

Russian Federation



Public-private partnerships
in agribusiness education



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



**European Bank
for Reconstruction and Development**

Russian Federation



Public-private partnerships
in agribusiness education



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



**European Bank
for Reconstruction and Development**

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned. The views expressed in this information product are those of the author(s) and do not necessarily reflect the views of FAO.

All rights reserved. FAO encourages reproduction and dissemination of material in this information product. Non-commercial uses will be authorized free of charge, upon request. Reproduction for resale or other commercial purposes, including educational purposes, may incur fees. Applications for permission to reproduce or disseminate FAO copyright materials, and all queries concerning rights and licences, should be addressed to:

Director
Investment Centre Division
Food and Agriculture Organization of the United Nations (FAO)
Viale delle Terme di Caracalla, 00153 Rome, Italy
or by e-mail to: Investment-Centre@fao.org

TABLE OF CONTENTS

Acknowledgements	v
Acronyms	vi
Executive Summary	vii
1. Overview of the agri-food Sector	1
2. The education gap	3
3. The agri-food education system	4
3.1 Secondary agricultural education	4
3.2 Higher agricultural education.....	4
3.3 Quality of the agricultural education system.....	5
4. Training of in-house and external personnel by agri-food companies	6
5. Russia’s legal framework for public-private partnerships in education	7
6. Directions for public-private partnerships in agribusiness education	8
Annex A: The supply of workers and managers in Russia’s agricultural sector	10
Annex B: Sample survey on the demand for skilled labour in Russian agricultural companies	17
Appendix 1: Study questionnaire.....	24
Appendix 2: List of selected respondents	26
Annex C: Examples of PPPs in the agricultural education system in OECD countries and Russia	27
Appendix 1: Definitions of public-private partnerships.....	32
Appendix 2: Case studies of private initiatives in agricultural education	33

LIST OF FIGURES

Figure 1. Shares and trends of agriculture in GDP and in total employment.	2
Figure A1. Agricultural employment by farm type 1990-2002	11
Figure A2. Graduates of agricultural secondary schools, thousand persons.....	12
Figure A3. Distribution of agricultural universities by Federal okrugs, number of universities	13
Figure A4. Financing of research in agricultural universities, real prices, million RUR	14
Figure B1. Distribution of sampled companies by federal okrugs, number of companies.....	18
Figure B2. Distribution of sampled companies by major production specialization	18
Figure B3. Distribution of answers to the question: In your company, how do the wages of the different kinds of jobs compare to those in non-agricultural companies in your region?	20
Figure B4. Willingness to participate in PPP for education and training by types of workers, percent of those willing to participate in PPP in general	23

LIST OF TABLES

Table 1. Rural employment by sectors of the economy 1999-2008.....	11
Table B1. Employment of external skilled workers.....	19
Table B2. Estimates of labour deficits, number of responses	21

ACKNOWLEDGEMENTS

This report presents the main findings and recommendations of a survey on potential Public-Private Partnerships (PPPs) in the Russian agricultural education and applied research sector, carried out under the cooperation between the European Bank for Reconstruction and Development (EBRD) and the Food and Agriculture Organization of the United Nations (FAO). The survey was conducted under the overall guidance of Eugenia Serova, Senior Advisor to the Director, FAO Investment Centre.

The report includes a main section, written by Michel Debatisse, Agribusiness Policy Advisor, and a series of background papers presented in separate annexes. The background papers include: a note on the Russian agricultural education system, written by Professor Evgeny Koshkin from Moscow's Timiryazev Agricultural Academy; a survey on the demand for qualified workers in Russia's agribusiness sector, led by Dr Renata Yanbykh from the Nikonov Agrarian Institute and Evgeny Borovic; and an overview of selected international PPP experiences in the area of agricultural education, written by Professor Ken Thomson, University of Aberdeen.

The findings and conclusions of the survey were discussed at a workshop held at Moscow's Timiryazev Agricultural Academy on 20 October 2010. The workshop was chaired by Vladimir Bautin, Rector of the Timiryazev Agricultural Academy, and co-chaired by Natasha Khanjenkova, EBRD's Managing Director for Russia, and Eugenia Serova.

The authors of the report would like to sincerely thank all government officials and private sector representatives who kindly accepted to participate in the survey and the Moscow workshop.

ACRONYMS

BSc	Bachelor of Science
CBE	Competence Based Education
CIS	Commonwealth of Independent States
EBRD	European Bank for Reconstruction and Development
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GSIB	The Graduate School of International Business
HSE	Higher School of Economics
IFC	International Finance Corporation
MA	Master of Arts
MBA	Master of Business Administration
MSc	Master of Science
NARK	National Agency for Qualification Development
NGO	Non Governmental Organization
OECD	Organisation for Economic Co-operation and Development
PFI	Private Finance Initiative
PPP	Public Private Partnership
RSPP	Russian Union of Industrialists and Entrepreneurs
RUR	Russian Ruble
UK	United Kingdom
USD	United States Dollars
UN	United Nations
VFM	Value for Money

EXECUTIVE SUMMARY

Over the past decade, Russia's agri-food sector has experienced substantial growth. Agriculture and the food industry represent ten percent of Russia's total GDP. Fifty percent of the total output of the food industry is concentrated in two districts, the Central Federal district (33 percent) and the Privolzhskiy district (17 percent). Grain (wheat) and processed oilseeds (sunflower) make up the largest exports. Nevertheless, Russia remains a net importer of foodstuffs.

New farming ventures, the so-called "agroholdings", have become the main drivers of growth. They use new technologies, favor commercially-oriented strategies and integrate food processing activities. This has resulted in a reduction by one third of the active population employed in agriculture (2.5 million individuals over ten years). Today less than five percent of the Russian GDP is generated by approximately nine percent of the national labour force.

The growth of the sector is hampered by a severe shortage of qualified labour. Young professionals do not seek work in rural areas because wages and living standards are low. As of 2010, the biggest shortage experienced by the agri-food sector was for specialists in animal and crop production, veterinarians and machine operators. Agri-food companies recognize that staff training is a priority and private-public cooperation could provide solutions. It is less costly, attracts better trainers and establishes more relevant programmes.

Since 2003, the Russian Federation has undertaken reforms to harmonize its education system with European ones. This process is not complete and as a result the old and new systems currently coexist. In 2009/10, the number of applicants to agricultural universities fell to 0.94 per open place. Therefore, several universities will have to consider reducing their programmes, merging with others, or closing their operations altogether.

According to the Ministry of Agriculture, in 2008, only 25 percent of university faculty was involved in scientific research.¹ 23 percent of post-graduates are involved in research activities (three percent of the total student body in higher agricultural education).

Several types of PPPs could strengthen on-going efforts by public institutions. Some methods include:

- Improved programmes and knowledge sharing in science and technology, as well as in economics and business administration. Students and industry agree there is a need for greater balance between theory and applied training; and for better education in economics, management, marketing, finance, law, and applied science and technology. Environmentally-friendly techniques (e.g. new agronomic techniques, carbon-dioxide emissions, etc) and subjects related to health and sanitation need to be strengthened;
- Use of agri-food technology by establishing agreements between companies and colleges for equipment use, faculty training in advanced technologies, and investment in new equipment for applied research;
- Providing financial support to: (i) faculty (e.g. research grants, sabbaticals, leaves of absence, participation in international conferences, etc); (ii) students (grants for short-term applied research, internships, etc) and (iii) modernizing selected university and college departments.

¹ The same year, a study by the Russian Higher School of Economics (HSE, Moscow State University) estimates that only 19 percent of the faculty staff of Russian universities is involved in some sort of research.

Possible benefits of PPPs for companies, educational institutions and students include:

- Greater efficiency in optimizing (cost, timing, design) both physical (equipment, buildings, land) and human (number, range of specialties) facilities;
- Alternative or complementary sources of finance to scarce or diminishing public resources;
- “Real-world” experience to academic and theoretical expertise in applied research;
- New (or updated) educational programmes that are more attractive to students and to potential employers;
- Improved (number and quality) enrollment of students and hiring of professionals with greater expertise;
- New programmes (or strengthening of existing ones) for vocational training;
- University staff’s improved understanding of commercial/market developments including the management of market risks;
- Improved recruitment (identification of potential employees during internships, for example);
- Enhanced company reputation.

Possible types of PPPs in agribusiness education are:

- Private finance investment-style PPPs by which a bank and/or company consortium invests capital in college/university buildings and/or equipment (e.g. computers);
- Company endowments to colleges or universities for staffing, posts and other department expenses;
- Financing of studentship and prizes. The internship or “stage” system is an example and/or support for housing and other expenses;
- Contractual arrangements between University departments and companies to finance selected applied research;
- Non-governmental or non-profit organizations college/university engagement with farmers’ clubs/associations, farmers’ cooperatives, or other private-sector trade associations in vocational training, or short-term courses, etc.

Possible small-scale partnerships include:

- Links with local or national agricultural companies or corporations for financial or staffing support, e.g. for conferences, trade material or student visits or stages;
- Promotion of PPPs through non-profit or non-governmental organizations of farmers, food processors, caterers and retailers, consumers, environmentalists, etc; and
- Informal partnerships with farmers and small-scale actors in the agri-food chain (local merchants, property agents, bank officials, sales personnel, auctioneers, etc.).

1. Overview of the agri-food sector

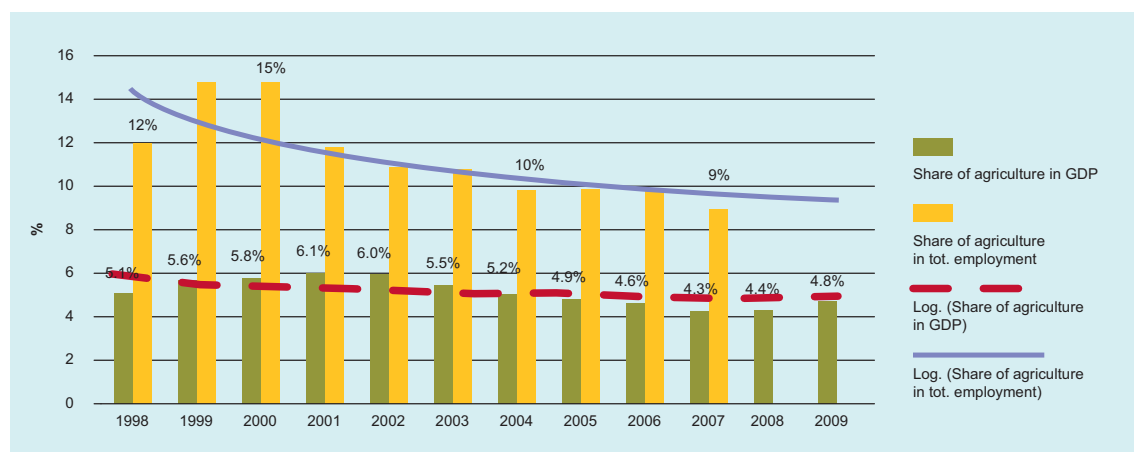
The agri-food sector in post transition years. In the past ten years, Russia's agricultural and food industry sector has experienced substantial growth. An increase in the population's purchasing power and the collapse of the ruble in 1998 contributed to a growing demand for domestic food products and greater competition on the market. The depreciation of the ruble made food imports more expensive and constituted a significant factor in the recovery of the domestic food industry.

