large portion of domestic demand in these sectors.
- The overall decline in imports as a percentage of total supply represents an opportunity for US exporters of soybeans and soybean meal as increased domestic production of meat should lead to increased imports of soybeans and soybean meal due to the protein feed deficit in Russia.



Source: USDA PSD Online

The potential for adoption of GMOs in Russia

- While Russia currently prohibits domestic production of GMO crops, in some cases the use of GMO-based feed is permitted for domestic livestock and poultry operations. This exception is made strictly on a case-by-case basis and livestock producers must obtain a certificate of approval for importing specific GMO soybean and soybean meal varieties.
- The current system is susceptible to abuse and corruption along the supply chain and it imposes significant transaction costs. It is further complicated by the fact that some regions such as Belgorod restrict the use of GMO soy products completely requiring the importation of more expensive non-GMO soybeans and soybean products that cost an additional \$10 -\$20/MT.
- The current restrictive GMO policy is not anticipated to change over the forecast period. As Russian consumers maintain a strong bias against GMO soybeans, there is little political will to consider modifying this policy and permitting domestic production of GMO soybeans.
- In theory, aggressive implementation of a hard non-GMO policy could provide Russia with an opportunity to export GMO-free soybeans abroad. However, Russian soybeans are still relatively uncompetitive in comparison with other origination markets and domestic demand for soybeans remains strong. Even if the current soybean export tariff is lifted (which is highly doubtful, at least in the near-term), there is no reason to expect a change in the level of soybean exports over the projection period.

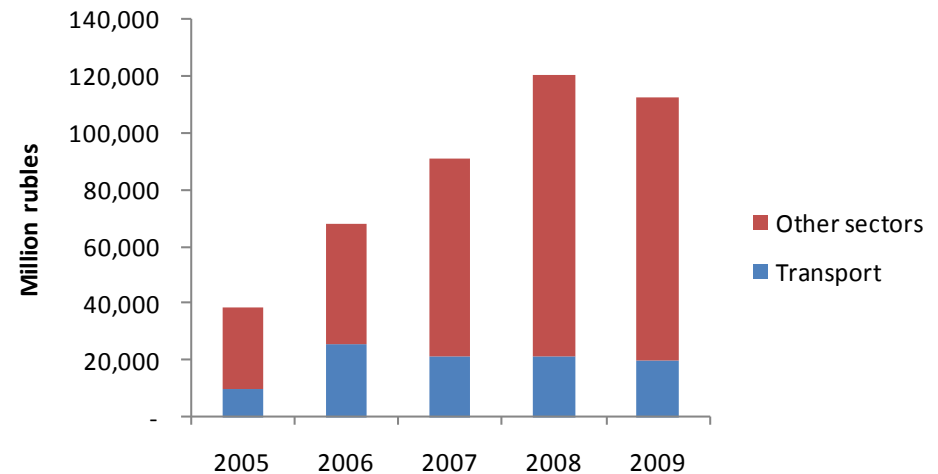
Infrastructure constraints on Black Sea agricultural exports

- The Russian government has created large state-owned companies that are structured to facilitate investment in the agricultural sector. Investment of public funds to improve transportation and storage infrastructure is expected to induce the private sector to co-invest alongside the government. Over the next five years, the government will spend an estimated \$5 -10 billion dollars on rural and transportation infrastructure.
- Because Russia's domestic private sector is not always capable of making the large-scale infrastructure investments that are necessary, state-owned companies provide public rural and transportation infrastructure to the private sector. Examples include transportation infrastructure such as ports, port elevators, railways, highways and barges.
- Sodrugestvo Group, a privately held agro-industrial company specializing in infrastructure development, logistics services and processing facilities, has initiated the construction of a new port complex in Kaliningrad, Russia. The \$430 million investment in a deep sea port terminal and expanded soybean crushing capacity is scheduled to be completed by 2013. The new port complex will be able to handle 5 million MT annually with a storage capacity of 160,000 MT of grains, 184,000 MT of dry bulk commodities and 30,000 MT of vegetable oils. The crush plant will provide an additional 5,000 MT of daily processing capacity.

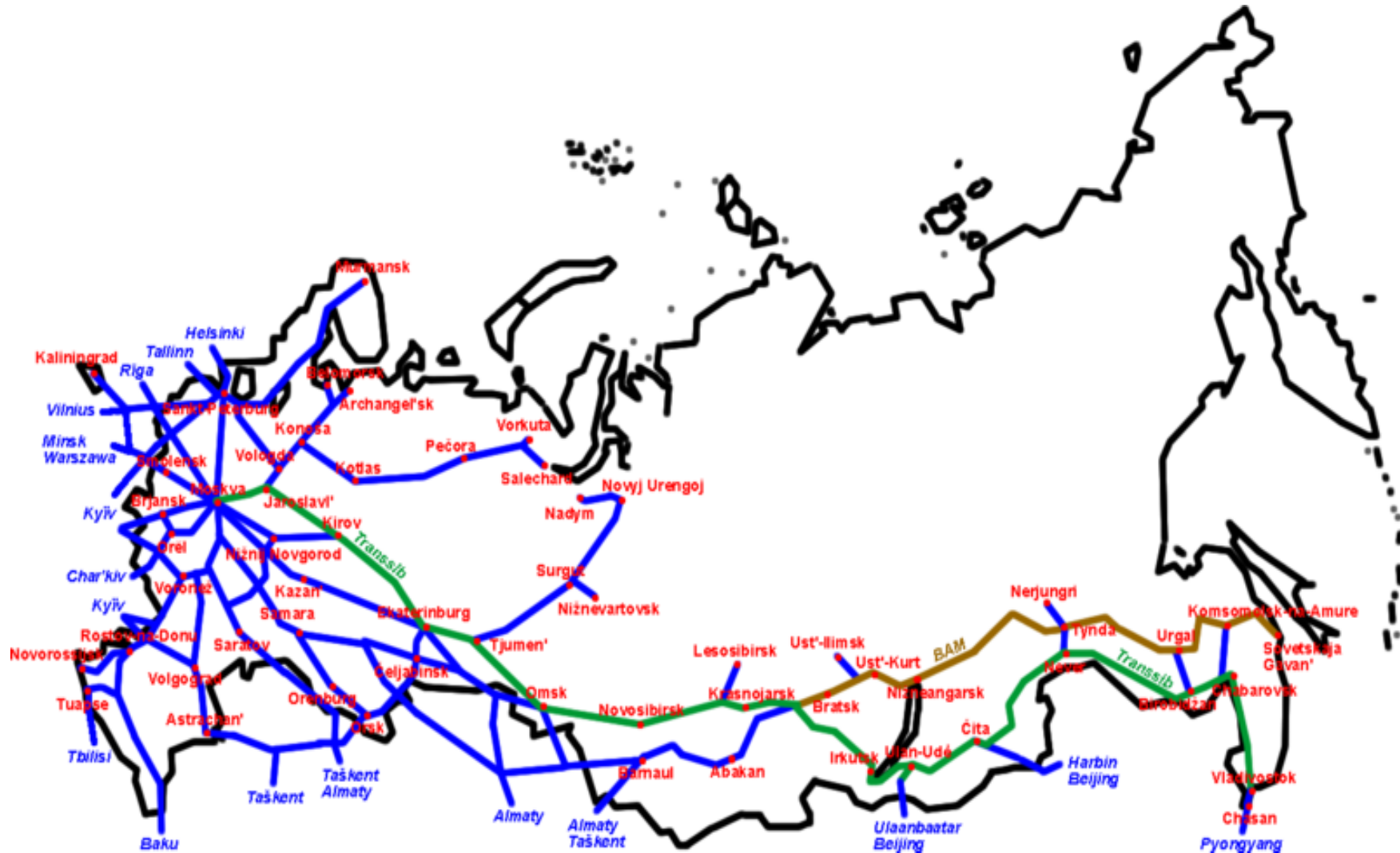
Development of transport and storage assets

- Transportation infrastructure is mostly supported by the Russian government, which has increased its funding by 98.7% since 2005. Accounting for about 18% of the domestic capital market, while the sector experienced a slight decline in 2009, growth is expected to return to pre-crisis levels in 2010.
- Russian grain capacity has reached 118.2 MMT, which includes 32.9 MMT of grain elevator capacity. However, most of this infrastructure is outdated and many facilities are inefficiently located near consumer markets. High costs of transportation have also rendered trade costs uncompetitive.

Capital investment in the transport sector



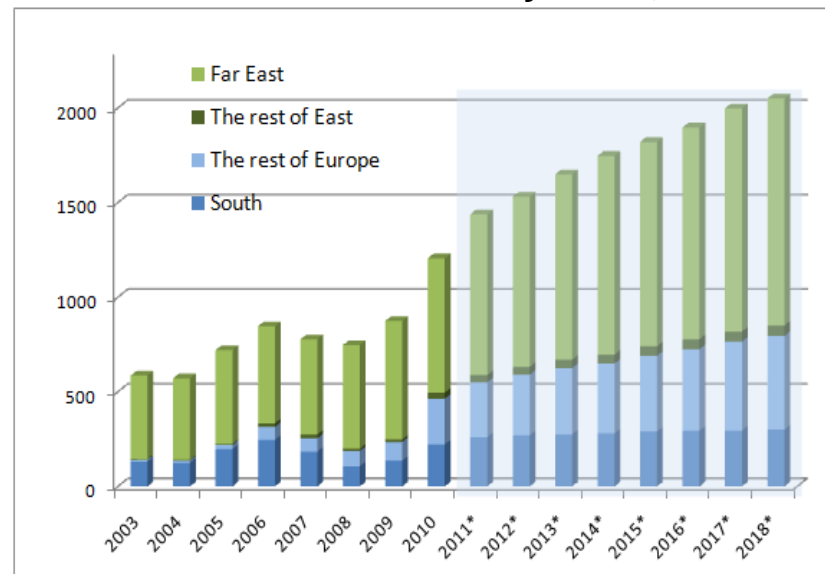
Russia's railroad network



Growth potential for soybean yields in Russia

- Soybean planted area in Russia increased by 37% in 2010 to 1.67 million hectares. Land dedicated to planting of oilseeds has increased due to lower grain prices in 2010, damage sustained by the winter grain crop and growing demand for protein meal from the domestic compound feed industry and livestock/poultry sectors. The soybean planted area is expected to reach 2.85 million hectares by 2018.
- Despite the increase in hectarage for oilseed plantings, production in 2010 was not expected to increase due to the severe drought that resulted in a 15% yield decrease. Soybean yields are not expected to improve significantly over the forecast period because of climatic limitations and expansion of soybean plantings onto less suitable lands. Famers with extensive growing experience in the Belgorod region are attempting to increase yields to 2 tons/hectare by planting more efficient seed varieties.

Planted Area Forecast of Soybeans, 1000 HA

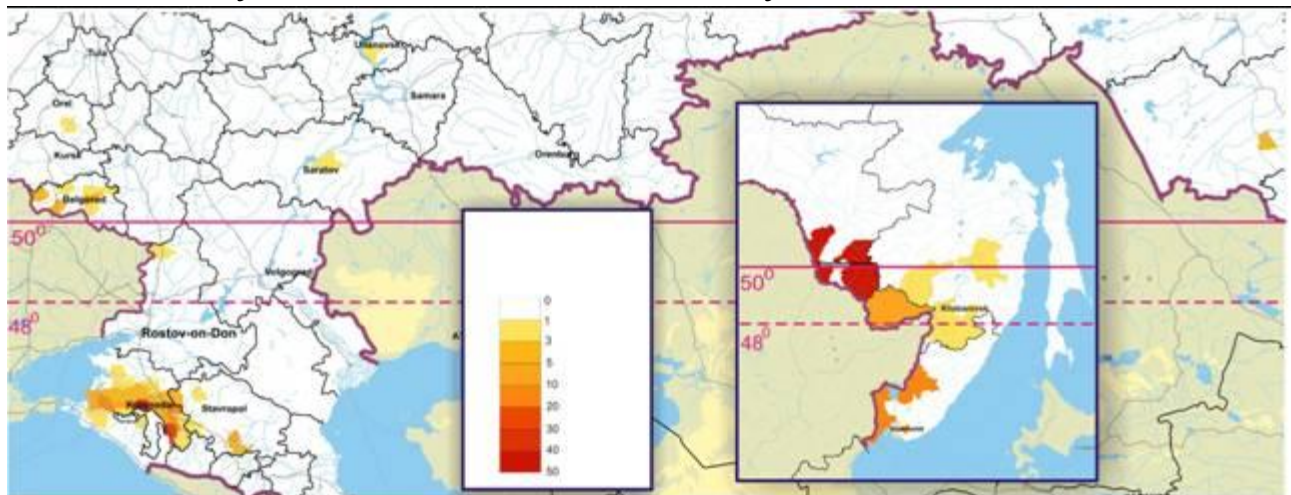


Source: IKAR

Agronomic Assessment of the Black Sea Region

- Precipitation and temperature levels in Russia's key domestic soybean production regions are less conducive to soybean production than those of the world's three key competing regions. The Pampa in Argentina, the Cerrado in Brazil and the Corn Belt in the US benefit from prolonged production seasons, optimal exposure to sun radiation and precipitation levels above 1,000 mm per annum. By contrast, Krasnodar, the most productive soybean region in Russia, experiences only 600 mm of precipitation annually and during the growing season can experience excessive heat above 40C with little rain.
- The northern regions of Russia receive even less precipitation and have much shorter vegetation periods due to late frosts in the spring and early frosts in the fall. Longer days and colder soils that impact nitrogen fixation in the roots also inhibit the soybean's ability develop. As a result, farmers face much higher risk of lower yields. Agronomists generally agree that it is very difficult to grow soybeans efficiently above the 48° northern latitude.
- While the southern half of Primorsky Krai in eastern Siberia may be a suitable region to produce soybeans, this region also faces higher risks of lower soybean yields which makes wheat and rapeseed a much more viable option for growers in this region.

