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## **Kazakhstan - Republic of**

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### **Kazakhstan Master Plan for Beef Cattle Sector Development till 2020**

**Report Categories:**

Trade Policy Monitoring

Livestock and Products

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**Report Highlights:**

The Kazakhstan Ministry of Agriculture has issued the plan for development of the beef livestock sector in Kazakhstan. This report contains unofficial translations of the full plan.

## General Information:

The Kazakhstan Ministry of Agriculture has issued the plan for development of the beef livestock sector in Kazakhstan through the year 2020. This report contains an unofficial translation of the plan as released. The plan reviews the current state of the sector, as of 2012, identified the conditions necessary for development of the sector, and problems currently impeding the development of the sector and solutions.

Unofficial English translation of the above-referenced master plan can be found below:

### BEGIN UNOFFICIAL TRANSLATION:

- I. Review of the current status and future prospects of the sector development
  1. Global market of beef production.

<b><i>Beef and veal production in 2012</i></b>		
##	Country	Amount in slaughter weight (1,000 t)
1	Brazil	9,307
2	EU (27)	7,765
3	China	5,540
4	India	3,460
5	Argentina	2,620
		<i>Source: USDA</i>
<b><i>Beef and veal consumption in 2012</i></b>		
№	Country	Amount in slaughter weight (1,000 t)
1	Brazil	7,845
2	EU (27)	7,806
3	China	5,597
4	Argentina	2,458
5	Russia	2,395
		<i>Source: USDA</i>

<b><i>Beef and veal import in 2012</i></b>		
##	Country	Amount in slaughter weight (1,000 t)
1	Russia	991
2	Japan	737
3	South Korea	370
4	EU (27)	348
5	Hong Kong	241
		<i>Source: USDA</i>
<b><i>Beef and veal export in 2012</i></b>		
№	Country	Amount in slaughter weight (1,000 t)
1	Brazil	1,524
2	India	1,411
3	Australia	1,407
4	New Zealand	517
5	Uruguay	355
		<i>Source: USDA</i>

2. Beef production technology

Beef production process can be provisionally divided into two types: 1) meat from the culled dairy cows and veal calves, and 2) high-quality beef from meat cattle fattened at specialized feedlots using prescribed diets aimed at the maximum weight gain within a particular time; it has higher selling price.

The first type of production is well-developed in the countries with advanced dairy cattle farming, and the meat is mostly delivered for further processing as it does not possess high tastiness. The second type of production is well-developed in the countries possessing considerable grazing land for keeping the seed stock and production of grain crops (barley, corn) for the fattening of bull-calves.

Till 1991 in Kazakhstan, as well as in all the USSR, dairy cattle production was dominating; therefore, the bulk of beef was produced from dairy cattle. There were some attempts to develop a dedicated beef cattle sector, which resulted in the creation of a domestic meat breed Kazakh White Head that became widespread in the territory of the former USSR. After collapse of the USSR and bankruptcy of the majority of state farms and collective farms, the selection of direction for the sector development in the modern environment of market-based economy again became important and received considerable incentives for enhancement after the adoption of Resolution of the Government of the Republic Kazakhstan #877 "On the approval of a comprehensive action plan for implementation of the project "Development of the export potential of cattle meat for 2011 - 2015" dated July 29, 2011."

### 3. Cattle population in the country over time

From 1990 to 2013, the cattle population in all categories of farms of the Republic of Kazakhstan reduced from 9.757 million head to 5.690 million head (of them cows - from 3.368 million head to 2.580 million head). Cattle slaughter rate in Kazakhstan makes up 43% of its total population. However, according to FAO, the rate of 30-35% is considered as an average value for maintaining a sustainable herd population in a country; if the rate is higher, the cattle population is going down and, in turn, it will affect further meat production output. In other words, the growth of public well-being induces an increased demand for beef and, thus farmers have to sell more cows than it is required to maintain or even to increase the cattle population. Speaking otherwise, to meet the growing public requirements, the cattle seed stock should also grow, but in reality it is declining continuously. Ultimately, this trend may cause total dependence of the country on beef import.

A way out from the current situation is to create favorable conditions for farm business, where cow raising in a farm will be more beneficial than to sell cows for meat, and to import cattle population from other countries in order to achieve an increase in seed stock in the country as soon as possible. Meantime, a temporary beef deficiency will be compensated by meat from the Customs Union (CU) member-states.

