



The poultry meat sub-sector



THE POULTRY MEAT SUB-SECTOR

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Highlights on four livestock sub-sectors in Kazakhstan

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CONTENTS

A.	OVERALL MARKET ANALYSIS.....	7
	Poultry production enterprises and overview of current situation, by region.....	8
	Tariff changes after formation of the Customs Union.....	12
B.	FEATURES OF THE POULTRY MEAT SECTOR IN KAZAKHSTAN.....	14
	Consumption perspectives.....	18
	Dynamics of the poultry population, by type of farm enterprise..	21
C.	MARKET TRENDS AND SECTOR ORIENTATIONS....	24
	Potential markets for poultry meat.....	25
	Retail shopper trends and future projections.....	27
	AC Nielsen shopper trends surveys – Kazakhstan, November 2009.....	27
	A market for chilled and cooked chicken products.....	29
	Projections for future sector development.....	31
D.	PERFORMANCE AND PROFITABILITY ASPECTS.....	33
	Current profitability indicators.....	33
	Productivity parameters.....	34
	Live production.....	34
	Indicative performance indicators.....	37
	Current status of technology, machinery and equipment.....	38
	Live production facilities.....	39
	Slaughterhouses and processing plants.....	40
E.	OVERVIEW OF THE SUB-SECTOR'S COMPETITIVENESS.....	42
	Disparity between import and export data for chicken meat entering Kazakhstan.....	48
	Wholesale and retail prices of poultry meat in Kazakhstan.....	49
	Poultry meat prices in other countries.....	52

Government support to the poultry sector	53
Costs of production structure	54
Key drivers of increased competitiveness	56
F. ISSUES AND DEVELOPMENT OUTLINES	58
Current sector subsidization level	58
The feed issue	58
Supply of parent stock and the breeding of parent and grandparent stock	59
Veterinary surveillance and diagnostic services, especially for HPAI . . .	59
Towards more advanced government support	60
Addressing sector competitiveness	62
Potential for an expanded feed milling industry in Kazakhstan . . .	63
Development of a market for chilled and cooked chicken products .	64
Option for the development of a contract grower model	65
Possible options for smallholder backyard poultry farmers	66
ANNEX 1: Reference Tables	67

ACRONYMS

ACC	Agro Credit Corporation	FMD	foot-and-mouth disease
ACEPAS	Analytical Centre of Economic Policy for the Agricultural Sector	FOB	free on board
ACP	Agricultural Competitiveness Project	GAIN	Global Alliance for Improved Nutrition
ADG	average daily gain	GATT	General Agreement on Tariffs and Trade
AE	agricultural enterprise	GDP	gross domestic product
AI	artificial insemination	GEF	Global Environment Facility
AWEX	Australian Wool Exchange	GlobalGAP	Global Partnership for Good Agricultural Practice
CIP	carriage and insurance paid	GMP	good management practice
CIS	Commonwealth of Independent States	GPS	Global Positioning System
CKD	centre for knowledge dissemination	HACCP	Hazard Analysis and Critical Control Points
CPI	Consumer Price Index	HHF	household farm
CU	Customs Union	HPAI	highly pathogenic avian influenza
DOC	day-old chick	ICT	information and communication technology
DP	duty paid	IFI	international financial institution
ELISA	enzyme linked immunosorbent assay	ISO	International Organization for Standardization
EMI	AWEX Eastern Market Indicator	ISTC	International Science and Technology Center
EU	European Union	IWTO	International Wool Textile Organization
FAS	Foreign Agriculture Service	JSC	joint stock company
FCC	Food Contract Corporation		
FCR	feed conversion ratio		

KAF	Kaz-Agro-Finance	SFM	sunflower meal
KAI	Kaz-Agro-Innovation	SPS	sanitary and phytosanitary standards
KAM	Kaz-Agro-Marketing	SZTS	service-purchasing centre
KPI	key performance indicator	SW	slaughter weight
Kaz-Memst	Committee for Technical Regulation and Metrology	SWOT	strengths, weaknesses, opportunities and threats
LEI	Agricultural Economic Institute at Wageningen University in the Netherlands	T	tenge
LLP	limited liability partnership	TB	tuberculosis
LSU	livestock unit	TBT	technical barriers to trade
LW	live weight	TCP	Technical Cooperation Programme
M&E	monitoring and evaluation	TRQ	tariff rate quota
MDF	modern dairy farm	UHT	ultra-high temperature-treated
MDP	milk and dairy product	UKPF	Ust-Komenogorsk Poultry Farm
MoA	Ministry of Agriculture	USDA	United States Department of Agriculture
MOC	Mal Onimderi State Company	VAT	value-added tax
MPE	milk processing enterprise	WAHID	World Animal Health Information Database
NWA/C	national wool association/council	WAHIS	World Animal Health Information System
OECD	Organisation for Economic Co-operation and Development	WHO	World Health Organization
OIE	World Organisation for Animal Health	WME	whole-milk equivalent
PF	peasant farmer	WPT	wool primary treatment
R&D	research and development	WTO	World Trade Organization
SBM	soybean meal		



OVERALL MARKET ANALYSIS

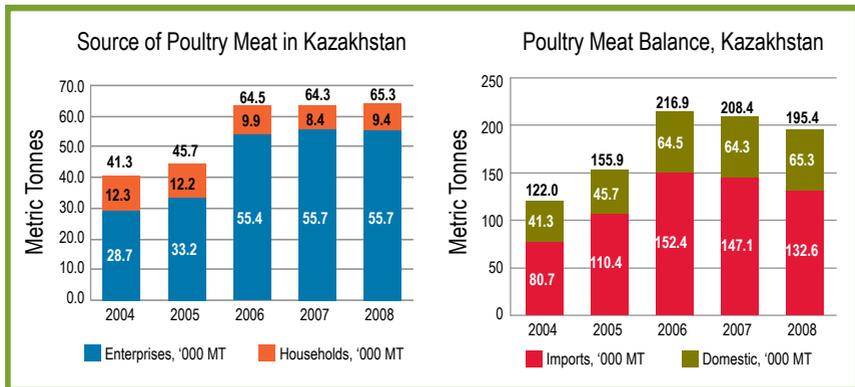
The current poultry meat supply balance in Kazakhstan is shown in Table A.1. Figure 1 illustrates the importance of imported chicken in the Kazakh marketplace.

Table A.1: Imports, exports and domestic production

Poultry meat balance, Kazakhstan '000 tonnes	2004	2005	2006	2007	2008
From "Enterprises"	28,7	33,2	54,4	55,7	55,7
From "Households"	12,3	12,2	9,9	8,4	9,4
Domestic production	41,3	45,7	64,5	64,3	65,3
Imports	80,7	110,4	152,4	147,1	132,6
Exports	0,0	0,1	0,1	2,9	2,5
Total Consumption	122,0	155,9	216,9	208,4	195,4

Sources: Statistics Agency of the Republic of Kazakhstan and Customs Committee of Ministry of Industry & Trade, 2008

Figure 1: Poultry meat balance



The data shown in Table A.1 and Figure 1, particularly when combined with the projected 2009 figures in Table A.2, demonstrate that the balance of domestic versus imported supply is increasing. The balance for all of

2009, projected from September data, is approximately 60:40 in favour of imports. Imported tonnages were projected to fall from a peak of 152 000 tonnes in 2006 to 110 000 tonnes in 2009, while domestic production was projected to increase from 41 000 tonnes in 2004 to 75 000 tonnes in 2009. Overall consumption in Kazakhstan is estimated to have fallen from 217 000 tonnes in 2006 to 185 000 tonnes in 2008, while imports decreased and the domestic supply increased.

Table A.2: Projected poultry meat balance, 2009

Kazakhstan Poultry meat balance 2009, tonnes	Production	Import	Export	Consumption
Poultry meat and subproducts, Jan-Sep 2009	56 444	82 746	51	139 190
Poultry meat and subproducts, Yr 2009 (estimate)	75 258	110 328	68	185 586
As percent of consumption	40.6 %	59.4 %		

Sources: Statistics Agency

Poultry production enterprises and overview of current situation, by region

Table A.3 lists the largest poultry meat enterprises in Kazakhstan, together with their locations, yearly production outputs and total capacities in 2008.

Table A.3: Leading poultry meat enterprises, 2003 to 2008

Enterprise Name	Region	Actual Production Output (tonnes)					% of 2007 production	Capacity (tonnes) 2008
		2003	2004	2005	2006	2007		
1. LLP Ruby Rose Agricole	Almaty	3 920	6 300	10 500	15 000	14 000	24,3	20 000
2. Ust-Kamenogorsk PF	East Kazakhstan	9 800	10 000	11 400	11 500	11 500	20,0	14 000
3. Aiel Agro	Almaty	2 280	3 750	4 000	10 000	8 000	13,9	20 000
4. Bent	Almaty	3 300	4 000	3 700	7 000	7 000	12,2	8 000
5. LLP Kaz Ross	Almaty	500	200	500	1 000	6 000	10,4	25 000
6. PK Izhevskiy	Akmola	1 279	1 500	2 100	4 000	1 500	2,6	6 000
7. LLP Aknar PF	Quaraghandy	2 035	2 500	3 500	3 500	4 500	7,8	5 000
8. SF AFK Ardager	East Kazakhstan	0	0	3 000	3 200	4 000	7,0	4 000
8. Kainar Kus	Sth Kazakhstan	550	1 100	1 500	1 500	1 000	1,7	2 000
10. LLP Kostanai	Nth Kazakhstan	120	150	0	0	0	0,0	1 000
TOTAL		23 784	29 500	40 200	56 700	57 500	100,0	105 000

Sources: Statistics Agency, industry sources and author's

Notes: Kazakhstan's leading producer in 2007, LLP Ruby Rose Agricole, is currently not operating and

its facilities are vacant owing to allegations of tax evasion. According to Pak (personal communication 2009), the marketplace position previously occupied by Ruby Rose appears to have been largely filled by LLP Kaz Ross, also in Almaty region.

In 2008, the four largest enterprises (including Ruby Rose) accounted for 75.2 percent of total capacity. Utilization of facilities is only 54.8 percent when comparing 2007 production figures with 2008 capacity, and 71.7 percent when comparing recent 2009 production data with 2008 capacity. In spite of increases in production, reasons for this underutilization relate to the poor profitability that many enterprises achieved during 2007 and 2008, largely due to high competition from exports, high prices for feed, fuel and other inputs, and a general difficulty in obtaining credit. The underutilization anomaly could also partly reflect inaccuracies in the total capacity data collected, the origins of which are unclear.

The regional dynamics of poultry meat processing by type are provided in Annex 1, Table 1.

The major sources of poultry meat imports into Kazakhstan are shown in Tables A.4 and A.5. A massive domination of imports by the United States of America is quite apparent, but the decrease in imports is penalizing the United States quota.

Table A.4: Source countries for poultry meat imports, by value

Source of Poultry meat imports to Kazakhstan, USD million					
	2004	2005	2006	2007	2008
Total imports	39,93	60,92	80,43	85,49	85,03
USA	38,38	59,19	74,37	75,77	66,34
Ukraine	0,00	0,00	0,00	5,45	8,66
Brazil	1,03	1,01	3,02	1,90	5,44
Russia	0,02	0,00	0,01	0,07	2,48
Canada	0,00	0,00	0,02	0,21	0,60
Other countries	0,50	0,71	3,02	2,10	1,52

Table A.5: Source countries for poultry meat imports, by tonnage

Source of Poultry meat imports to Kazakhstan, '000 tonnes					
	2004	2005	2006	2007	2008
Total imports	80,69	110,35	152,44	147,08	132,61
USA	78,37	107,56	140,65	136,98	116,99
Ukraine	1,84	1,62	5,72	3,56	7,82
Brazil	0,00	0,00	0,00	2,71	4,17
Russia	0,02	0,00	0,01	0,03	1,12
Canada	0,00	0,00	0,03	0,44	0,87
Other countries	0,47	1,17	6,03	3,37	1,65

Source: Statistics Agency

Almost 88 percent of imports are frozen second-grade “grey meat” from the United States of America, consisting of halves/quarters, bone-in, and dominated by leg meat, referred to as “bush legs”.¹ This product is less popular than breast meat and chicken wings in the United States, so can therefore be landed on the Kazakh market for considerably less than the production cost of a whole bird in the United States, despite being subject to an import tariff of 20 percent or a minimum of EUR 0.40/kg. This product generally enters the Kazakh supply chain at about 190 tenge (T) per kilogram, including tariff and value-added tax (VAT) at 12 percent; it retails for approximately T 340/kg. Locally produced frozen whole chicken generally enters the market at approximately T 345/kg and retails at an average of about T 440/kg. A breakdown of the types of product imported from the United States of America in 2009 is shown in Table A.6.

1.- The origin of this term dates back to the era of United States food aid programmes to the Russian Federation, Kazakhstan and other Commonwealth of Independent States (CIS) countries in the early 1990s and was instigated by former President George H.W. Bush. The term is still commonly used to describe any “grey” poultry meats from the United States of America, and not just legs (or “drumsticks”).

Table A.6: Poultry meat imports from the United States of America, by type of product

2009 (estimated based on 1 st 10 months)	Tonnes
halves or quarters, bone-in	88 899
Other cuts	5 022
Chicken legs, bone-in	2 265
halves or quarters, bone-in, fresh or chilled	1 752
Chicken cut, boneless	660
Whole chicken, gutted	141
Total	98 598

Source: Custom Committee of Ministry of Industry and Trade, November 2009.

Import tonnages and average pricing details for major poultry meat imports into Kazakhstan are given in Table A.7, based on Customs Committee data for January to October 2009, projected to full year 2009. Import tariffs on poultry meat are currently 20 percent of landed value, but not less than EUR 0.40/kg. Hence the tariff option in Table A.7 is EUR 0.40/kg, converted to USD0.54/kg using an average 2009 exchange rate of EUR 1.35 = USD1. All imports were subject to 12 percent VAT in 2009. Note that under preferential tariffs for CIS countries, no import tariff is charged for products from the Russian Federation or Ukraine (which is a “*de facto* participating member”, but not an official CIS member).