Importer of foodstuffs. Grain (wheat) and processed oilseeds (sunflower) are Russia's largest exports. Nonetheless, Russia remains a net importer of foodstuffs. In particular, the meat processing industry is largely dependent upon imported raw material.

Geographic concentration. Fifty percent of the total output of the food industry is concentrated in two districts, the Central Federal district (33 percent) and the Privolzhskiy district (17 percent). These districts produce respectively 22 percent and 27 percent of the total output of the agricultural sector.

Agroholdings: the drivers of the agri-food recovery. High transaction costs along the agri-food supply chain, an underdeveloped market infrastructure and inefficient market institutions led to the development of new agricultural ventures and management structures. Agroholdings are typically much larger than former Soviet farms. These new farming enterprises operate not only on a larger scale, but also under new managerial modes and structures. They call upon new technologies and favor commercially-oriented strategies. They also tend to integrate food processing activities. Over the past decade, these companies have been the main drivers of the recovery of the agri-food sector.

Poor labour productivity in agriculture. Initially (1999-2002), recovery focused on improvements in efficiency. The agri-food sector benefited from better general management and investment in new machinery and equipment. However, today the agricultural sector remains hampered by its poor labour productivity with less than five percent of the Russian GDP generated by approximately nine percent of the national labour force (Figure 1).

Figure 1. Shares and trends of agriculture in GDP and in total employment.


Source: World Development Indicators.

Employment in agriculture. Over the past decade, employment in rural areas has slightly increased (+6.9 percent), reaching 17 million in 2008. However, employment in agriculture decreased rapidly while it remained stable in the industrial sector. The restructuring of the farming sector resulted in a reduction by one third of the active population employed in agriculture (2.5 million individuals over ten years). Between 1990 and 2002, corporate farms lost 4.5 million workers (55 percent of their workforce), of which 2.5 million shifted to small peasant farms and individual plots. In 2008, 1.9 million were employed by large corporate farms, approximately 1 million were in peasant farms and 4.5 million were living of individual household plots.

2. The education gap

Lack of qualified labour. The FAO survey of southern Russia's agribusinesses reveals that the sector remains hampered by its low labour productivity and by a severe lack of qualified labour (specialized managerial skills and applied agricultural research). The supply of young graduates from secondary schools and universities is unlikely to meet the demand of the agri-food sector. According to the Analytical Centre – AFE's 2006 survey of 1,385 students in five regions (Perm, Ivanovo, Astrakhan, Kostroma, Voronezh), only 11 percent of all students expressed their willingness to work in a rural area.² The Ministry of Agriculture estimates that agricultural enterprises need 77,000 graduates with managerial and technical backgrounds. The annual demand for replacement of retirees is estimated at more than 14,000 young professionals. However, recent data from the Ministry of Agriculture reveals that an increasing number of graduates whose education fee was covered by the federal budget found employment in the agri-food sector.

Two major factors influence the lack of skilled labour and experienced managers in Russian agriculture: (i) reluctance of university and secondary school graduates to work in rural areas, due to low wages and poor living conditions;³ and (ii) poor quality of education in agriculture. A 2008 survey of the food processing industry⁴ concurred, listing: (i) low professional skills of staff; (ii) obsolete equipment and technologies; (iii) poor quality management; and (iv) weak marketing and distribution.

² The situation in the Russian Federation is not unique as similar observations have been made over the past 30 years in numerous OECD countries.

³ Poverty in rural areas remains higher than in urban areas and the gap is steadily increasing (low income groups in rural areas increased from 38.9 percent in 2008 to 42 percent in 2009). In 2009, unemployment reached 11.3 percent in rural areas, compared to 7.5 percent in urban areas (respectively 9.6 percent and 5.2 percent in 2008). Housing in rural areas is of much lower quality than in urban areas.

⁴ IFC, Russian agribusiness survey, 2008.

3. The agri-food education system

Harmonization with European university standards. In 2003, the Russian Federation signed the Bologna Declaration⁵ and began a reform process to harmonize its curricula with the European education system. This process has not been completed yet and the old and new systems currently coexist.

3.1. Secondary agricultural education

Restructuring secondary technical agricultural schools⁶. Instruction ranges from two to four years and students are admitted after nine or eleven years of elementary school. Originally under the supervision of the Ministry of Agriculture, 285 schools were transferred to the jurisdiction of regional governments (62) and the Agency for Education (223) under the Reform of 1 January 2005. In 2010, the Agency for Education was dismantled and the schools were put under the jurisdiction of the Ministry of Education and Research of the Russian Federation. The schools placed under the supervision of the Agency for Education include a total of 320,000 hectares of farmland used for training and agricultural production.

The Agency for Education is not regarded as the appropriate governing body to manage agricultural land and to train agricultural specialists. Many representatives of the agribusiness community surveyed for this report indicated that, due to its general education orientation, the agency lacks the necessary background to run farms to train students.

3.2. Higher agricultural education

Agricultural institutions at the university level. 23 specialized universities⁷, 35 educational academies and 1 educational institute make up the Russian Federation's higher agricultural education system. Universities offer a wider spectrum of fields of research, and academies specialize in one area of research only.

Drops in university applicants and students. The higher education institutions are mostly located in agricultural areas. The total number of students and percentage of full-time students (440,000 in 2008, of which 229,000 were full-time⁸) and post-graduate students (9,500) has diminished. In the eastern districts of the Federation, the number of students has dropped significantly in the past 5 years. In 2009/10, the number of applicants to agricultural universities fell to 0.94 per open place. Out of 54 agricultural institutions of higher education, only 34 met the programme number of admission. The drop is due to: (i) a decline in the overall population of the country; and (ii) the fact that jobs in agriculture are unattractive.

5 The Bologna Declaration (June 1999) put in motion a series of reforms needed to make European Higher Education more compatible and comparable, more competitive and more attractive for Europeans and for students and scholars from other continents. The three overarching objectives of the Bologna process have been: introduction of the three cycle system (bachelor/master/doctorate), quality assurance and recognition of qualifications and periods of study. http://ec.europa.eu/education/higher-education/doc1290_en.htm

6 As part of the Bologna process, these technical secondary schools have been renamed "colleges".

7 Among the reforms put in place after the signing of the Bologna Declaration, former "institutes" have been renamed "universities".

8 Part-time students do the correspondence education programmes and/or night programmes.

Restructuring agricultural universities. A decrease in population means a reduction of applicants to universities, including agricultural institutions.⁹ Therefore, universities will have to consider reducing their programmes, merging with others, or closing their operations altogether.¹⁰

3.3. Quality of the agricultural education system

- **Ranking of universities.** Among international rankings, Lomonosov Moscow State University is the only ranked university from the Russian Federation. In 2010, it was ranked 93rd in the Times Higher Education QS rating (29th in natural science); 74th in the 2010 Academic Ranking of World Universities in Natural Sciences and Mathematics; and 228th in the Performance Ranking of Scientific Papers for World Universities. Russian agricultural universities are not listed.
- **Research activities.** The number of published scientific papers is a widely used (although also widely criticized) indicator of a university's stature. According to the Ministry of Agriculture, in 2008, 25 percent of the faculty was involved in scientific research. In the same year, a study by the Russian Higher School of Economics (HSE, Moscow State University) estimated that only 19 percent of the faculty of Russian universities was engaged in research. Only 23 percent of post-graduates were involved in research activities, and 3 percent of the total student body in higher agricultural education.
- **Quality of equipment.** The equipment in Russian universities needs significant modernization. Laboratories and farming equipment in higher education institutions is of poor quality. The State Secretary of Agriculture indicated that 70 percent of the equipment installed in agricultural universities is rundown. Only 4 out of the 59 agricultural universities were able to get investment grants and modernize their equipment as part of the National Priority Projects of 2006-2008¹¹.
- **Quality of applicants.** According to the HSE study, the 3 best agricultural universities of Russia, Timiryazev Academy, the University of Land Engineering (Moscow), and Stavropol Agricultural Academy were ranked respectively 296, 316, and 336 out of 477 Russian universities with regard to the quality of their applicants. The other agrarian universities were at the bottom of the ranking list.¹²
- **Collaboration with foreign partners.** Numerous bilateral agreements with European and US universities (e.g., University of London-Wye college, Humboldt University, Warsaw, Wageningen, Vienna, etc.) have been arranged to address the weaknesses in the curricula and train faculty and students. Internships or stages on foreign farms and agro-processing companies have also been proposed. In 2009/10 collaboration with private companies was initiated to develop standards for nine Bachelor of Science (BSc) and eight Master of Science (MSc) degrees, but the nationwide impact of these efforts is limited.

9 According to an article published by *Novyje Izvestia* (21 June 2010), due to the fall in the birth rate during the 1990s, it is foreseen that in 2010 the number of applicants to all of Russia's universities will be reduced by 1.2 million people, compared to 2009. In 2016, the number of graduates of secondary schools will be less than half the 2005 figure. This may also cause a decrease in the quality of applicants and graduates.

10 The Minister of Education has already announced a programmes of reduction of the number of Russian universities in 2008-2012 [*Russian Gazette*, 2008 - <http://www.rg.ru/2008/11/25/vuzy.html>].

11 The four National Priority Projects were Education, Agriculture, Housing and Health. Project "Education" provided support to 30 universities for a total of RUR 20 billion (more than USD700 million).

12 Russian state universities: quality indices of admission. 2010 Moscow: HSE, 2010

4. Training of in-house and external personnel by agri-food companies

Introduction

This section summarizes the results of the survey (presented in Annex B) on training needs of agri-food companies.

Staff training. Agri-food companies hire personnel from the domestic market and train them:

- 40 (out of 54 surveyed) companies send their staff to external training courses;
- 12 companies provide scholarships for university graduates (27 students in eight universities from 6 districts). In return the students are expected to work in the company for 5 years. 8 companies send their personnel for training abroad (Germany, the Netherlands, Canada, Spain, Turkey, France, Poland, USA, Ireland, Sweden, UK, and Belarus). Trainees spend 3 years working in the company prior to training and are required to work in the company upon return. The cost is covered by the company or shared with the inviting foreign counterparts. In 2009, more than 1000 individuals had been trained by the 54 sampled companies. They were trained in crop production (320) or animal husbandry (206), in mechanization (177), in economics and accounting (158), in legal issues, land engineering, and credit. Training is often offered and financed by input suppliers: farm equipment, food processing technology, farm inputs (seeds, pesticides, etc.). Russian subsidiaries of international companies (e.g. suppliers of farm machinery, equipments, chemicals, seeds) send their own staff to train potential buyers in Russia or invite their personnel abroad to attend training sessions.