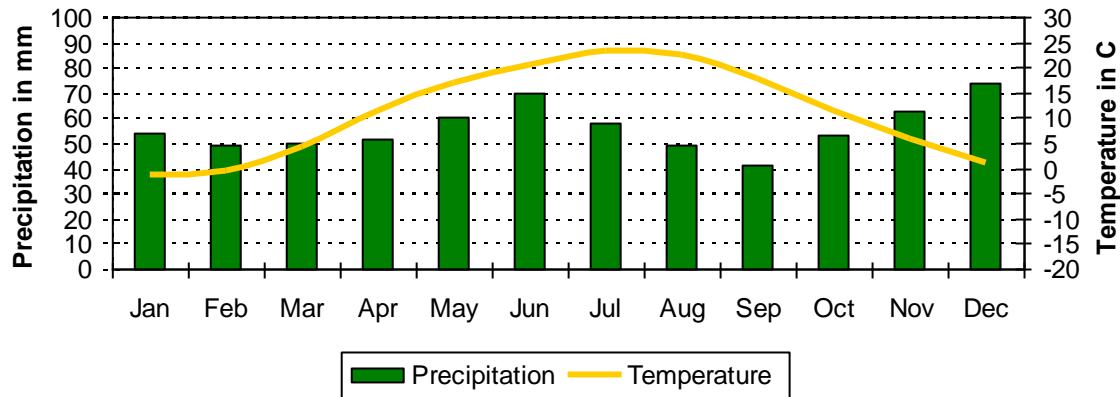
Key Production Areas of Soybeans in Russia



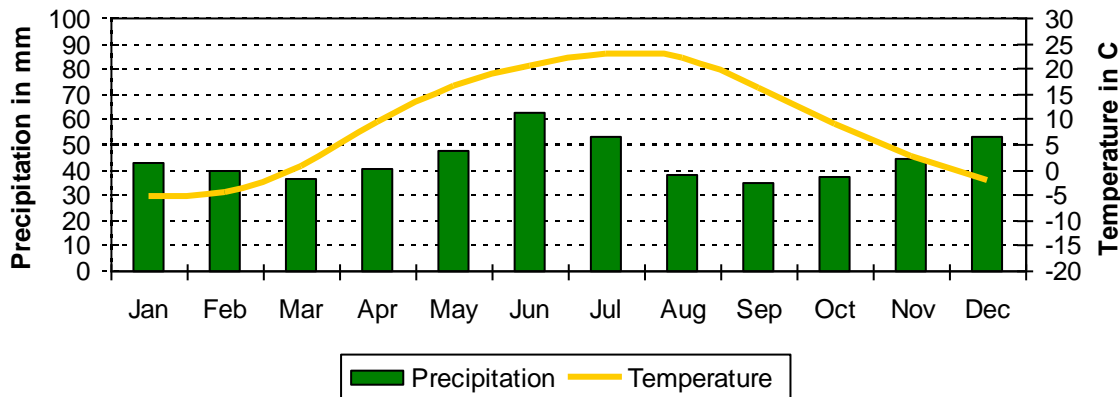
Source: IKAR

Regional climatic variation within Russia

Krasnodar

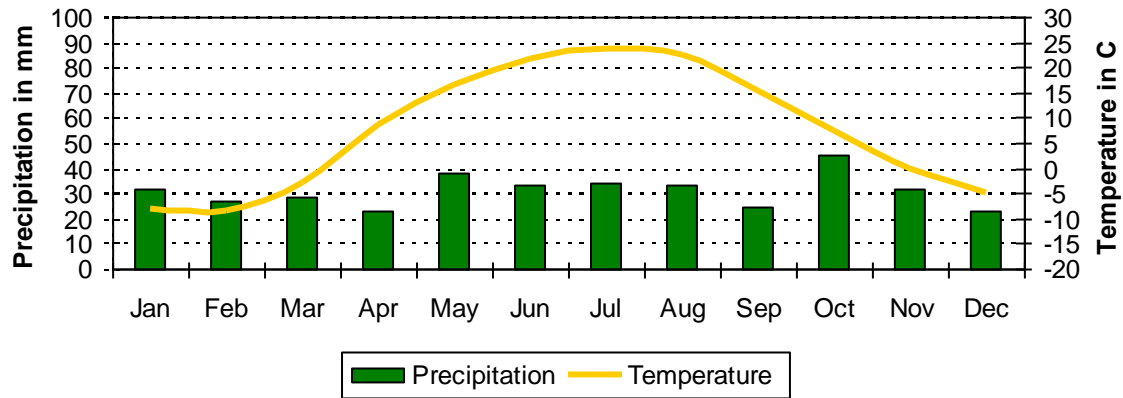


Rostov-na-Donu

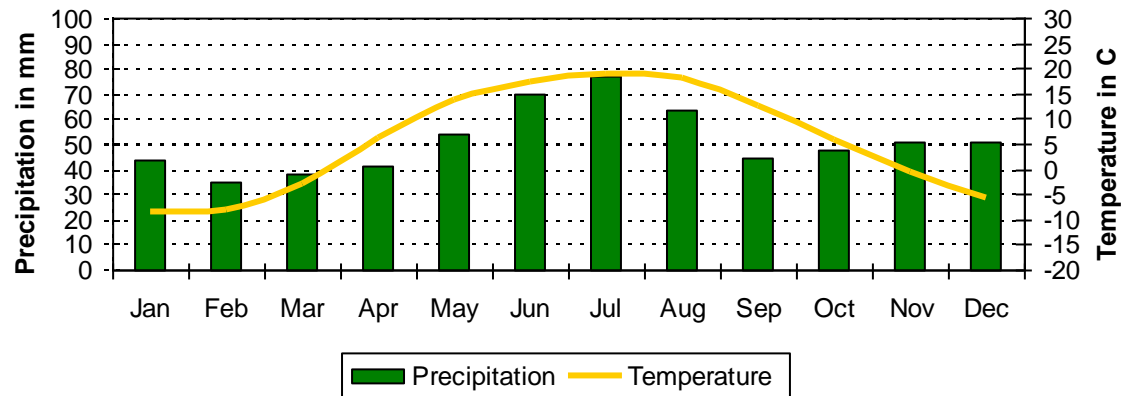


Regional climatic variation within Russia(cont'd)

Volgograd

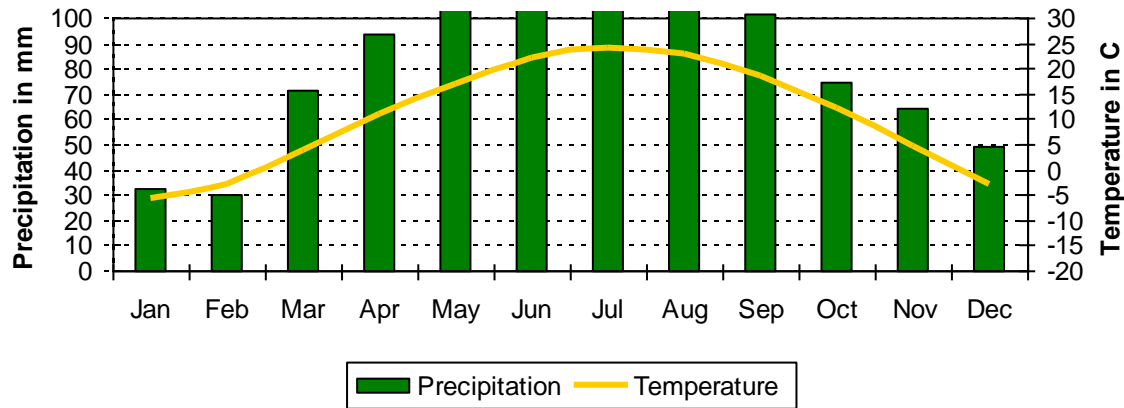


Kursk

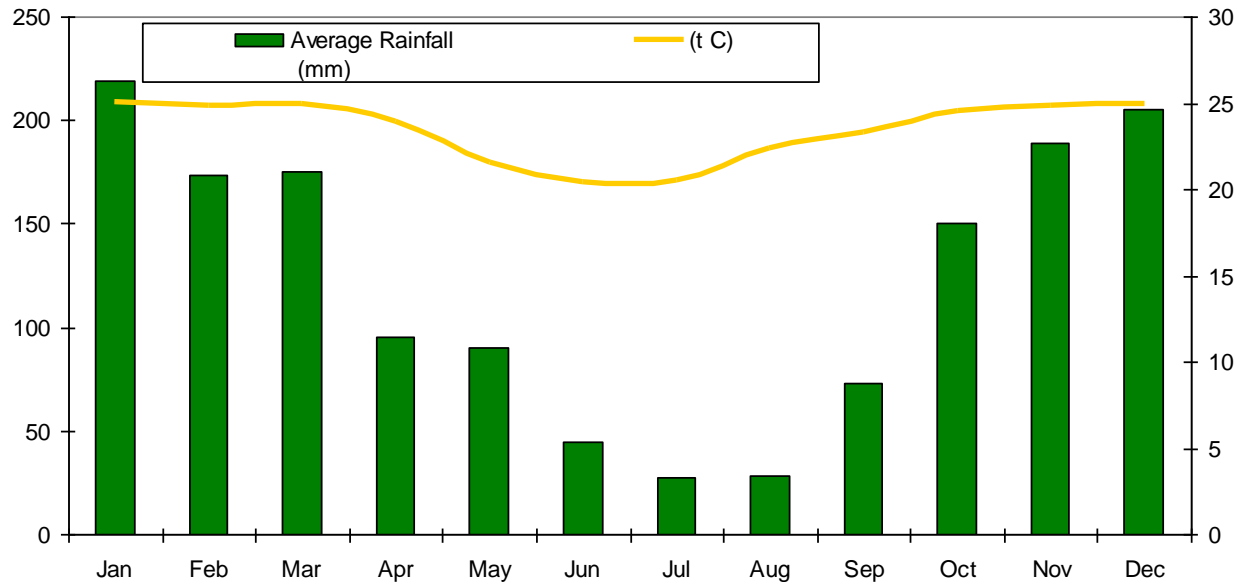


Regional climactic variation in competing countries

Burlington, Iowa USA



Cerrado, Campo Grande, Brazil



Source: IKAR

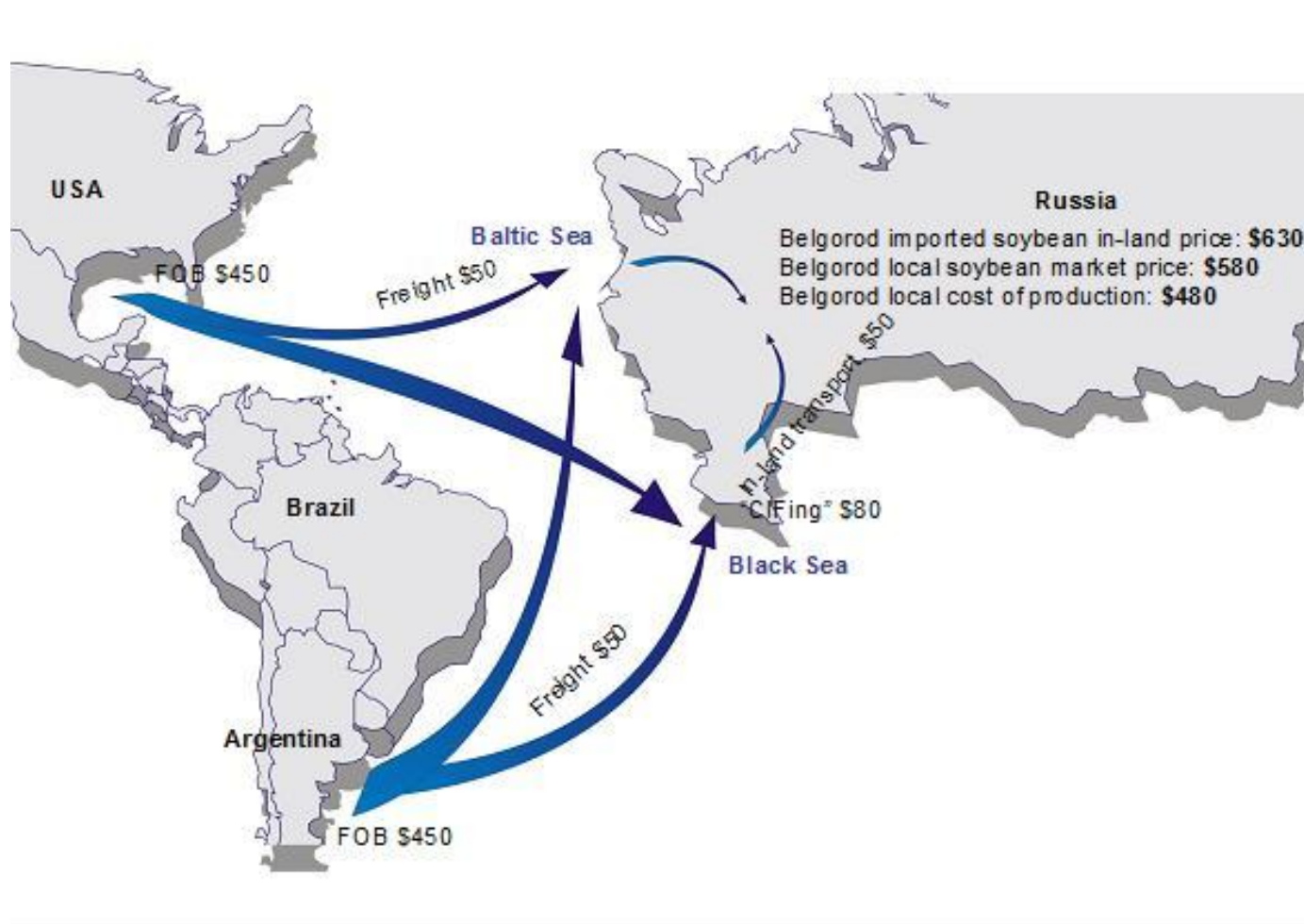
Soybean trade in European Russia

- Despite the less than ideal growing conditions in southern Russia, soybean production in this region can compete with imported soybeans due to the high logistical costs of moving soybeans and soybean products to end-users in the livestock and poultry sector . Many farmers prefer growing soybeans even though they risk achieving lower yields.
- Unlike the export infrastructure for Russia's grain sector which has been upgraded, Russia's soybean and soybean meal import infrastructure is inadequate and outdated. Russian Baltic Sea ports are unable to receive vessels with a capacity greater than 25,000 MT. The most common approach for importing soybeans and soybean meal into Russia via the Baltic Sea is to reload Panamax vessels in Rotterdam into much smaller vessels or import via Latvian and Lithuanian ports. Trade through the Baltic ports offers greater efficiency, fewer problems with seed damage and lower port fees. Privately-held Sodrugestvo Company, the largest soybean crusher in Russia, handles over 65% of the soybean meal trade in Russia via the company's private berths located in the port of Kaliningrad .
- Russia's Black Sea ports import soybeans and soybean meal using existing raw sugar infrastructure. However, raw sugar imports usually occur during the second part of the marketing year which can conflict with soybean and soybean meal import activity. In addition, as southern Russia is the major soybean production zone, soybean imports into this region conflict with the interests of local producers.
- The costs of port off-loading and in-land transportation in Russia are very high, which explains why northwest Russia prefers to use imported soybean meal.

Soybean competitiveness in the Black Sea Region

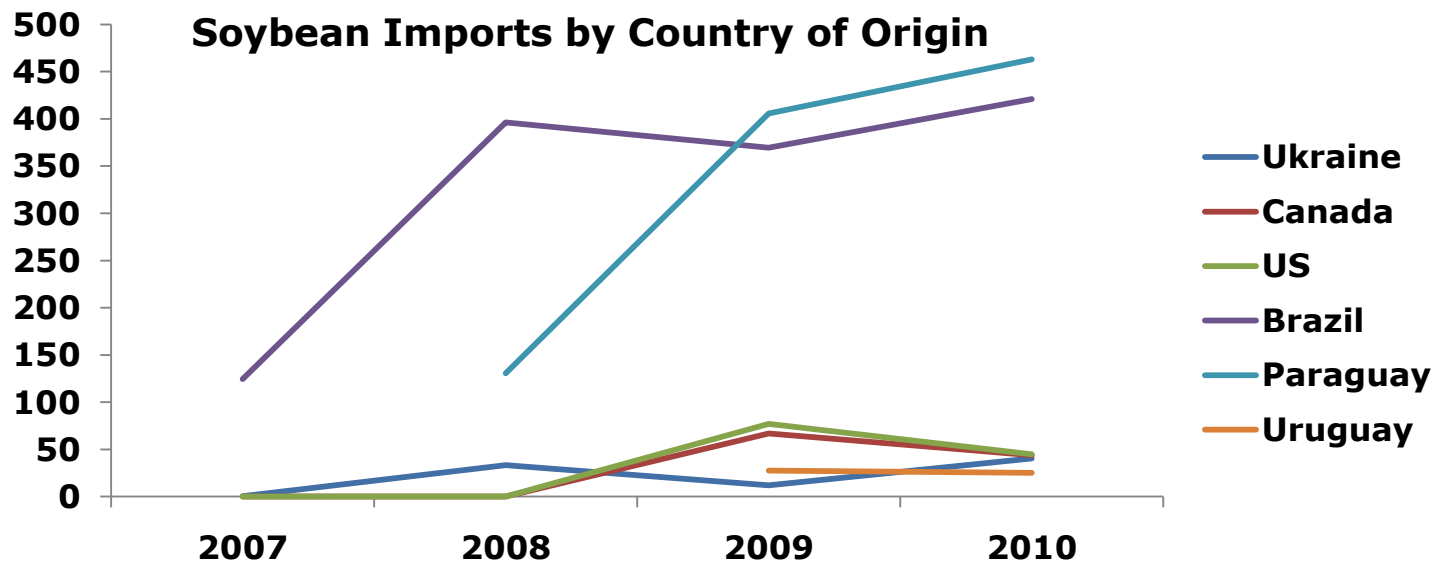
- The average soybean FOB price in the Americas is \$450/MT and freight costs to Russia are estimated between \$40 and \$60/MT depending on the size of vessel and logistical model. The soybean transport costs from CIF onto rail at the port are about \$80/MT, which include 10% VAT and various off-loading costs. Additionally, the in-land transportation cost to the Central Black Soil region (center of domestic animal protein production, where currently about 23% of Russian commercial broilers and 18% of commercial pork meat is produced) is estimated at another \$50/MT. Therefore the total end-user price of imported soybeans is an estimated to be \$630/MT. This compares to the full cost of production per hectare of soybeans in Belgorod (center of domestic animal protein production) at an estimated at RUR 14,000 or US \$480/MT.
- Despite the substantial difference in cost between imported and local soybeans, soybean and especially soybean meal imports are likely to continue to increase in the Black Sea region due to several factors
 - The average soybean yield in Russia is 1 Mt/hectare compared to 3.5-4.5 MT/hectare yields in Argentina and the U.S. and the amount of arable land in production is declining throughout the region.
 - At the same time, animal protein production in the region is growing at a faster pace than soybean production as the Russian government strives to attain self-sufficiency in animal protein production so Russian producers of animal protein are forced to import soybeans and soybean meal to meet their needs.
 - The cost of building soybean processing facilities is high and there is insufficient demand for the oil so it is unlikely that processing capacity will increase at the same rate as demand for soybean meal in the region.
 - Therefore, the Black Sea region of Russia is likely to remain a net importer of soybeans and especially soybean meal for the foreseeable future.