Table A.7: Poultry imports, 2009 (projected from data for first ten months)

2009	Percentage of Imports	Tonnes per Year	Landed Ave USD/kg	Import Tariff USD/kg	Final Price inc 12% VAT USD/kg	Final Price inc 12% VAT KZT/kg
USA	87,8	98.739	0,59	0,54	1,27	190
Ukraine	7,3	8.220	1,38		1,54	231
Brazil	2,1	2.349	0,99	0,54	1,72	257
Poland	1,0	1.094	0,66	0,54	1,35	202
Canada	0,8	930	0,55	0,54	1,23	184
Russia	0,4	469	1,85		2,07*	311*
Germany	0,4	425	0,66	0,54	1,34	202
others	0,2	272				
TOTAL		112.498				

Source: Customs Committee of the Ministry of Industry and Trade, November 2009, based on weighted year average landed prices.

It is interesting to note the presence of small quantities of very low-

priced product from Brazil, Poland, Canada and Germany. It is expected that Brazil and Canada could be competitive threats to Kazakh producers, but it is not clear whether Poland and Germany should be regarded as the same.

Tariff changes after formation of the Customs Union

Implications of the new trading environment for Kazakhstan under the Customs Union (CU)² include that imports of “poultry meat and edible meat offals, fresh, chilled or frozen” into Kazakhstan will be subject to a quota restriction of 110 000 tonnes. Applicable tariffs will be:

- *poultry meat under tariff quota: 25 percent but not less than EUR 0.20/kg; the latter is usually the higher amount, and equates to T 41.7 or USD0.29/kg on landed product;*
- *poultry meat over tariff quota: 80 percent but not less than EUR 0.70/kg; the latter is usually the higher amount and equates to T 146 or USD1.01/kg on landed product.*

The results from applying the CU tariffs to the volumes of imports received in 2009 (projected) are given in Table A.8, showing the potential impacts of the new CU. Assuming total 2009 imports were less than 110 000 tonnes (the actual total was only 2.5 tonnes above this), the below-quota rates would apply and all imports would be subject to lower tariffs than in pre-CU times. Russian imports would be slightly more competitive, as they would attract neither tariff nor VAT. For imports over the 100 000-tonne quota, Russian (or Belarusian) products would be highly competitive.

2.- The CU involves the Russian Federation, Belarus and Kazakhstan and came into effect on 1 January 2010.

Table A.8: Poultry imports with assumed CU below-quota tariffs, 2009 (projected from data for first ten months)

	Percentage of Imports	Tonnes per Year	Landed Ave USD/kg	Import Tariff USD/kg	Final Price inc 12% VAT USD/kg	Final Price inc 12% VAT KZT/kg
USA	87,8	98 739	0,59	0,29	0,99	148
Ukraine	7,3	8 220	1,38	0,34	1,93	289
Brazil	2,1	2 349	0,99	0,29	1,43	215
Poland	1,0	1 094	0,66	0,29	1,06	160
Canada	0,8	930	0,55	0,29	0,94	142
Russia	0,4	469	1,85			277*
Germany	0,4	425	0,66	0,29	1,06	159
others	0,2	272				
TOTAL		112 498				

Source: Customs Committee of the Ministry of Industry and Trade, November 2009, based on weighted year average landed prices.

* no VAT

FEATURES OF THE POULTRY MEAT SECTOR IN KAZAKHSTAN

A simplified strengths, weaknesses, opportunities and threats (SWOT) analysis of the Kazakhstan poultry sector is given in the following box.

STRENGTHS	WEAKNESSES
<ol style="list-style-type: none"> 1. Sector has relatively low production costs for feed, due to low wheat prices, although it is not currently fully competitive with imports in the domestic market. 2. Kazakhstan is one of the world's leading producers of wheat, and also has great potential as a producer of sunflower meal. 3. Public support to the sector is important. 4. The country has low energy costs, especially for oil and gas, but also electricity. 5. The workforce has good basic skills. 6. There is modern airport infrastructure. 7. The country has a stable macroeconomic environment. 8. Stimulation of the economy through oil and gas exports keeps the tenge strong and improves purchasing power for the imported inputs required by the industry. 	<ol style="list-style-type: none"> 1. The sector is highly reliant on government subsidy programmes for meat producers and breeder farms, and on protection through high import tariffs and quotas (under the CU). 2. Currently, production costs are uncompetitive and the market is dominated by frozen imports, particularly "grey meat" from the United States of America. 3. There is high reliance on certain imported feed ingredients. 4. The feed milling industry is undeveloped. 5. Many, especially smaller, farms and processing plants have outdated technology and poor hygiene standards. 6. There is limited access to finance, particularly for small and medium-sized agricultural enterprises and household farms (HHFs). 7. Labour costs more than in several neighbouring countries. 8. There is a shortage of managerial skills and entrepreneurship. 9. Advanced and up-to-date technical skills are lacking. Veterinary services are inadequate, especially for peasant farms (PFs) and HHFs. 10. Extension and advisory services are inadequate. 11. Export competitiveness is lacking owing to distance from large export markets and high transport costs. 12. Bureaucratic business regulatory requirements are expensive. 13. The scarcity of foreign multinationals limits competition and the upgrading of local capabilities.

OPPORTUNITIES	THREATS
<ol style="list-style-type: none"> 1. Population growth and increasing disposable incomes mean that domestic demand for poultry meat will grow. 2. The bulk industry is well established, with some integrated modern facilities. Ample potential exists for expansion and modernization. 3. Chickens have better feed conversion ratios (FCRs) than other farm animals and are the most cost-effective source of animal protein. 4. Poultry meat is versatile, has a healthy low-fat image, and is in growing demand. Rising incomes help to drive this demand. 5. Growth of the retail supermarket sector will provide opportunities for high-quality processed chicken and value-added products (e.g., chilled portions and ready-cooked meals). 6. The opportunity for supplying “fresh” product may create a natural barrier to frozen imports and enable the establishment of higher-value branded local chicken products, suitable for retail and food service applications. 7. While domestic demand develops, there could be opportunities for exporting breast meat into the European Union (EU) or neighbouring countries. 8. Contract grower or breeder farming can be an opportunity to boost the production throughput of larger integrators, while providing employment opportunities for small- and medium-scale farmers. 	<ol style="list-style-type: none"> 1. The ability to remain competitive is unclear, following the reduction of substantial government protection for meat producers and breeder farms. 2. There is a serious threat of import substitution by frozen whole-bird product from Ukraine and the Russian Federation, together with grey meat from the United States of America and Brazil. 3. Failure or inability to invest in facility upgrades may lead to non-competitiveness. 4. Trade liberalization through World Trade Organization (WTO) accession and the new CU may open the Kazakh market to even more imported poultry products. 5. Biosecurity risks posed by avian influenza and Newcastle disease present a constant threat to sector profitability, and possibly to consumer preferences for chicken meat. 6. The large backyard poultry population has biosecurity threats that are difficult for the government to control. 7. Clientele patterns and favouritism by government create significant barriers for business development. 8. Over-indebted top-level operators are at risk should competitiveness not be improved.

The Kazakh market for poultry meat is currently valued at about USD 490 million. Per capita poultry meat consumption has displayed a generally positive trend in recent years (until 2007), in line with trends in the United States of America, the Russian Federation and many Central Asian and developing countries. This trend has been driven primarily by population growth, increase in disposable incomes, and relatively low chicken meat prices compared with other major meat types (beef, mutton and pork).

However, despite this growth, total per capita consumption of poultry still remains well below that in many other countries, including the Russian Federation and EU countries. Slight falls in per capita consumption of poultry meat have occurred in Kazakhstan since 2007. These can probably be explained by high feed-related costs for production during 2007 and 2008, plus a degree of consumer concern following outbreaks of highly pathogenic avian influenza (HPAI) in some neighbouring countries. Another reason could be the present market over-supply with frozen hind-quarter product (grey meat) from the United States of America.

During 2009, the Kazakh market totalled 185 000 tonnes, of which 75 000 tonnes (40 percent) was produced domestically, mostly by the ten leading vertically integrated local poultry enterprises, which collectively produced approximately 85 percent of domestic supply. The top three groups – Kaz-Ross, Ust-Komenogorsk Poultry Farm (UKPF) and Alel Agro – represent more than 56 percent of total capacity. More than 80 percent of broiler meat is produced in Almaty and the northeastern regions, particularly Pavlodar and Ust-Kamenogorsk. However, domestic production is currently heavily subsidized, to approximately 13 percent of the production cost of chicken meat; hefty subsidies also apply to the supply of day-old chicks (DOCs) or hatchable eggs from specialist breeder farms. The industry receives some protection from imports through import tariffs, which can equate to more than 50 percent of the landed price of imported frozen chicken. Generous tax relief for commercial producers currently represents a 70-percent reduction on all taxes payable by this group.

There is a huge smallholder, backyard poultry population in Kazakhstan, estimated at more than 14 million birds, or approximately 47 percent of the country's total poultry population. However, calculations carried out for this study suggest that more than 11 million of these birds may be egg laying breeds, and that smallholder poultry's contribution to national broiler meat production is only approximately 14 percent of the total. Nevertheless, through meat and eggs, backyard poultry is a highly significant contributor to the daily protein intake of perhaps 2 million households in rural areas. Biosecurity issues for the backyard sector are important, and difficult to control.

In terms of production costs, Kazakhstan is currently not competitive with the Russian Federation, Ukraine, the United States of America, Turkey and probably Brazil.³ As a result, and despite significant direct government support to the industry, the large majority (110 000 tonnes, or 60 percent) of the Kazakh market is supplied by imported chicken products, more than 88 percent of which are second-grade grey meat from the United States. Other exporting countries gaining increasing significance for domestic competition are headed by Ukraine and Brazil.

Competition in the Kazakh market is projected to increase substantially over the next one to three years, owing to the entrance of strong Ukrainian and Russian enterprises with decreasing production costs and improving efficiencies, which already supply frozen chicken to several regions of Kazakhstan. These companies include Mironovski in Ukraine, and Severnaya and Prioskolie in the Russian Federation. The huge Mironovski group is rapidly expanding its operations, while the average growth rate of poultry operations in both the Russian Federation and Ukraine is understood to be approximately 12 to 15 percent. During 2009, Russian poultry operations produced 2.4 million tonnes of chicken meat/products (Fedorova, 2009)⁴, while Ukraine produced 1.0 million tonnes (Agricultural News, 2009)⁵. It is projected that these tonnages will continue to increase. It is also forecast that second-grade poultry imports from the United States of America will remain a strong market presence for at least the short term, but will then probably gradually decrease over the next three to five years as a result of increased import tariffs and the establishment of a quota system through Kazakhstan's entry into the CU. Key issues are that domestic production cannot currently fulfil total demand, while low-price United States product maintains its appeal in lower-income consumers.

3.- Brazil also appears to be more competitive, but data still report low imports from Brazil, probably owing to a preferential demand in Kazakhstan for products of United States origin.

4.- Svetlana Fedorova, CEO of The Express-Overview. <http://www.rb.ru/inform/128307.html>

5.- http://agroua.net/news/news_26468.html

Consumption perspectives

Countries in Table B.1 are ranked according to per capita chicken meat consumption in 2009. With per capita consumption well below that of many countries – at only 12.4 kg/year – and substantial price competitiveness, there appears to be significant potential for increasing the market share of poultry meat in Kazakhstan, especially through the gradual replacement of imported frozen grey meat with more attractive domestic chilled or cooked value-added lines.

Table B.1: Worldwide meat consumption, 2009 (projected from data for first ten months)

Kg/capita			
Country/trade block	Beef	Pork	Chicken
United States of America	40,5	28,7	44,2
Brazil	37,2	12,1	38,5
Australia	34,7	21,9	33,1
Argentina	69,3	6,4	32,5
Russia	16,5	21,2	19,8
EU	17,4	42,7	17,2
Ukraine	10,4	16,2	17,1
South Korea	11,6	31,0	12,5
Kazakhstan	26.1	13,6	12,4
China	4,7	33,7	9,6

Source: Food and Agricultural Policy Research Institute, Iowa State University, United States of America, www.fapri.iastate.edu/outlook/2009.

Table B.2 ranks meat types in Kazakhstan according to per capita consumption in 2008, together with prices and trade statistics. Again, the price differentials shown imply that there is potential for replacing a proportion of beef and pork consumption with chicken, especially through the development of processed lines. Table B.2 also shows the huge significance of poultry meat imports, and the virtual non-existence of any type of meat export from Kazakhstan at present.

Table B.2: Domestic production, imports, consumption and prices of alternative meat types, 2008

Meat	Production '000 tonnes	Imports '000 tonnes	Exports '000 tonnes	Consumption '000 tonnes	Consumption kg/capita	Wholesale* Prices T/kg	Retail* Prices T/kg
Beef	400,1	11,7	0,4	411,3	26,0	503	585
Pork	206,2	9,1	-	215,3	13,6	550	622
Poultry	65,3	132,6	2,5	195,4	12,4	347	387
Mutton	130,8	0,3	-	131,1	8,3	518	595
Horse	66,3	2,1	-	68,4	4,3	680	764
Other	5,5	0,6	-	6,1	0,4	-	-

Sources: Statistics Agency; Customs Control Committee of the Ministry of Finance, 2008 ; and
* KazAgroMarketing JSC price averages across all regions of Kazakhstan, 3 November 2009, www.kam.kz.

As shown in Table B.3 and Figure 2, with population growth, the consumption of meat in general has increased, although there was a minor reduction in poultry consumption during 2007 and 2008. The trend for increasing consumption of both red and white meat with increasing gross domestic product (GDP) and income levels is common to many other developing nations. However, poultry's slightly falling share of total meat consumption in recent years goes against the trend in most other countries. This phenomenon is possibly best explained by a partial failure to meet total customer demand due to inadequacies in the supply chain, a lack of product appeal because of market domination by frozen grey meat product, or feed-related price rises causing a lack of sufficient price competitiveness.