Increase in staff training. 20 companies in the survey spend annually RUR 17,000,000 (more than USD 0.5 million, i.e., on average, USD 25,000 per company¹³) on staff training. Spending for training appears to be increasing. Only 3 companies among 22 reported spending less on training in 2009 than the previous year. Oilseed and dairy firms spent the most on training: around RUR 1 million annually per company (USD 30,000). In the livestock sector, companies tend to spend less than RUR 400,000 (USD 12,000) on average.

13 For comparison – a full two-year programme for one student MBA, in Timiryazev Academy, would cost USD 10 to 15,000.

5. Russia's legal framework for public-private partnerships in education

A special Federal Law¹⁴, passed in August 2009, introduced a number of amendments and additions to existing legislation. It authorized state-owned education and research institutions to establish commercial entities to implement the findings of their research activities. Its main objective was to accelerate and streamline the adoption of new technologies and innovations. The state-owned entities involved in research and education had the legal right to establish their own commercial entities and use the profits for certain activities. However, applying the law has proven to be difficult. It contradicts existing legislation, and can lead to taxation problems as there is an absence of appropriate regulation for the taxation and distribution of commercial incomes. In recent years, national universities have established ten “business-parks”, others are in the process of establishing such parks.

14 N° 217-FZ from 2 /08/2009

6. Ways forward for public-private partnerships in agribusiness education

Willingness for private-public cooperation. 50 percent of the surveyed enterprises (26 out of 54) are willing to participate in private-public cooperation to enhance the quality of their employees. 68 percent of senior managers expressed their support to such partnerships.

Possible areas for collaboration between the agricultural education system and the private sector include:

- **Improved programmes and knowledge sharing.** Students and industry officials agree there is a need for greater balance between theory and applied training; and better education in economics, management, marketing, finance, law, and applied science and technology. Environmentally-friendly techniques (e.g. new agronomic techniques, carbon-dioxide emissions, etc), and subjects related to health and sanitation need to be strengthened;
- **Agri-food technology.** Establish agreements between companies and colleges for equipment use and faculty training in advanced technologies; and investment in new equipment for applied research;
- **Financial support.** The private sector should consider providing financial support for: (i) faculty (e.g. research grants, sabbaticals, leaves of absence, participation in international conferences, etc); (ii) students (grants for short-term applied research, internships, etc.) and (iii) modernizing selected university and college departments.

Possible benefits of PPP:

There are arguments for considering PPPs in education for both agribusiness companies and academic institutions. PPPs may offer benefits including:

To companies:

- Technology linked to research findings (agronomic, animal husbandry, food processing, management of quality, logistics);
- Improved recruitment (identification of potential employees during internships, for example);
- Enhanced company reputation demonstrates its wider contribution to the sector and/or the community.

To academic institutions:

- New (or updated) educational programmes that are more attractive to students and potential employers;
- Improved (number and quality) enrollment of students and recruitment of professionals with greater expertise;
- New programmes (or strengthening of existing ones) for vocational training; greater efficiency in providing the necessary facilities (physical or human) in terms of cost, timing, design, etc.;
- University staff's improved understanding of commercial/market developments including the management of market risks;
- Substitution for or additions to funding from scarce or diminishing public sources;

- “Real-world” experience and expertise: linking theory to practice, widening the educational programme.

To students:

- More relevant course material;
- Financial support;
- Links to potential employers;
- “Real-world” experience and expertise: linking theory to practice, widening the educational programmes.

Addressing Russia’s regional economic gaps. PPPs provide an opportunity for the Russian government to address the economic gap between western Russia and the eastern part of the country. The establishment of scientific research hubs, promotion of educational opportunities in lagging regions and cooperation between private sector and universities in selected subsectors (agriculture, forestry and fisheries) could help reduce the growing economic gap.

Possible types of PPPs¹⁵:

- Private Finance Initiative (PFI) style PPPs by which a bank-company consortium provides capital investment in college/university buildings or perhaps equipment (e.g. computers), often with subsequent servicing contracts.
- Company endowments¹⁶ (financial grants) to colleges or (more usually) universities for the staffing and perhaps other expenses of departments, institutes or teaching posts (e.g. chairs) in a specific field where the company hopes for better educated students and “knowledge transfer.”
- Student activities such as practical case studies or courses, or the financing of studentships, prizes and sponsorships (e.g. “sandwich” periods or internships); these may include farms (family or corporate) or associated businesses such as ‘upstream’ input/service supply companies or ‘downstream’ product processing companies;
- College/university involvement with non-profit or non-governmental organizations, such as farmer clubs or other private-sector trade associations for training and educational purposes.

In Russia, the general public, as well as politicians, may not favor close links between the public and private sectors, in education or in other areas. Therefore, information regarding the potential benefits of PPPs in education needs to be shared more widely.

Small-scale PPPs. Another approach may be to avoid the “PPP” label, and seek informal links with farmers, farm cooperatives, agri-food enterprises and other businesses.

15 For a description of PPPs in the general education sector, see Patrinos, H. A., Barrera-Osorio, F. and Guáqueta, J. (2009) *The Role and Impact of Public-Private Partnerships in Education*. Washington DC: World Bank. Available under “Documents and Reports” at www.worldbank.org.

16 A financial endowment is a transfer of money or property donated to an institution. The total value of an institution’s investments is often referred to as the institution’s endowment and is typically organized as a public charity, private foundation, or trust. The most common examples are endowed professorships (also known as named chairs), and endowed scholarships or fellowships.

ANNEX A

The supply of workers and managers in Russia's agricultural sector

Two major factors influence the lack of skilled labour and managers in the Russian agricultural sector:

- (i) reluctance of university and secondary school graduates to work in rural areas; and
- (ii) poor quality of education in agriculture.

1. Overview

Fluctuations in rural population. Russia's current rural population makes up 27 percent of the population. Fluctuations in the rural population have been due to: (i) immigrants from countries of the former Soviet Union settling in rural areas; (ii) migration of the urban population to the countryside in the early post-Soviet era; and (iii) changes in statistical methodology ('rural area' was re-defined several times during the last 20 years).

Life expectancy. Life expectancy of the rural population is lower than that of the urban population and the gap between rural and urban continues to widen.

Rural population workforce. In 2002 the working age population made up 22.5 percent of the total rural population. This number diminished to 21.4 percent in 2008¹. The unemployment rate in rural areas was 9.6 percent in 2008 and increased to 11.3 percent in 2009 compared to 5.2 percent in 2008 and 7.5 percent in 2009 in the urban sector².

Below average wages. Agricultural wages remain below average and one of the lowest among professional groups.

Poverty of rural poor increasing. The number of rural poor is increasing. In 2005, low-income groups made up 38.9 percent of the rural population. This increased to 42 percent in 2008. In 2008, the risk of poverty was 1.5 times higher for the rural population than for non-rural Russians.³

Low living standards. Living standards are also low in rural areas and lag behind those in urban areas. Nearly 90 percent of urban houses have sewage, running water and heating. Whereas in rural housing, less than 50 percent have access to sewage and running water, while just over 50 percent have heating. (Rosstat 2009)

1.1. Employment

Non-farm rural economy. The rural population employed in agricultural activities has decreased sharply from 46 percent to 28 percent. Industry and services has absorbed labour. (Table 1.) A particularly sharp increase was observed in retail and private personal services, which grew from 8 percent to 14 percent of rural employment between 1999 and 2003.

1 Rosstat, 2009.

2 *ibid.*

3 Rosstat, 2009.

In 1990, agricultural enterprises (i.e. traditional collective and state farms) were the dominant agricultural employers. Between 1990 and 2002, farm enterprises (the corporate farms that succeeded the former *kolkhozes* and *sovkhazes*) lost 55 percent of their 1990 workforce. More than half the workers left the corporate farms and shifted to the individual sector – household plots and peasant farms combined. In 2002 individual employment matched that of corporate farms, with each sector employing 3.8-3.9 million people. (Figure A1.)

In 2008, large corporate farms employed around 1.9 million people, peasant (family) farms around 1 million people and households with with employed agricultural activities- 4.5 million people.⁴ Despite its growth, the individual sector did not absorb the entire labour force leaving the farm enterprises. Two million people appear to have left agriculture altogether. They may have moved to other non-agricultural occupations or become inactive.

Educational background of managers and professionals. Today there are 300,000 agricultural entities of various legal statuses ranging from enterprises to individual farms. The majority of the senior managers and professionals (i.e. agronomists, veterinarians, engineers, book keepers) have either a university-level or a specialized technical education background. Less than 60 percent of agricultural enterprises have graduate-level economists and managers, and only 20 percent of them have marketing experts⁵.

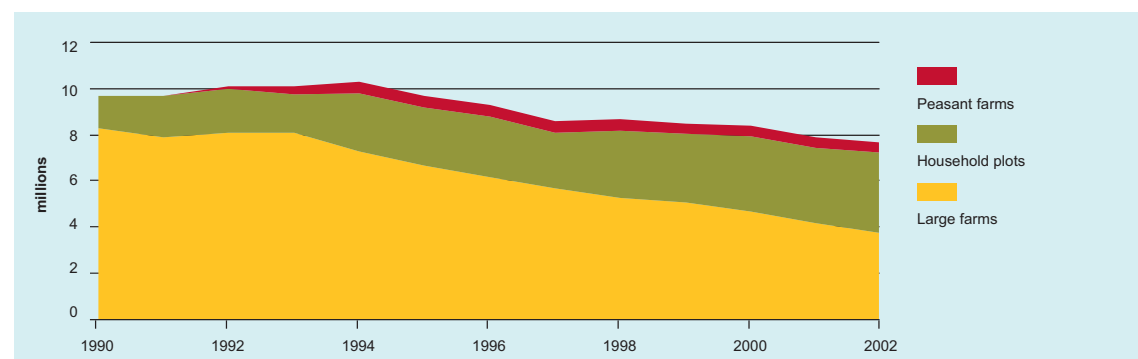
Table 1. Rural employment by sectors of the economy, 1999-2008

	1999	2003	2008*	2008/2003, percent
Total rural employed, millions	15.9	15.6	17.0	107.0
Total rural employed, percent	100.0	100.0	100.0	100.0
Agriculture, percent	45.8	36.5	28.3	61.7
Industrial sectors, percent	19.9	22.2	22.8	114.6
Others, percent	34.3	41.3	48.9	142.6