### 4. Beef production, import, export and consumption in the country

Item	Measuring Units	Years						
		1990	2007	2008	2009	2010	2011	2012
Cattle	thousand head	9,757.0	5,840.9	5991.6	6,095.2	6,175.4	5,702.4*	5690.0*
Incl. Cows	thousand head	4,879.0	2,605.6	2,675.4	2,717.3	2,751.3	2,502.8*	2580.1*
Beef	thousand head	709.6	385.9	400.1	396.1	406.8	392.8	373.5
Export, thousand t	thousand head	184.5	0.00	0.39	0.02	0.00	0.02	0
Import, thousand t	thousand head	6	18.84	11.69	6.0	10.4	12.3	20.6
Consumption, 1 person/year, kg	thousand head	30	26.1	26.2	25.0	25.6	24.5	23.1
Import share, %	thousand head	0.0	4.6	2.8	1.5	2.5	3.0	5.5

## II. Necessary conditions for the beef cattle sector development

### 1. Low cost of feed production

Kazakhstan is ranked as number five in the world for availability of grazing land. Availability of pastures for animal grazing is a critical factor for cost reduction of the management of the beef cattle seed stock.

*For reference: the area of natural forage land of the Republic is 189.3 million ha, or 69.5 % of the overall area. Pastures take up 184.3 million ha, and hayland - 5.0 million ha. In the territorial structure, summer pastures take up 51.6 million ha, spring-and-summer pastures 77.1 million ha, winter pastures 30.0 million ha, and all-the-year-round pastures 26.3 million ha.*

Kazakhstan annually exports an average of 5 million tons of grain which can serve as feeding for the production of high-quality beef – the next chain of the added value, and bring additional export earnings. A very simple calculation shows that the sales of 1,000 tons of grain brings an export revenue about US\$200 thousand, while the sales of 250 tons of beef (conversion: 1 kg of meat – 4 kg of grain) will bring not less than US\$1.5 million.

### 2. Animal high genetic potential

This condition could be accomplished if a course taken under the program “Development of the export potential of cattle meat” is held in the future. This course envisages an essential amount of the state support targeted at the development of pedigree cattle business. The achievement of the above conditions is critical for ensuring the competitiveness and profitability of the sector: in 2012 in Kazakhstan the average slaughter weight of a carcass was 154 kg, while in countries with well-developed livestock farming this indicator amounts to approx. 250 kg. In other words, since the gross production output of beef is calculated as a number of slaughtered cows multiplied by an average slaughter weight, the increase in cattle productivity becomes a key factor for the sector advancement along with the cattle population growth. Targeted public purebred associations play an important role in increasing productivity of the pedigree livestock. The adopted updates of the RK Law “On Pedigree Livestock Farming” have established a legal framework for the development of public institutes composing of the farmers-breeders of certain cattle breeds who are interested specifically in its further evolution.

### 3. Availability of marketing outlets

Potential market outlets for the domestic beef include: the Russian Federation (import in 2012 – 991 thousand tons) and China (57 thousand tons 2012; clear trends to increase in beef consumption are observed due to the growing public well-being), as well as the premium market outlets of high-quality beef in the South Korea, Japan, the EU member-states and Persian Gulf countries – in view of the supreme palatability characteristics of the Kazakhstan beef and its completely organic production which will provide an additional competitive advantage. Certain efforts should be made to conduct certification according to the standards “organic, eco, bio, halal”) which will satisfy the strict criteria established by the importing countries.

The condition is accomplishable subject to veterinary safety of the country, especially in the regions targeted at export; sustainable availability of commercial beef shipments; and, introduction of a system for origin traceability of the products meeting the highest requirements of importing countries. The Australian system put into place for organizing beef shipments to Japan and South Korea can be referred to as an example.

## **II. Structure of the beef cattle sector**

In the countries with advanced beef cattle production and similar feed resources – with abundance of natural pastures and developed production of grain crops (Australia, the USA, Canada) the sector is structured in the following way:

### **1. Reproduction farms for purebred cattle breeding** (Appendix 1)

Capacity: 200 to 500 head of seed stock.

Basic products to sell: stud bulls, heifers and bred heifers.

Marketing takes place at the specialized auctions arranged directly at the farms every year. The price for exceptional breeding bulls comes to as much as US\$200,000 per head. Data about the auctions are posted in advance on the web-sites of the purebred Associations.