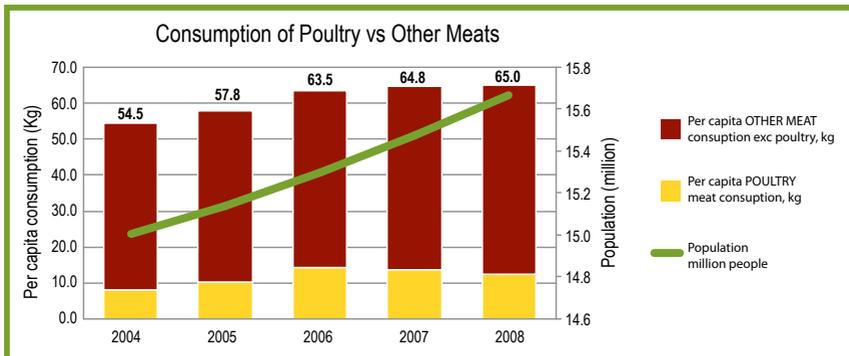
Table B.3: Meat consumption in relation to changes in the Consumer Price Index (CPI) and real incomes

Meat consumption trends according to incomes	2004	2005	2006	2007	2008
Population, million people	15,0	15,1	15,3	15,5	15,7
Per capita nominal money income, KZT per month	12 817	15 463	18 608	25 226	30 509
Consumer Price Index, % change from previous year	106,7%	107,5%	108,4%	118,8%	109,5%
Consumer Price Index, % change from 2004	100,0%	107,5%	116,5%	138,4%	151,6%
Per capita real money income in year 2004 prices, KZT	12 817	14 384	15 968	18 222	20 126
Per capita POULTRY meat consumption, kg	8,1	10,3	14,2	13,7	12,4
Per capita OTHER MEAT consumption exc poultry, kg	46,3	47,5	49,4	51,2	52,6
Per capita TOTAL MEAT consumption, kg	54,5	57,8	63,5	64,8	65,0

Source: Statistics Agency.

Note: Per capita meat consumption amounted to 69 kg in 2008 when canned and other processed meats were included. "Real money income" is calculated to incorporate consumer price changes.

Figure 2: Meat consumption against population growth



However, although there has been a fall in overall consumption during the last three years, a decrease in imports since 2007 has been accompanied by an increasing domestic production trend. This may imply growing consumer preference for national produce.

Dynamics of the poultry population, by type of farm enterprise

At 1 January 2009, Kazakhstan's poultry industry was represented by 38 large poultry enterprises, 26 of which were involved in producing edible eggs, and 12 in producing broiler meat Table B.4. It appears that the majority of birds held in enterprises are egg layer breeds.

Table B.4: Increasing trends in poultry enterprises

Poultry population distribution in Kazakhstan	1990	2008	
Number of enterprises	23	38	(26 egg, 12 broiler)
Total Bird population in enterprises	39.902.000	15.523.600	

Source: Statistics Agency.

However, although the commercial enterprise sector is increasing in size, the importance of poultry in HHFs, and its role in the sustainability of rural families, should not be overlooked. This flock includes meat and egg laying chicken breeds, turkeys, ducks, etc., and was estimated at between 14 and 15 million in 2009, or approximately 47 percent of Kazakhstan's total poultry population, by the Statistics Agency (Table B.5). Calculations based on information from multiple sources, including estimates of total egg numbers produced, suggest that the majority of birds held in smallholdings (HHFs and PFs) are egg layers (Table B.6). However, it must be noted that many of these birds are multi-purpose, with older egg laying hens being an important source of chicken meat.

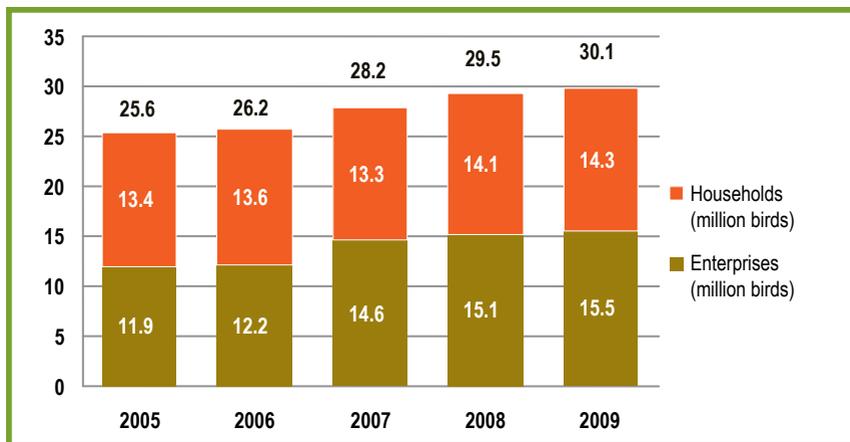
Household poultry is the major source of protein in rural villages where, according on estimates from similar countries, about 40 percent of human nutritional protein requirement is provided by eggs and poultry meat. The importance of household poultry production to human health status should therefore not be underestimated.

Table B.5: Poultry population

Poultry Population of Kazakhstan	2005	2006	2007	2008	2009
Population in Enterprises (million birds)	11,9	12,2	14,6	15,1	15,5
Population in Households (million birds)	13,4	13,6	13,3	14,1	14,3
TOTAL Population (million birds)	25,6	26,2	28,2	29,5	30,1

Source: Statistics Agency.

Figure 3: Poultry in enterprises and households in Kazakhstan



An estimate of the division of poultry populations in Kazakhstan is shown in Table B.6. Assumptions include that egg layers in smallholdings are probably 20 percent less efficient than those in enterprises, principally owing to inferior disease control and lower nutritional standards of feed rations.

Table B.6: Estimated division of bird populations across poultry sub-sectors, 2009 (projected)

Broilers		Meat, tonnes	Birds, no.	
Enterprises	2009 estimate	75 258	5 917 160	Including breeders
	Pending finance	207 158	16 272 189	Including breeders
Smallholders	2009 estimate	5 277	2 800 592	including breeders
EGG		Eggs, no.	Birds, no.	
Enterprises	2009 estimate	1 362 560 096	9 582 840	
	2009 estimate	1 400 000 000	11 500 000	

Source: Calculated from Statistics Agency data for 2009, in association with feed requirement prediction models based on Hubbard bird performance standards.

A further issue of some note, and one acknowledged by the Union of Poultry Farmers, is that there are currently no formal definitions of “enterprises”, “peasant farms” or “households”, these last two categories often being grouped together as “smallholders”. The issue has implications

for taxation law and the allocation of government production subsidies, as these rely on accurate determination of the levels of commercial activities undertaken.

MARKET TRENDS AND SECTOR ORIENTATIONS

Table C.1 shows the world's largest poultry meat producing nations in recent years. The United States of America has led the world for the past several years, with China and Brazil consistently in second and third positions. Note should be taken of the significantly increasing chicken production in the Russian Federation and Ukraine. Production in Kazakhstan is very small by comparison, but growing.

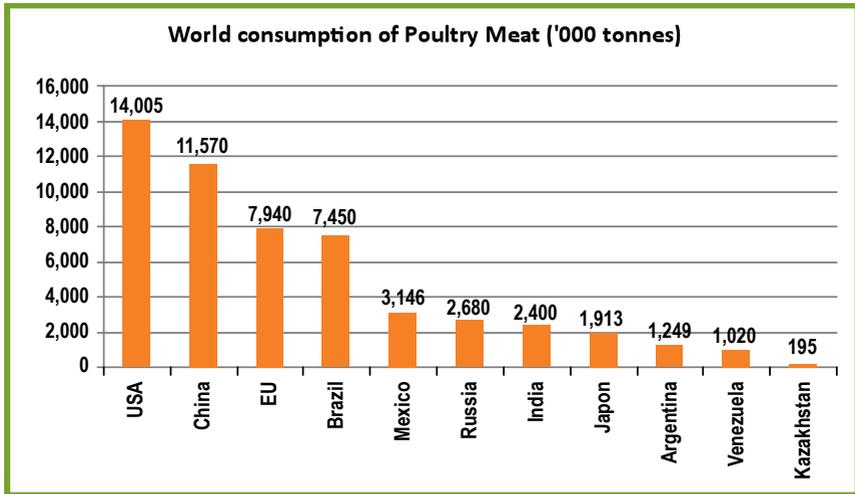
Table C.1: World's leading producers of poultry meat, 2004

'000 tonnes	2004	2005	2006	2007	2008	2009
United States	15 294	15 837	16 064	16 099	16 556	
China	9 700	10 200	10 350	10 850	12 650	
Brazil	8 105	9 080	9 280	10 105	10 895	
EU	7 695	7 670	7 425	8 035	8 400	
Mexico	0	0	0	2 656	2 722	
India	0	0	0	2 200	2 400	
Russian Federation	1 109	1 380	1 645	1 919	2 219	2 441
Argentina	900	1 080	1 210	1 300	1 425	
Japan	0	0	0	1 235	1 225	
Thailand	0	0	0	1 050	1 150	
Ukraine	200	280	375	460	570	1 000
Kazakhstan	41	46	65	64	65	75
TOTAL	43 044	45 573	46 414	55 973	60 277	

Sources: Statistics Agency, 2008 and 2009; Russian data: Fedorova, 2009, www.rb.ru/inform/128307.html; Ukraine 2009 data: Arpaphi News, 2009, agroua.net/news/news_26468.html.

World consumption of poultry meat is shown in Figure 4, with imported tonnages included in total consumption figures. It is apparent that Kazakhstan is well down the list, although countries' populations are not indicated by these data.

Figure 4: Consumption of poultry meat in selected countries, 2008 production



Potential markets for poultry meat

Regarding the potential for exports from Kazakhstan, Table C.2 lists the world's largest importers of poultry meats. The Russian Federation may seem to be a large potential future importer within the CU, but its domestic production is currently increasing by 15 to 16 percent per year, and now accounts for 75 percent of demand. The industry expects to be able to support itself fully within the next four to five years (Kokkonen, 2010)⁶. However, under the non-tariff conditions of the CU, there may be some opportunity for Kazakhstan to supply part of Belarus's requirements, possibly with air-freighted chilled or cooked chicken products (as well as frozen), if the industry progresses as planned in these directions; these possibilities require further analysis. Other potential markets would include western China, possibly also with frozen, chilled or cooked products.

6.- Kokkonen, D, (2010): Daily Media Monitoring for MHP. Company e-mail service, Monday 18 January 2010.

Table C.2: Major poultry meat importing countries, ranked on 2008 tonnages

'000 tonnes	2004	2005	2006	2007	2008
China	655	828	1 081	1 315	1 492
Russia	1 003	1 210	1 270	1 281	1 210
Mexico	441	516	550	535	594
Japan	349	414	366	345	421
UAE	0	82	0	237	269
Ukrain	0	0	0	0	237
South Africa	132	173	217	217	183
EU	327	387	272	178	178
Kazakhstan	0	108	150	141	125
Canada	82	85	106	117	125
Venezuela	0	0	0	0	109
Singapore	63	74	70	82	85
Yemen	0	0	76	93	72
Ghana Republic	0	0	0	72	68
Oman	0	50	46	51	62
Quatar	0	0	0	0	61
USA	0	0	0	25	58
Swiss	18	0	0	24	34
Malaysia	0	0	0	29	31
Cuba	125	96	161	0	0
Kuwait	0	0	66	67	0
Republic of Korea	0	46	61	44	0
Saudi Arabia	345	426	415	459	0

Table C.3 gives an indication of the global market players against which Kazakhstan would have to compete.

Table C.3: Major poultry meat exporting countries, ranked on 2008 tonnages

'000 tonnes	2004	2005	2006	2007	2008
Brazil	2 424	2 758	2 581	3 005	3 265
USA	2 242	2 409	2 542	2 994	2 803
EU	694	646	640	598	705
Argentine	0	64	70	150	193
Canada	55	78	85	111	124
China	61	121	92	120	120
Chili	42	54	57	37	0

Retail shopper trends and future projections

Marketing studies from other countries with developing chicken meat industries, such as Turkey, suggest that a typical spread across the main sales channels is in the order of: retail 42 percent, wholesale 33 percent, and food service 25 percent (EuropeAid, 2006)⁷. Following trends seen in other countries, these shares can be expected to change as the market matures, with the retail sector increasing its share. This may be driven by the financial involvement of global players such as Metro in the Kazakh retail sector. It would then increase pressure on producer prices, as retailers attempt to drive costs down.

Another channel that is expected to grow in volume as consumer incomes rise is the food service sector, where growth will be seen in fast-food outlets and catering establishments as more people eat out and the hotel industry develops. The poultry sector must prepare itself for these market changes by positioning its products through processing, branding and quality. The industry has recognized the demand for further processed products, and investments have already been made in facilities to satisfy the food service channel with further processed lines of chilled, cooked and par-cooked chicken products. In Turkey, 75 percent of the market is now sold as fresh, as opposed to frozen, product (EuropeAid, 2006)⁸.

AC Nielsen shopper trends surveys – Kazakhstan, November 2009

Recent surveys of the retail shopping market sector in Kazakhstan (mainly in urban areas) by the Nielsen Company⁹ have highlighted trends that point to a bright future for a food industry such as poultry, which has the ability to diversify and produce an interesting range of chilled and portioned, cooked and par-cooked, ready- or nearly ready-to-eat, healthy food items.

7.- EuropeAid Framework Contract. Agri-Livestock Consultants Ltd and WDC (World Development Consultants S.A.) Turkey Poultry Meat Sector Final Report. Dec 2006.

8.- Ibi idem.

9.- The Nielsen Company is a huge United States marketing and advertising research company with its headquarters in New York. Nielsen is active in more than 100 countries and employs some 36 000 people. A subsidiary of the company, AC Nielsen Kazakhstan Ltd, is located in Almaty. www.acnielsen.com/kz.