Soybean trade in European Russia

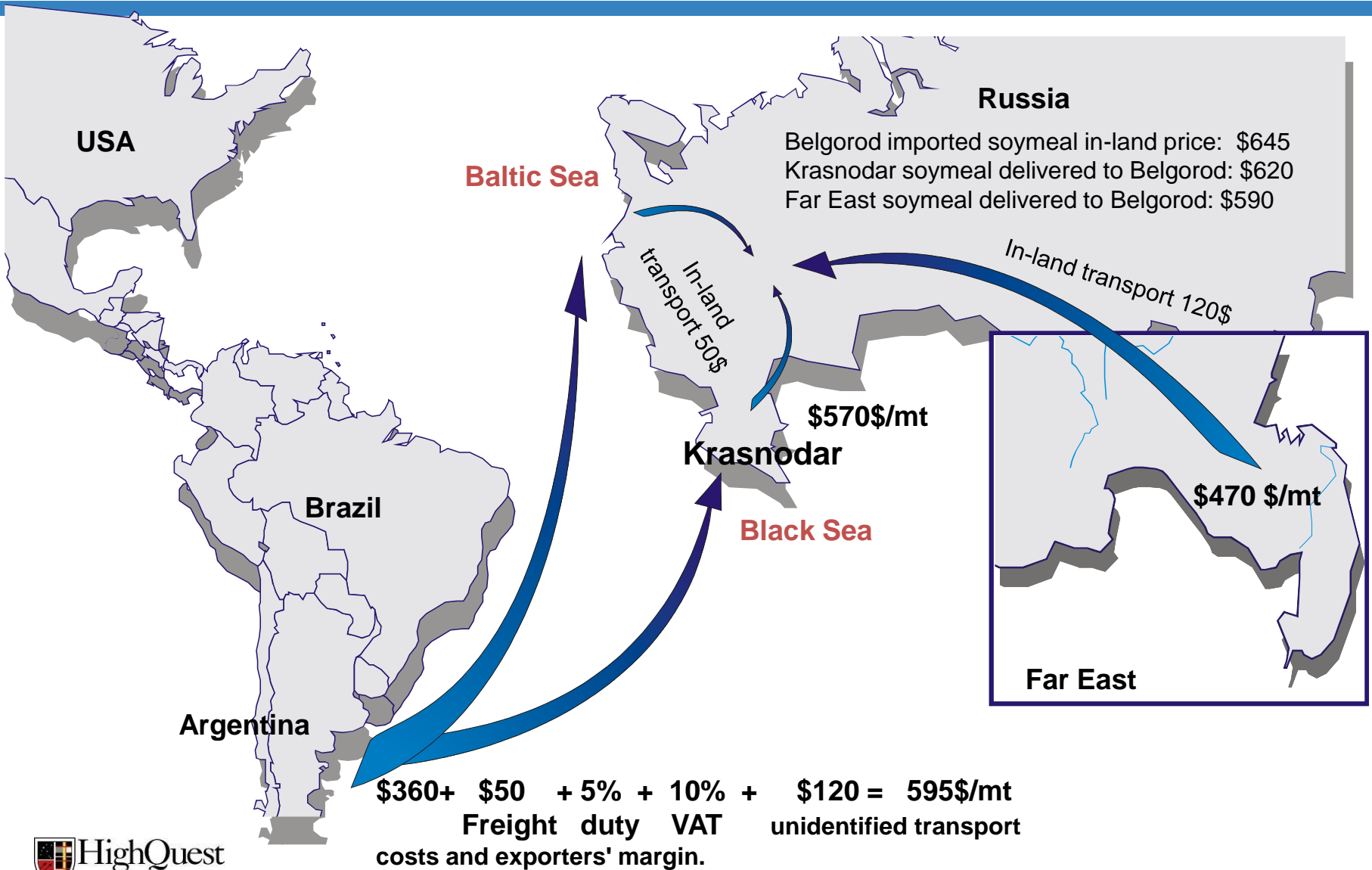


Soybean trade flows into Russia by country of origin

- Over the past four years, Russian imports of soybeans have increased from 125,000 MT to 1 million MT with the majority of the soybeans originating from Brazil and Paraguay.
- There are several reasons that Brazil and Paraguay have become the dominant origins for Russian soybean imports.
 - Russia's soybean processing sector has increased substantially due to the expansion of Sodrugestvo, the largest crusher in Russia.
 - Sodrugestvo favors the origination of Brazilian and Paraguayan origin due to the preference of a sizable minority of animal producers in Russia for non-GMO feed ingredients.

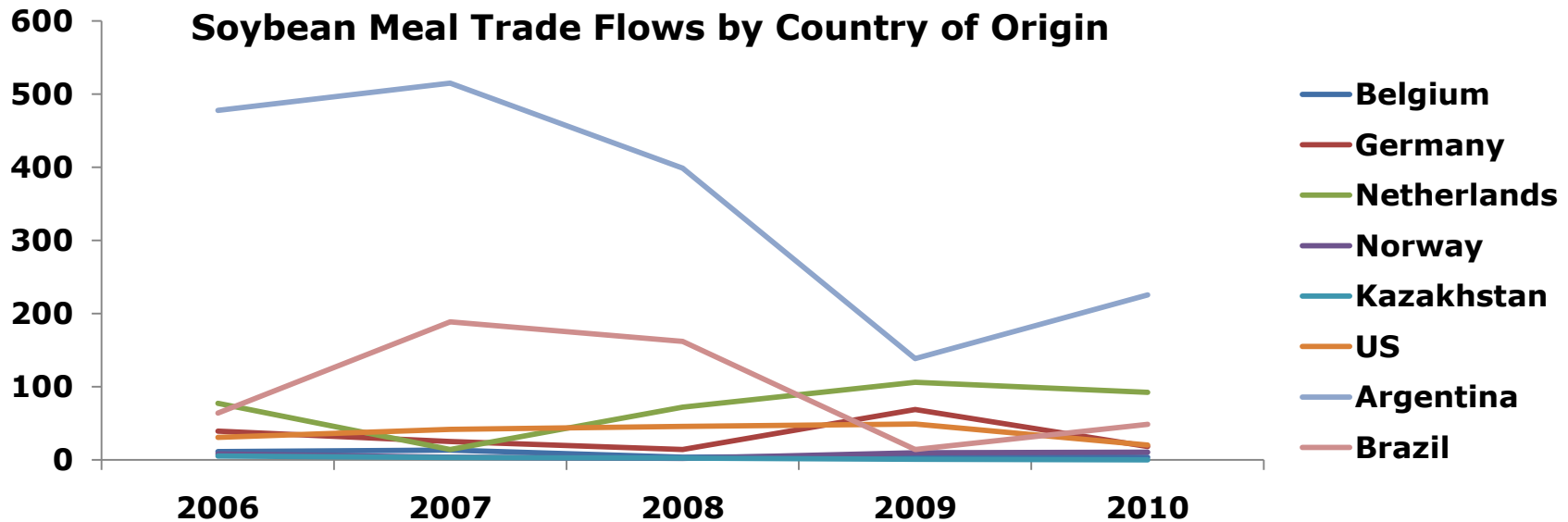


Soybean meal trade in Russia



Soybean meal trade flows into Russia by country of origin

- Soybean meal imports have declined as Russia's domestic oilseed crush industry has developed.
- The fact that the domestic soybean processing industry has increased substantially means that Russian feed millers and vertically integrated animal protein producers require lower volumes of soybean meal imports despite increased animal protein production.
- Over the last five years, Argentina, which had been the dominant importer of soybean meal in Russia, has seen its share of imports decline from 66% in 2006 to 52% in 2010. Brazil, the Netherlands and the U.S. have seen their shares of soybean meal exports to Russia increase slightly to fill this gap.



Soybean transportation subsidy

- In January 2011, the Russian government introduced a 70% state-subsidized tariff on railway transportation of soybeans from the Far East to European Russia. The subsidy was implemented in response to the drought experienced in European Russia and depressed soybean prices in the Far East. Consequently, soybeans in the Far East and soybean products in European Russia have become increasingly competitive.
- Transportation costs from the Far East to European Russia (using Belgorod as a key consumption region) declined from R6500 to R3900, or from \$225 to \$135 per ton. This is the first time that soybean trade from the Far East to European Russia has been made possible. An estimated 100 -150 thousand MT is expected to move between these regions by the end of the 2011 season.

Profitability analysis of soybeans and other crops in Russia

Krasnodar	Wheat	Corn	Barley	Sun-seeds	Rape-seeds	Sugar Beet	Rice	Soy-beans 1	Soy-beans 2
Full investment cost, RUR/ha	15,000	22,000	15,000	18,000	18,000	40,000	30,000	16,000	15,000
Yield, ton/ha	4.5	6.5	4.7	2.0	1.8	38.0	5.5	1.8	1.2
Farm gate price, RUR/ton*	5,000	5,500	4,000	15,000	14,000	1,900	11,000	14,000	14,000
Earnings per ha, RUR	22,500	35,700	18,800	30,000	25,200	72,200	60,500	25,200	20,160
Net income per ha, RUR	7,500	13,700	3,800	12,000	7,200	32,200	30,000	9,200	5,160
Risk profile	Medium	High	Medium	Low	High	High	Low	Medium	Medium

Belgorod	Wheat	Corn	Barley	Sun-seeds	Rape-seeds	Sugar beet	-	-	Soy-beans 2
Full investment cost, RUR/ha	14,000	20,000	13,000	16,000	14,000	37,000	-	-	14,000
Yield, ton/ha	3.8	5.0	3.6	1.5	1.2	35.0	-	-	1.0
Farm gate price, RUR/ton*	5,000	5,500	4,000	14,000	14,000	1,900	-	-	16,000
Earnings per ha, RUR	19,000	27,500	14,400	22,500	16,800	66,500	-	-	16,000
Net income per ha, RUR	5,000	7,500	1,400	6,500	2,800	29,500	-	-	2,000
Risk profile	Medium	High	Medium	Low	High	High	-	-	Medium

Prices: Typical, disengaging on the current prices, caused by drought conditions

Soybeans 1: in crop rotation with rice on irrigation

Soybeans 2: crop rotation with other crops

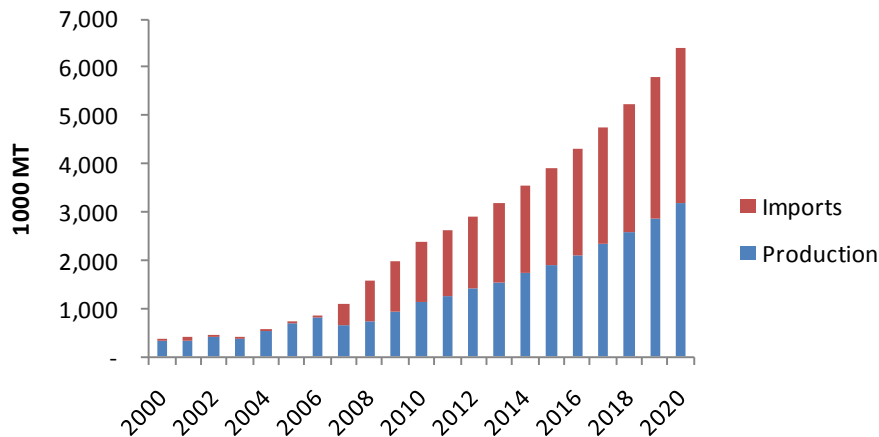
Profitability of soybeans in the Black Sea Region

- In southern Russia, soybeans can be grown in rotation with irrigated rice along with other crops. While in most cases soybeans yield satisfactory earnings per hectare, all the other major crops provide a substantially higher earnings per hectare potential. Consequently, soybeans pose a challenge for incorporation into current and future crop rotation systems.
- The *Central Black Soil* region generates considerably lower profits than the southern region. Although soybeans typically yield lower margins than other crops, planted area dedicated to soybean production continues to expand due to several key factors:
 - Despite low yields, soybeans used as a rotational crop are considered a strong crop predecessor that enriches the soil with nitrogen.
 - Soybeans proved to be very resilient during the drought of 2010. Corn yields suffered from the extreme heat while sunflower seed yields also decreased due to pollen sterilization. While soybeans yields also suffered, they did so to a lesser extent than other crops. In many areas they also produced higher protein levels compared to US and Argentine origin soybeans.
 - Soybeans are increasingly cultivated by vertically integrated poultry and swine operations that use locally produced crops to substitute for both US origin and southern Russian soybeans and soybean meal. These companies use extruded full-fat soybeans to manufacture their own compound feeds for animal protein production.
 - Soybeans have increased in popularity due to their low opportunity cost. Soybeans are also a fungible commodity, especially following the Russian government's recent decision to provide a transportation subsidy for soybeans shipped from the Far East to consumption points in European Russia.

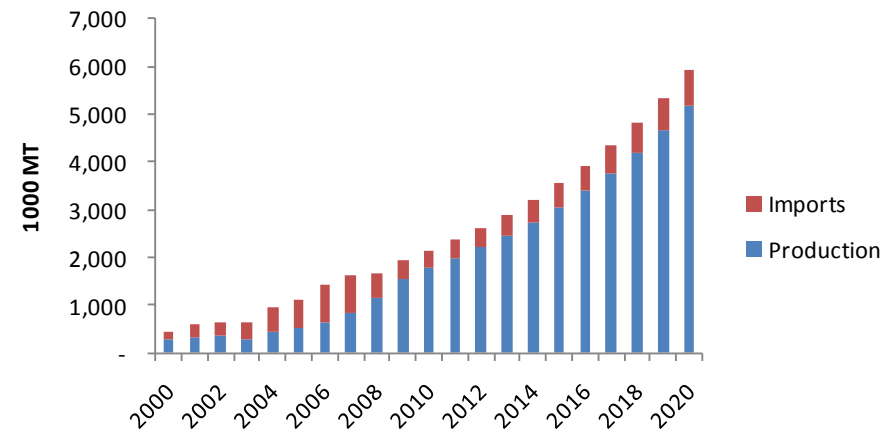
The state of soy processing in Russia

- Russia's food processing industry is growing rapidly and represents one of the most dynamic sectors in its economy. Russian and foreign investors invested more than R125 billion in the industry between 2005 and 2008, two-thirds of which was used to acquire modern equipment in order to increase labor productivity. Meat and edible oil producers made the greatest capital asset improvements. As a result, soybean and other edible oil processors have become much more competitive and have increased their demand for domestic supply.
- The USDA projected a 20% increase in soybean imports over the 1.3 MMT imported in 2010 in order to meet growing demand from domestic livestock and poultry producers. This growth in imports translates into a 3% increase in the domestic oilseed crush of 8.9 MMT. Over the past six years the oilseed crushing industry has grown significantly with a capacity over 10 MMT; given current trends of domestically produced soybeans, excess capacity is likely to be satisfied by increasing soybean and sunflower seed imports. Import forecasts predict the current soybean meal imports to double to 3.9 MMT by 2018.