* - Rosstat, 2008

Source: Bogdanovskii (2007)

Figure A1. Agricultural employment by farm type, 1990-2002



Source: Bogdanovskii (2007)

4 Rosstat data, 2008.

5 Expert Group on Agriculture and Fishery at the Chairman of Council of the Federation, 2009.

2. The agricultural education system in Russia

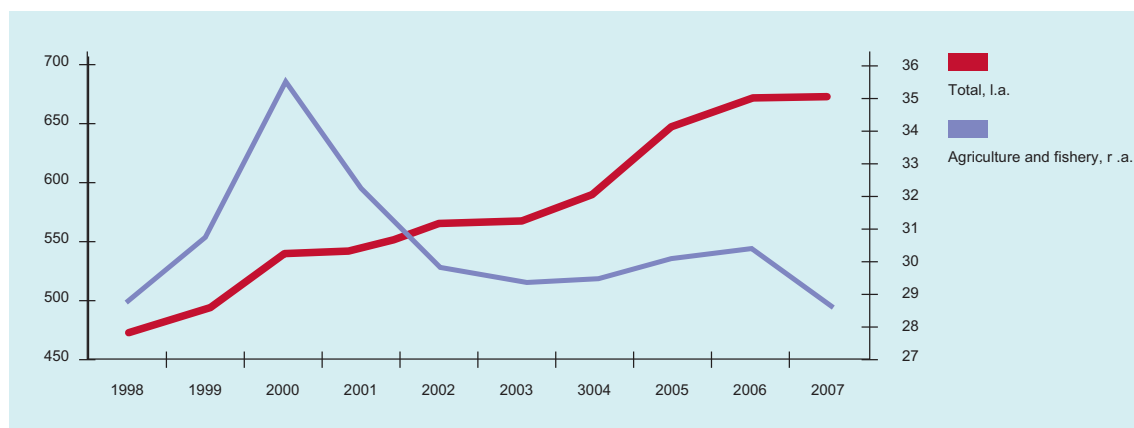
For the purpose of this study, agricultural education is defined as acquiring knowledge and skills in all aspects of agriculture through formal instruction. This includes crop and livestock agronomy, veterinary, agricultural engineering, food processing, farm or food business management, farm product (and input) marketing, and agricultural economics.

2.1. Technical secondary education in agriculture

Technical secondary agricultural schools are specialized schools that provide a professional education. Instruction ranges from 2 to 4 years and students are admitted after 9 or 11 years of elementary school. There are 205 agricultural secondary schools under the jurisdiction of the Agency for Education.⁶ Seventy of these schools include training farms. There are 320,000 hectares of farm land available both for training and agricultural production.

The number of graduates from technical secondary agricultural schools is declining from year to year (Figure A2.) Many do not end up working in agriculture.

Figure A2. Graduates of agricultural secondary schools, thousand persons*



Source: *Monitoring of personnel in agricultural organizations (2002-2008)*

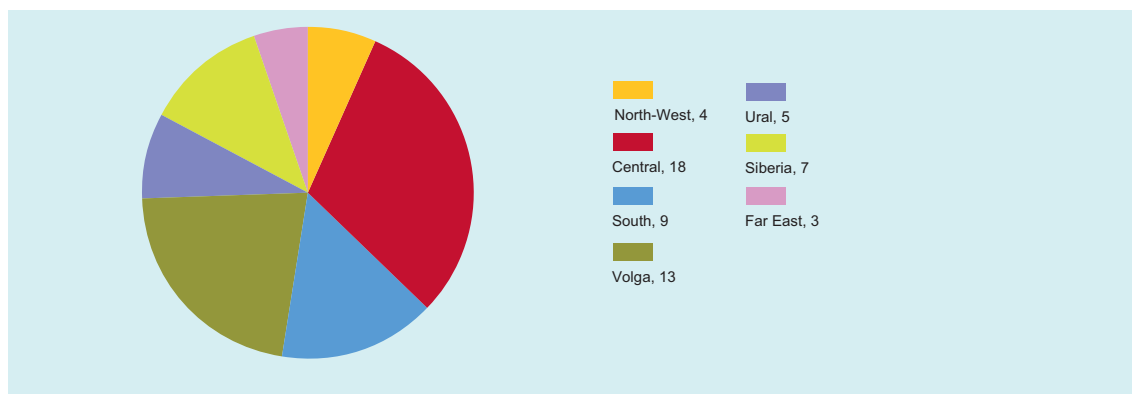
2.2. Higher education in agriculture

In 2007 there were 660 state-run higher education institutions in Russia. 59 of those were agricultural (8.9 percent of total). In 2008 the total number of agricultural students was 440,000: 229,000 were full-time students and 9,500 were post-graduate students. Among the 59 agricultural institutions there are 23 universities, 35 educational academies, and one educational institute. They all fall under the direction of the Ministry of Agriculture.

⁶ In recent years, the Agency for Education has been criticized as an inappropriate governing body to manage these lands for agricultural training. In 2010, the RF Agency for Education will be abolished, and its functions will be transferred to the RF Ministry of Education and Research.

Distribution of agricultural universities. The institutions are located mostly in agricultural areas (Figure 3). About 60 percent of the students originate from rural areas. In the eastern parts of the country, there are fewer agricultural universities and significantly fewer students. In the last 5 years the number of students in agricultural universities in Siberia and Far East has dropped.

Figure A3. Distribution of agricultural universities by Federal okrugs, number of universities



Source: Data of Ministry of Agriculture (MoA)

The number of full-time students in agricultural universities is also diminishing. Today they make up a little over 50 percent of the total student body.

The most popular areas of study are economics, management, accounting and audit as these professions are viable outside the agricultural sector.

Drop in admissions. In 2009/2010 the number of applicants in agricultural universities fell from 1.96 in 2008/2009 to 0.94 persons per place. Only 34 universities have achieved the expected number of admittance. The drop in admission is due mainly to demographic changes: the birth rate decreased at the beginning of the transition period in the early 1990s.⁷

Career advancement opportunities as incentive. In 2006, Research Center AFE conducted a survey of 1,385 students from universities in five regions (Perm, Ivanovo, Astrakhan, Kostroma, Voronezh). Only 11 percent of all students expressed their willingness to work in a rural area. Students seek high salaries and adequate working conditions which agricultural work does not provide. Nevertheless, more than half of the respondents reported that career advancement opportunities could be an incentive to work in rural areas. For more than 60 percent of students, the possibility of receiving housing is a strong factor in opting for rural employment.⁸

7 Novye Izvestia, 21 June 2010: Because of the fall in birth rate in the 1990s, in 2010 the number of applicants to all of Russia's universities is assessed as less than in 2009 by 1.2 million people. In 2016 the number of graduates of secondary schools will be less than half that of 2005.

8 Serova, 2006.

Data emerging from the Ministry of Agriculture shows that in recent years the number of graduates whose tuition was covered by the federal budget and who consequently found work in farms and in the agri-food sector is slowly increasing.

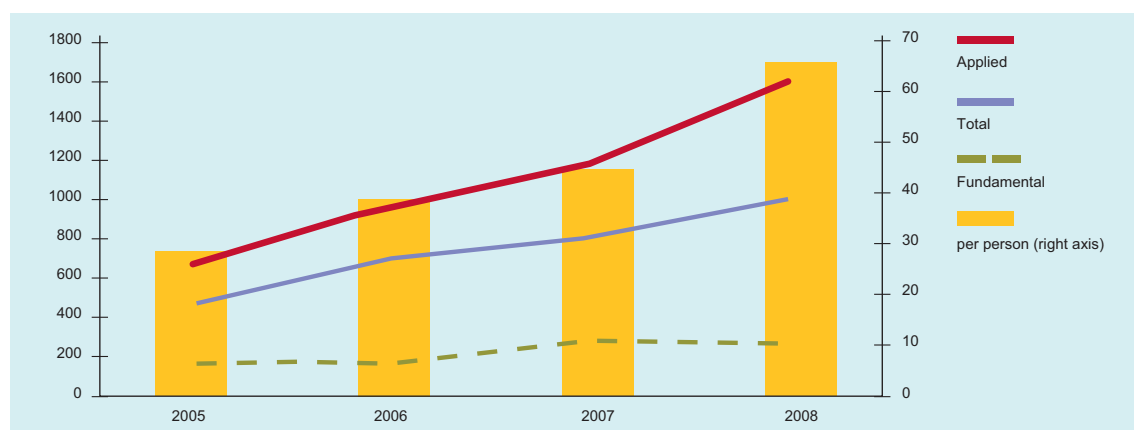
2.3. Quality of education

Ranking of Russia's agricultural universities. Moscow State University is Russia's number one university. In 2009 it was ranked 155 in the *Times Higher Education QS World University Rankings* and 77 in the *Shanghai Jiao Tong ARWU* rating. In the Performance Ranking of Scientific Papers for World Universities, Moscow State University ranked 227.⁹ Although not ranked, it is assumed that Russia's agricultural universities are rated lower.

Research activities remain poor. Scientific work in agricultural universities is very poor. Numerous academic publications are issued by universities, however only one percent is published in international peer-reviewed journals. In Germany, for example, this indicator is almost seven percent.¹⁰

A study by the Higher School of Economics (State University in Moscow) reveals that only 19 percent of university professors do research.¹¹ According to the Ministry of Agriculture (MoA), 25 percent¹² of the professors in agricultural universities undertake research work. The number of postgraduate and undergraduate students engaged in research is low: 23 percent of postgraduates and 3 percent of undergraduates. In recent years there has been an increase in the budget for applied research in agricultural universities (Figure A4).

Figure A4. Financing of research in agricultural universities, real prices, million Russian Rubles (RUR) (per person in thousand RUR)



Source: Data of agricultural universities provided by Timiryazev Academy

9 Cited from *Competing for the Future Today*, 2010.

10 **Empfehlungen zur Entwicklung der Agrarwissenschaften in Deutschland im Kontext benachbarter Fächer** (Gartenbau-, Forst- und Ernährungswissenschaften). - Wissenschaftsrat. 2006.

11 Pedagogic comedy - *New Izvestia*, 22.10. 2008.

12 Data of RF MoA, 2008.

Elderly professors. In 2010, 40 percent of full professors were over 65 years old and 20 percent of associated professors were over 60 years old.¹³

Old equipment. State Secretary of Agriculture Alexander Petrikov (December 2007-present) stated that 70 percent of the equipment in agricultural universities is run down.¹⁴ During the implementation of the National Priority Projects from 2006-2008¹⁵ only 4 out of 59 agrarian universities received grants to modernize their equipment.¹⁶

Quality of admission. The Moscow State University Higher School of Economics ranked the quality of applicants among 477 Russian universities. Three agricultural universities ranked highest: Timiryazev Academy ranked 296, University of Land Engineering (Moscow) ranked 316, and Stavropol Agricultural Academy ranked 336.