Main survey results, with implications for poultry meats (sample size: approximately 750 people)

- During 2009, supermarkets have become the main source for purchases of all product categories, although still competing with the open markets (bazaars) for fresh meat/chicken, fresh fish/seafood and fresh vegetables, which are still traditionally purchased from the open markets.
- Convenience stores are second in popularity, and have a strong market share. Hypermarkets achieve only a small share, indicating that these stores attract only their “neighbours” because location is a key driver of store choice. During 2009, convenience stores strengthened their position significantly.
- 38 percent of the household grocery budget is spent on fresh food (meat, fish and vegetables), highlighting the importance of these categories for consumers.
- In general, shoppers tend to demonstrate loyalty to specific brands, across all categories.
- The traditional grocery has lost its position. The number of shoppers visiting these shops occasionally declined to 45 percent, while the number spending most money in them declined by 70 percent.
- Open markets and specialized stores are also becoming less popular with shoppers, who prefer modern trade stores and supermarkets in particular.
- During 2009, Gros, Ramstore and Magnum were the three leading supermarkets in the Kazakh retail market.

Proportion of income spent on fresh food versus other food, groceries and personal care items

- Shoppers with higher income spend a higher share of their grocery budget on fresh food, up to 39 percent.
- Lower- and medium-level income earners spend 36 and 37 percent of their grocery budget on fresh food.
- Fresh food is an important category for all shoppers, whatever their income.

Places where fresh meat or poultry are “most often purchased” (sample size: 97 people)

- Supermarket = 43.0 percent.
- Open market = 41.0 percent.
- Hypermarket = 5.2 percent.
- Traditional grocery = 4.1 percent.
- Wholesale market = 3.0 percent.
- Others = 2.0 percent.

A market for chilled and cooked chicken products

Kazakhstan will need to distinguish itself in the marketplace to remain competitive. This could be done by following strong Russian, United States, Australian, Turkish and other international trends in supplying chilled fresh as opposed to frozen product, and by establishing a variety of value-added cooked or semi-cooked chicken products that are appropriate to the huge food service and convenience foods markets in many developed and developing countries. McDonalds, KFC, Red Rooster and similar companies have become enormous stimuli to the poultry industries in countless nations, as many people recognize chicken as a more tender and appealing alternative to the tougher, higher-fat-content red meats. In Turkey, 75 percent of the chicken market is as fresh product.

According to Central Asian Consultants (2009)¹⁰, in late 2008, 97 to 98 percent of the Kazakh market consisted of frozen whole birds and products. The remaining 2 to 3 percent consisted of “deep-processed products” – convenience foods, canned chicken, chicken sausages, etc. However, these analysts suggest that Ministry of Agriculture (MoA) plans are for deep-processed chilled, and cooked or partially cooked value-added products to represent 60 to 70 percent of the market by 2014. During this analysis, two of the sector’s leaders expressed the following intentions:

- UKPF plans to increase to 90 percent the share of fresh chicken in its production of chicken supplied to the Ust-Kamenogorsk area, by 2010.
- Alel Agro plans to increase its share of fresh chicken production to 20 to 30 percent over coming years.

The AC Nielsen market study confirmed shoppers’ preference for supermarkets, which are more conducive to the development of value-added products. These forms of products can out-compete frozen imported product, essentially the only form in which imported product can enter the Kazakh.

10.- Central Asian Consultants (2009): Report on preliminary research of prospects and economic feasibility of poultry (meat) in different regions of the Republic of Kazakhstan. Report for KazAgroFinance, Feb 2009.

The market premium for fresh/chilled whole chicken or chicken portions over frozen whole birds is not yet clear in the Kazakh market. The country's most advanced and modern supplier of fresh product, UKPF in East Kazakhstan, has only been supplying from its recently completed factory since September 2009. Early indications suggest a premium of T 30 to 50/kg, depending on the level of further processing and presentation. There also needs to be a period of consumer adaptation and differentiation of genuinely fresh product in the Kazakh market. This has been confused by the current poor practice of some retailers offering supposedly fresh portions that are derived from frozen and thawed whole birds from foreign exporters. Such product is expected to have a shelf-life of approximately one day, compared with approximately five days for hygienically prepared fresh products. Of considerable significance for the domestic market for chilled or cooked chicken will be whether Kazakhstan follows impending Russian legislation. From 1 January 2010, the Russian Federation has banned the use of previously frozen chicken in any further processed foods intended for babies or nursing mothers, and from 1 January 2011 it will ban the use of previously frozen chicken in all further processed food applications. Kazakhstan's joining of the CU is likely to include the adoption of such legislation, which should greatly expand the market for fresh product. Exporters seeking to compete in the pre-cooked and frozen market will then see significant increases in their existing costs of manufacture.

Examples of types of value-added, further processed chicken products are given in the following box. These products are common in many countries with well-developed fresh chicken markets.

Processed chicken products manufactured by Tyson Foods (United States of America)

Case-ready tray packs: Distributed primarily for direct consumer consumption and sold through retail markets

Fresh (refrigerated)	Whole birds
Deboned parts	Marinated speciality products
Bone-in parts	

Further value-added: Distributed for both in-home and food service applications in both bulk and convenient consumer packaging

Fresh (refrigerated) or frozen	Par-cooked
Deboned and trimmed	Battered and breaded
Marinated, seasoned and flavored	Custom packaging

For fresh, chilled product, shelf-life increases from the common two to five days to ten days or more will be important in maintaining food safety and satisfying retailers' demands, by minimizing the serious risk of large stock losses in the event of cold chain breakdowns or failure to sell estimated volumes of product. Various modern food processing technologies are now available for shelf-life extension, often using gas injection and/or vacuum packaging techniques. The Kazakh processing sector should investigate these approaches, particularly in view of the restrictions that Halal food manufacture standards impose on the use of preservative chemicals.

A key component of chilled product development will be the requirement for numerous improvements in the refrigerated transport and cold chain distribution networks of Kazakhstan. Improvements in this area could also have benefits for the country's milk, dairy products and other cold product collection and distribution systems.

For development of a market for fresh, cut-up chicken a further consideration is the need for a larger-sized breed than the traditional Hubbard types currently used in Kazakhstan (of approximately 1.5 kg dressed weight), which would be better suited to this market. Hence, birds of 2.2 kg dressed weight (such as Ross 308) are a more desirable genotype, although the transition would involve purchasing parent stocks of DOCs from alternative breeding sources and commencing with a whole new generation of birds throughout breeder divisions. This is quite possible, although a key issue is that higher-performance birds require improved feed specifications and general management, as they are not quite as hardy as the current smaller birds. Nevertheless, such larger birds are well-suited to the Central Asian and European markets, which display a preference for a good ratio of "dark" to "white" meat.

Projections for future sector development

Chicken meat production in Kazakhstan is still in some places characterized by backward features, including obsolete technology and outdated equipment, underdeveloped logistics and distribution networks, and a lack of well-trained or qualified specialists. However, a strong trend towards the modernization of technology and the upgrading of buildings

and equipment has been clear in the domestic poultry meat industry over recent years, with strong government support for the sector predicting a growing demand for poultry products.

MoA intends to stimulate poultry meat production to reach 150 000 tonnes, or twice 2009 production, over the next five years (Central Asian Consultants, 2009)¹¹. The justification for this strategy assumes increasing per capita consumption of chicken meat to 17 kg/year, equating to 20 percent of the country's total meat market¹². As mentioned, related plans provide for diversification of the market for chicken products by encouraging further deep-processed products, which are planned to represent 60 to 70 percent of the total market by 2014.

Kaz-Ross and UKPF commenced significant upgrades of their production capacity in 2006. Several other Kazakhstan poultry companies, following their Russian counterparties, are also expected to increase their production capacities in the near future. This has been verified by recent industry investment information from Kazakhstan's leading agricultural credit provider, the joint stock company (JSC), Kaz-Agro-Finance, as shown in Table 2, Annex 1. Eleven local poultry companies have recently been financed or are in the process of negotiating finances for equipment or plant upgrades totalling more than over USD184 million. Other, albeit unconfirmed, sources suggest that a further sum of up to USD144 million has been committed to another six poultry expansion projects by the Development Bank of Kazakhstan, Halyk Bank JSC and other lenders. The total meat plant capacity increases represented by these expansions and upgrades total approximately 130 000 tonnes of chicken meat.

11.- Ibi idem.

12.- At a meeting of MoA officials with the recently formed Union of Poultry Farmers and other industry representatives on 2 December 2009, it was proposed that the level of government subsidy on chicken meat production should be increased to match the upgrading of production facilities currently being undertaken or recently completed. This seems indicative of the current optimism regarding the poultry sector within Kazakhstan government circles.



PERFORMANCE AND PROFITABILITY ASPECTS

Current profitability indicators

An indication of the profitability of a fully integrated poultry meat enterprise over the financial year July 2008 to June 2009 is shown in Table 3, Annex1. The model is based on real financial data from a commercial producer, adjusted to represent activities that yield an annual output of 10 000 tonnes of chicken meat and semi-processed products. Income streams include sales of typically associated products such as eggs and feed, and government poultry meat production subsidies and various grants have also been accounted for. The profit and loss account includes typical financing costs, taxation and depreciation for an enterprise of this scale. To obtain a more representative indication of industry performance, the fiscal impacts of the devaluation of the tenge in February 2009 were removed from this model.

The performance of most poultry meat operations in 2008 was generally poor. As indicated, the prices for all types of grains and milled feeds (particularly soybean meal [SBM]) increased quite dramatically in Kazakhstan. Other significant causative factors for generally poor sector profitability in 2008 include rising wages, electricity costs and interest rates on credit.

Table D.1: Indicative costs of production for a 10 000 tonnes/year poultry meat enterprise

			USD:KZT	151,50
				USD/kg
Farm Cost of Production (live production, processing + depreciation)				
216,86	KZT/kg meat	without subsidies		1,43
39,63	KZT/kg meat	subsidies (actual)		
177,23	KZT/kg meat	with subsidies		1,17
156,14	KZT/kg LW on farm, approx (without subsidies)			1,03
Total Cost of Production (inc admin, transport, taxation + financing)				
264,58	KZT/kg meat	without subsidies		1,75
39,63	KZT/kg meat	subsidies (actual)		
224,95	KZT/kg meat	with subsidies		1,48
190,50	KZT/kg LW on farm, approx (without subsidies)			1,26

Productivity parameters

Live production

An indication of key performance indicators (KPIs) for commercial poultry meat farms across Kazakhstan in 2009 compared with breed standards for Hubbard birds in Central Asia is shown in Table D.2. The Kazakh data shown here were compiled from limited industry sources and extrapolated from information gathered during this analysis. The Hubbard breed standards were compiled from limited sources and other commercial data, but should not be regarded as official Hubbard KPI data.

Table D.2: KPIs for commercial chicken farms, 2009

Key Performance Indicators, Poultry Meat Sector, Kazakhstan, 2009	Typical Kazakh Commercial Farms	Hubbard Breed Standard
Breeders (10% male, 90% female)		
Feed per bird per 64 wk cycle	52.5 kg	45.5 kg
Eggs per hen housed	125	150
Hatching Rate	82,0%	84,5%
Broilers (averaged across sexes)		
Day-Old Chick Mortality	5%	
Feed per bird per 42 day cycle	4.5 kg	4.5 kg
Livability of Broilers	87 - 93%	96,5%
Feed Conversion Ratio	1.90 - 2.20	1,72
Slaughter Weight (LW basis), 42 days	1.7 - 2.1 kg	2.3 kg
Carcase Yield percentage	72 - 76%	82,0%
Days on Feed	42 days	42 days
Production Cycles per year	6 - 7	6 - 7
Cost of Production - live bird (KZT/kg LW)	175 - 225	
Cost of Production - carcass (KZT/kg meat), inc depr'n	245 - 315	

Source: For breed standards, www.hubbardbreeders

Comparing the KPI data in Table D.2, and assuming that most of the birds used are of Hubbard bloodlines, it would appear that typical Kazakh farms are generally below breed standards for FCR, liveability, SW and carcass yield. Each of these important KPIs is strongly influenced by nutritional, biosecurity and health management factors, which can be strongly influenced by standards of housing design, environmental control systems, hatchery performance, and slaughter management.

Figure 5 shows a simple model for demonstrating the potential annual savings in feed costs in a large enterprise producing 10 000 tonnes/year of chicken meat, when the FCR and SW can be significantly improved. This could be achieved through a combination of enhanced farm management, sharper feed purchasing and/or more scientific ration formulation. A potential yearly saving in feed of T 119 million (approximately USD795 500) appears possible, assuming that FCR could improve from 2.25 to 1.80, and SW increase from 1.80 to 2.00 kg LW, while ration cost should not rise from T 57.00/kg to more than T 63.75/kg.

Figure 5: Influences of FCR, final bird weight and ration cost on the annual feed cost for an enterprise producing 10 000 tonnes/year of chicken meat

POOR SCENARIO			IMPROVED SCENARIO		
FCR	2,25	kg feed/kg LW	FCR	1,80	kg feed/kg LW
Final Bird Wt	1,80	kg LW	Final Bird Wt	2,00	kg LW
Livability	87,0%		Livability	87,0%	
Carcase Yield	72,0%		Carcase Yield	72,0%	
Ration cost	57.000	KZT/ tonnes	Ration cost	63.750	KZT/ tonnes
Feed used	4,05	kg/bird/42 days	Feed used	3,60	kg/bird/42 days
Wasted feed	0,55	kg/bird/42 days	Wasted feed	0,45	kg/bird/42 days
Total feed used	4,60	kg/bird/42 days	Total feed used	4,05	kg/bird/42 days
Feed CoP/bird	262,20	KZT/bird at slaughter	Feed CoP/bird	258,19	KZT/bird at slaughter
Feed CoP/kg LW	145,67	KZT/kg LW	Feed CoP/kg LW	129,09	KZT/kg LW
Feed CoP/kg Meat	104,88	KZT/kg meat	Feed CoP/kg Meat	92,95	KZT/kg meat
Yearly Meat output	10.000	tonnes chicken meat	Yearly Meat output	10.000	tonnes chicken meat
Cost of Feed req'd	1.048.800.000	KZT per year	Cost of Feed req'd	929.475.000	KZT per year
			Savings in Feed	119.325.000	KZT per year
				795.500	USD per year

This model assumes that – with the exception of ration cost – no additional expenses are incurred in the process of making the necessary improvements. However, the magnitude of the possible savings easily justifies spending on acquiring professional advice or training staff to bring about the required changes in farm management.