Soybean Supply Forecast in Russia



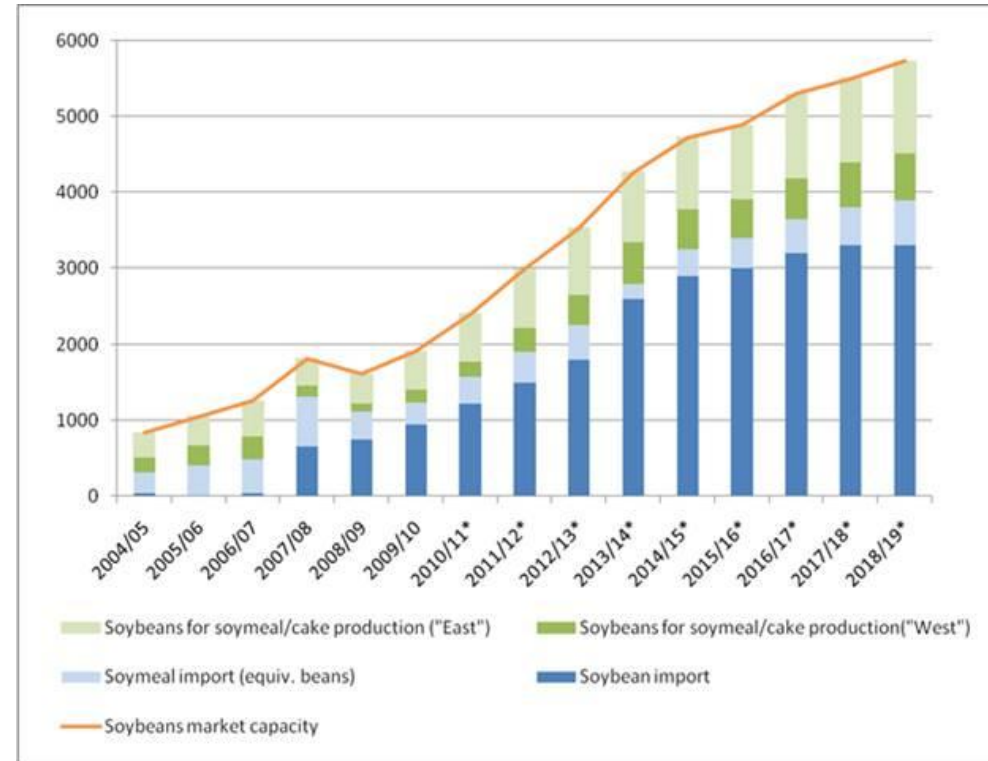
Soybean Meal Supply Forecast in Russia



Implications of increased animal protein production on domestic soybean production

- Since the mid 2000s, Russia has increased its soybean hectareage and production considerably. Despite having a less than ideal climate, demand for soybean meal, cake and full-fat extruded soybeans has incentivized farmers in Russia to continue expanding soybean production.
- Increased demand for soybean meal is driven by the growth in Russia's domestic poultry, swine and dairy cattle industries that receive strong support from the federal and state governments. As these institutions continue to fund livestock and poultry development, demand for feed inputs such as soybean meal is expected to continue increasing.
- Growing domestic demand for feed and import controls on poultry and livestock products are providing growers with an incentive to shift their hectareage to soybeans. While domestic soybean prices are not competitive with other feed inputs, poultry producers are recognizing the high quality characteristics of soybean meal. As the industry continues to vertically integrate, larger scale producers have developed soybean production and processing systems. As the domestic supply of raw materials is not sufficient to meet future demand, the importation of feed inputs is expected to continue .

Domestic Demand for Soybeans and Utilization Patterns (1,000 MT)

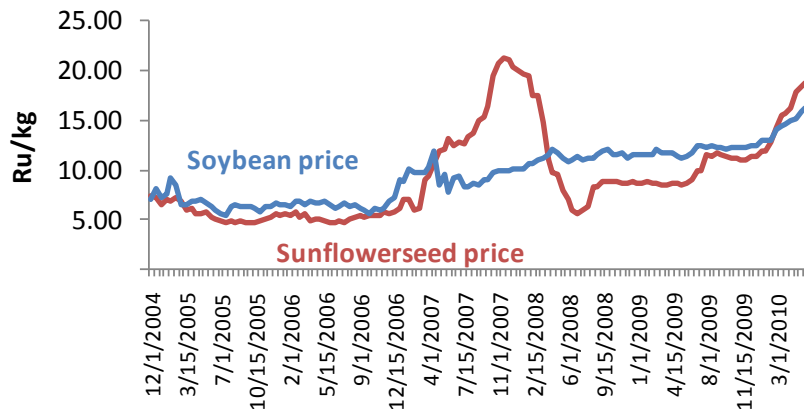


Source: IKAR

Domestic prices for cereals and oilseeds in Russia

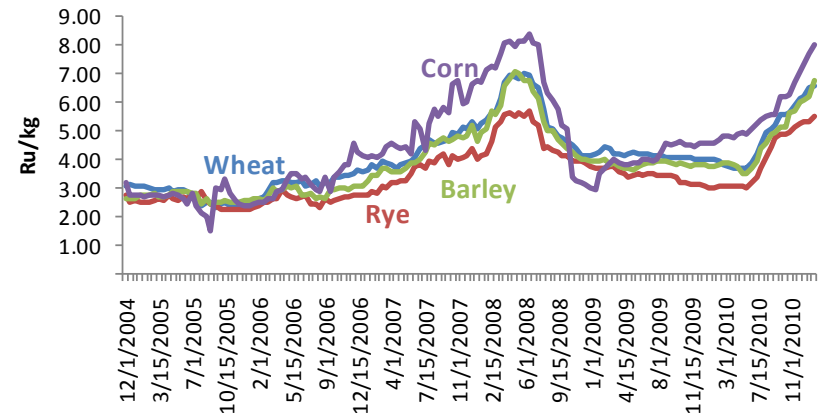
Price levels for major crops and by-products have been increasing steadily over the past five years creating incentives for Russian growers to increase their production.

Sales Price of Oilseeds in Russia



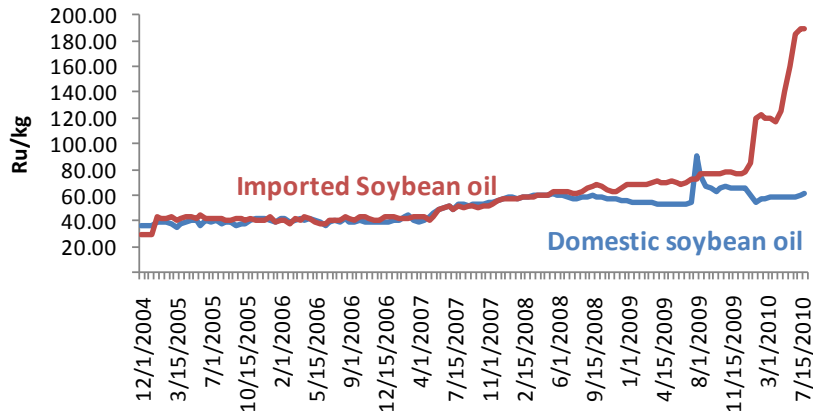
Source: IKAR

Sales Price of Cereals in Russia

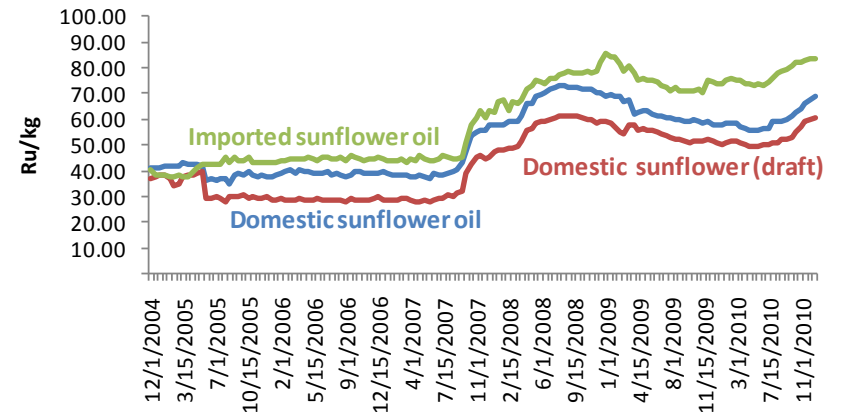


Prices for edible oils in Russia

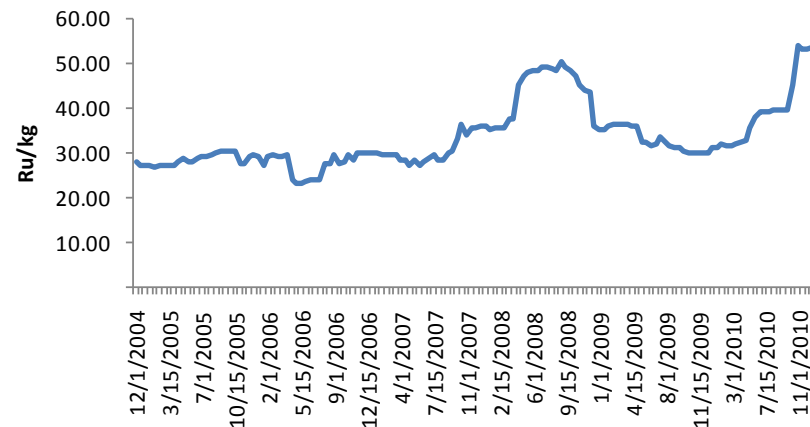
Consumer Price of Soybean Oil in Russia



Consumer Price of Sunflower Oil in Russia



Producer Price of Domestic Soybean Oil in Russia



Source: IKAR

Implications for soybean and soy product trade balance in Russia

- Soybean imports in Russia have increased substantially over the last five years, but the majority of these imports have entered the country through Baltic ports. The Black Sea region is not a major importer due to larger volumes of domestic production.
- The vast majority of these imports have come from Brazil and Paraguay.
- The dynamics for soybean meal in Russia are very different than for soybeans.
 - Historically, Russia has been an extremely large importer of poultry because of lack of domestic supply.
 - However, the government is strongly supporting domestic production of livestock and poultry in an effort to become more self-sufficient in its animal protein production.
 - As a result, imports of animal protein as a percentage of total supply has declined dramatically and there is increased demand for soybean meal as the Russian population continues to shift to an animal protein diet due to higher per capita incomes.
 - The increase in domestic crush is coming almost entirely from the Baltic region. It is very difficult and expensive to transport this soybean meal from the Baltic region to the Black Sea region.
 - As livestock and poultry production continues to grow in the Black Sea region of Russia, the majority of soybean meal used in these regions will be imported from Argentina, Brazil and the U.S.

Opportunities for U.S. soybeans and soy products in Russia

- The opportunity to export soybean meal from the U.S. to Russia is greater than the opportunity for export soybeans.
 - As Sodrugestvo, the primary crusher in Russia, has off-take agreements in place with soybean producers in Brazil and Paraguay, unless a new destination soybean processing facility is developed in the Black Sea region is developed, the opportunity to ship U.S. soybeans will be limited.
- However, the export of soybean meal to Russia represents an attractive opportunity.
 - Domestic soybean meal production levels are far below domestic demand, with the gap likely to increase as GDP per capita continues to increase and consumers increase the amount of animal protein in their diet.
 - At the same time, while Russia's domestic crush capacity has expanded considerably, it is all located primarily in the northern regions of the country whereas the animal protein production expansion is occurring in the Black Sea region.
 - Therefore, it is expected that soybean meal imports into the Black Sea region will increase substantially over the next decade.
 - Currently, Argentina, Germany and the Netherlands are the major importers of soybean meal into Russia with the U.S. being a very small player in this market.
 - However, as sheer demand increases in the region, it is likely that the U.S. can pick up some of this additional demand, especially since crushers in Germany and the Netherlands are shifting from crushing soybeans to rapeseed due to the additional value-add that rapeseed oil offers in biodiesel consumption.

USSEC's role in increasing U.S. soybean meal exports to Russia

- The key questions regarding prospects for U.S. exports of soybean meal to Russia is whether the U.S. can become competitive with Argentina in this market and whether livestock and poultry producers in southern Russia appreciate the value of higher protein content soybean meal vs. buying solely on price.
- One way that the U.S. can become more competitive with Russia in the Black Sea region is to improve agricultural trade relations with Russia.
 - Currently, the U.S. and Argentina have to pay a 5% import duty and 10% VAT tax on all soybean meal imports into the Black Sea region.
 - If the U.S. could negotiate a trade agreement with Russia that would eliminate the 5% import duty it would reduce the cost of U.S. soybean meal in Russia by \$18/MT assuming a price of \$360/MT and make the U.S. extremely competitive in the expanding Black Sea import market.
 - USSEC can play an extremely important role by pushing the U.S. government to improve relations with Russia.
- If no improvements in trade relations can be negotiated with Russia, USSEC should focus its efforts on promoting the value of its higher protein meal to Russian feed millers and integrated poultry and swine producers through conferences and workshops.
 - Russian feed millers and integrated poultry and swine producers currently make their purchasing decisions based on price alone and are not as concerned about quality.
 - They do not consider that a higher protein content soybean meal means that they can reduce the quantities of ingredients require to feed their livestock and poultry production while generating product better results in the end product.
 - USSEC needs to assist these livestock and poultry producers that a higher protein content soybean meal is more beneficial to them in the long run than a lower priced, lower protein content soybean meal through conferences, individual workshops and field studies to increase U.S. soybean meal exports to the Black Sea region.

Assessment of Agricultural Development in Ukraine's Black Sea Region

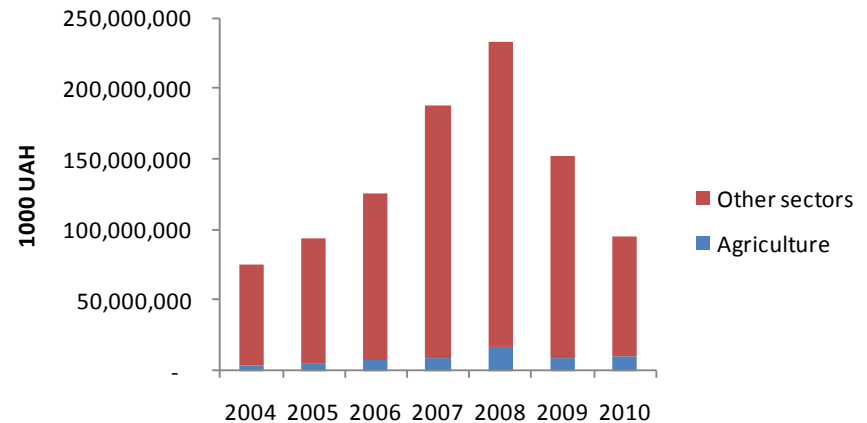
Key agricultural production regions of Ukraine



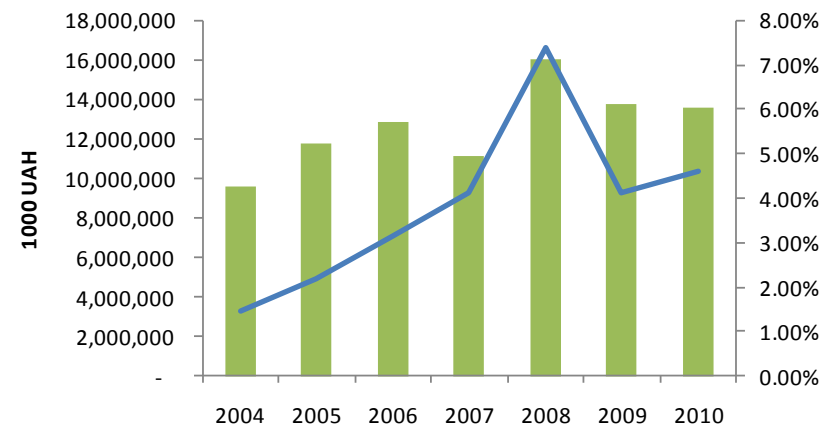
Capital investment in agriculture in Ukraine

- In 2010, capital investments in Ukraine's agricultural sector was 10.37 billion UAH (1.3 billion USD), representing an increase of 11.83% from 2009. While agriculture gained additional share of overall investment in Ukraine, capital investment in the national economy declined by 37.3% during the same period.
- Despite the steady increase in agricultural investments in Ukraine, the sector is still underdeveloped and requires additional capital to expand its asset base. Capital demand from Ukraine's agricultural sector currently exceeds supply, compelling producers to borrow at above market interest rates. As a result of the sector's constrained access to capital markets, Ukraine's agricultural sector currently operates below its production capacity and produces only 22% of its potential output.