### **2. Reproduction farms for commercial (commodity) cattle breeding** (Appendix 2)

Capacity: 100 to 2000 head of seed stock.

Basic products: purebred or cross-bred (mostly Angus and Hereford) bull-calves aged 7-8 months, intended for further fattening, and commercial heifers for the restocking of other commercial farms. Marketing takes place both at auctions and through direct contracts arranged as commercial farm-feedlot. Auctions for selling bull-calves and heifers are held daily in specialized cattle markets provided with all necessary equipment for cattle loading/unloading, weighing and identification. Specially valued are the cross-bred meat bull-calves that possess a high potential of meat gain and feed conversion due to the phenomenon of heterocyst.

### **3. Feedlots with advanced infrastructure** (Appendix 3)

Their one-time cattle housing capacity is no less than 1,000 head. There are also feedlots with a capacity

of 30,000 or 50,000 head. As high profitability of the business directly depends on the feedlot scale, large feedlots have the following advantages: possibility of shaping commercial lots of fattened bull-calves for marketing; wholesale discounts for feed acquisition or preparation; low construction cost per fattening station as there is a list of mandatory facilities for any feedlot independent on its size; and high labor efficiency (10 employees can serve a feedlot for 10,000 head of the cattle, and 20 employees – 50,000 head).

#### **4. Meat processing plants**

Their annual slaughter capacity is at least 200,000 head (in the USA, some plants have the annual capacity of 1-2 million head).

Basic products: fresh refrigerated meat and frozen meat blocks. By-products are sold to smaller meat-processing factories specializing in the production of sausages and specialty meats.

#### **IV. Problems impeding development of the sector and ways of their solution**

The beef cattle production sector in Kazakhstan has the following challenges:

- Low proportion of pedigree animals in the total beef cattle population (8.2 %)
- insufficient number of the seed stock of commercial cattle population (as of August 20, 2013, 311,000 head)
- low productivity of the commercial cattle population, and, accordingly, low slaughter yield of meat per carcass (an average yield is 154 kg in the Republic)
- high cattle concentration in the individual households/backyards (72% of the total number)
- small-scale commercial production and technological backwardness of most livestock entities (farms and feedlots)
- small number of dedicated feedlots (57,000 cattle stalls) and underdevelopment of the system of selling young animals from the commercial farms after weaning to the feedlots
- deviations from the balanced diet in cattle feeding
- underdevelopment of the organized cattle trade
- Underdevelopment of the system of lending funds for cattle purchase by the second-tier banks. Underdevelopment of the cattle insurance market. A lack of the legislative provisions for cattle insurance.
- insufficiently developed system of cattle and cattle products identification and traceability
- a lack of the technical regulations for the production of livestock products meeting the world standards "halal", "organic", "bio", and "eco".
- poor skills of the farmers and inadequate training, consulting, and knowledge extension systems

The solution of the above-stated problems by achieving the following indicators and performing the following measures by 2020:

1. To increase the seed stock of the breeding beef cattle to 300,000 head (20% of the total number);
2. To increase the seed stock of the commercial cattle herd to 1,500,000 head and the share of purebred beef cattle to 40-50% of the total number of the commercial herd, and to achieve the beef cattle slaughter weight gain at least by 2% annually;
3. To create conditions for the construction of appropriate hi-tech infrastructure for cattle growing and fattening at the dedicated farms, build meat-processing plants of appropriate capacity with sufficient number of warehouses fitted with refrigerating equipment for the shipment of

- commercial beef lots for export;
4. To set up conditions for the construction of cattle markets based on up-to-date technologies and as many as necessary;
  5. To launch the world-class information systems for animal identification and traceability of the origin of animal products meeting the requirements of the meat importing countries;
  6. To ensure skill improvement of the farmers and to develop a knowledge transfer and technology commercialization system;
  7. To establish a necessary legal framework (Law on Livestock Farming, Law on Animal Insurance, Law on Pastures, Law on individual households/backyards, technical regulations, etc.);
  8. To ensure the absolute achievement of the annual target indicators of the Program by every region.