2.4. International cooperation with Russia's agricultural universities

Efforts to improve the quality of education include the EU TEMPUS project on Integration of Russia into the Bologna Process. The project developed a system of quality management.

Box 1. Bologna Declaration¹⁷. The Russian Federation signed the Bologna Declaration in 2003. Nevertheless, agricultural universities are only just beginning to modify the education system under the Bologna process. Only three percent of students graduated from the two-level system (B.Sc. and M.Sc).

In 2010 under an agreement between Russian and Dutch Ministries of Agriculture, Wageningen University in cooperation with three Russian agrarian universities in Belgorod, Kazan, and Moscow developed the international MBA programme, Agribusiness. The programme began in January 2010. It is too early to judge its efficiency.¹⁸

13 Data of MoA, 2010.

14 **German-Russian agrarian political dialogue. Meeting of 9.11.2010.** <http://www.agrardialog.ru/activities/details/id/7>.

15 *Education, Agriculture, Housing and Health* were the four National Priority Projects adopted for 2006-2008. One of the tasks of the *Education* project was to support 30 universities through investment grants (around RUR 20 billion or more than USD 700 million).

16 <http://www.rost.ru/projects/education/ed6/docs.shtml>.

17 The Bologna Declaration (June 1999) put in motion a series of reforms needed to make European Higher Education more compatible and comparable, more competitive and more attractive for Europeans and for students and scholars from other continents. The three overarching objectives of the Bologna process have been: introduction of the three cycle system (bachelor/master/doctorate), quality assurance and recognition of qualifications and periods of study. http://ec.europa.eu/education/higher-education/doc1290_en.htm.

18 http://www.agrimba.ru/index.php?option=com_content&view=article&id=54&Itemid=76&lang=en.

Box 2. Examples of Timiryazev Academy's partnerships with European universities

- Humboldt University, (Germany) (1992-1993), set up a joint programme of education of agricultural managers. The 158 Russian graduates were employed both in Germany and in Russia (often on joint ventures in agriculture and agribusiness). Currently, the universities have developed a joint master's programme, Agricultural Economics and Management;
- Hohenheim and Wageningen universities (Netherlands) (1994-2002), to establish a master's programme in extension and management in agriculture. Similar programmes on extension were also developed with Scottish Agricultural College;
- The Association of European Universities NATURA and Wye College (UK) (1998-2001), to design a number of e-courses in agricultural environment, economics, marketing, management and extension;
- Warsaw University of Life Sciences (Poland) (2006-2009), to design a two-level programme on food safety and agro-environmental engineering;
- The National Priority Project Education through which 164 teachers of Timiryazev Academy were re-trained;
- The Erasmus Mundus External Cooperation Window¹⁹ programme (2007-2010). Under this programme, 94 students, 24 postdocs graduated, and seven teachers were trained in the EU universities.

19 http://eacea.ec.europa.eu/erasmus_mundus/programme/programme_guide_en.php.

ANNEX B

Sample survey on the demand for skilled labour in Russian agricultural companies

1. Agricultural professionals in Russia's agribusiness

1.1. Background: sample survey of agribusiness

FAO, in collaboration with a Russian consultant, undertook a sample survey of Russia's large agricultural companies to assess their demand for qualified professionals and managers. The survey's objectives were to identify:

- How companies cope with a deficit of qualified workers;
- How much they spend on personnel training and education;
- Whether companies are willing to pay for training and education services; and
- Potential for private-public partnership in enhancing the quality of agricultural education in Russia.

1.2. Survey methodology and sample description

The survey took place in the first quarter of 2010. 54 large agricultural companies from 21 of Russia's regions were sampled (Figure B1). The major part of the sample represents southern and central federal okrugs¹, the main agricultural areas of the country. Among those sampled, two companies are partially owned by the state. Three of the companies are joint ventures; while the rest have Russian capital. Their average size is 8.09 thousand hectares of which 4.6 thousand hectares make up arable land (the largest has 60 thousand hectares); the average number of employees is 194 people (the largest has 1000 employees); annual sales per company on average is RUR 144 million in 2008 and 171 million in 2009 (USD 5.1-5.3 million approximately) (the largest annual sales among sampled companies is around RUR 2 billion, or around USD 60 million).

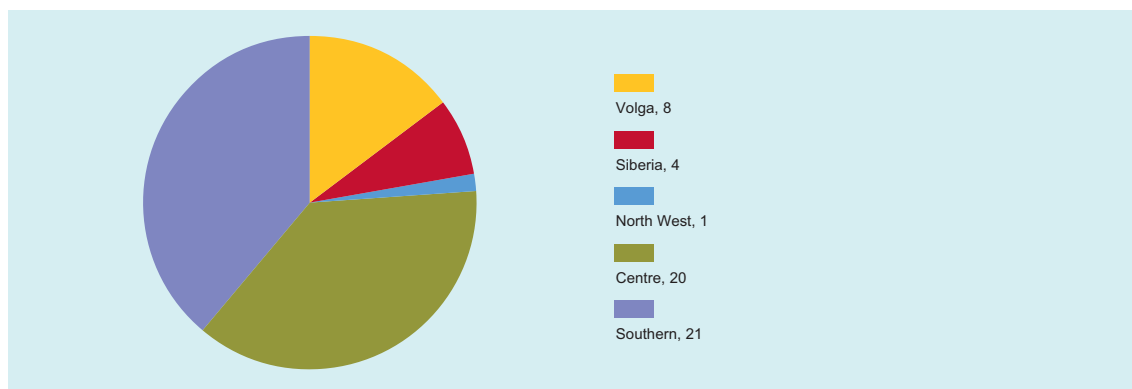
Two case studies were carried out. A questionnaire was sent by mail and some personal interviews were also given.

The sampled companies' areas of specialization correspond to the overall structure of Russia's agriculture (Figure B2). In addition, these companies also produce soy beans, wool, breed horses, goats, sheep, cultivate grapes and fruits, as well as process agricultural raw materials, supply farm inputs (fertilizers) and market agri-food commodities.

The companies' respondents included: senior managers (26 respondents), heads of human resources (HR) divisions (14) and managers of agricultural units (7). Thirty of the respondents had been in agribusiness for more than ten years; and eleven for more than five years. Most of the respondents (35) had an agricultural background. The average age of the respondents was 44 years, and ranged from 25 to 61 years of age.

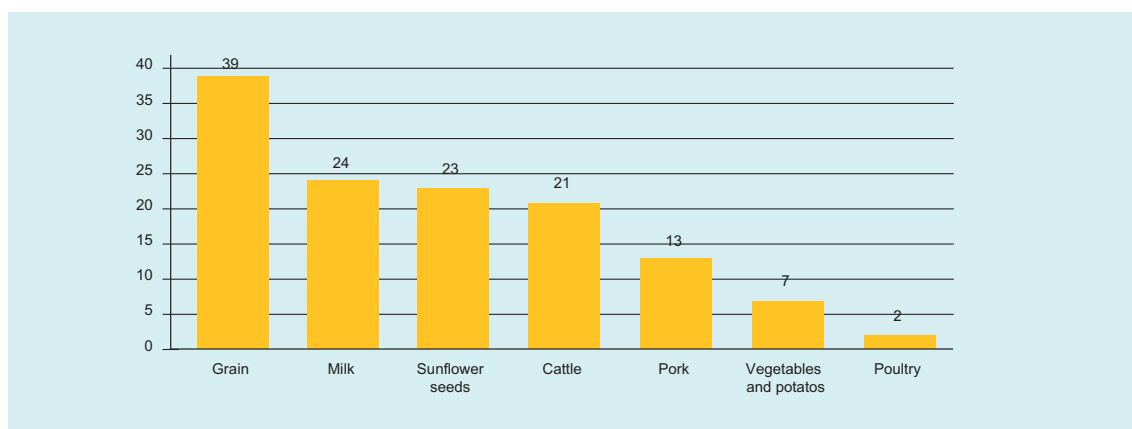
1 An *okrug* is a level of administrative division in Russia, which includes several federal subjects. Currently there are 8 *okrugs*.

Figure B1. Distribution of sampled companies by federal *okrug*s, number of companies



Source: FAO 2010 survey

Figure B2. Distribution of sampled companies by major production specialization



Source: FAO 2010 survey

1.3. Recruitment of workers

Five of the sampled companies do not have a human resources division or staff. The majority (33 companies) have one/two HR staff. On average, the sampled agribusiness companies have a little less than two people in charge of recruitment with employees. The companies spend 0.6 percent of their overall costs on recruitment.

In a level most cases, the companies recruit their personnel from the domestic market. Only two recruited managers from Western Europe. Field workers are often recruited from CIS countries such as Tajikistan, Uzbekistan, Kyrgyzstan, Moldova, and Ukraine, where labour is cheaper and workers are more motivated. Grain companies take managers from the domestic labour market (61 percent of cases); and dairy companies acquire 100 percent of their managers and chief experts from the domestic labour market.

Direct tempting or ‘poaching’ of labourers from other companies is not common practice in agribusiness. The survey revealed only two or three cases in each category of ‘poached’ labourers.

On average, more than half of the recruitment is done via the candidate’s speculative application. The companies have a more pro-active recruitment strategy when seeking economists, marketing and livestock experts, i.e. they advertise vacancies, set up contracts with universities, and/or apply to recruitment agencies. Livestock professionals in specific fields are recruited through specialized universities. Two thirds of the sampled companies employ workers for temporary work, mainly seasonal agricultural work for example tractor drivers. Economists, lawyers, accountants and breeders are also hired for temporary work. (Table B1).

Staff turnover is relatively low: 7.8 percent annually. The highest level of staff turnover is among cattle breeding companies. This could be explained by the higher wages in this sector which creates greater competition for these jobs.