Capital Investment in Ukraine



Capital Investment in Agriculture and its Market Share

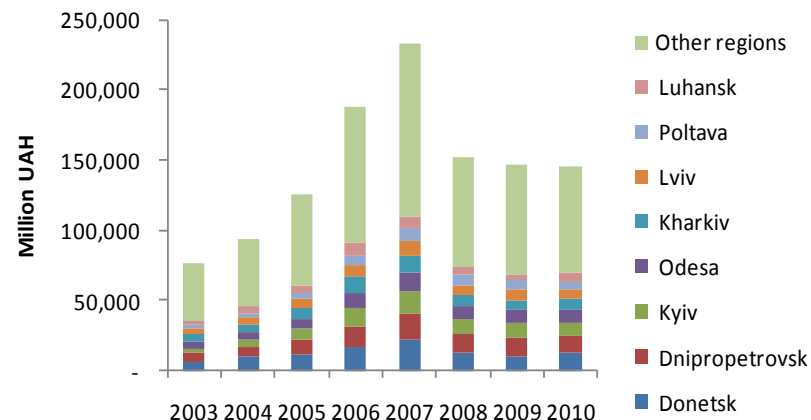


Source: State Statistics Committee of Ukraine, World Bank, IFC, HighQuest analysis

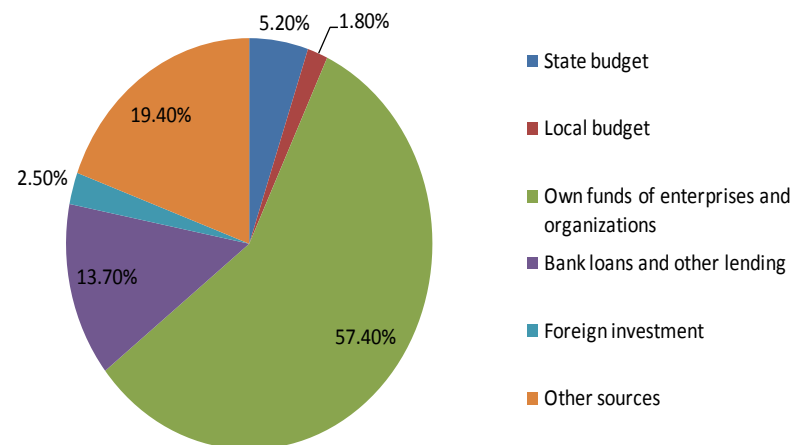
Capital structure of Ukraine's agricultural sector

- Access to equity capital has continued to decline in Ukraine's agricultural sector, resulting in farming becoming more dependent on debt as the main source of external financing. Although the banking sector in Ukraine has played an increasingly important role in providing farms with credit, the capital markets serving the agricultural sector remain underdeveloped. Many banks are undercapitalized, few loan contracts are executed and non-banking financial institutions are lacking. Bureaucratic obstacles and imperfect information about potential borrowers pose major constraints to efficiency in the financial system.
- Agricultural producers in Ukraine are highly dependent on external funds to finance their operations. While the agricultural sector receives 16% of the total bank credit volume, this accounts for only 50% of the credit demand for variable input costs and 2% of long term debt. Input suppliers, processing and leasing companies and credit unions account for the balance. Currently, it is estimated that only 5% of potential investment demand from Ukraine's agricultural sector in Ukraine has been met.

Investment in Fixed Capital by Region



Market Share of Fixed Capital Investments in Ukraine

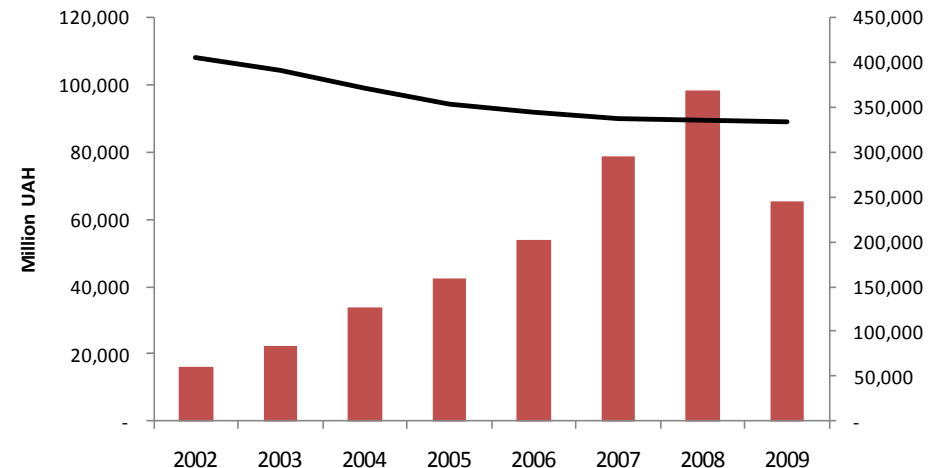


Source: State Statistics Committee of Ukraine, World Bank, HighQuest analysis

Sectors requiring additional investment

- Although capital investment in machinery and equipment has increased, the agricultural sector's fixed asset base has continued to deplete along with its production efficiency. Depreciation of agricultural machinery exceeds investment in replacement machinery by a factor of 10.
- Producers increasingly rely on imports to modernize their facilities rather than purchasing domestically produced machinery and equipment. This is occurring despite the government's efforts to develop domestic agricultural machinery through financial leasing with state-owned UkrAgroLeasing. Growers also tend to prefer imported machinery and equipment due to its superior quality.
- Other structural inefficiencies include public infrastructure, particularly transportation and storage. The physical and transaction costs of storing agricultural commodities in Ukraine are very high due to low levels of private investment in storage facilities and high storage costs in non-privatized storage silos. Public services are also weak such as seaport handling, food safety and quality assurance.

Capital Investment and Inventories of Agricultural Machinery and Equipment

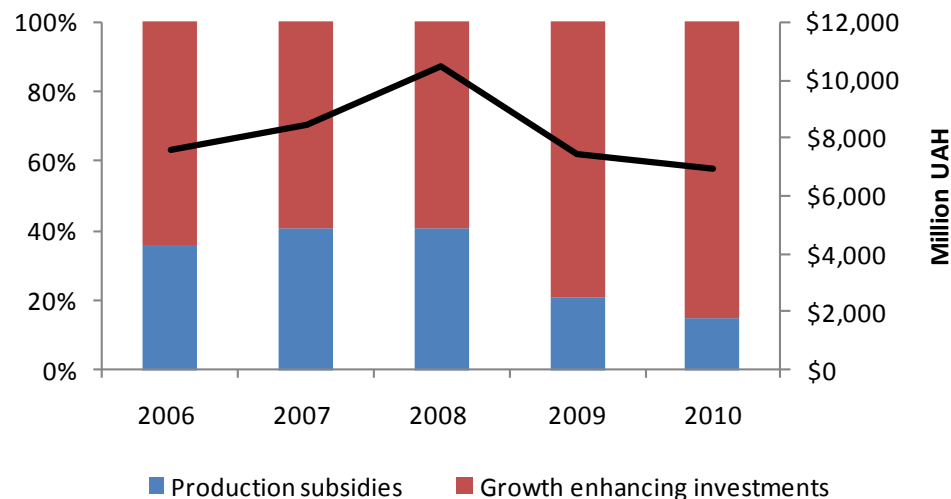


Source: State Statistics Committee of Ukraine, World Bank, HighQuest analysis

Private and public sector participation in Ukraine's agriculture

- Over the last five years, Ukraine's government has decreased its share of spending on production subsidies and increased its funding of growth enhancing measures. Most of the government's budget and tax expenditures are allocated to public infrastructure projects and improvement of public services provided to the private sector. Public investment in road and rail networks and waterways has increased agricultural competitiveness and, consequently, increased private investment along the supply chain.
- Ukraine has depended on the private sector to develop its agricultural sector to a greater extent than in other CIS countries such as Russia. Large scale producers such as Nibulon provide substantial investment to the industry, improving its storage and transportation capacities. Institutional investors from the EU and the European Bank of Reconstruction and Development have provided significant capital to these operations, particularly to pork and poultry operations that offer high returns. Other companies such as MHP and Agromars have also issued millions of dollars in debt to expand their operations and mitigate input price risk through vertical integration.

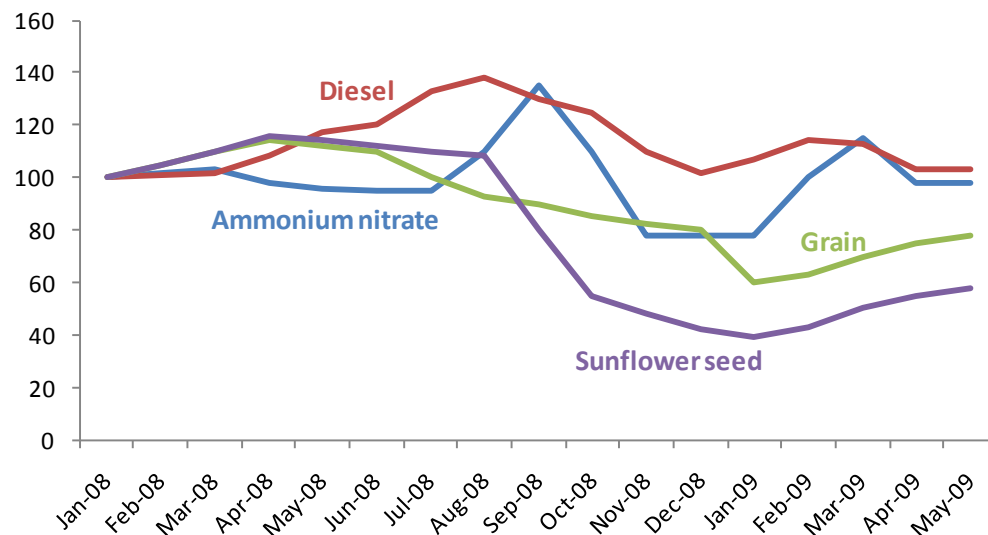
State Budget Expenditures for Agriculture in Ukraine



Effects of the 2008 economic and financial crisis on Ukraine's agriculture

- Credit institutions severely weakened by the financial crisis and a fall in aggregate demand for commodities caused Ukraine's agricultural sector to stagnate. As local banks were unable to acquire the necessary external finance, investment activity in the agricultural sector declined. The volume of loans decreased by 35.3% in 2009 as a result of banks' unwillingness to sign new loan agreements. Ukraine's government responded by attempting to extend loans to farm operations and established the 2.2 UAH billion Stabilization Fund which provided direct support to producers.
- High interest rates also constrained farm profitability as input prices rose and output prices declined which induced farmers to plant less intensive crops and decrease fertilizer use.
- Despite falling agricultural prices in both domestic and international markets, the depreciation of the UAH helped maintain a strong export market. Producers relied on export revenue to stay in business while cutting input costs and considering alternative financing opportunities.

Input and Output Price Index in Ukraine



Source: National Bank of Ukraine, Institute for Economic Research and Policy Consulting, HighQuest Analysis

Consolidation of the agricultural sector

- Vertically integrated agricultural producers have been gaining increasing market share in Ukraine since the mid 1990s. Economies of scale and credit access have incentivized many producers, processors and distributors to merge in an effort to minimize input price fluctuations and enable further expansion of operations.
- Ideal growing conditions, tax incentives, increasing margins generated in crop production and relatively low production costs have attracted many new players to the agricultural market. Many of the large agro-holdings have expanded their operations in the Poltava, Cherkasy and Vinnytsya regions of Ukraine where abundant land and a flexible labor supply exist. While there are currently around 30 large agro-holdings in Ukraine, this number is expected to increase to 50 by the year 2015.
- Consolidation of agricultural production is not evident in every sector of the industry. While the dairy and beef cattle sectors are composed largely of household producers, poultry and swine operations have become much more integrated. One hundred and fifty of the largest operations produce 20% of wheat, 35% of sunflower seed and 70% of rapeseed. Two of the largest poultry producers control 70% of the domestic market's production.

Sources of Financing for Agro Holding Formation

Variables	Significance (%)
Raw material supply for processing	38.9%
Investments of industrial capital	16.7%
Investments of financial capital	11.1%
Foreign investments	11.1%
Own and other investment sources	16.7%
Investments of agricultural production exporters	5.6%

Public policy and its limitations on the agricultural sector

- Since joining the WTO, Ukraine's agricultural sector has been able to develop in a relatively liberal market. Reduced export duties and limited import controls have enabled Ukraine to become a major global agricultural competitor. However, in October 2010 the government issued a grain export quota in October 2010 for wheat, corn, barley, rye and buckwheat (following Russia's lead) in an effort to control grain exports. These quotas, which were lifted in May 2011, benefitted animal protein producers who paid less for inputs at the expense of grain producers who lost the opportunity to generate profits by selling in the international market. Despite the strong harvest season of 2010/11 the federal government has decided to continue applying an export duty tax of 9% - 14%.
- Both the agricultural and the banking systems in Ukraine have structural weaknesses that obstruct potential investment and discourage modernization of the agricultural sector. Farms are exposed to significant market risk, high transaction costs and lack collateral in the form of plant and equipment, while banks operate under inefficient credit registrations, opaque accounting systems and banking law inconsistencies.
- Increased direct investment and a more effective credit rating system could facilitate much more productive allocation of capital to the agricultural sector. Ukraine's government should concentrate most of its funds on public resources that improve research and development, logistics services, transportation infrastructure and education.

VAT tax and its implications

- The Ukrainian government claims that oilseed producers have enjoyed considerable tax benefits such as the ability to retain the 20% VAT and reinvest it back into their operations.
- However, this VAT has not been paid reimbursed to oilseed producers since it was first announced, representing a major setback for oilseed producers and also for potential investors in Ukrainian agriculture.
- The lack of reimbursement of VAT means that oilseed producers (who were counting on receiving the repayment of the VAT) have not had access to a substantial portion of projected revenues which could be used to invest in modernizing their operations.
- At the same time, the lack of reimbursed VAT represents another potential risk for foreign investors considering investing in Ukraine and an example of lack of the central government's control over its own policies.

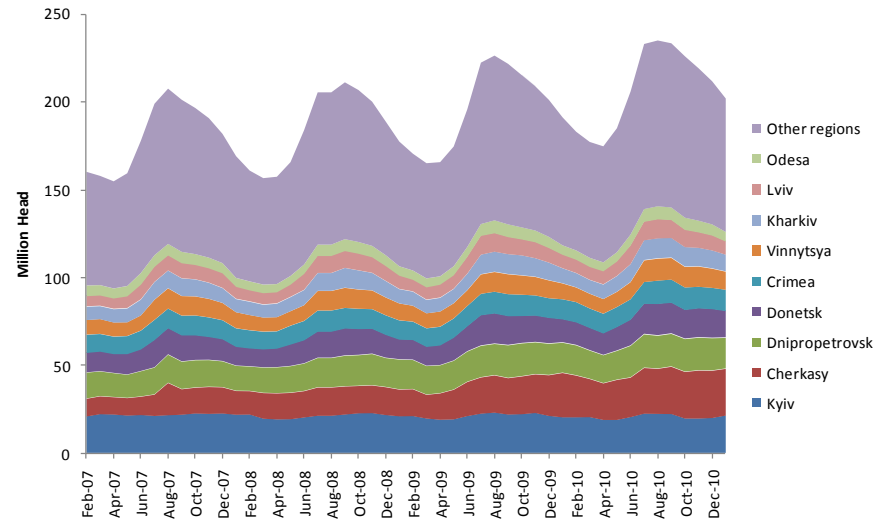
Land reform obstacles

- Foreign ownership of Ukrainian farmland is currently not permitted due to the government's outstanding moratorium on the sale of agricultural property. Consequently, the only way for a foreign investor to enter the market is through a leasing system. Cargill and Chumak are two active players that have secured land rights and obtained permits to run operations in the country.
- The moratorium on sale of land can be lifted if two laws are passed by Parliament; the Land Market Law and the Land Cadastre Law. The Land Market Law governs the functions of the land market in Ukraine that includes its various rules and regulations while the Land Cadastre Law establishes the metes and bounds of the 58 million hectares of registered land in Ukraine.
- The overall effects of lifting the moratorium are unknown. Some experts believe that the taxing structure of the current system is advantageous and outweighs the benefits of lifting the moratorium. This includes land taxes and VAT refunds that could discourage market activity. Not only are taxes expected to increase with this policy change, but short-term fraud and corruption may also increase land acquisition risk. However, the current moratorium has undoubtedly prevented additional foreign capital entering the sector and also prevents farmers from being able to use their land as collateral. This makes borrowing particularly costly. Leasing rather than owning land also increases the risk of expropriation once the investment in land improvement has been made, posing a major concern for many multinational firms considering investing.
- The sector's leading fund managers believe that the parliament will eliminate the moratorium in the short to medium term as many of its members are stakeholders in the agro-holdings. It would be in their best interest to make this policy change, especially before the capital markets become more competitive with the entrance of foreign investment. If the moratorium is lifted in the near future, Ukrainian residents would be given first priority to purchase land before the market is opened up to foreigners.