The sectorial program for agribusiness (agro-industrial complex or APC - *in Russian*) development in the Republic of Kazakhstan for 2013-2020 "Agribusiness-2020" approved by Resolution of the Government of the Republic of Kazakhstan #151 dated February 18, 2013, has envisaged the following financial tools of the state support for the sector development:

- **investment subsidies** (*to reduce repayment time of the projects and to improve their investment attractiveness; to be allocated only to the priority activities*)
- **insurance and guarantee of loans to the agribusiness entities** (*to address the problem associated with a lack of sufficient collateral for the project implementation*);
- **subsidizing of the loan rate for all categories of loans in the agribusiness** (*to ensure availability of commercial loans from the second-tier banks and other lending organizations for the agribusiness sector*)
- **subsidizing of stock breeding** (*to increase the percent of pedigree cattle and animal productivity*)
- **production subsidizing** (*to reduce the cost of made products*)
- **funding of the consulting expenses and implementation of R&D results** (*farmer competence improvement*)

1. To increase the seed stock of the breeding beef cattle and to conduct stock breeding business

To achieve the goal on increasing the population of the breeding beef cattle it is necessary to import a seed stock and to ensure annual procurement of domestic bred heifers by the farms. To this end, the policy of subsidizing and soft bank lending for purchasing the breeding cattle should be continued within the scope, corresponding to the indicators given in Columns 4 and 5.

Year	Pedigree cattle population, as of the end of the year	Seed stock of the pedigree cattle	Import of seed stock of the pedigree cattle	Natural seed stock growth	Procurement of domestic pedigree seed stock
1	2	3	4	5	6
2013	306,325	133,091	14,000	19,000	10,000
2014	382,278	166,091		21,295	18,000
2015	431,290	187,385			18,000

				19,931	
2016	477,164	207,316		22,486	10,000
2017	528,919	229,802		24,878	10,000
2018	586,178	254,680		27,576	10,000
2019	649,648	282,257		30,562	10,000
2020	719,990	312,818		33,871	10,000

\*Column 2 = Column 3 x 2.3 (seed stock proportion in a herd – 43.5%). Column 3<sub>i</sub> = Column 3<sub>i-1</sub> + Column 4 + Column 5, for example, at the end of 2013, the seed stock (cows) amounts to 133,091 head; in 2013 the number of additionally imported heifers was 14,000 head, and the natural seed stock growth reached 19,000 head of the cattle, 10,000 of them were purchased for loans and 9,000 at the expense of funds of the farmers, or kept for increasing their own seed stock. Ultimately, by the end of 2014, the seed stock population will include 166,091 head.

Breakdown of the indicators specified in Columns 4 and 6 is shown by region in Appendix 4.

#### Production of the pedigree products:

Year	Seed stock of breeding cattle (at the end of year)	Offspring			Selling of pedigree products	
		calf yield	bull-calves	heifers	heifers*	bull-calves**
2013	133,091	80.5%	37,385	37,385	10,000	5,766
2014	166,091	81.0%	53,902	53,902	18,000	7,522
2015	187,385	81.5%	67,682	67,682	18,000	9,559
2016	207,316	82.0%	76,828	76,828	18,000	11,921
2017	229,802	82.5%	85,518	85,518	18,000	14,662
2018	254,680	83.0%	95,368	95,368	18,000	17,841
2019	282,257	83.5%	106,329	106,329	18,000	21,529
2020	312,818	84.0%	118,548	118,548	18,000	25,807

\* Sale of pedigree heifers: 25% of the offspring is culled (veterinary reject), then the replacement heifers are kept to retain the seed stock at the previous level instead of the culled cows (20%), the rest are sold – 12% of the seed stock

\*\* Selling of the pedigree bull-calves is calculated proceeding from the need in breeding bulls for the commercial cattle population (1 bull per 30 head of the seed stock, with the bull replacement once in two years)

#### Meat production (from rejected bull-calves, heifers and cows):

Year	Number of rejected head per slaughter				Slaughter meat yield per carcass*, kg			Meat production from rejected head, t			
	Seed stock	Heifers	Bull-calves	Total	Seed stock	Heifers	Bull-calves	Seed stock	Heifers	Bull-calves	Total
2013	19964	6671	22289	48924	240	192	248	4791	1281	5516	11589
2014	26618	9346	31619	67583	242	196	250	6452	1830	7904	16186



2015	33218	13475	46380	93074	245	200	252	8133	2692	11710	<b>22534</b>
2016	37477	16921	58123	112521	247	204	255	9267	3448	14821	<b>27536</b>
2017	41463	19207	64907	125577	250	208	258	10355	3992	16717	<b>31064</b>
2018	45960	21379	70856	138196	252	212	260	11593	4532	18431	<b>34557</b>
2019	50936	23842	77527	152305	255	204	263	14092	3905	20481	<b>38478</b>
2020	56451	26582	84800	167833	257	206	265	15759	4373	22472	<b>42604</b>

\*The projected slaughter meat yield per carcass is 1% per year.