Indicative performance indicators for the commercial processing sector, as possibly representative of all larger integrated enterprises in Kazakhstan, are outlined in the following box.

Indicative performance indicators

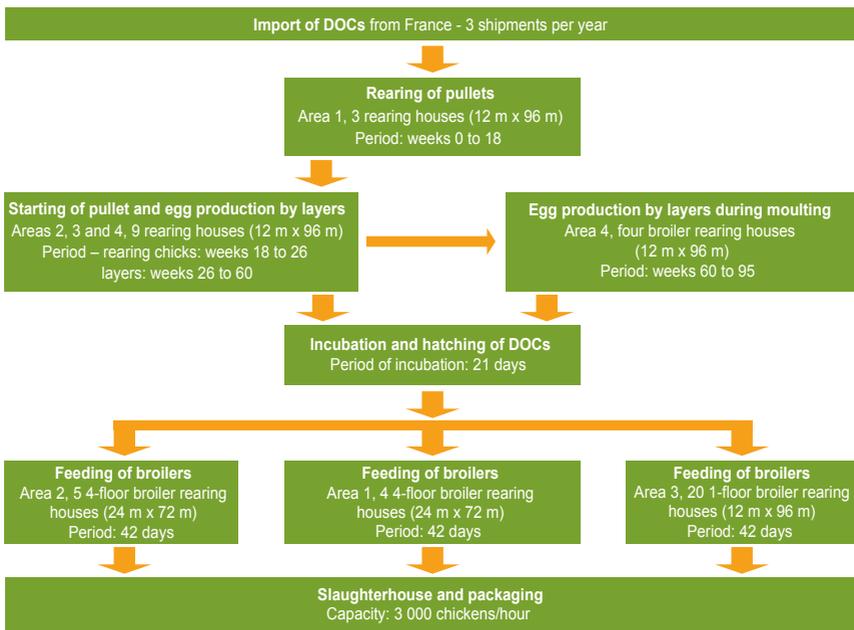
- **Primary carcass yield:**
Estimated approximate average 72 to 74 percent, with 78 percent achievable.
(Very close to the Turkish average of approximately 73 percent).
- **Meat yield after boning:**
Approximately 80 percent, with boneless meat yield approximately 73 percent of 80 percent, or 58.4 percent.
- **Processing plant costs:**
(broad estimates)
 - Fresh chicken = 21 T/kg meat.
 - Frozen chicken = 29 T/kg meat.The reduced costs associated with the processing of fresh, chilled product reflect the electricity savings achieved by not having to run freezers.
- **Processing plant throughput:**
Approximately 3 000 birds/hour, but largely depending on plant sophistication.
- **Labour costs:**
Based on 2009 average wages in Kazakhstan of T 75 000/month, with a throughput of 3 000 birds/hour, approximately T 470/hour, or T 0.16/bird.

Smallholder poultry farms: Using the same model, a similar exercise can be performed for smallholder poultry farms, demonstrating the possible savings in yearly feed cost that would result from various changes in current management. Recent estimates suggest that close to 2.8 million broiler birds are slaughtered each year in smallholdings, yielding more than 5 000 tonnes of chicken meat. To produce 1 tonne of chicken meat per year, an individual farmer would need to own and process approximately 500 broilers per year; this number is theoretically possible from only five breeder hens, plus a rooster (although DOCs are usually purchased from breeder farms). On a farm of this size, implementation of strategies to achieve the improvements in FCR and SW given in Figure 5, although not increasing ration cost to more than T 63.75/kg, could theoretically result in a yearly feed cost saving of T 11 933 (USD80.00).

Commercial broiler farm operations scheme: The farm operations in Figure 6 illustrates a basic enterprise structure for an integrator with a yearly output of 11 500 tonnes of broiler chicken meat. Every 20-week

period, up to 32 000 parent stock DOCs (83 000 per year) are ordered and shipped from France to commence the next cycle of breeder activity and broiler meat production. An operation of this size is expected to have an annual turnover of approximately 6 million broilers (based on six to seven 42-day production cycles) and approximately 60 000 breeder birds (90 percent female, 10 percent male).

Figure 6: Farm operations scheme for large poultry meat produce



Current status of technology, machinery and equipment

Central Asian Consultants (2009) sought to assess the status of the technology used in the industry as a minor component of its *Report on preliminary research of the prospects and economic feasibility of poultry (meat) in different regions of the Republic of Kazakhstan*, prepared for Kaz-Agro-Finance in February 2009. However, a thorough and accurate assessment of technology status throughout both the live production and the processing sectors is required for a better understanding of the constraints and opportunities.

As the global financial crisis started to evolve in mid-2008, credit terms given to customers (debtors) were extended, and poultry companies increased their own supplier terms (creditors). This has significantly slowed the replacement of old and outdated equipment, prevented further investment in new efficient technology, and even led to the closure of some poultry enterprises. As the same economic situation occurred in other nearby countries, government applied various approaches. Low-cost loans were made available to the industry for modernization and expansion, while imported poultry meat was subject to restrictions of some kind, resulting in an increase in domestic prices.

Live production facilities

Broiler farms: Broiler flocks are grown in a wide variety of housing systems, ranging from small barns with only a dozen or so birds in HHFs, to a few hundred birds in purpose-built sheds on some PFs, and to up to 30 000 birds/year on each level of giant four-storey buildings on some commercial enterprise farms. Population densities on commercial farms are generally 15 to 18 chickens/m². Most houses are heated with coal-burning boilers or sometimes natural gas. Pan feeding systems are generally utilized, with either nipple or bell drinkers. Ventilation systems range from basic manually operated inlets and fans with little or no automation, to fully automate advanced environmental control systems where temperature and humidity are kept constant using thermostats and other electronic sensor devices. The areas where farms are most likely to need modernization include:

- ventilation systems and exhaust fans;
- automated environmental control systems, for temperature and humidity monitoring and management;
- automated feeding and watering systems;
- systems for biosecurity and flock health management.

Pullet and breeder farms: Pullet rearing farms (growing young hens to 20 weeks of age) are structurally similar to broiler farms. Breeder farms are those where mating and egg laying takes place in large open pens holding

groups of 10 percent males and 90 percent females, for periods of 40 to 75 weeks, depending on whether or not hens are moulted. They differ from broiler farms in having large numbers of breeding pens, egg laying boxes, and egg cleaning and storage facilities. The areas where these farms are most likely to modernization are similar to those for broiler farms:

- ventilation systems and exhaust fans;
- automated environmental control systems, for temperature and humidity monitoring and management;
- automated feeding and watering systems;
- systems for biosecurity and flock health management;
- egg cleaning and storage facilities.

Hatcheries: The areas where these operations are most likely to need modernization include:

- incubator upgrades and/or replacement: older incubators are generally no longer serviced by manufacturers, so repairs and maintenance are difficult; wiring and circuit boards often need total replacement; accurate temperature and humidity control is critical to maximizing hatching rates and chick performance soon after hatching;
- improved biosecurity systems.

Slaughterhouses and processing plants

The areas where slaughter and processing facilities most likely need modernization include:

- structural aspects of buildings that may constitute non-compliance with international standards for hygiene and food safety, such as cold rooms and freezers, intake and out-loading areas, flooring, walls, roofing, ventilation and lighting arrangements, stainless steel surfaces;
- equipment for cleaning and disinfecting procedures;

- equipment for monitoring the bacterial load of finished product;
- general production line components, to improve operating efficiencies;
- machinery for gas injection or cryovac packaging for fresh/chilled chicken, rather than frozen;
- vehicles and equipment used throughout the fresh chicken cold supply chain.



OVERVIEW OF THE SUB-SECTOR'S COMPETITIVENESS

An analysis of the value chain for domestically produced poultry meat is presented in Table E.1.

Table E.1: Value chain analysis of chicken, ex-processing plant, 2008

LIVE PRODUCTION		Cost KZT per kg LW
	% Contribution	
Day Old Chicks @ 5.15% mortality	2,4%	4,70
Feed @ 1.85 FCR	64,8%	126,85
Labour	11,7%	22,90
Vaccinations	4,9%	9,59
Transport of live birds to processing	5,0%	9,79
General operating expenses	11,2%	21,92
TOTAL	100,0%	195,76
Shrinkage, deaths, rejects @ 1.5%		2,94
Farmgate Price per kg LW		198,69
		Frozen
PROCESSING		Cost KZT per kg Meat
Equiv Carcase Price per kg (72% yield)		275,96
Processing plant costs		29,30
GOVERNMENT SUBSIDY deducted		39,63
Chicken Production cost per kg meat		265,64
Producer Margin (30%)		79,69
Ex Plant Price per kg Meat		345,33

In calculating the production costs for Kazakh frozen whole chicken shown in Table E.1, the T 39.6/kg government subsidy was considered. The price of landed product in Kazakhstan usually bears little relationship

to the cost of producing a whole bird in the United States of America, as indicated in Tables E.2 and E3.

Table E.2: Value chain for United States imported bush legs, from farm to Kazakh border

USA Pre-export Prices (Whole Bird)	2007	2008	Kazakhstan entry Prices	2009	2009
	USD/kg	USD/kg		USD/kg	Tg/kg
Live basis	0,96	1,01	Landed Price	0,59	89
Carcase	1,34	1,40	Import Tariff	0,54	81
Wholesale	1,68	1,57	Final inc 12% VAT	1,27	190
Retail	3,64	3,85			

Source: For United States data, United States Department of Agriculture (USDA) Economic Research Service, May 2009, www.ers.usda.gov.

Table E.3: Value chain analysis for United States frozen halves/quarters, from landed in Kazakhstan to retail supermarket

USA "Bush Legs" Value Chain Analysis, Astana, Nov'09	USA Frzn Halfs/ Qtrs KZT/kg meat	Kzk Frozen W/bird ** KZT/kg meat
Landed Price (inc Tariff + VAT) .. OR .. Domestic CoP	0	0
Transport to distribution centre .. OR .. Retailer	10	10
Food Safety Lab services	4	
Wholesale storage costs		
Wholesale margin		
Retail margin (estimated from retail price)	136	85
Retail price (Astykzhan, Astana)	150	95

In Table E.3, it is assumed that both United States bush legs and locally produced frozen whole birds are supplied directly to retailers in supermarkets or bazaars. Food safety laboratory testing charges for imported product follow Kaz-Agro-Finance estimates for February 2009. Retail margins have been estimated to equate with retail prices observed in Astykzhan Supermarket in Astana during November 2009 (see Table 4, Annex1). It appears that margins on United States product are considerably higher than those on local chicken, and hence very attractive to retailers.

63. A partial value chain analysis for Ukrainian products is shown in Tables E.4 and E.5. These are based on commercial information sourced

in January 2010, which confirms that import tariffs are currently not being applied to Ukrainian chicken. The product is supplied to wholesalers prior to reaching supermarkets. Estimates of wholesale and retail margins have been made to equate with retail prices during early January 2010.

Table E.4: Value chain for Ukrainian imported non-tariff chicken, from farm to Kazakh border

Ukraine pre-export Prices (Whole Bird)	2009	Kazakhstan entry Prices	2010 (under quota)	2010 (under quota)
	USD/kg		USD/kg	KZT/kg
Live basis	0,00	Landed Price	1,35	203
Carcase	0,00	Import Tariff		0
		Final inc 12% VAT	1,55	233

Source: For Ukraine data, commercial information, January

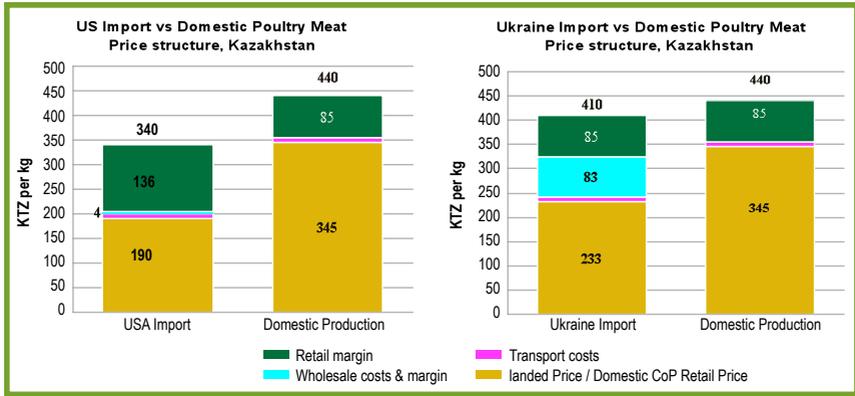
Table E.5: Value chain analysis for Ukrainian chicken, from landed in Kazakhstan to retail supermarket

Ukraine Frozen whole bird, Astana, January 2010	Ukrainian Frozen whole bird T/kg meat*	Kazakh Frozen whole bird T/kg meat*
Landed Price (inc Tariff + VAT) .. OR .. Domestic CoP	233	345
Transport to distribution centre .. OR .. Retailer	10	10
Food Safety Lab services	4	
Wholesale storage costs	7	
Wholesale margin	72	
Retail margin (estimated from retail price)	85	85
Retail price (Astana)	410	440

Sources: Commercial information and estimates, January 2010;

* UKPE, first six months 2009, including subsidy of T 39.6/kg

Figure 7: Comparisons among the price structures for United States and Ukrainian imports and domestic poultry meat



It is apparent that the non-tariff Ukrainian product poses a threat to the Kazakh product in retail supermarkets. This because of its lower production cost and highly competitive landed price, despite being subject to wholesale and retail costs and margins, plus 12 percent VAT.¹³ The Russian product may also challenge the Kazakh poultry meat market under the CU. Table E.6 analyses the value chain for Russian products, which reach a border price of about T 277/kg (based on 2008 production costs) and with no tariff or VAT payable. This could represent fierce competitor for domestic products, which could retail at T 383/kg (without wholesale charges).