Table B1. Employment of external skilled workers

Profession	Purpose	Terms of contract
Economist, accountant, auditor	For audit and annual financial statements	Contract; RUR 20 to 30,000 a month
Lawyer	To carry out a lawsuit, to register real estate, to make amendments and changes in charters and bylaws	Payment by product/outcome, RUR 5 to 30,000 a month
Veterinarian	For treatment of animals	When needed
Animal engineer	Animal treatment	Periodically
Crop breeder	At cultivation season	Payment by outcome
Tractor/harvester driver	At harvest season	On average RUR 25,000 a month, ranked RUR 5 to 70,000 a month
Unskilled labourer	For seasonal jobs, shearing	Payment by result, sometimes daily. RUR 5 to 20,000 a month, on average RUR 10,000 a month
Marketing expert	For market studies	RUR 5 to 10,000 a month
Others	Drivers with trucks for transporting products, technology engineers, experts on new soil cultivation techniques	

Source: FAO 2010 survey

1.4. Quality of workers

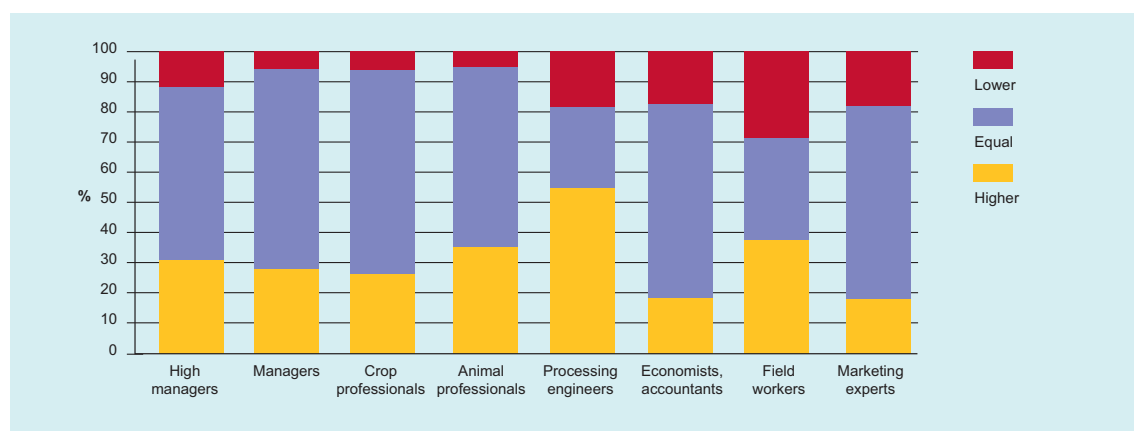
The sampled respondents were asked to evaluate the quality of workers on the market today with a 5-score system (5 the highest and 1 the lowest). The average score was 3.8. The respondents gave their top managers the highest scores (4), animal professionals, field workers, and marketing experts scored lowest at 3.7. In informal interviews, the respondents complained of unreliability, low motivation and alcoholism among the majority of unskilled labourers. For seasonal work, employers prefer to hire groups of labourers from Central Asia rather than local villagers. The grain and oilseed companies evaluated the quality of labour available as higher than average.

Human resources personnel rate the quality of the workers as higher than that of managers. This difference is especially significant for crop and animal experts and processing technicians. However, HR officers tend to overrate the quality of employees as it is a valuation of the recruitment work they do for the company.

1.5. Remuneration of workers

The majority of respondents consider their wages average (Figure B3). A large number of respondents consider their wages higher than their counterparts in non-agricultural companies within the same region. Crop and animal experts, and field workers can only find work in agriculture. Economists, accountants and marketing experts have better job offers in the same region.

Figure B3. Distribution of answers to the question: In your company how do the wages of the different kinds of jobs compare to those in non-agricultural companies in your region?



Source: FAO 2010 survey

The largest companies (by sales) pay higher wages for all types of workers. The highest wages (for all types of workers) are in the cattle breeding sector, which significantly exceeds the average level. The highest wages are in the Moscow region. As Moscow is in center okrug, center federal okrug on average has higher wages.

Around half of the sampled companies use annual bonuses and free medical insurance as worker remuneration, and one third assist with purchases and/or rent of housing. One quarter consider as remuneration the provision of training at the company's expense. In personal informal interviews, the respondents mentioned in-kind payments with company products.

1.6. Assessment of the labour shortage

Respondents stated that animal and crop production specialists, veterinarians and machine operators are in most need today. Although there is no shortage of economists, lawyers, accountants and marketing experts on the national market, these jobs are in high demand in agribusiness.

Table B2. Estimates of labour deficits, number of responses

Specialists in:	Which specialists are in short supply?		Causes of shortage	
	difficult to recruit for your company	in short supply on Russian labour market in general	absolute shortage on the labour market	agribusiness is not wage competitive market
Crop production	17	19	11	18
Animal production	23	19	11	22
Machine operator	21	24	15	19
Veterinary	15	16	10	16
Food industry	8	8	7	7
Economics	11	6	3	7
Marketing	7	10	5	7
Accounting	10	8	2	7
Law	7	3	3	8
Construction		1		
Finance and insurance	4	4	1	3
Environmentalist	4	7	5	
Land engineering	7	10	7	1
Energy				1

Source: FAO 2010 survey

Livestock production companies have a higher shortage of workers than companies involved in crop production. Crops (grain and sunflowers mainly) were Russia's key cash crops and generated high yields, leaving livestock breeding as a non- or low-profit business. Today animal production has been boosted, but there is a shortage for qualified staff in this field

1.7. Training of company employees

Most companies invest in personnel training. Spending for personnel training varies from RUR 50,000 to 1,000,000. Companies spend from 0.1 percent to 5.5 percent of their annual sales on training. Only three companies among 22 reported that spending for training was less than in 2008. Oilseed and dairy companies spend the most in training, while beef companies spend less. The central federal okrug spends significantly more on personnel training than other territories.

Forty of the sampled companies send their staff for training courses, twelve companies pay scholarships for university graduates, eight companies send their personnel for training abroad, and some companies invite trainers for on-the-job training.

In 2009, the total number of trained personnel by 54 sampled companies came to more than 1,000 people. Most of them were trained in crop (320 people) or animal production (206), in machinery (177), in economics and accounting (158), and also in legal issues, land engineering, and credit.

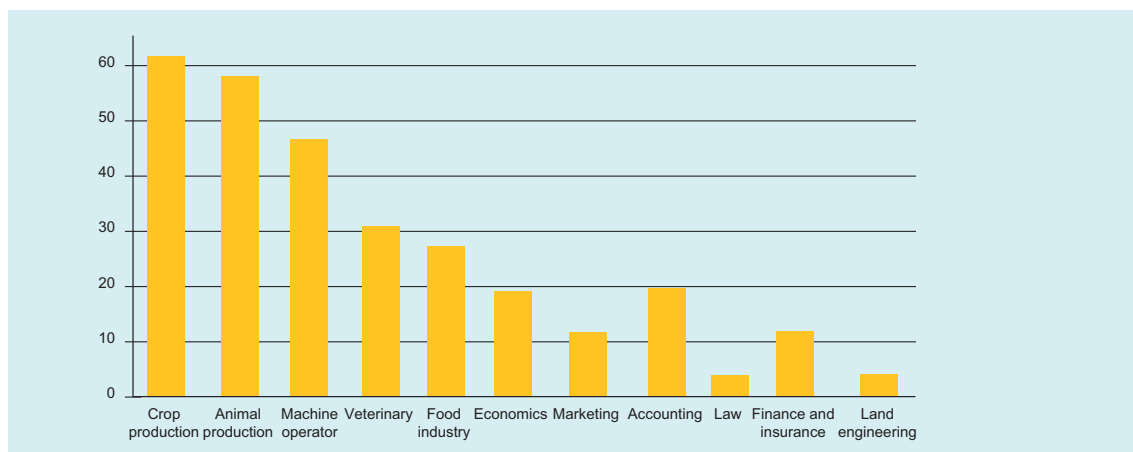
Twelve companies provide scholarships for 27 students in eight universities in six regions of Russia. Some provide scholarships for students in technical secondary schools. The condition of the scholarship is five years of work in the company after graduation.

Eight of the 54 sampled companies send their workers for training abroad (Germany, the Netherlands, Canada, Spain, Turkey, France, Poland, USA, Ireland, Sweden, UK, and Belarus). Trainees spend three years working in the company prior to training and are required to work in the company upon return. The cost is covered by the company or shared with the inviting foreign counterparts.

1.8. Participation in public-private partnerships in agricultural education

Twenty-six of the 54 sampled companies expressed their willingness to participate in a PPP for agricultural education. Among the senior managers interviewed, 17 support participation in PPPs and only eight do not. Companies are most keen in collaborating in education and training of crop and animal production specialists and machine operators (Figure B4).

Figure B4. Willingness to participate in PPP for education and training by types of workers, percent of those willing participate in PPP in general*



* Multiple answers were allowed

Source: FAO 2010 survey

APPENDIX 1

Study questionnaire

Questionnaire: public-private partnerships (PPPs) in agribusiness education

The following questionnaire is designed to elicit information on types of PPPs found in Agribusiness Education in Western and Central European countries.

For the purpose of this study:

“Agribusiness education” is defined as training in all aspects of agriculture and the food chain, including crop, livestock (e.g. veterinary) or food science, farm or food business management, and marketing. Research-only activity is excluded (but PhDs included).

A **“PPP”** is defined as a collaborative activity or arrangement between one or more public-sector institutions such as colleges and universities (including ministries) offering agribusiness education, and a private-sector company, person or agency (e.g. NGO) which provides resources (e.g. finance, staff, property) in support of such education.

Examples of PPPs in agribusiness education include (using the terms “college” and “company” generically):

- company-college arrangements such as practical case studies or courses, or the financing of studentships, prizes and sponsorships (e.g. “sandwich” periods), or “endowed” (funded) chairs (if not primarily research-oriented);
- college involvement with non-profit farmer clubs or other private-sector trade associations for training and educational purposes; and
- “private finance initiatives” (PFIs) by which private funds (usually from a bank-company consortium) are used for (usually large-scale) capital investment in college buildings or perhaps equipment (e.g. computers), often with subsequent servicing contracts.

Possible aims of PPP in agribusiness education include:

- the more widespread, quicker or more successful attainment of academic qualifications, skills and/or knowledge by students, farmers or others; and
- awareness of agricultural opportunities, benefits, dangers and risks by managers and citizens; infrastructure investment; marketing potential; etc.

Please answer the following questions as precisely as you can, in relation to your country (or region). Please include titles (or web sites) of relevant schemes, institutions, papers, etc.

1. What are the main examples of PPPs in agribusiness education in your country or region? If possible, identify main topics (e.g. animal science, marketing, farm business management), human subjects (e.g. “non-degree students”), purposes (software), etc.
 - 1.a
 - 1.b
 - 1.c.....

2. Over the last 10 years, has PPP in agribusiness education developed or multiplied (in terms of courses/ programmes, institutions) or has it diminished? Please specify and/or give examples.
 - 2.a
 - 2.b
 - 2.c

3. What central government arrangements (e.g. tax incentives, additional co-funding, general advice) encourage (or discourage) PPPs in agribusiness education?

.....

.....

4. What do you see as the main educational advantages (not financial or project-management advantages) of agribusiness education PPPs? If there are disadvantages, please include.

	Advantages	Great (high)	Small (low)	None
4.a	Substitute for unavailable public finance			
4.b	Provide “real-world” experience and expertise for students			
4.c	Provide “real-world” experience and expertise for staff			
4.d	Help enterprises to find high-quality staff recruits			
4.e	Enhance social/professional reputation of private companies and/or individuals			
4.f	Other, i.e.			
4.g	Other, i.e.			