The increase in meat production from the pedigree beef cattle will achieve 30,000 t from 2013 to 2020.

### Calculation of the necessary funds

#### 1. Lending for the acquisition of imported and domestic young pedigree animals

##### - soft-term financing at the expense of the Republican Budget (RB) and the National Fund (NF)

Funds from the RB are allocated to the procurement of foreign pedigree cattle within the program on the development of export potential of the cattle meat (Resolution of the RK Government #877) by making up the authorized capital of the Joint Stock Company "KazAgroFinance" in the amount of Tenge 20.589 head for 27,366 head for the period of 2011-2014 (Tenge 8.400 head for 10,461 head in 2011; Tenge 4.868 head for 7,036 head in 2012; Tenge 5.230 head for 7,198 head in 2013; and, Tenge 2.091 head for 2671 head in 2014). Soft-term loans for the cattle procurement are provided on a leasing basis with a 4% interest rate for an 8-year period and with a grace period of up to 2 years.

Funds from the NF are allocated to the establishing of a network of pedigree cattle reproduction farms in the amount of Tenge 17.449 billion (for 23 thousand head), beginning from 2010.

##### - subsidizing of the interest rate for commercial loans

The Joint Stock Company "NUKh KazAgro" and the second-tier banks will finance acquisition of the domestic breeding cattle using their own and borrowed funds, and later the loan rate will be reduced by 7% to create soft terms, thus providing incentives to the farmers by subsidizing the loan rate for cattle procurement.

Table. The required amount of funds by year

Year	Loans for import of the pedigree cattle (Cost per head – Tenge 600,000 and taking subsidies into account – Tenge 365,000)		Loans for acquisition of the domestic pedigree heifers (Cost per head – Tenge 450,000 and taking subsidies into account – Tenge 332,000)		Funds needed for the reduction of interest rate* (%), Tenge million
	Number of head	Amount of necessary loan funds, Tenge mil	Number of head	Amount of necessary loan funds, Tenge mil	
2013	14,000	5,110	10,000	3,320	930
2014			18,000	5,976	1,673
2015			18,000	5,976	1,673

2016			18,000	5,976	1,673
2017			18,000	5,976	1,673
2018			18,000	5,976	1,673
2019			18,000	5,976	1,673
2020			18,000	5,976	1,673
<b>Total:</b>	<b>14,000</b>	<b>5,110</b>	<b>136,000</b>	<b>45,152</b>	<b>12,643</b>

*Table. Scheme of loan funding for the procurement of import and domestic pedigree cattle, Tenge. The amount of subsidies is fixed immediately upon conclusion of a loan agreement for the entire period of its validity. Cost per head – Tenge 450,000 and taking subsidies into account – Tenge 332,000, grace period – 2 years*

<b>Domestic pedigree heifers</b>				
<b>Year</b>	<b>Outstanding principal loan (PL)</b>	<b>PL payment</b>	<b>% payment (14%)</b>	<b>Subsidizing up to 7%</b>
1	332,000	-		
2	332,000	-	46,480	23,240
3	265,600	66,400	46,480	23,240
4	199,200	66,400	37,184	18,592
5	132,800	66,400	27,888	13,944
6	66,400	66,400	18,592	9,296
7	0	66,400	9,296	4,648
		<b>332,000</b>	<b>185,920</b>	<b>92,960</b>

*1.2. Subsidizing the procurement of seed stock of the imported and domestic young pedigree cattle*

Subsidizing the acquisition of the young pedigree cattle is regulated by Resolution of the RK Government #35 dated January 25, 2013

*Table. The amount of funds required to pay subsidies with a breakdown by year*

<b>Year</b>	<b>Import of seed stock of the pedigree cattle</b>		<b>Procurement of seed stock of the domestic pedigree cattle</b>	
	<b>Number of head</b>	<b>Amount of subsidies (rated amount per head – Tenge 235,000)</b>	<b>Number of head</b>	<b>Amount of subsidies, Tenge mln (rated amount per head – Tenge 118,000)</b>
2013	14,000	3,290	10,000	1,180
2014			18,000	2,124
2015			18,000	2,124