Table E.6: Value chain for Russian imported non-tariff chicken, from farm to Kazakh border

Russian pre-export Prices (Whole Bird)	2008	Kazakhstan entry Prices	2010	2010
	USD/kg		USD/kg	KZT/kg
Live basis	0,81	Landed Price	1,85	277
Carcase	1,13	Import Tariff	0,00	0
		Final inc 12% VAT	0,00	0

Source: For Russian data, commercial information, January 2010.65.

13.- Wholesale costs and margins have been adapted and estimated from Kaz-Agro-Finance information for February 2009.

Production subsidies: As noted throughout these value chain analyses, the production cost of local Kazakh product has been reduced by a T 39.6/kg production subsidy from MoA. In the light of available information, it is assumed that similar production subsidies have not been granted in the United States of America, Ukraine or the Russian Federation. In common with the governments of many other more developed poultry meat producing countries, the governments of these three countries do not grant direct subsidies, but may assist producers through measures such as reductions in VAT, assisted credit terms and interest rates, and various forms of trade barriers to protect the locally emerging industry from imports. As mentioned previously, the value of second-grade, United States by-products when landed on the Kazakh market bears no resemblance to the value of a whole bird in the United States, from which the highly favoured white meat (breast and wing) products are derived.

The role of wholesalers: Commercial information suggests (Caldier, 2008)¹⁴, that at least a good proportion of imported chickens and products, including United States bush legs, are supplied directly to large Kazakh supermarkets such as Ramstore. However, for Ukrainian imports, wholesalers may play a crucial role in the poultry meat supply chain. An outline of costs, charges and margins is indicated in Table D.7, adapted from Kaz-Agro-Finance information for February 2009.

14.- Caldier, P (2008): Kazakhstan to double poultry production. World Poultry 24 (4): 10-12. <http://www.WorldPoultry.net>

Table E.7: Value chain analysis for Ukrainian imports when wholesalers are involved

Chicken Value Chain Analysis - Where Wholesalers Are Involved			
Ukraine	Assumptions:	tonnage of poultry meat processed through this chain is total imported poultry from all countries, year to date, 2009	tonnes per container
Frz W/Bird			20
			8,220
			411
			5
			T/kg
			232,50
			10,00
			4,00
Ukraine Poultry Meat Landed Price At Entry To Kazakhstan			
Transport To Astana			
Food Safety Testing			
Wholesale Costs	T/mth	Tg/day	W/sale trade kg/day
Container rent	26.000	867	5.480
Certificate		450	5.480
Wholesale Lab		350	5.480
Wages		2.000	5.480
Transport to retail			
			0,16
			0,08
			0,06
			0,36
			6,00
			6,67
			72,00
Wholesale Margin			
Retail Costs	T/mth	Tg/day	Retail trade kg/day
Trade place rent	20.000	667	4.000
Storage			
Balance		5	4.000
Taxes		150	4.000
Washing services		120	4.000
			0,03
			0,17
			5,00
			0,00
			0,04
			0,03
			5,24
			85,00
Retailing Margin (Estimated, And Includes Retail Costs)			
Retail Price, Astana			410,17

Sources: Commercial information and estimates, January 2010; Kaz-Agro-Finance, February 2009, Analysis of the value chain for imported agricultural and processed products.

Disparity between import and export data for chicken meat entering Kazakhstan

Data in Table D.8 highlight some significant anomalies in the flow of trade in chicken meat, especially between Kazakhstan and the United States of America. Far higher tonnages are recorded as entering Kazakhstan from the United States than leaving the United States for Kazakh. The Kazakh import data are likely to be correct, as all imported product should enter with country of origin labelling. However, much chicken of United States origin seems to enter via neighbouring countries, most likely Uzbekistan, the Kyrgyz Republic and Ukraine, on trains or trucks using a preferential customs and tariff policy before being sold direct to supermarkets (Caldier, 2008)¹⁵. Other United States chicken legs, such as those imported by the French frozen food company Agri-Mat-Export, arrive first in Klaipedia, Lithuania and are then loaded on to trains for a 15-day journey to Kazakhstan, where they are sold directly to three major supermarkets, including Ramstore (Caldier, 2008)¹⁶.

This information raises questions over the accuracy of the cost component analyses performed for United States and other imported products that enter Kazakhstan via neighbouring CIS countries. However, it is difficult to understand why United States product would be afforded preferential customs treatment when the Customs Committee of Kazakhstan seem to be aware of its origins. Further investigation of this is warranted.

15.- Ibi idem.

16.- Ibi idem.

Table E.8: Disparity between import and export data for chicken meat entering Kazakhstan

Metric Tonnes Poultry Meat Traded	2004	2005	2006	2007	2008
Import - Kazakhstan from USA	78.367	107.558	140.652	136.976	116.994
Export - USA to Kazakhstan	8.972	4.587	21.105	10.618	15.597
Difference	69.395	102.971	119.546	126.358	101.397
Import - Kazakhstan from Brazil	1.837	1.622	5.724	3.558	7.816
Export - Brazil to Kazakhstan	2.362	3.528	5.810	5.473	5.491
Difference	-525	-1.906	-86	-1.915	2.325
Import - Kazakhstan from Ukraine				2.711	4.166
Export - Ukraine to Kazakhstan				2.905	4.659
Difference				-194	-493
Import - Kazakhstan from Russian Federation	21	3	7	26	1.115
Export - Russian Federation to Kazakhstan	26	10	14	52	1.137
Difference	-4	-7	-7	-26	-22
Import - Kazakhstan from Canada			25	442	873
Export - Canada to Kazakhstan	122	100		225	501
Difference	-122	-100	25	218	372
Import - Kazakhstan from Turkey					
Export - Turkey to Kazakhstan		21			43
Difference		-21			-43

Source: United Nations Statistics Division, Commodity Trade Statistics Database 2009.

The anomalies in the recorded United States data could be explained by the United States Customs Department recording product as being exported to these on-route countries, rather than to Kazakhstan. The same reason probably explains the anomalies in the Brazilian data.

Wholesale and retail prices of poultry meat in Kazakhstan

Figure 8 illustrates the generally consistent relationship between wholesale and retail prices for poultry meat in Kazakhstan, with a strong upwards trend in prices occurring throughout 2007 and 2008.

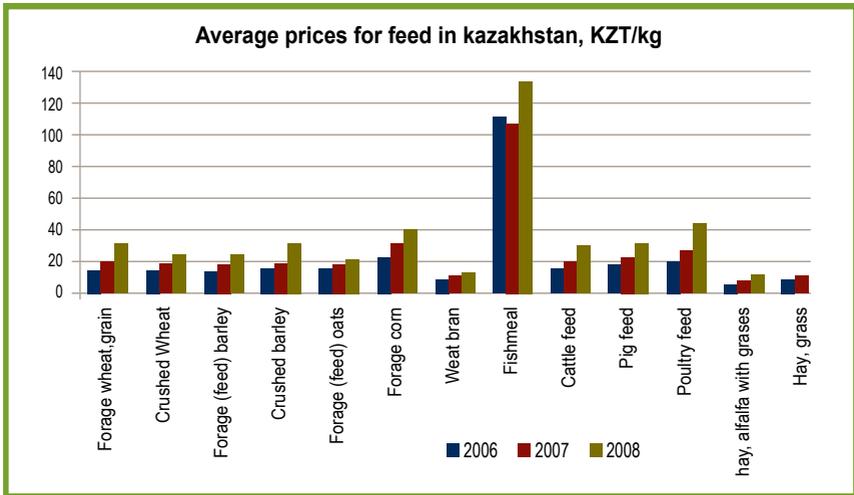
Figure 8: The dynamics of wholesale and retail prices in Kazakhstan, 2007 to 2008



Source: Statistics Agency, 2009.

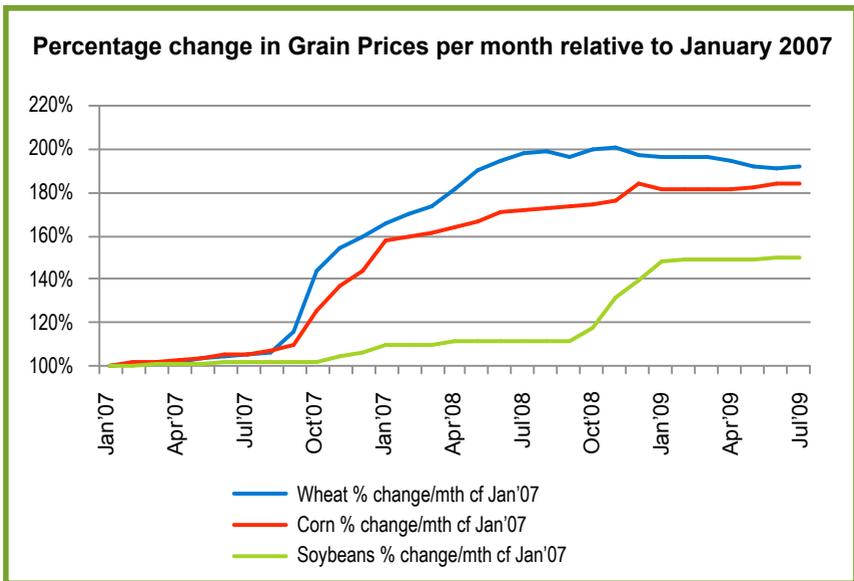
The generally rising prices from early 2007 and throughout 2008 are best explained by the rises in wages, electricity, interest rates and grain prices over the same period. These are shown in Figures 9 and 10. During 2008, prices for all types of grain and milled feed increased in Kazakhstan. As feed costs comprise approximately 65 percent of the total production cost for a live bird, these developments were central to chicken price increases. Diesel fuel rose by 43 percent and diesel oil by 24 percent from 2007 to 2008, while tariffs for freight transport rose by 8.9 percent. These factors contributed to the higher costs of widely transported and imported products.

Figure 9: Average prices for feed commodities, 2006 to 2008 (T/kg)



Source: Kaz-Agro-Marketing, 2009.

Figure 10: Major grain price changes from 2007 to 2009, relative to January 2007 prices



Source: Statistics Agency.

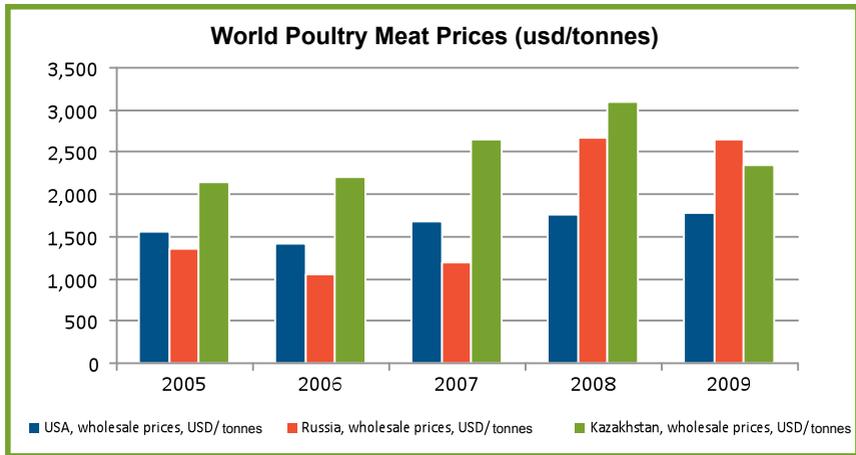
In addition to higher grain prices, the devaluation of the tenge in February 2009 led to higher prices for imported ration ingredients. When imported soybean meal (SBM) is used in commercial broiler rations, imported ingredients can account for almost 50 percent of total costs, but when SBM is supplied domestically (such as from the Vitasoy company), the figure declines by 25 percent.

The share of imports in the SBM used by the poultry industry over recent years is difficult to determine without a thorough industry survey. During 2009, approximately 94 000 tonnes of soybeans were harvested domestically, producing approximately 55 000 tonnes of SBM. From 2006 to 2009, 176 000 tonnes of soybeans were imported and 26 000 tonnes exported. During this same period, 25 000 tonnes of SBM were imported and 97 000 tonnes exported. It should also be noted that SBM is much in demand for Kazakhstan's pig industry and, increasingly, its dairy industry, with some also used for young horses.

A further influence on poultry meat prices since the onset of the global financial crisis in 2008 is that world producers, particularly those in the United States of America, significantly reduced poultry placements in response to the crisis. This led to the projected poultry price increases for 2010.

Poultry meat prices in other countries

A comparison of poultry meat prices across Kazakhstan, the United States of America and the Russian Federation over the past five years is shown in Figure 11. Lower prices during 2009 are probably the result of relief from the mostly feed-related high costs of production experienced in 2008.

Figure 11: Poultry meat wholesale in selected countries, 2005 to 2009

Source: Kaz-Agro-Marketing, 2009.

Some improvement in the international competitiveness of Kazakh chicken meat prices compared with both Russian and United States products occurred during 2009, although wholesale prices are still less favourable for consumers than they are in the United States of America.

Government support to the poultry sector

The poultry meat sector in Kazakhstan is currently protected by import tariffs and subsidized to approximately 13 percent of production costs. Substantial industry subsidies also apply to independent breeder divisions. Import tariffs often equate to more than 50 percent of the landed price of imported frozen chicken. In addition, commercial producers receive generous tax relief providing a 70 percent reduction in all taxes payable.

Several significant policy changes are about to affect the industry. The new tariff quota scheme applicable to CU members may significantly retard the flow of imported chicken into Kazakhstan from non-CU member nations, and create import substitution of domestic product by Russian chicken.

neighbouring countries, although these costs compare fairly well with two of its main competitors. Average wages in 2009 were approximately:

- Kazakhstan: USD500/month;
- Russian Federation: USD400 to 650/month;
- Ukraine: USD500/month.

Vaccinations are the third highest contributor to costs. Kazakhstan currently has at least six commercial producers of poultry vaccines, and additional vaccines can be imported when needed without much competitive disadvantage. Oil and gas are now inexpensive in Kazakhstan, compared with many other countries less well-endowed in natural resources wealth.