P.S.: If possible, please include information regarding the current structure (institutions, qualifications, curricula, etc.) of agribusiness education in your country/region. Please include any references to relevant descriptions or reviews (preferably in English).

APPENDIX 2

List of selected respondents

The following individuals provided oral or written material, which was incorporated into the report. The author bears full responsibility for any errors and omissions.

- Ms. Irene Bews, University of Aberdeen, Scotland UK
- Dr. Jean-Marc Boussard, lately of INRA Paris, France
- Mr. Stephen Butcher, Higher Education Funding Council for England, UK
- Prof. Dimitris Damianos, Agricultural University of Athens, Greece
- Dr. Ian Edwards, University of Aberdeen, Scotland UK
- Mr. Garth Entwistle, independent consultant, Scotland UK
- Prof. David Heald, University of Aberdeen, Scotland UK
- Dr. Holger Bergmann, University of Göttingen, Germany
- Prof. Dr. Bernhard Brümmer, University of Göttingen, Germany
- Dr. Attila Jambor, Corvinus University, Hungary, and Newcastle University, England UK
- Prof. Dr. rer. pol., Dr. agr. h. c. Ulrich Koester, C-A University, Kiel, Germany
- Asst. Prof. Alex Koutsouris, Agricultural University of Athens, Greece
- Prof. Margaret Loseby, University of Viterbo, Italy
- Mr. Ciaran Lynch, Tipperary Institute, Ireland
- Mr. David Mackenzie, Scottish Agricultural College, UK
- Dr. Edward Majewski, Warsaw Agricultural University (SGGW), Poland
- Mr. Charles Marriott, Universities Scotland, UK
- Prof. Alan Matthews, Trinity College Dublin, Ireland
- Dr. Maria Niemann, Institut für Zuckerrübenforschung, Göttingen, Germany
- Prof. dr. ir. Arie Oskam, Wageningen University, the Netherlands
- Dr. Julian Park, University of Reading, England UK
- Asst. Prof. Demetris Psaltopoulos, University of Patras, Greece
- Prof. Tahir Rehman, University of Reading, England UK

ANNEX C

Examples of PPP in the agricultural education system of OECD countries and Russia

1. Scope and terminology

Definition. In this study a public-private partnership is defined as a mutual arrangement between a public¹ institution or organization and one or more private-sector institutions (primarily companies) whereby the latter funds and provides an investment and/or service (a “project”, i.e. constructing and administering a student hall of residence), and assumes a degree of financial, technical and/or operational risk in doing so.

The rationale for PPPs is:

- “Value for Money” (VFM), and
- Avoiding a burden on the government budget.

In the UK, for example, individual PPPs emerged in the 1980s as the government dealt with budget difficulties. In 1992 the idea was formalized as the PFI scheme. Through the PFI all public agencies are encouraged to seek PPP as a way of providing public services and assets.

Proponents of PFI-type PPPs argue that the private sector, under the force of market competition and perhaps fewer labour-force restraints, is inherently more efficient, in cost and timeliness, in design/construction and in operation. Of course, this efficiency argument loses force if the private-sector partners are monopolistic, or form cartels. Analysts of PFI-type PPP construction projects in the UK have suggested average savings of 17 percent (see KPMG, 2002), and that 88 percent of PFI projects in the UK were delivered on time and within budget compared to 30 percent and 27 percent respectively for traditional procurement projects (Myers, 2006).

The second basic rationale for PPPs – avoiding a burden on the public finances – is more a political than an economic issue. If the public sector wants an asset, it must pay for it (short of expropriation). PFI-type financing merely alters the time profile of expenditure from a (mainly) initial investment cost to a long-term (e.g. 40 year) stream of relatively constant payments.

1.1. Public-private partnerships and education

Although research is limited, the potential advantages of greater contact between educational institutions and the business community are now widely recognized (CEC, 2009), both in terms of designing programmes and courses suited to changes in the economy and society, and in terms of motivating and informing individual students about the realities of commercial life.

¹ The definition of a “public” organization may not always be clear-cut. For example, universities may be legally independent charitable trusts or foundations, but the bulk of their funding usually comes (directly or indirectly) from the government, under restrictive conditions as to the use of these funds, the quality of their teaching (and research) is subject to government assessment, and their staff (or salary levels) may be subject to government approval. Nearly all such educational institutions are considered – here and generally – as “public”.

For “human” PPPs such as staff exchanges and student internships, there are important issues of competence (can internal staff or external personnel do the work better?), and managerial complexity (does the private-sector provider adequately understand the context and needs of the public-sector partner? How can academic supervision and control of staff and/or students be exercised?). There may still be ‘political’ issues, such as whether only state-funded college or university employees should be permitted to undertake educational duties, and the possible consequences of private sector resource provision (eg. finance, staff, property) distorting “academic freedom.”

2. PPP in agricultural education in selected OECD countries

2.1. Agricultural education in selected OECD countries

In the 1970s, lack of public finances and increasing unemployment, alongside falling farming populations (the source of most students) began a push for reform. At the same time, agricultural education had to keep up with reduced demand for labour due to rapidly advancing farming technology provided by many fewer firms with reduced staffing. Other influences came from developments in the food chain, with processors and retailers demanding higher and more uniform standards of raw-material supplies. These required a more highly educated workforce, at least at the managerial level.

One response to these pressures on agricultural education institutions has been to diversify their range of programmes, e.g. natural resource management or leisure (equine, golf) management. Another has been to forge links with other institutions at higher or lower level, thus offering students “progression” from one institution to another. In some cases, smaller colleges and university faculties have been closed. Less popular or more expensive specialties, such as agricultural engineering (for farm machinery etc.), have been eliminated, while “business management” courses have become more popular.

2.2. Rationale for PPPs in agribusiness education

The general arguments for considering PPPs in education are both managerial and academic. PPPs may offer:

To companies:

- Potential to identify promising students as future employees;
- Potential PR benefits of being seen to “give something back”.

To academic institutions:

- Greater efficiency in providing the necessary facilities (physical or human), in terms of cost, timing, design;
- Substitution for or additions to finance from scarce or diminishing public sources;
- Ability to keep staff up to date with commercial developments.

To students:

- “Real-world” experience and expertise: linking theory to practice, widening the educational programme.

An official good practice survey of teaching quality in England (Ofsted, 2008) found that industry-focused teaching practice and contact are associated with high overall institutional quality. Respondents (mostly academics in agricultural education) saw the main advantages of PPPs as providing “real-world” experience to staff and/or students. The financial (and social, e.g. reputational) attractions were ranked less highly.

2.3. Types of PPPs found in western European agricultural education

Types of PPPs in agribusiness education include:

- PFI-style PPPs by which a bank-company consortium provides capital investment in college/university buildings or perhaps equipment (e.g. computers), often with subsequent servicing contracts;
- Company endowments² (financial grants) to colleges or (more usually) universities for the staffing and perhaps other expenses of departments, institutes or teaching posts (e.g. chairs) in a specific field where the company hopes for better educated students and “knowledge transfer”;
- Student activities such as practical case studies or courses, or the financing of studentships, prizes and sponsorships (e.g. “sandwich” periods or internships); these may include farms (family or corporate) or associated businesses such as ‘upstream’ input/service supply companies or ‘downstream’ product processing companies;
- College/university involvement with mutual-education organizations, such as farmer clubs or other private-sector trade associations for training and educational purposes.

3. Russia’s legislation for public-private partnership in education

In the last three years, PPP has been identified as a basic instrument for the development of Russia’s national economy and the national education sector, in particular.³ A strategic report outlining Russia’s development till 2020 foresees “education units funded by both private and public finance as the way forward toward creating structural changes in the education sector.”⁴ Another document highlighting the government’s activities until 2012 projects an increase of endowment-funds in universities and participation of the business sector in shaping curricula and overall governance of universities.⁵

In August 2009 a new federal law was passed⁶ which authorizes state-owned education and research institutions to establish commercial entities in the pursuit of knowledge. Its main objective is to accelerate the adoption of new technologies and innovations. The law has provided the state-owned entities in the research and education sector the legal rights to establish commercial entities and use the profits for authorized activities. In recent years national universities have established ten business-parks, however, most universities are not ready to apply this piece of legislation.

² A financial endowment is a transfer of money or property donated to an institution. The total value of an institution’s investments is often referred to as the institution’s endowment and is typically organized as a public charity, private foundation, or trust. The most common examples are endowed professorships (also known as “named chairs”), and endowed scholarships or fellowships.

³ Long-Term Social and Economic Development of the Russian Federation till 2020 and Major Directions of the Government’s Activities until 2012 adopted by the Russia’s government on 17 November 2008; programme of the Anti-Crisis Measures for 2009 approved in April 2009.

⁴ Long-Term Social and Economic Development of the Russian Federation till 2020.

⁵ Major Directions of the Government’s Activities until 2012.

⁶ August 2009 Federal Law No. 217-FZ “On amendments to certain Russian Federation’s legislative acts related to the creation of business entities by federally-funded scientific and educational institutions with the purpose of practical application (implementation) of intellectual activity results.” For more information on 217-FZ please see: http://www.beyondthefirstworld.com/?page_id=1958.

3.1. Public–Private Partnerships in Russia’s agricultural education

Scholarships/grants. The most common business partnership is direct financial support for advanced students and teachers. Agribusiness companies provide scholarships for students, and finance their training abroad and/or distribute grants through a competitive process to research teams made up of professors and students.

Endowment funds. The Russian Union of Industrialists and Entrepreneurs (RSPP) introduced the idea in 2006 and a federal law on endowment funds was adopted in 2006. Today there are 30 endowment funds in Russia. One of the first was established in the Moscow State University’s Higher School of Economics (HSE) in 2007. No endowment funds have been established in agricultural universities.

Practical training. Universities access modern technologies, management systems, and industry best practices which increases the quality of the education. Companies have an opportunity to pre-select their potential employees first-hand and at an early stage of their education. Related to this type of partnership is tutorship. Students are tutored by specialists of agricultural companies.

Independent centers for certification of qualification. In 2006 the Russian Union of Industrialists and Entrepreneurs (RSPP) established the National Agency for Qualifications Development (NARK). NARK’s objectives are to: 1) promote the development of a quality workforce; 2) develop a national qualifications system; 3) coordinate the actions of organizations representing the business community; and 4) coordinate the interaction of business and state bodies in the design of a national system of qualifications. NARK pilot projects do not include agriculture and agribusiness yet⁷.