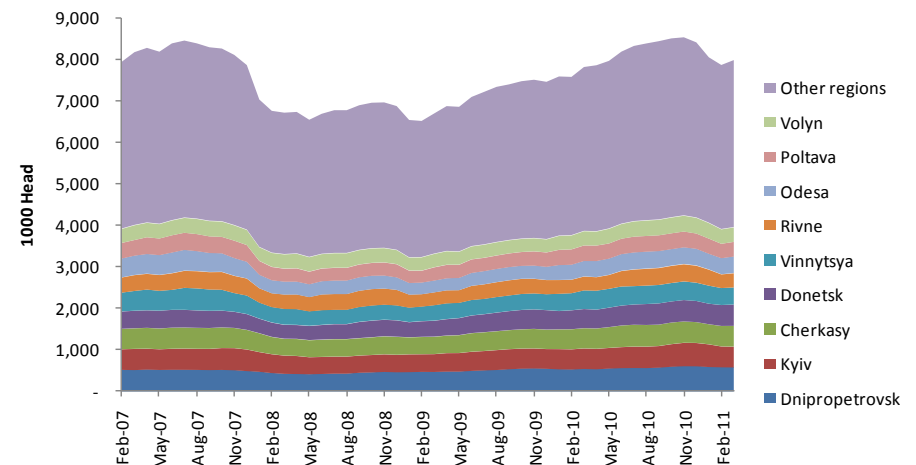
Livestock and poultry demand in Ukraine

- Ukraine's poultry industry has experienced significant growth over the last decade and is expected to continue expanding due to increased aggregate demand and continued government support. Import controls and wealthier consumers have enabled the industry's players to generate larger profit margins. Sustained high domestic prices have also favored producers and reflect relatively inelastic consumer preferences. In addition, growth in poultry exports to destination markets such as Russia, Kazakhstan and Central Asia is expected to continue increasing.
- Ukraine's pork industry is expected to continue growing, but at a slower pace than poultry. Because household farms dominate the pork market, production continues to lag behind consumer demand. However, industrial producers are expected to gain market share over the long-term due to economies of scale and adoption of technological advances. Significant private investment has contributed to the market's growth and development.

Poultry Inventories by Region in Ukraine



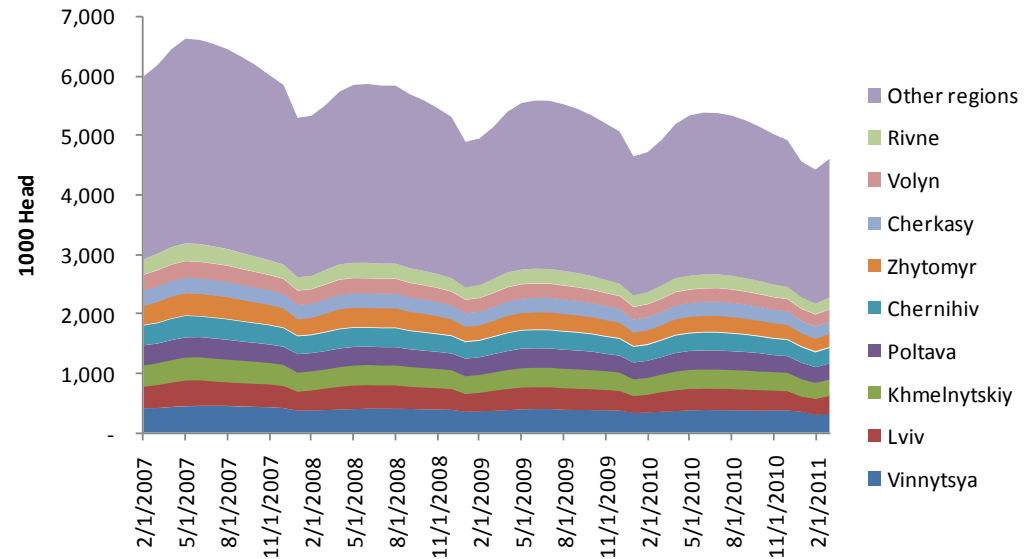
Swine Inventories by Region in Ukraine



Livestock and poultry demand in Ukraine

- Unlike the pork and poultry sectors, beef cattle production and demand has declined as a result of increasing feed prices and industry inefficiencies. Import controls on beef have also caused consumers to shift their preferences to alternative animal proteins. Most of the domestically produced beef is driven by the export market demand from Russia.
- While dairy cattle inventories have also decreased, high milk prices have recently provided an incentive to investors to fund large-scale industrial production. These operations still lack the necessary capital resources and effective management. While price inflation and the recent decline in real disposable incomes have limited domestic demand for dairy, strong demand from Russia has generated substantial revenue.

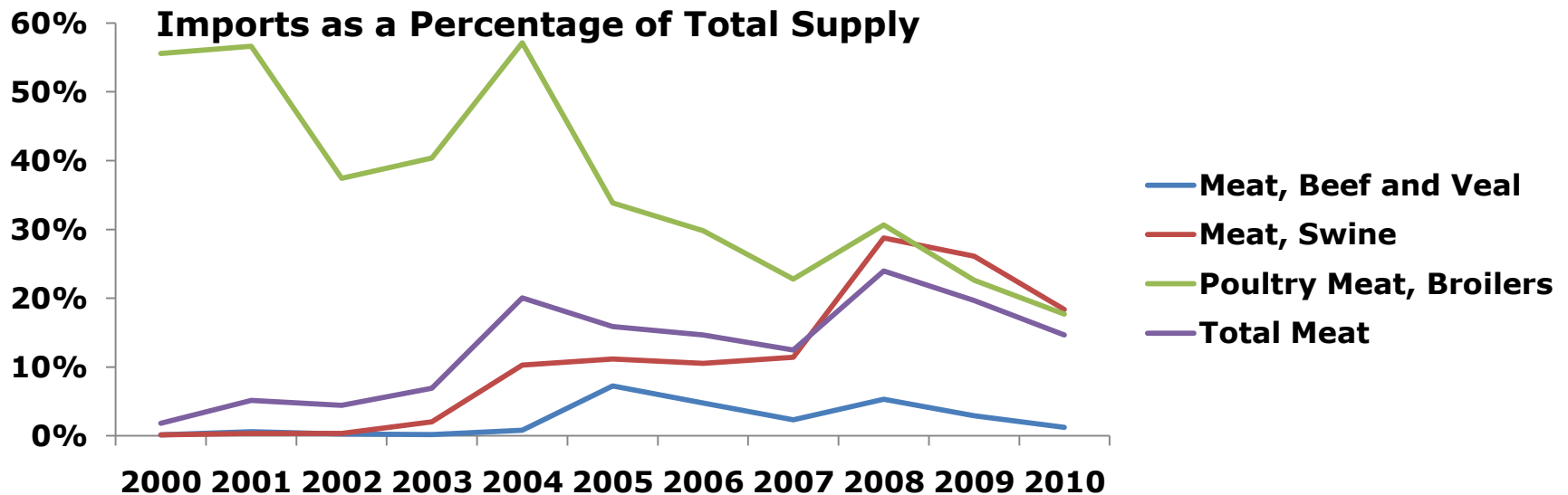
Cattle Inventories by Region in Ukraine



Source: State Committee of Statistics of Ukraine; HighQuest analysis

US opportunity for meat exports to Ukraine

- Historically, imports have represented a very small percentage of the total supply of meat in Ukraine.
- Unlike Russia, Ukraine has the domestic production capacity to meet the majority of its meat demand, resulting in Ukraine not being an opportunity for US meat exports.
- Poultry meat imports as a percentage of total supply have declined from 56% in 2000 to 18% in 2010, beef imports have increased from 0% in 2000 to 1% in 2010, and pork imports have increased from 0% in 2000 to 18% in 2010. Overall, meat imports as a percentage of total supply have increased from 2% in 2000 to 15% in 2010 (still a relatively small number).

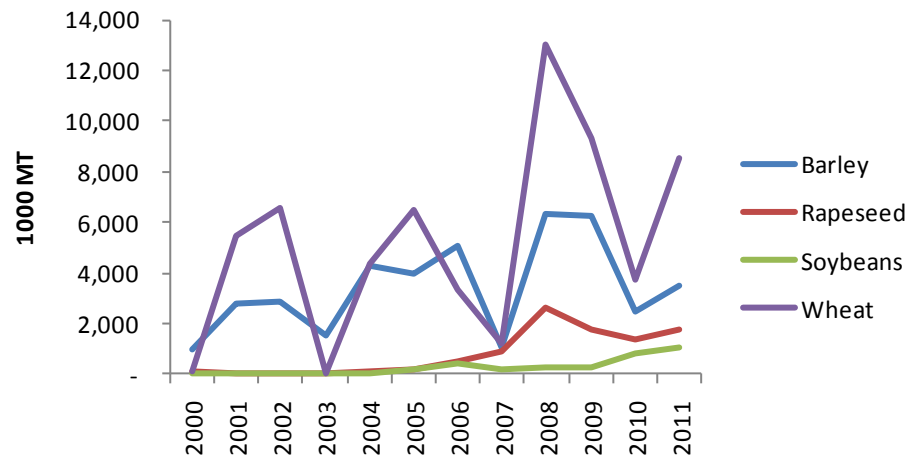


Source: USDA PSD Online

International demand for agricultural commodities

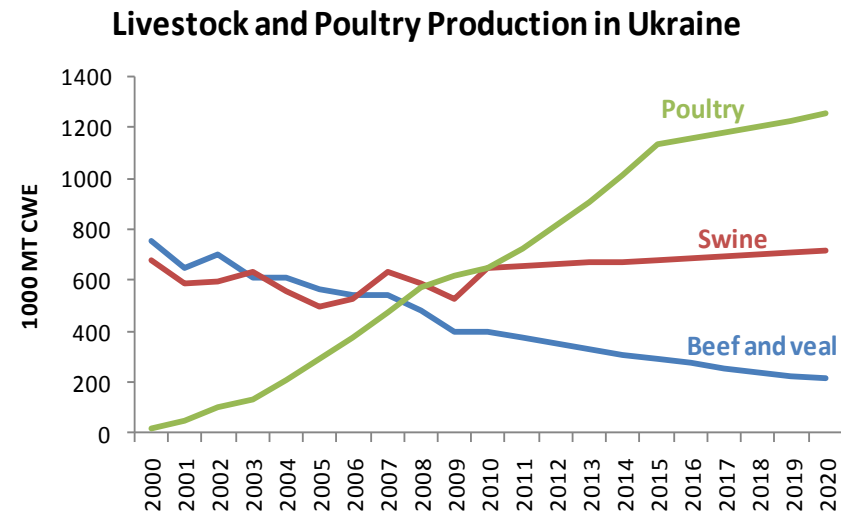
- International demand plays an integral role in the agricultural growth and development of Ukraine. The country maintains a major geographical advantage over other agricultural producers because of its proximity near key demand markets including the EU, North Africa and the Middle East.
- While Egypt is the largest importer of wheat in the world, Morocco and Algeria are also expected to increase their import share to meet growing demand. Saudi Arabia imports the most barley in the world and the EU is the largest user of rapeseed, which is the major feedstock of its biofuels program. These markets provide major opportunities for trade growth in Ukraine over the next decade.

Grain Exports in Ukraine



Implications of domestic livestock and poultry demand

- As the drought of 2010 had a limited impact on agricultural output in Ukraine, domestic livestock producers have been able to depend on a relatively stable supply of feed. To ensure feed availability, the state enterprise Agrarian Fund has also taken measures by controlling exports in order to replenish stocks. Nevertheless, higher feed prices resulting from the adverse weather effects have reduced the profitability of many livestock operations in the short term.
- Growth of the domestic poultry industry is expected to drive feed demand in Ukraine. Many of the large, vertically integrated producers have invested significantly in arable land acquisitions to produce feed crops for internal consumption. High-protein feeds necessary for intensive poultry farming given soybeans an increased importance over other oilseed meals.
- As swine operations continue to consolidate, feed consumption by this sector is expected to increase. Although growing input prices have not resulted in significant change in production, household farming of pork is expected to decline in the long run as profit margins continue to erode for small-scale producers.

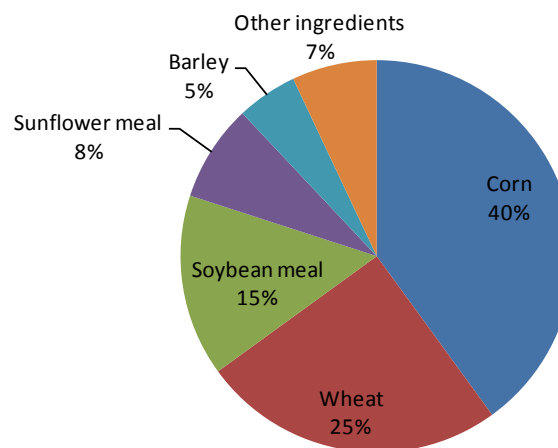


Source: State Committee of Statistics of Ukraine, HighQuest analysis

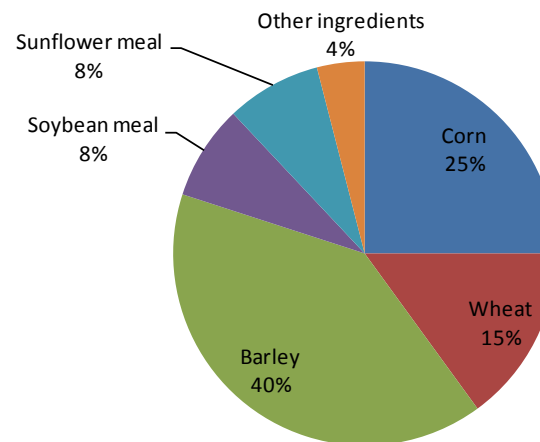
Feed composition of swine and poultry farms

- Compound feed production has been showing an upward trend in recent years. Although production remains below the 1990 level, it is adequate to meet the livestock sector's current needs.
- Highest compound feed output is concentrated in regions where major industrial operations of cattle and poultry are located.
- Compound feed composition is determined by the poultry and livestock producers.
- The growth and development potential of Ukraine's compound feed sector depends on the general condition of Ukraine's livestock and poultry sectors and consumers' purchasing power.
- The preponderance of small-scale household producers continues to pose a constraint to the development of compound feed production in Ukraine.

Composition of Compound Feed for Broilers in Ukraine



Composition of Compound Feed for Swine in Ukraine



Source: IKAR

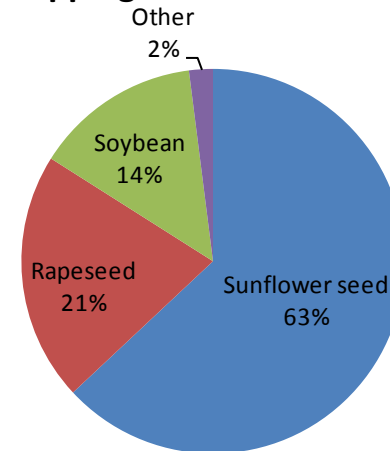
Status of GMO legislation in Ukraine

- Although commercial production of GMO products are not officially allowed in Ukraine, the federal government has temporarily approved the use of GMO-derived soybean meal. This includes Monsanto's Roundup-Ready Soybean. Under current legislation, all food products containing more than 0.9% GMO must be labeled for the end consumer.
- Since becoming a member of the WTO, the government of Ukraine has begun to implement a biotechnology registration and approval system. This includes the construction and certification of GMO testing labs that would enable GMO animal feeds and feed additives to enter the marketplace. In 2009, Ukraine imported an estimated \$60.8 million of food products containing GMO; this represented a substantial decline in trade resulting from the economic crisis and increased pressure to comply with biotech labeling.
- Additional changes in the biotech legislation of GMO products are expected to be implemented in December of 2011 in compliance with WTO rules and regulations. By that time, food testing for GMO content and labeling products accordingly may not be mandatory. On the other hand, two draft laws have been submitted and are currently pending to discourage GMO use altogether. Although it is more likely that these proposals will be abolished, this uncertainty represents a risk factor for the food industry.
- Marketing GMO products in Ukraine is still unfeasible due to the limited number of approved products and the negative public opinion that has emerged from the labeling laws that discourage GMO consumption. Public awareness campaigns have attempted to educate end consumers in an unbiased manner of the biotechnology issue, but surveys indicate that many Ukrainians remain uninformed.