2016			18,000	2124
2017			18,000	2,124
2018			18,000	2,124
2019			18,000	2,124
2020			18,000	2,124
<b>Total:</b>	<b>14,000</b>	<b>3,290</b>	<b>136,000</b>	16,048

### 1.3. Investment subsidizing of the material and technical support of the reproduction farms

To solve the issues caused by a poor technical capability of the domestic farms and to increase labor efficiency, reduce production costs of made products, as well as to enhance the production output by implementing up-to-date processes, it is planned to fit all the pedigree cattle reproduction farms which have the capacity above 500 head with the necessary facilities, equipment and tools that are considered as an integral part of the modern reproduction farms. It will be accomplished by the payment of investment subsidies in the amount of up to 50% of the overall sum of investments for the above mentioned facilities (veterinary station equipped for handling and sorting out the cattle, unloading chute, calving unit, pasture fence/electric fence), equipment and machinery (tractors, feed distributors, lift trucks, forage conservation equipment). See details in Annex 3.

To solve the issue on the sustainable provision of reproduction farms with high-quality and low production-cost feed, it is planned to fit them with the irrigation systems for growing feed crops. It will be accomplished by the payment of investment subsidies in the amount of up to 50% of the overall sum of investments for the irrigation system infrastructure. To this end, it necessary to have an agricultural land and water source with sufficient water flow to ensure adequate functioning of the system. See details on investments and structure of cultivated areas in Annex 4.

*Table. The amount of funds required to pay subsidies with a breakdown by year*

<b>Table</b>	<b>Number of farms for material and technical support</b>	<b>Required amount of investment subsidies, Tenge mln</b>	<b>Number of farms for the installation of irrigation systems</b>	<b>Required amount of investment subsidies, Tenge mln</b>
2014	10	1,006	2	226.4
2015	10	1,006	2	226.4
2016	10	1,006	2	226.4
2017			2	226.4
2018			2	226.4
2019			2	226.4

2020			2	226.4
<b>Total:</b>	<b>30</b>	<b>3,018</b>	<b>14</b>	<b>1,584.5</b>

#### *1.4. Carrying out of the breeding and selection business*

Technological process in the reproduction farms for pedigree cattle breeding is extremely high-tech and labor consuming and requires considerable breeding and selection costs, including the purchase of semen from the world-class pedigree stud bulls; veterinary services and drugs; specialized cattle handling equipment; accounting and identification; and, reimbursement to experts and consultants. For reducing the production cost of this process, subsidies are provided for conducting breeding and selection business.

The rules of subsidizing are regulated by Resolution of the RK Government #35 dated January 25, 2013.

*Table. The amount of funds required to pay subsidies for selection and breeding business*

<b>Year</b>	<b>Pedigree cattle (seed stock)</b>	<b>Rated amount per head, Tenge</b>	<b>Required amount of funds, Tenge mln</b>
2013	133,091	14,000	1,863
2014	166,091	14,000	2,325
2015	187,385	14,000	2,623
2016	207,316	14,000	2,902
2017	229,802	14,000	3,217
2018	254,680	14,000	3,566
2019	282,257	14,000	3,952
2020	312,818	14,000	4,379
<b>Total:</b>	<b>1,773,441</b>		<b>24,828</b>

#### *1.5. Reduction in price of rough and succulent feed*

To get high-quality pedigree products, it is critically important to provide the animals with complete high-nutrient diet of succulent, rough and concentrated feed with addition of the necessary vitamins, minerals and salt. The body of beef calves is basically developing till the age of 8 months, and in case of failure to receive the necessary energy and nutrients at this age, the animal body will not reach the indicators of the breed standard even if intensive feeding is provided after weaning.

For this purpose, rough and succulent feed for cattle is subsidized; the subsidizing process is regulated by Resolution of the RK Government #36 dated January 25, 2013. It is necessary to increase the rate of subsidizing from Tenge 4,500 to Tenge 15,000 per seed stock head taking into account the high price of feed required for the complete diet.