A comparison of the costs of production for a live bird in different poultry meat producing countries is given in the Table E.9.¹⁷

Table E.9: Comparative of production costs for a live bird in selected poultry producing countries

Costs of Production - Live Bird (not inc any subsidies)			
Exch Pre Feb 2009		Exch 2009	
USD:KZT = 120		USD:KZT = 150	
Country	EUR/kg LW	KZT/kg LW	USD/kg LW
Turkey, 2006	0.763	13	1.12
EU, 2006	0.710	12	1.05
USA, 2006	0.457	8	0.67
Brazil, 2006	0.396	7	0.58
USA, 2008		15	1.01
Russia, 2008		9	0.81
Ukraine, 2009		12	0.81
Turkey, 2009		15	1.01
Kazakhstan, 2006		7	0.58
Kazakhstan, 2007		8	0.72
Kazakhstan, 2008		19	1.63
Kazakhstan, 2009		21	1.43

Source: For 2006 data, Turkey: Poultry meat sector final report, EuropeAid Framework Contract, December 2007.

17.- Many different methods are used to calculate production costs. It is difficult to align these methods across countries and exchange rates applicable at the time in question. As this case is on a live bird basis, breed-specific variations in performance in some countries also complicate comparisons. Note should be made of the differences in applicable exchange rates, pre- and post-February 2009, when the tenge was significantly devalued against the United States dollar.

Competitiveness with the United States of America is a complex (and inappropriate) issue, as the second-grade grey meat (bush legs) enters Kazakhstan at less than the cost of production for a whole bird in Central Asia and Europe. Nevertheless, in recent years, production costs have been higher in Kazakhstan than in the Russian Federation and Ukraine. These are matters of concern for the poultry sector, especially in view of the free trade now possible with the Russian Federation and the lower (under-quota) tariffs payable by Ukraine under the CU's new trade agreements.

In summary, it would appear that Kazakhstan is not fully competitive with the Russian Federation, Ukraine, Turkey or the United States of America in terms of the production costs for a live bird. Other countries – including Brazil – that were not closely examined during this study, owing to their current low volumes of exports to Kazakhstan, must also be regarded as being possibly more competitive than Kazakhstan.

It is worth mentioning some of the justifications that other countries give for retaining domestic rural industries that lack global competitiveness. These may involve considerations such as:

- improved food safety of chicken and chicken products produced within the country;
- increased consumer confidence in the poultry meat supply chain;
- incremental tax revenues resulting from an increased volume of taxable domestic production.

Key drivers of increased competitiveness

Future growth of the poultry sector is likely to be driven, at least in the short term, by the domestic market and the capacity of the industry to capitalize on the comparative advantages that have emerged over the last decade. The growing oil and gas industry will cause the domestic consumer market to expand, thereby providing significant growth opportunities for the poultry industry, both meat and eggs. By exerting downwards pressure on the exchange rate, the oil and gas industry could make any future Kazakh exports less competitive, but also make imports of chicken meat products more price competitive on the domestic market, which

would benefit Kazakh consumers. A stronger tenge will also reduce the cost of imported poultry production inputs such as fishmeal, SBM, feed pre-mixes and microadditives, veterinary vaccines, antibiotics and other pharmaceuticals, DOCs, environmental control systems, incubators and production line components for processing plants.

ISSUES AND DEVELOPMENT OUTLINES

Current sector subsidization level

The poultry meat sector in Kazakhstan is currently heavily subsidized and protected by import tariffs. Meat production subsidies totalled T 2.6 billion, or USD17.5 million, during 2008, with large enterprises producing 10 000 tonnes/year receiving something in the order of T 400 million (USD2.6 million) each.

The feed issue

Kazakhstan can increase its international competitiveness with neighbouring exporting countries. This is largely owing to having access to a very substantial feed base, consisting mostly of high-grade wheat at fairly low prices. Wheat commonly comprises 50 to 60 percent of broiler rations, while feed costs comprise approximately 65 percent of the total cost of production for a live bird, or 50 percent of the production cost for processed chicken meat. Other key production costs of chicken meat in Kazakhstan include wages, vaccination costs, heating, fuel, coal, electricity, water and materials. Most of these are generally cost-competitive with CIS and other neighbouring countries.

SBM and fishmeal are key protein sources in broiler rations. However, although soybeans are generally grown competitively in Kazakhstan, locally produced SBM appears to be overpriced.¹⁸ When shortages occur and SBM needs to be imported, the percentage contribution to ration costs from imported ingredients rises to almost 50 percent.

Opening up the market for domestically produced SBM by constructing new factories for soybean processing in the Almaty and south Kazakhstan regions, as

18.- This may be owing to the monopolistic position for soybean oil extraction held by JSC Vitasoy; Statistics Agency data suggest that Vitasoy processed 61 percent of total soybeans in Kazakhstan in 2008.

currently advocated by the government, would appear a sensible strategy.

In view of the significant quantities of very competitively priced sunflower meal in Kazakhstan, there is an opportunity for the Kazakh poultry industry to follow the example of companies in Ukraine, the Russian Federation, the Black Sea countries and throughout the world, by further processing sunflower meal to allow better utilization and cost-effectiveness in poultry rations. In broiler chickens feeds, up to 50 to 75 percent of the soybean content can be satisfactorily replaced by decellulosed sunflower meal, particularly when supplemented with additional synthetic lysine.

Supply of parent stock and the breeding of parent and grandparent stock

The opportunity for specialist commercial breeding farms in Kazakhstan to supply the DOC requirements of smallholder poultry farmers (particularly larger PFs) in Kazakhstan or other CIS or Central Asian countries with developing poultry meat industries is worth further analysis and assessment.

However, attempting to develop bloodlines of poultry specifically bred for conditions prevalent in Kazakhstan would be expensive and time-consuming, would have very little economic benefit for the industry, and may even disadvantage it. The current practice of using genetically advanced breeds established by the world's leading poultry breeding companies (such as Hubbard, Ross and Cobb) should be maintained; this is the strategy practised worldwide by most other leading poultry production companies. It is more beneficial to focus attention on improving other elements of the total cost of goods sold rather than on the 2.5 percent attributed to the cost of importing parent stock DOCs.

Veterinary surveillance and diagnostic services, especially for HPAI

Kazakhstan is gradually moving towards compliance with World Organisation for Animal Health (OIE) standards in relation to poultry disease issues, and this will enhance investor confidence in the sector. Over recent years, a proactive programme has been put in place for vaccination

of smallholder and village birds against HPAI. There is also a system for the serological monitoring of village chickens and wild birds.

A full OIE-approved HPAI biosecurity plan must be established as soon as possible. There must also be a full contingency plan supported by a compensation plan.

MoA, through the Department of Livestock Sector Development and Veterinary Safety, should continue to heighten awareness of biosecurity requirements and the risks posed by major exotic diseases of concern, particularly HPAI and Newcastle disease. Training in up-to-date and veterinary-approved biosecurity procedures is essential across all poultry industry sub-sectors. This will include MoA veterinary officers and employees at all levels, private sector veterinarians, poultry traders, integrators, PFs and household poultry keepers at all scales of operation.

Investments from private enterprises should also focus on upgrading the biosecurity on farms and across all integrated business components. The fencing of sites to control the movement of visitors and vehicles on and off the farm, and the protection of buildings from entry by wild birds will continue to be priorities.

In association with existing MoA control of State veterinary services and assistance programmes, the current programme of upgrading diagnostic procedures and vaccine development methodology for key poultry epizootic diseases of concern, particularly HPAI, should be continued and enhanced.

Towards more advanced government support

For Kazakhstan to improve its competitiveness with imported poultry products, the following options should be considered:

- (1) Promotion of best practice industry methods for reducing production costs, at both the farm and the processing plant levels.
- (2) Promotion of best practice industry methods for enhancing quality and food safety standards.
- (3) Support for the import quota and tariff policies of the CU during the early phases of domestic industry development.

- (4) Government policies for capacity building of the sector and the provision of a supportive environment for industry development. These may involve government-assisted education and training of the human resource base; upgrading of transport and cold chain networks and of veterinary and feed testing laboratories; and increasing access to commercially manufactured feed.
- (5) Public awareness campaigns on the improved food quality and safety value of fresh poultry lines.
- (6) A concessional taxation policy for primary producers in Kazakhstan, in the early phases of domestic industry development.
- (7) Improved public support and facilitated access to finance for acknowledged innovations and for upgrades of equipment and technology used on farms, in hatcheries and in processing plants, to optimize the production of fresh/chilled product.
- (8) Technical assistance, advisory services and training (including sourcing of best international technical assistance and advice) in business management, marketing, supply chain and cold chain management, and packaging techniques and retail presentation.

Changes to remove government subsidies and certain other forms of policy support for the industry can only be regarded a positive sign regarding the long-term competitiveness of the sector. However, the gradual withdrawal of subsidies will need to be accompanied by policies designed to effect capacity building for the sector, together with the provision of readily available long-term credit for the modernization and expansion of production facilities. Some level of taxation relief, including VAT, may also be appropriate during the phase of industry growth and development.

Accessible and more diversified (through the involvement of the private/commercial banking system) long-term credit should be facilitated for the modernization and expansion of production facilities. Support could be provided in the form of guarantee funds and rebate schemes (appropriately designed), and by improving the sector-related risk assessment capacity of

participating financing institutions. Technology upgrades will drive sector profitability and competitiveness by ultimately reducing production costs and improving efficiencies. Improved efficiencies at the farm and processing plant levels – involving animal health, nutrition, husbandry and processing – will ultimately determine the future viability of the industry. Relief from all major industry taxes, including VAT, during the industry growth phase would also benefit the overall development process. Certain sections of Kazakhstan’s Taxation Law may need to be reviewed, to enable broiler breeders, growers and chicken meat processors greater access to eligibility. Financing of such a government support programme could by and large be arranged through a restructuring of the current large subsidization scheme.

Eligibility for all direct government support should be determined by the presentation of a detailed, viable five-year business plan, incorporating projected long-term profitability, biosecurity and environmental considerations. Smallholder farmers should be eligible to apply for support, provided there is evidence of organized economies of scale and viable business plans.

Addressing sector competitiveness

In general, international competitiveness of the poultry industry would be improved through simultaneous investments in the areas of animal production activities and processing facilities and marketing. Areas for investment options include the following:

(1) Live production:

- control and reduction of feed costs;
- self-sufficiency in soybean growing and SBM production;
- development of alternatives to SBM, such as decellulosed sunflower meal;
- scale-up operations, either through investing in new equipment/infrastructure on-site, or through acquiring smaller poultry farms in the local region and controlling them under a contract grower model or as geographically expanded in-house operations.

(2) Processing and marketing:

- production of more value-added products with higher

profitability, such as chilled fresh chicken products and cooked or partially cooked portions, along with development of cold chain distribution channels and associated marketing efforts; improved product packaging and presentation can also improve sales;

- upgrading and modernization of existing processing plants and equipment.

Potential for an expanded feed milling industry in Kazakhstan

Commercial feed milling industries operate very successfully in the world's most profitable animal producing countries. Huge international stock feed milling groups include Tyson Foods (33 mills) and Pilgrim's Pride (29 mills) in the United States of America; Charoen Pokphand in Thailand and throughout Southeast Asia; PT Japfa Comfeed in Indonesia and Viet Nam; Suguna Poultry in India; and Banvit AS in Turkey. All these were originally established with poultry meat as their core business.

There are 22 companies in Kazakhstan currently listed as producing feed, although the main activity for most of these companies is the production of flour and flour products. Current feed mill utilization is only 56 percent of design capacity, probably owing to outdated milling technologies and the general perception throughout the poultry industry of a lack of nutritional quality in feeds manufactured by commercial feed milling companies in Kazakhstan.

MoA should promote the feed milling industry through the dissemination of information relating to the cost-benefit ratios of compound feeds for the country's livestock and animal production facilities.

The feed milling industry should also be supported through the provision of assistance to selected regionally dispersed privately owned mills that are attempting to expand and supply a wider range of customers. As has occurred elsewhere in the world, such a model could also be implemented by supporting large vertically integrated poultry meat production enterprises that currently operate private feed mills.

Development of a market for chilled and cooked chicken products

In late 2008, 97 to 98 percent of the Kazakh market consisted of frozen whole birds and products. However, MoA strategies are for to promote deep-processed chilled, and cooked or partially cooked value-added products so that they represent 60 to 70 percent of the market by 2014.

As all imports into Kazakhstan are currently frozen product, there is an opportunity for the country to override its poor competitiveness for frozen poultry by rapidly developing the domestic market for fresh/chilled and cooked or partly cooked, more versatile and attractive chicken products, which are well suited to the expanding retail supermarket trade.

The poultry industry will need to distinguish itself in the marketplace to remain competitive, perhaps by following strong United States and other international trends of supplying chilled/fresh product rather than frozen, and establishing a variety of value-added cooked or semi-cooked chicken products that are appropriate for the huge fast food and convenience food markets. This is happening in many developed and developing countries. McDonalds, KFC, Red Rooster and similar companies have become enormous stimuli to the poultry industries in countless nations.

Numerous reports, including the November 2009 AC Nielsen market surveys of retail shopper trends in Kazakhstan, have indicated that open markets and specialized stores are becoming less popular with shoppers, as they turn to “modern trade stores and supermarkets in particular”. The supermarket environment is far more conducive to the development of value-added chilled or cooked/partly cooked chicken products, and these products can out-compete frozen imported product.

Regarding fresh, chilled product, shelf-life extension from the common two to five days to ten days or more will be important for maintaining food safety and retailer demand. Various modern food processing technologies are now available for shelf-life extension, often using gas injection and/or vacuum packaging techniques. These approaches should be investigated by the Kazakh processing sector, particularly in view of the restrictions imposed on the use of preservative chemicals by Halal standards of food manufacture.

A key component of the chilled product development option will be capacity building through staff training and the development of skills in cold chain management, packaging techniques and retail presentation. Improvements will also be required in the various refrigerated transport and cold chain distribution networks of Kazakhstan.