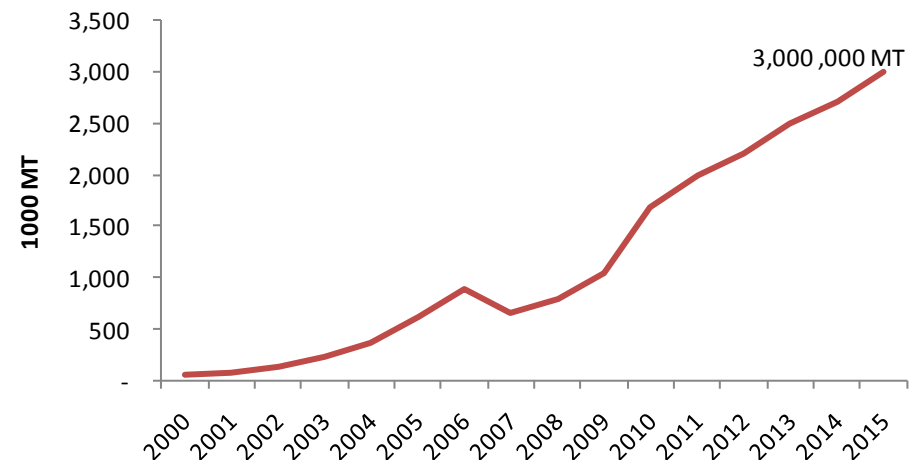
Growth potential of soybeans in Ukraine

- The “soy belt” region in Ukraine, an area with favorable climatic conditions for soybean harvest, produced a total of 1.68 MMT in 2010. While the level of soybean production has varied historically, its increasing profitability is expected to lead to sustained growth over the next decade. Assuming increased industry consolidation and favorable weather conditions, soybean output is projected to reach 3 MMT by 2015.
- Strong domestic demand from livestock and poultry producers for high quality protein feeds provide an incentive to farmers to continue increasing planted acreage as they did in 2010. The 2010 soybean harvest in Ukraine was a record for the domestic soybean market, reaching 1.68 million MT. While soybean meal imports accounted for over 60% of the market before 2005, domestic producers were able to gain 90% of the market share in 2010.

Ukraine Cropping Pattern of Oilseeds in 2010



Production Forecast of Soybeans in Ukraine

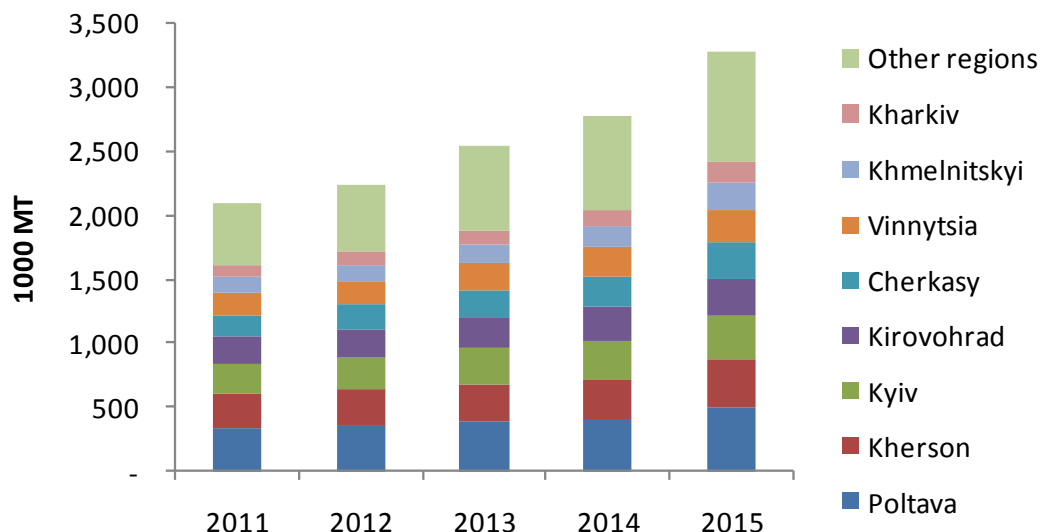


Source: IKAR

Regional assessment of soybean production in Ukraine

- Soybeans are not an widespread oilseed crop in Ukraine; yields have been historically low around 1.5 MT/hectare. However, large scale producers who have access to credit and technical knowledge should be able to increase yields substantially. These include the large publicly-traded agro-holdings that are able to raise foreign capital.
- Regional production of oilseeds is expected to continue to increase over the projection period. Poltava, Kherson and Kyiv, the primary regions of soybean production, are expected to maintain their positions as key soybean production areas.

Production Forecast of Soybeans in Ukraine



Source: IKAR

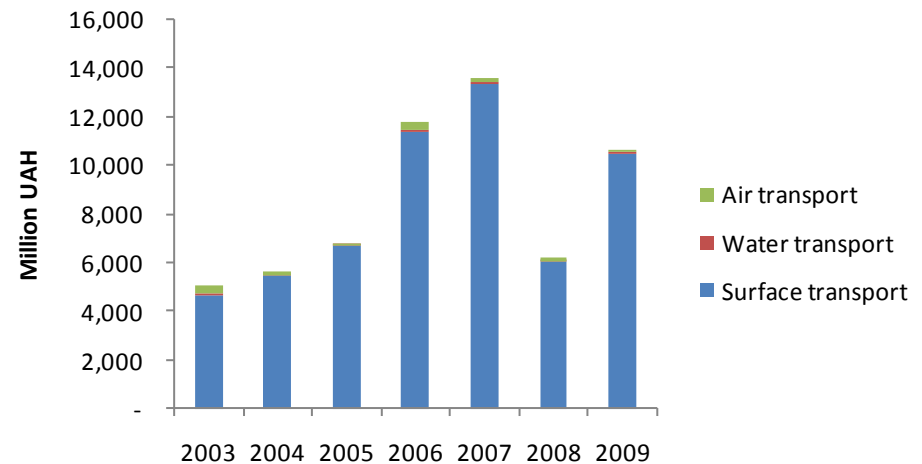
Soybean competitiveness in Ukraine's Black Sea Region

- While the most profitable crops in Ukraine include grapes, sunflower, grains and legumes, domestically produced soybeans have become increasingly competitive due to increased livestock and poultry demand and Ukraine's currency devaluation. Soybeans compete with sunflower seeds, a very profitable oilseed market with a significant domestic crush capacity and strong export demand.
- While most of the demand for soybeans in Ukraine is accounted for by domestic usage, other oilseed crops such as rapeseed are more export-oriented. While rapeseed crush is not as competitive in the domestic market due to its profitability in the EU for biofuels, assuming the EU continues to subsidize its biofuels industry, rapeseed prices are expected to become much more price stable compared to soybeans over the long-term.
- Similar to the soybean price dynamics in Russia, domestic soybean prices in Ukraine are relatively volatile and tend to fall in the beginning of the marketing year while rising at the end of the marketing year. In 2010 Ukraine produced nearly 1.7 MMT of soybeans, only half of which were exported. Growth of soybean production in Ukraine has accelerated in the past 10 years with a CAGR of 30% due to increases in hectareage and improved yields.

Capital investments in the transportation sector of Ukraine

- While the global economic and financial crisis depressed investment in Ukraine's transportation sector, it was able to regain strength as fixed capital grew by 18.4% in 2009. This sector accounted for about 11.3% of Ukraine's GDP. Increased funding to the sector is critical for trade growth and development in terms of both transport infrastructure and improved logistics technologies.
- Financial support of surface transportation infrastructure makes up the majority of fixed capital allocated to the sector. This includes rail and road infrastructure, which is primarily operated and funded by the government. While most port infrastructure is public as well, highway and river transport in Ukraine is fully privatized.

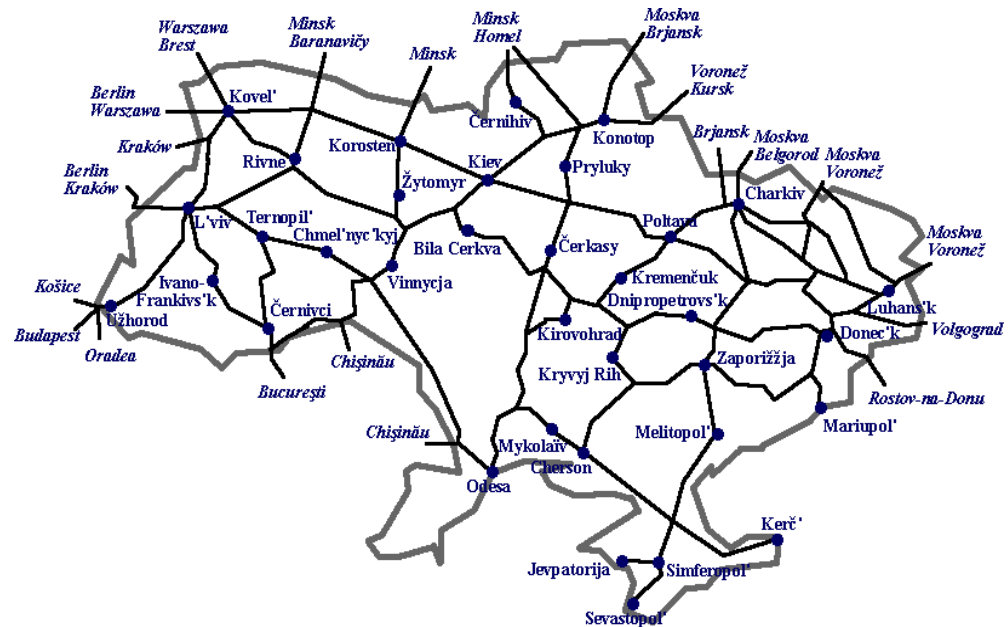
Fixed Capital Investment in Transportation



Railroad transportation in Ukraine

- Although storage and rail transport pose as major constraints in Ukraine's production system, Ukraine's trade infrastructure fares well in the export market compared to other emerging agricultural players. Many farms have access to rail capacity within 70 kilometers of major railroads and elevators. Nevertheless, rail transport is still very costly due to the industry's monopoly, which makes trade less competitive across many sectors.
- Ukraine's state-owned rail system remains underdeveloped and fragmented, but has the potential to become a competitive advantage for agricultural trade in the global market. Railroads are responsible for moving a significant portion of the agricultural sector's cargo.

Rail network of Ukraine



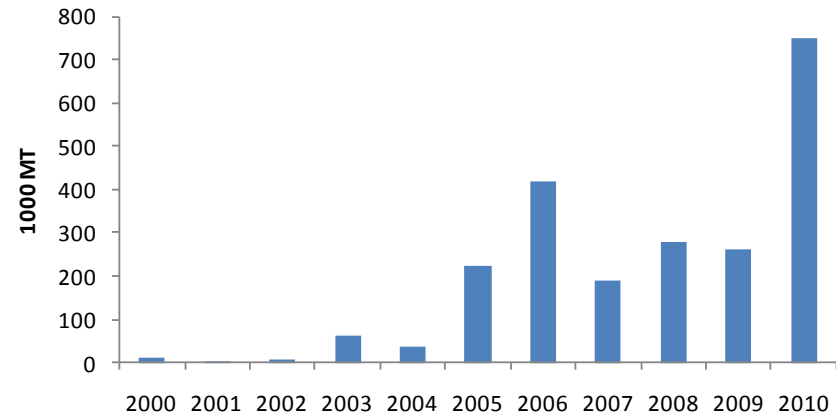
Addressing Ukraine's storage and transport infrastructure limitations

- Transforming the state railroad company into a joint-stock entity would benefit export trade in Ukraine. Markets would be able to distinguish between the rail network's operational and regulatory functions, thereby allowing entrance of both public and private sector participants. With a more transparent and competitive system, the private sector would contribute significant capital to the modernization of the rail system.
- Funding for highway, rail and waterway systems is expected to increase in Ukraine. This is part of an overall effort made to adopt similar directives as the EU, which would drastically improve environmental and economic efficiency of trade. Liberalizing the transport markets to encourage additional inflows of private sector capital would be a critical step towards modernization.

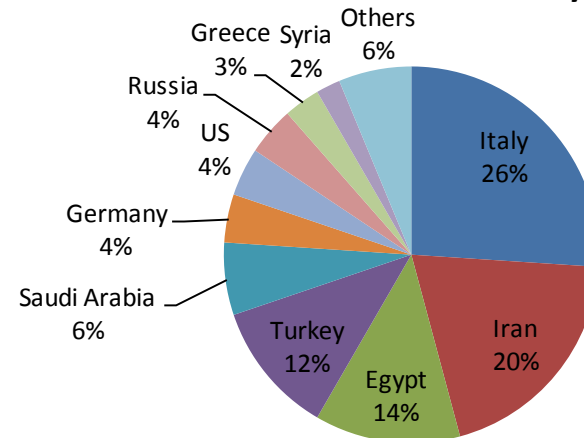
Soybean and soybean meal trade in Ukraine

- Although Ukraine plays a very small role in the global soybean trade, the country's geographic location gives it significant advantages in the export market. While 25% of Ukraine's soybean production has been exported historically, current conditions in the global soybean market could lead to a 50% export share in 2010/11. A favorable soybean harvest in 2011 and imposed export quotas on grain provide an incentive to farmers to shift their acreage to soybeans.
- Major destination markets for Ukraine soybean exports include Italy, Iran and Egypt. In 2010/11 these countries accounted for 25%, 19% and 12% respectively of Ukraine's soybean exports. The Middle East and North Africa in particular have accounted for significant growth in export demand..
- Soybean meal exports have experienced tremendous growth over a short period of time. Ukraine is expected to export at least 6,000 MT in 2010/11, a 259% increase from 2009. Increases in soybean meal production will correspond to an increase in soybean meal exports as well.