Joint education and corporate training centers. The Graduate School of International Business (GSIB) is a structural division of the Russian Federation Academy of national Economy. For more than a decade it has been running training courses tailored to the needs of Russia’s agribusinesses. From 2009-2010 GSIB developed 15 courses for Cargill, Inc, Auchan, Mars Co, Wimm-Bill-Dann, Erhmann AG - Russia, and Hochland Russland - Russia.⁸

Corporate universities. A corporate university is any educational entity that is a strategic tool designed to assist its parent organization in achieving its goals by conducting activities that foster individual and organizational learning and knowledge. Corporate universities are a growing trend in corporations. In most cases, corporate universities provide job-specific, indeed company-specific, training for the managerial personnel of the parent corporation. They help companies retain and promote key employees.

The most known corporate universities were established in Russia by Severstal, VympelCom, Wimm-Bill-Dann, Norilsk Nickel, PROTEK, Svjazinvest, Rosgosstrakh , Sibneft , RUSAL, etc⁹.

7 <http://www.nark-rspp.ru/index.php/lang-ru/english.html>.

8 <http://www.gsib.ru/41.htm>.

9 <http://www.ubo.ru/articles/?cat=98&pub=1903>.

3.2. Potential PPPs

Participation of agribusiness in development of university education standards, curricula and syllabi. The traditional theoretical approach of higher agricultural education should be replaced by the competence based education approach (CBE)¹⁰, which assumes graduates have received professional knowledge and skills, but also qualifications demanded by employers. This implies the participation of potential employers in the formulation of the curricula and syllabuses.

Education units. One of the biggest problems of agricultural education in Russia today is teachers' lack of modern competencies because of an underinvestment in the education sector; aging staff; low incentives for hiring new professionals; and administrative reform in agricultural education. The development of new education units within existing universities is a mechanism to improve these deficiencies. The curricula, syllabuses and teaching methods of such units would be designed with the best international agricultural schools. Applied research would also be a key component to attract financial support. Units could focus specifically on crop and animal production, management, and veterinary, slowly improving the quality of the graduates as well as changing the supply of agricultural professionals in the Russian labour market. An international team of teachers would teach the first years; and the graduates of the units would then take the place of the international staff, creating a new generation of teachers. These new education units could draw investment from private agribusiness companies.

10 CBE is an institutional process that moves education from focusing on what academics believe graduates need to know (teacher-focused) to what students need to know and should be able to do in varying and complex situations (student and/or workplace focused). CBE is focused on outcomes (competencies) that are linked to work force needs, as defined by employers and the profession. CBE often needs more complex assessments that involve portfolios, experiential learning assessments, field experience, demonstration in varying contexts, role play, use of standardized patients or clients, etc. Source: <http://www.ceph.org/files/public/Competencies.pdf>

APPENDIX 1

Definitions of Public-Private Partnerships (PPPs)

Her Majesty's (HM) Treasury (United Kingdom):

“Arrangements typified by joint working between the public and private sector. In the broadest sense, PPPs can cover all types of collaboration across the interface between the public and private sectors to deliver policies, services and infrastructure. Where delivery of public services involves private sector investment in infrastructure, the most common form of PPP is the Private finance initiative”

http://www.hm-treasury.gov.uk/ppp_index.htm

Organisation for Economic Cooperation and Development (OECD):

“Arrangements whereby the private sector provides infrastructure assets and services that traditionally have been provided by government, such as hospitals, schools, prisons, roads, bridges, tunnels, railways, and water and sanitation plants”

<http://stats.oecd.org/glossary/detail.asp?ID=7315>

“An agreement between the government and one or more private partners (which may include the operators and the financiers) according to which the private partners deliver the service in such a manner that the service delivery objectives of the government are aligned with the profit objectives of the private partners and where the effectiveness of the alignment depends on a sufficient transfer of risk to the private partners” (OECD, 2008).

International Monetary Fund (IMF):

“[An arrangement] where the private sector supplies infrastructure assets and services that traditionally have been provided by the government [with] two other important characteristics: there is an emphasis on service provision, as well as on investment, by the private sector, and significant risk is transferred to the private sector” (IMF sources cited in OECD, 2008).

European Investment Bank (EIB):

“A wide variety of working arrangements from loose, informal and strategic partnerships, to design-build-finance-and-operate (DBFO) type service contracts and formal joint venture companies” (EIB source cited in OECD, 2008).

Standard and Poor:

“Any medium to long-term relationship between the public and private sectors, involving the sharing of risks and rewards of multi-sector skills, expertise and finance to deliver desired policy outcomes” (Standard and Poor's source cited in OECD, 2008).

British Broadcasting Corporation (BBC):

“Any collaboration between public bodies, such as local authorities or central government, and private companies tends to be referred to a public-private partnership (PPP)”

<http://news.bbc.co.uk/1/hi/uk/1518523.stm>

APPENDIX 2

Case studies of private initiative in agricultural education

Box 1. The *Malino* Group of Companies

Company profile. *Malino* consists of 17 enterprises (of which 15 are agricultural) located in 4 oblasts¹ in central okrug. The first enterprise emerged in the beginning of the 1990s, and the group was formed in 2006. *Malino*'s original business was vegetable wholesale. It expanded to storage and retail, then to fruit imports, and later to agricultural production. Today it produces vegetables, potatoes, grain, sunflower seeds, milk, and fodder.

Three of its enterprises are rated among Russia's best.² One of the enterprises is a joint venture with the Dutch company, *Beyo Zaden*. The *Malino* group of companies operates in some 60,000 hectares of agricultural lands, and employs 1,000 people. Its sales were 2 billion RUR in 2009 (~USD 67 million).

Human resources strategy. *Malino* attracts employees by offering them decent wages, training, and promotion; and most importantly support staff's children's agricultural education. These children are willing to work in agriculture and in *Malino* in particular, after graduation.

Malino's professional high level staff is made up of those who have been promoted from within the company. The company recruits non-qualified labourers from CIS countries.

Malino recruits workers among the graduates of provincial universities as they have lower wage expectations. It cannot compete with the non-agricultural sectors for young specialists, and especially those coming from central universities who have higher wage expectations.

Compared to similar agricultural companies in the Moscow region, the level of wages in *Malino* is higher. Its branches outside of Moscow pay lower wages. Staff turnover is only 2 percent.

At headquarters, one staff member is responsible for HR work. Within the entire agro-holding, there are 18 employees working on recruitment and personnel training. The total annual cost of HR work in the company accounts for about 0.9 percent of company sales.

The head of human resources estimates the quality of labour available on the market as between 2 and 5 within a 5-point scoring system; the lowest scores are given to animal specialists.

1 An *oblast* is an administrative division or region in Russia.

2 Rating of the best agricultural enterprises of Russia for 2006-2008. VIAPI, 2010.

Personnel training. The *Malino* group has a 5-pronged approach to training:

1) **Own training.** It trains its own personnel. A special training center was established at the Gorodische branch. It provides year-round training for machinery drivers and other experts in maintenance of machinery and equipment. It also provides training in marketing and business planning. The trainings are available to all *Malino* workers and outside companies. Often the suppliers of technologies and inputs to *Malino* provide on-the-job-training. In those cases, the cost is covered by the input suppliers.

2) **MBA programme at Timiryazev Academy.** Staff are funded to attend programme and following graduation he/she is obliged to work 5 years in the *Malino* group or pay back the 12,000 euro tuition fee.

3) **International specialized fairs and exhibitions.** Fairs are attended by staff.

4) **Overseas training.** Staff members have been trained in the Netherlands, the UK, and the USA. The managers consider training abroad as useful as it provides training in specific areas.

5) **Primary schools:** *Malino* works with primary school children. School #2 in *Ozery* town (Moscow region) has two specialized classes: (i) trains students as machinery specialists and field workers; and (ii) provides children with elementary knowledge of agronomy. The students are invited to do part-time work at the *Malino* enterprises, and are sent to exhibitions at *Malino*'s expense. School #2 graduates have access to continuing their education in Timiryazev Academy, Moscow Agro-Engineering University. In four years, 62 students of School #2 have entered universities and college. After graduation, these students have guaranteed jobs in the *Malino* group. However, only a few went to work in agriculture.

2.1. Assessment of Public-Private Partnerships in agriculture

According to *Malino*, PPPs in agricultural education should focus on provincial agricultural universities and colleges as graduates tend to be more motivated to work in rural areas. *Malino*'s managers have found that once students spend several years in capital cities, they do not return to agriculture as they find more attractive jobs in the city. Good students often seek PhDs which prolongs their education for another three years. PhDs aspire to higher salaries, but do not have practical skills. In addition, after graduation, men must complete their compulsory one year military service, which delays reintegration into the company even further.

Malino is interested in education with a module system – more targeted at the specific needs of the agricultural companies (e.g. training the students not in animal production in general, but in specific types of animals – cattle, pigs or poultry). The theoretical course should be followed by mandatory practical training in the field or farm. *Malino* is ready to participate in partnerships involving specialized education in crop and animal production and veterinary.

Box 2. Timiryazev academy and private business

University profile. The Russian State Agrarian University – Moscow Agricultural Academy named after K.A.Timiryazev (RSAU-MTAA) is the oldest higher-education institution of agriculture in Russia. At present, Timiryazev Academy is a large educational, scientific and production complex, comprising eleven faculties and an affiliate in Kaluga city. The university has four training and research farms located in different regions. Timiryazev Academy has cultural and technical cooperation agreements with more than 30 universities and scientific centers from 25 countries. University scientists take an active part in the implementation of TEMPUS-TACIS European Union programmes. Timiryazev Academy offers undergraduate, Master and Advanced Degree programmes.

Examples of collaboration.

- Timiryazev Academy has a long-term contract with a large vegetable company, Dmitrovskiye ovoschi, and one of the biggest meat processing and packaging company, Mikoyanovsky, both in Moscow. The companies provide training for both students and teachers in up-to-date technologies;
- PepsiCo allocates annually 150 scholarships for the most advanced students of Moscow Agricultural Academy, St.Petersburg and Kuban Agrarian Universities. In 2010, the company financed the participation of 23 Russian bachelors and masters students in the International Ecological Summer School in Moscow; facilitated a short-term training of professors and teachers;
- Timiryazev Academy collaborates with European equipment manufacturing companies such as GEA Westfalia Surge (Germany), Big Dutchman (Germany), Schauer (Austria), La Buvette (France), and Kronen (Germany). Long-term cooperation with GEA Westfalia Surge established the training center for mechanization and automation of dairy farming. The center is located on a training dairy farm of the academy. The academy's experimental vegetable station was equipped with Kronen machinery for the pre-treatment of vegetable production;
- The world's biggest retailer, Wal-Mart, has just entered the Russian market. It has signed a Memorandum of Understanding with Timiryazev Academy to work with vegetable producers in central Russia.

Please address comments and inquiries to:

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

Viale delle Terme di Caracalla - 00153 Rome - ITALY

E-mail: Investment-Centre@fao.org

Web site: www.fao.org/investment

FAO Web site: www.fao.org

Report I I/004 EBRD-RUS