A further consideration for the development of a market for fresh, cut-up chicken is that a breed of bird somewhat larger than the traditional one (of approximately 1.5 kg dressed weight) is better suited to this market. Hence, larger birds (of approximately 2.2 kg dressed weight) are a more desirable genotype, although a transition would involve purchasing parent stocks of DOCs from breeding companies and commencing a whole new generation of birds throughout breeder divisions. This is possible, although a key factor is that higher-performance, larger birds require improved feed specifications and general management, as they are not as hardy as the smaller traditional birds. Nevertheless, Ross 308 birds are well suited to the Central Asian and European markets, which have displayed a preference for the breed's good ratio of dark to white meat.

Option for the development of a contract grower model

The adoption of a model for the contracting of broiler grower farmers by large fully vertically integrated enterprises is a possible means of significantly increasing the scale of broiler production operations in Kazakhstan, while also leading to capacity building for smallholder farmers and rural communities, especially through increasing employment opportunities.

Contractor models are used widely in the United States of America and also in Turkey, India, Thailand and many parts of Southeast Asia. The model can also lead to expansion of the feed milling industry, as new or expanded mills are needed to supply growers spread throughout rural communities. However, limitations include the potential for a degree of exploitation of contractors by parent companies. The Russian Federation and Ukraine have preferred a "full integration" model, with all expansions occurring within the confines of one large complex. In Kazakhstan, large vertical integrations are currently well below capacity (at only approximately

72 percent), so this option of expanding through existing infrastructure is probably more attractive.

Prior to recommending that the contract grower model be applied in Kazakhstan, it would be necessary to complete a thorough socio-economic feasibility study across large enterprises and the rural areas in which contractors would operate.

Possible options for smallholder backyard poultry farmers

There is a huge smallholder, backyard poultry population in Kazakhstan. There could be scope for supporting this segment, particularly where the commercial poultry industry is less able to reach consumers competitively. Services to support the backyard poultry industry should be demand-driven. Periodic training workshops or other educational activities and media promotions should be made available to smallholder farmers to promote improvements such as:

- (1) upgrading biosecurity provisions on PFs and HHFs;
- (2) increasing farm sizes or amalgamating PFs, to increase competitiveness.
- (3) village-level training in biosecurity, flock health and nutrition, hygiene in processing, food safety, minimizing epizootic risks to human health, preventing the transfer of diseases to commercial poultry houses, environmental management, and business accounting;
- (4) improved access to higher-quality commercially prepared feed from feed mills;
- (5) improved access to higher-quality DOCs from specialist breeder farms;
- (6) marketing support via bird collection and distribution points;
- (7) micro-finance schemes to increase farm size; many farms also require financing for new equipment, to remain viable;
- (8) capacity building for smallholders, including through facilitating opportunities for the contract growing of broilers for larger integrated enterprises.

**ANNEX 1:
REFERENCE TABLES**

Table 1: Volumes of processed poultry meat in Kazakhstan regions, 2007 and 2008

Region	2007	2008
Aqmola		
Meat and edible offal, tonnes	1585	750
chickens (including young chickens), turkeys, ducks, geese and guinea fowls, fresh or chilled, carcasses, tonnes	1181	519
semi-chopped meat (including poultry), tonnes*	83	35
Aktobe		
Meat and edible offal, tonnes	378	538
chickens (including chickens), turkeys, ducks, geese and guinea fowls, fresh or chilled, carcasses, tonnes	123	69
semi-chopped meat (including poultry), tonnes*	189	104
Almaty		
Meat and edible offal, tonnes	27806	49161
chickens (including chickens), turkeys, ducks, geese and guinea fowls, fresh or chilled, carcasses, tonnes	16404	34275
semi-chopped meat (including poultry), tonnes*	355	847
Eastern Kazakhstan		
Meat and edible offal, tonnes	16396	17837
chickens (including chickens), turkeys, ducks, geese and guinea fowls, fresh or chilled, carcasses, tonnes	1290	781
semi-chopped meat (including poultry), tonnes*	158	148
Zhambyl		
Meat and edible offal, tonnes	30	35
chickens (including chickens), turkeys, ducks, geese and guinea fowls, fresh or chilled, carcasses, tonnes	30	35
West Kazakhstan		
Meat and edible offal, tonnes	260	271
chickens (including chickens), turkeys, ducks, geese and guinea fowls, fresh or chilled, carcasses, tonnes	260	271
semi-chopped meat (including poultry), tonnes*	35	49
Karaganda		
Meat and edible offal, tonnes	5528	5784
chickens (including chickens), turkeys, ducks, geese and guinea fowls, fresh or chilled, carcasses, tonnes	77	50
semi-chopped meat (including poultry), tonnes*	238	371
Region	2007	2008

Kostanay		
Meat and edible offal, tonnes	433	336
chickens (including chickens), turkeys, ducks, geese and guinea fowls, fresh or chilled, carcasses, tonnes	433	336
semi-chopped meat (including poultry), tonnes*	246	170
Qyzylorda		
Meat and edible offal, tonnes	100	21
chickens (including chickens), turkeys, ducks, geese and guinea fowls, fresh or chilled, carcasses, tonnes	100	21
semi-chopped meat (including poultry), tonnes*	117	78
Pavlodar		
Meat and edible offal, tonnes	183	228
chickens (including chickens), turkeys, ducks, geese and guinea fowls, fresh or chilled, carcasses, tonnes	183	228
semi-chopped meat (including poultry), tonnes*	338	739
North Kazakhstan		
Meat and edible offal, tonnes	238	350
chickens (including chickens), turkeys, ducks, geese and guinea fowls, fresh or chilled, carcasses, tonnes	238	350
semi-chopped meat (including poultry), tonnes*	26	16
South Kazakhstan		
Meat and edible offal, tonnes	1135	1580
chickens (including chickens), turkeys, ducks, geese and guinea fowls, fresh or chilled, carcasses, tonnes	1135	1580
Astana city		
semi-chopped meat (including poultry), tonnes*	283	182
Almaty city		
Meat and edible offal, tonnes	71	67
semi-chopped meat (including poultry), tonnes*	617	640

* Total volume produced, as separation of specific poultry meat was not possible.

Source: Central Asian Consultants, 2009, using Statistics Agency data.

Table 2: Finance applications for poultry enterprise upgrades, expansions or new constructions, December 2009

Kazakhstan Poultry Meat Industry Investment Portfolio, asat December, 2009						
Name of Poultry Enterprise	Financing Institution	State of Progress	Type of Construction	Increase of production capacity, tonnes meat	Funding, million Tenge	
					Total	KAF
"Petropavl broiler/poultry farm" LLP	"KazAgroFinance" JSC	Perspective (interested in financing)	New capacities	6.000	1.469	1.249
"Akzhar K" LLP	"KazAgroFinance" JSC	Perspective (interested in financing)	New capacities	-	-	-
"Komsomolskaya poultry farm" LLP	"KazAgroFinance" JSC	Planned (BP ready, waiting for approval)	Modernization	12.000	2.911	2.472
"Breeding poultry farm Kostanai" JSC	"KazAgroFinance" JSC	Planned (BP ready, waiting for approval)	Modernization	6.500	3.616	3.074
"KazKomplekt Investment Company", LLP	"KazAgroFinance" JSC	Planned (BP ready, waiting for approval)	New capacities	20.000	6.967	4.879
"Ust-Kamenogorsk poultry farm" JSC	"KazAgroFinance" JSC	Planned (BP ready, waiting for approval)	Modernization	25.000	2.455	2.229
"AgrolinterPitca" LLP	"KazAgroFinance" JSC	Planned (BP ready, waiting for approval)	New capacities	4.000	2.895	2.282
"Broiler Poultry Farm Zhas Kanat" LLP	"KazAgroFinance" JSC	Ongoing (working projects)	Modernization	1.880	592	435
"Healthy Products" LLP	"KazAgroFinance" JSC	Ongoing (working projects)	New capacities	5.000	1.585	1.324
"Ordabasy Kus" LLP	"KazAgroFinance" JSC	Ongoing (working projects)	New capacities	10.000	3.805	3.094
"Bent" JSC	"KazAgroFinance" JSC	Ongoing (working projects)	Modernization	10.000	1.280	1.020
Source: KazAgroFinance, 2009				Total	100.380	27.575
						184
min USD						
Unconfirmed information						
Farm "Yesen"	"Kaspiy" SEC (Social-Entrepreneurship Corp)	Planned (BP ready, waiting for approval)			1.155	
"Sheremshansky Broiler" LLP	"Development Bank of Kazakhstan", JSC	Ongoing (working projects)	New capacities	6.500	2.755	
"Sa Nar" LLP	Ministry of Industry and Trade?	Ongoing (working projects)	New capacities		1.145	
"Maikudusjaya Poultry Farm" LLP	"Development Bank of Kazakhstan", JSC	Ongoing (working projects)	New capacities		1.569	
"Gorbatenko" Individual Entrepreneur	"Development Bank of Kazakhstan", JSC	Planned (BP ready, waiting for approval)	New capacities	20	10	
"KazRoss Broiler" LLP	"Halyk Bank" JSC	Completed/Production started	New capacities	25.000	15.000	
Source: Unconfirmed reports through internet searches, Asiana, 2009				Total	31.520	21.634
						144
						min USD

Table 3: Indicative profit and loss account for a 10 000 tonne/year poultry meat enterprise in Kazakhstan

Broiler Farm Profit & Loss Account		
Unit size of enterprise:	KZ:US \$	15
10,000 tonnes Chicken Meat per year	1 Jul-31 Dec 2008	1 Jan-30 Jun 2009
Volume of goods sold (kg)	kg	kg
Meat and semi-processed food (kg)	4,879,023	5,120,977
Other products (kg)	169,232	226,344
Income	KZ	KZ
Chicken Meat, semi-processed food and subproducts	1,259,578,294	1,310,990,260
Eggs	2,609,322	2,609,322
Fee	120,796	0
** Other Revenue (net)	129,481,180	258,686,780
Total Revenue from Sales & Other Income	1,391,789,592	1,572,826,587
Expenses	KZ	KZ
<i>Farm Costs</i>		
Feed Costs	668,945,112	653,146,533
Salaries and related expenses	115,369,668	142,788,742
Materials	60,298,320	70,122,643
Veterinary services	29,546,732	25,566,820
Electricity	35,941,437	49,676,452
Fuel	38,914,841	61,202,043
Depreciation	46,879,513	63,652,932
Other expences	48,407,112	58,108,803
Sub-total	1,044,302,735	1,124,264,968
<i>Office, general and administration</i>		
Salaries and related expenses	33,713,424	49,563,172
Transportation costs	12,871,078	11,164,011
Audit and consulting	16,356,605	12,583,765
** Taxes other than income tax	21,554,834	11,249,765
Security services	10,733,668	10,225,114
Others	35,835,237	46,091,673
Sub-total	131,064,846	140,877,500
<i>Cost of meat product sales</i>		
Transportation costs	8.237.122	4.326.291
Salaries and related expenses	5.703.969	8.479.565
Electricity	3.571.745	5.924.107
Storage of final products	8.072.650	16.605.810
Others	3.293.197	3.948.935
Sub-total	28.878.683	39.284.708
EXPANSION OF CERTAIN ITEMS ABOVE		
Financial expenses	49.246.516	87.896.215
Total Operating Expenses	1.253.492.780	1.392.323.391

Highlights on four livestock sub-sectors in Kazakhstan - Poultry

Profit & Loss, half year	138.296.812	180.503.196
Profit & Loss, full year, Jul-Jun 2008-09		318.800.008
	<i>USD</i>	<i>2.125.333</i>
Other operating activities	KZ	KZ
Revenue		
Gains on disposal of fixed assets	4.342.370	5.618.500
Grants from the Government	133.982.070	276.688.220
Income from rental	3.535.780	3.780.290
Revenues from the sale of utility services	30.850.540	28.606.220
Other income from sales	8.537.560	3.761.980
Sub-total	181.248.320	318.455.210
Expenses		
The cost of disposal of fixed assets	9.653.390	3.726.870
Sum differences	0	6.904.970
Other	649.670	2.901.400
Cost of rental	4.905.580	3.780.840
Expenditures from the sale of utility services	35.929.250	39.839.100
Other expenditures (debt discount bonds)	629.250	2.615.250
Sub-total	51.767.140	59.768.430
Profit & Loss from other activities	129.481.180	258.686.780
Tax items	KZ	KZ
Property tax	2.847.582	5.356.144
Fee for use of land plots	373.668	461.699
Payment for environmental pollution	17.442.265	4.354.084
Land tax	170.353	170.029
Natural resources consumption tax	654.996	751.104
Vehicle tax	63.498	105.030
Income tax at the source of payment	0	51.675
Fee for the use of radio frequencies	2.472	0
Total taxes	21.554.834	11.249.765

EXPANSION OF CERTAIN ITEMS ABOVE						
Wings (Priiskolle, Ru), polystyrenne tray	539	3.59				
Assorted cuts	469	3.13	Whole bird (Alraid, Ukraine)	410		2,73
Stomachs (Aknaar, Kz)	455	3.03				
Cuts for soup (Ardager, Kz)	319	2.13				
Chicken mince	379	2.53				
Liver	375	2.50	Eggs - edible	KZT/doz		USD/doz
"GREEN" SUPERMARKET, 9 Jan'10			Loose form; according to weight	140-190		0.93-1.27
Deep Frozen, plastic bags						
Whole bird (Alraid, Ukraine)	345	2.30				
Whole bird (UKPF, Kz)	420	2.80				
Chilled, Fresh Chicken on trays						
Whole chicken (UKPF, Kz)	480	3.20				
Chicken thighs (UKPF, Kz)	580	3.87				
Chicken legs (ULPF, Kz)	460	3.07				
"KEREMET" SUPERMARKET, 9 Jan'10						
Deep Frozen, plastic bags						
Whole bird (Alraid, Ukraine)	380	2.53				
METRO WHOLESALE HYPERMARKET, Nov'09						
Chilled, Fresh Chicken on trays						
Whole bird (UKPF, Kz)	427	2.85				
Chicken thighs & shanks (UKPF, Kz)	409	2.73				