Soybean Exports of Ukraine



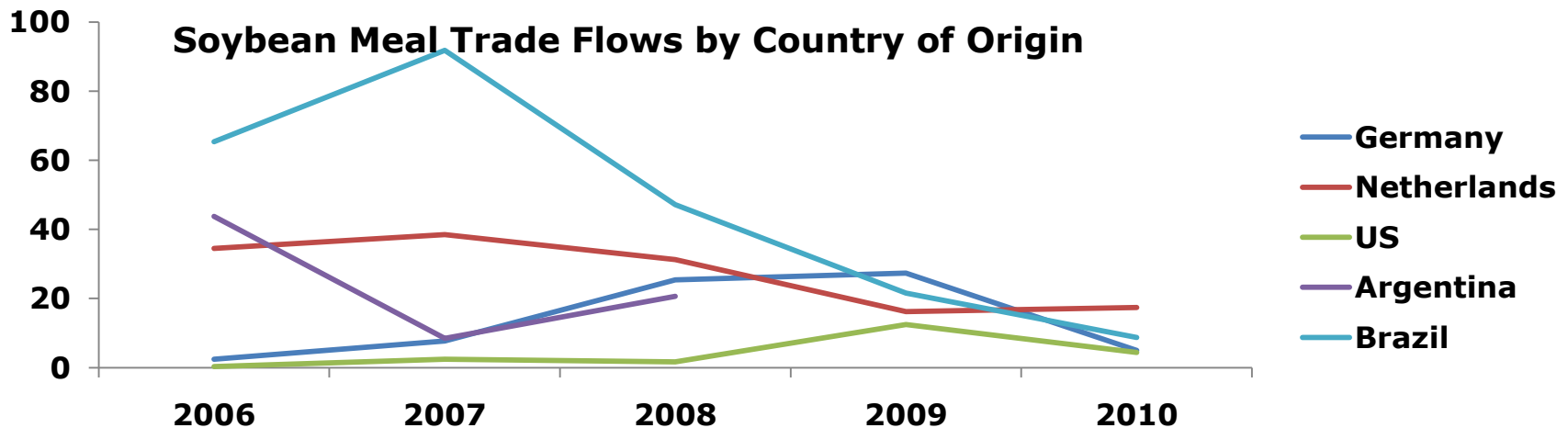
Destination Markets of Ukraine Soybean Exports



Source: IKAR

Soybean meal trade flows in Ukraine by country of origin

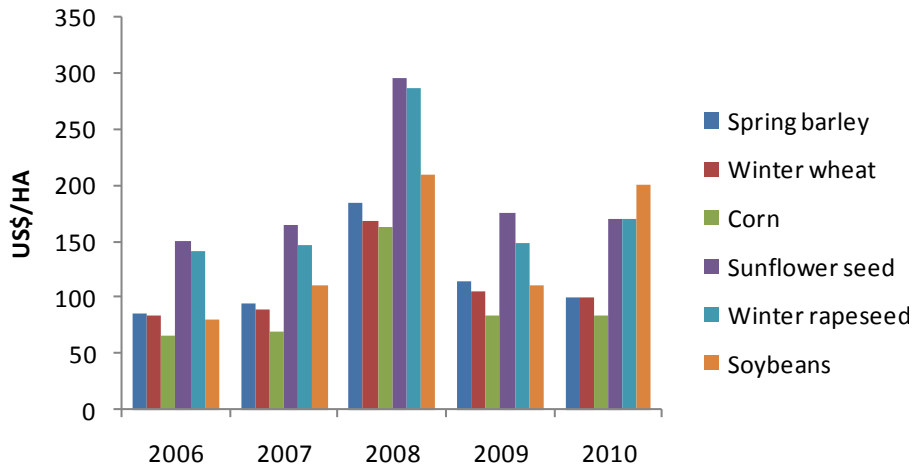
- Over the past five years, imports of soybean meal to Ukraine have declined from 150,000 MT in 2006 to 42,000 MT in 2010.
- During this period, Brazil has shipped the majority of soybean meal imported into Ukraine and its share of total imports has decreased from 41% in 2000 to 21% in 2010. The other primary countries of origin are the Netherlands which has increased from 21% in 2000 to 41% in 2010, Germany (2% to 12%), the US (0% to 12%) and Argentina (27% to 11%)
- In other words, the US is gaining share but in a shrinking market.
- There were virtually no soybean imports entering Ukraine during this time period.



Profitability analysis of soybeans and other crops in Ukraine

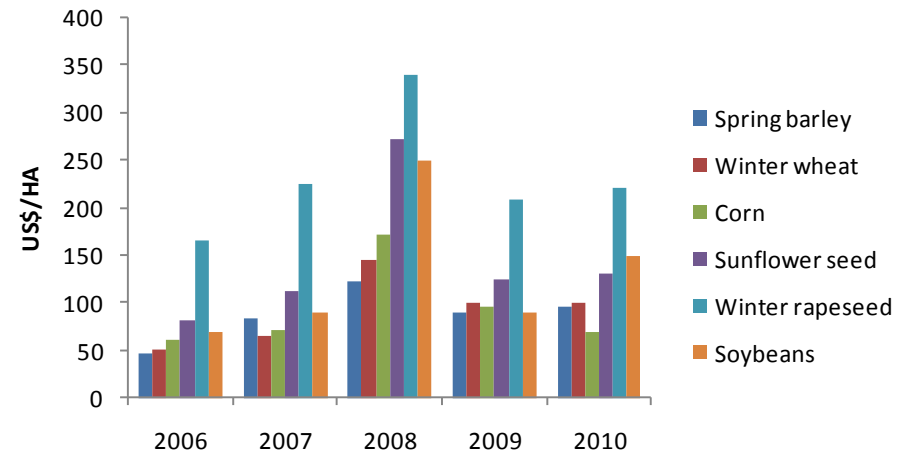
- Agricultural profitability varies by production method and is subdivided into intensive and extensive farming. Profit margins are determined by the difference between prime production costs and the crop's market price.
- Large scale farms in Ukraine practice intensive farming methods using high quality seeds, modern machinery and applying more fertilizers and herbicides. Although these agro-holdings spend more on inputs per unit of crop, they achieve a significantly higher yield than extensive farming producers.

Intensive Farming Production Costs



Source: IKAR

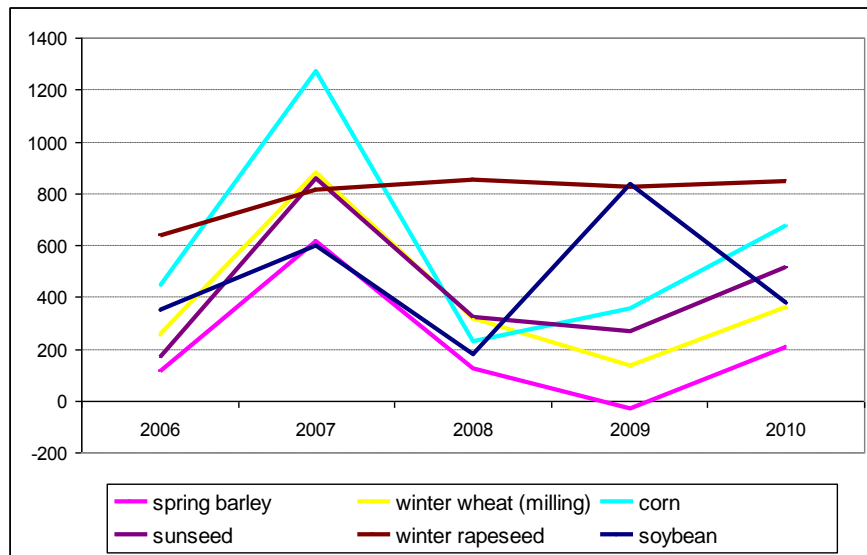
Extensive Farming Production Costs



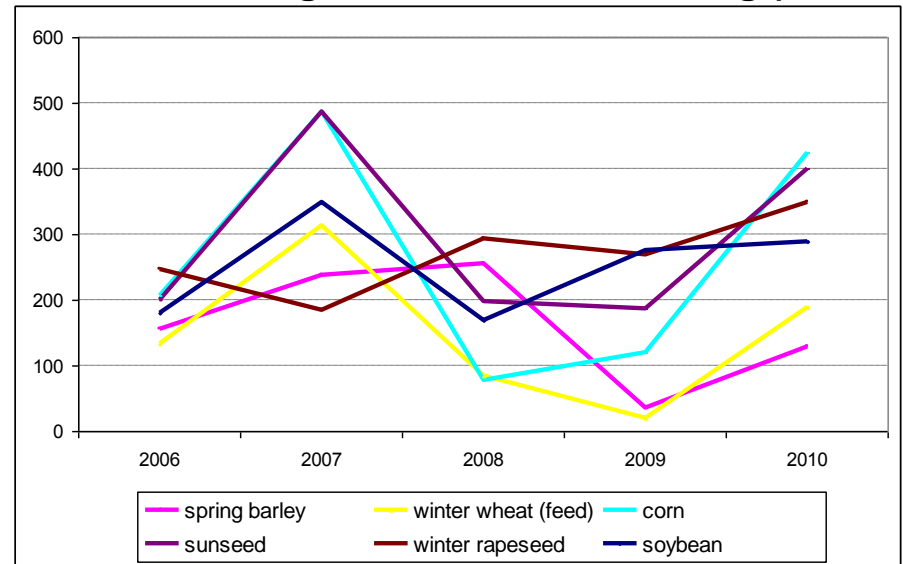
Crop production margins in Ukraine

- Crop size and structure is a function of the previous season's crop margins. A crop that generated small or negative margins in the previous season typically loses the interest of farmers who tend to seek out more efficient crops to grow. Over the past few years, corn and oilseeds have generated the highest returns in Ukraine for both intensive and extensive producers.

Production Margins of Intensive Farming (US\$/HA)



Production Margins of Extensive Farming (US\$/HA)



Source: IKAR

Profitability analysis of soybeans and other crops in Ukraine

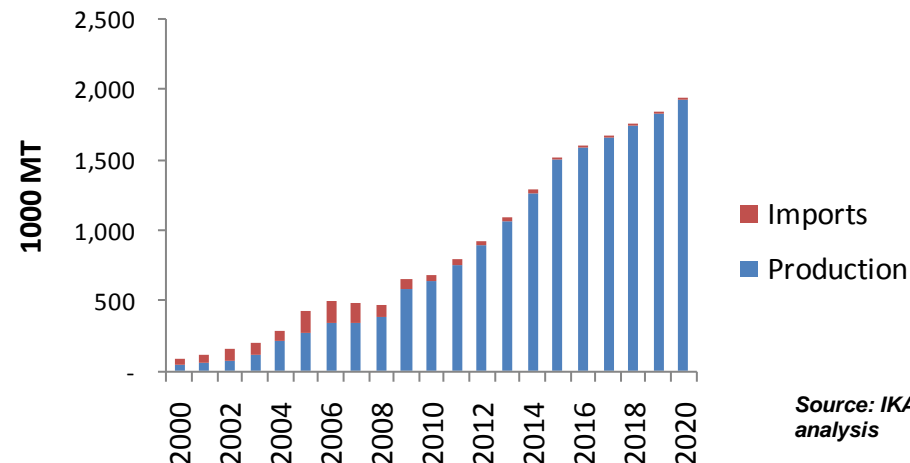
Vinnitsa	Wheat	Corn	Barley	Sunseed	Rapeseed	Soybeans
Full investment cost, \$/ha	758	1,038	533	489	707	542
Yeld, ton/ha	6	8	4	2.2	3.8	2.2
Farm gate price, \$/ton*	265	265	195	640	630	500
Earnings per ha, \$	1,590	2,120	780	1,408	2,394	1,100
Net income per ha, \$	832	1,082	247	919	1,687	558
Risk profile	Medium	Low	Medium	Low	High	Low

- Rapeseed is the most profitable crop grown in Ukraine. However, most of Ukraine's rapeseed crop is a winter crop which is subject to high winter kill risk.
- Corn is the next most profitable crop and is grown during the summer making it less susceptible to harsh conditions except in periods of drought.
- While sunflower seed is also grown during the summer, it is less profitable than corn as a large portion of corn is exported while sunseeds are generally consumed by domestic crushers.
- Wheat, soybeans and barley are less profitable than the other three crops due to internal consumption.

The state of oilseed processing in Ukraine

- The growth of Ukraine's oilseed industry in Ukraine has driven significant expansion of domestic crush capacity. Soybean crush has led the domestic oilseed market with 800,000 MT in 2010, representing an 8% increase from 2009. Despite the recent growth of soybean crush capacity in Ukraine, the number of crush plants capable of extracting soybean oil is limited. Limitations in soybean crush infrastructure also results in many producers preferring sunflower seeds over other oilseeds. While Ukraine continues to import some soybean meal, import volumes continue to decrease as additional modernized processing plants emerge. Over the next five years, Ukraine is expected to eliminate its soybean meal imports completely.
- Poultry production has driven the increase in soybean crush volumes for both meal and cake. While the market was originally made up of small scale processors with capacities of up to 35,000 MT/year, within the past few years, industrial scale producers have emerged. These include Creative Group based in Kirovohrad (315 KMT), Kakhovka Prom-Agro in Nova Kakhovka (250 KMT) and Thegra Ukraine in Vinnytsya (80 KMT). Over 85% of the soybean crush is concentrated in the central regions of Ukraine including Kirovohrad, Kherson, Vinnytsya, Poltava and Kharkiv.

Soybean Meal Supply Forecast in Ukraine



Source: IKAR, USDA, HighQuest analysis

Soybean crush capacities in Ukraine - top processors and production regions

Company	Capacities, KMT per year
Creative Group, JV with Russian CJSC Protein Production	315
CJSC Kakhovka-Prom-Agro	250
CJSC Theeuwes Holding Thegra Ukraine	80
Oil shop of Kyiv Atlantic Ukraine	36
UkrSoya Ag Company	35
Sistema Company	35
LLC Triada KMB	35
LLC Privat Alliance	35
ZernoProdukt private enterprise	35
LLC SelkhozProdukt (Poltava)	35
Agro-Antik (Kharkiv region)	35
LLC Tavriyskaya Perspektiva	15
Total	941

Region	Capacity, KMT/year	Harvest in 2010, 1000 MT
Kirovohrad	315	155
Kherson	265	260
Vinnitsya	80	155
Poltava	70	222
Kharkiv	70	57
Kyiv	36	172
Zaporizhzhia	35	19
Mykolaiv	35	27
Donetsk	35	0.5
Total	941	1067

Implications for soybean and soy product trade balance in Ukraine

- In 2010, Ukraine produced 1.68 million MT of soybeans and crushed 736,000 MT of soybeans. Approximately, 750,000 MT of soybeans were exported, primarily into the North African markets of Egypt, Tunisia and Morocco.
- Ukraine is expected to remain a minor exporter of soybeans into North Africa and the Middle East throughout the projection period as:
 - Consolidation continues to occur leading to improved farming practices and higher yields.
 - Soybean production profitability continues to rise vs. other crops due to the increase in export opportunities resulting in growers shifting their acreage to soybeans from other crops.
 - Growth in the domestic livestock and poultry sectors leads to increased demand for soybean meal and thus increased soybean production.
- While Ukraine is a net importer of soybean meal, the volume of meal imports have declined rapidly over the last five years, despite increased animal protein production, due to increased domestic soybean production and expansion of soy crush capacity.
 - The majority of soybean meal imports in Ukraine come from Brazil and the EU.
 - This is due to the fact that Ukraine is technically a non-GMO market, although GMO restrictions were lifted temporarily this year due to a lack of domestic supply which pushed crop prices higher.
 - The Ukrainian government places export quotas on soybean meal to ensure that the domestic market does not experience significant price increases and supply shortages.

Opportunities to export U.S. soybeans and soy products to Ukraine

- It will be very difficult for U.S. soybean exporters to make headway in Ukraine as the country is a net exporter of soybeans and production is expected to increase throughout the projection period.
- In fact, Ukraine could become a competitor for the U.S. in the expanding Middle Eastern and North African markets due to its lower transportation costs into these markets.
- While the Ukrainian soybean meal import market is also relatively small, there are some opportunities that the U.S. could pursue assuming that the 20% VAT that the Ukrainian government has guaranteed to reimburse processors remains unpaid.
 - Processing capacity has increased substantially over the last three years since the Ukrainian government stated that it intended to allow processors to retain the 20% VAT tax for internal improvements.
 - However, as these reimbursements have not been made, the operating margins that processors have realized are far lower than their expectations.
 - The result has been a significant loss of margins for these processors which have led many to the edge of bankruptcy.
 - Should this trend continue, there is a strong possibility that total soy processing capacity in Ukraine could decline in the near future at the same time that livestock and poultry production continue to increase, resulting in a substantial increase in soybean meal import volumes.

USSEC's role in increasing U.S. soybean meal exports to Ukraine

- USSEC can play a significant role in increasing U.S. soybean meal exports to Ukraine by undertaking promotional and marketing efforts in the event that the domestic soybean processing industry begins to decline due to the unresolved VAT issue.
- Crop profitability is dependent upon being able to export to the international marketplace as domestic prices in Ukraine are maintained artificially low due to imposition of export duty taxes. Therefore, in a perfect world soybean producers would prefer to sell their soybeans to the export market.
- As processors begin to feel squeezed by the delayed reimbursement of VAT payments, there will be opportunities for the U.S. to sell more soybean meal into Ukraine's dynamic poultry and livestock industries. At the same time, the Ukrainian government has shown a willingness to drop GMO restrictions on soybeans and soybean meal in times of supply shortages.
- Therefore, USSEC needs to promote the advantages of GMO soybeans and identify and market U.S.- origin soybean meal to the major feedlots and feed millers in Ukraine in anticipation of a decline in domestic processing capacity.