*Table. The amount of funds required to pay subsidies for reduction in price of rough and succulent feed*

<b>Year</b>	<b>Pedigree cattle (seed stock)</b>	<b>Rated amount per head, Tenge</b>	<b>Required amount of funds, Tenge mln</b>
2013	133,091	4,500	599
2014	166,091	15,000	2,491
2015	187,385	15,000	2,811
2016	207,316	15,000	3,110
2017	229,802	15,000	3,447
2018	254,680	15,000	3,820
2019	282,257	15,000	4,234
2020	312,818	15,000	4,692
<b>Total:</b>	<b>1,773,441</b>		<b>25,204</b>

### *1.6. Cattle insurance*

For development of the lending market for cattle acquisition it is crucial to provide functioning of the insurance market and loan securing by cattle. Unfortunately, the cattle insurance market is not developed in the Republic and considerable efforts should be made for its successful functioning. For this purpose, it is necessary to create a legal framework and clear rules for the insurance companies, involving the state as a market regulator.

The proposed cattle insurance scheme looks as follows:

The state fund for obligatory cattle reinsurance will reinsure the overall cattle population which is pledged by the lending organizations, and will assume 50% of all risks. The fund will also carry out supervision and oversight of the compliance with the conditions of insurance and will play a role of the state regulator of the cattle insurance sector.

Risks will be calculated proceeding from the livestock mortality ratio, developed and approved by the RK Ministry of Agriculture.

Thus, the following objectives will be achieved:

- a civilized market of cattle insurance will shape up, since the state regulating company is available
- a competitive environment composing of insurance companies will be created in view of the direct interaction of these companies with the farmers and lending institutions (including second-tier banks) and the internal competition in fight for clients
- necessary conditions are established for advancing the sector of lending for cattle acquisition by the second-tier banks
- cattle insurance will not create a big burden for farmers (insurance premium is expected to be no more than 1.5% of the collateral value of animals subject to risk hedging by the reinsurance fund up to 50% of the total share).

Alternatively, the lending institutions can include the risks of animal mortality in the loan interest rates, and the state will continue to implement the program of subsidizing the loan rates up to 7% of the annual interest rate.

In any case, a 50% participation of the state in insurance of the animals purchased on a loan basis will require the following volume of funding (proceeding from 1% of the loan price, Tenge 14,600 for the imported cattle, and Tenge 13,280 for the domestic cattle):

*Table. Scheme of animal mortality risk insurance (1% of the.PL) by year, Tenge*

Yr	Import of the pedigree cattle				Domestic pedigree heifers			
	Outstanding principal loan (PL)	PL payment	% payment	Ins	Outstanding PL	PL pyt	% pymt	Ins
1	365,000	-		3,650	332,000	-		3,320
2	365,000	-	51,100	3,650	332,000	-	46,480	3,320
3	292,000	73,000	51,100	2,920	265,600	66,400	46,480	2,656
4	219,000	73,000	40,880	2,190	199,200	66,400	37,184	1,992
5	146,000	73,000	30,660	1,460	132,800	66,400	27,888	1,328
6	73,000	73,000	20,440	730	66,400	66,400	18,592	664
7	-	73,000	10,220	-	-	66,400	9,296	-
		<b>365,000</b>	<b>204,400</b>	<b>14,600</b>		<b>332,000</b>	<b>185,920</b>	<b>13,280</b>

*Table. Amount of funds required for cattle mortality risk insurance (50%)*

Year	Import of the pedigree cattle		Domestic pedigree cattle	
	Number of head	Amount of funds, Tenge mln	Number of head	Amount of funds, Tenge mln
1%				
2013	14,000	204	10,000	133
2014			18,000	239
2015			18,000	239
2016			18,000	239
2017			18,000	239
2018			18,000	239
2019			18,000	239
2020			18,000	239
<b>Total:</b>	<b>14,000</b>	<b>204</b>	<b>136,000</b>	<b>1,806</b>

1.7. Consolidated table of the state support funds required for the development of beef cattle breeding business under the Program "Agribusiness-2020"

*Table (in Tenge head)*

Year	Investment subsidies	Remuneration rate subsidizing	Breeding business subsidizing	Commodity production subsidizing	Cattle insurance	Total, Tenge mln
2013		930	10,803	599	337	12,669
2014	1,232	1,673	6,573	2,491	239	12,209

2015	1,232	1,673	6,871	2,811	239	12,827
2016	1,232	1,673	7,150	3,110	239	13,405
2017	226	1,673	7,465	3,447	239	13,051
2018	226	1,673	7,814	3,820	239	13,772
2019	226	1,673	8,200	4,234	239	14,572
2020	226	1,673	8,627	4,692	239	15,458
<b>Total:</b>	<b>3,018</b>	<b>12,643</b>	<b>63,504</b>	<b>25,204</b>	<b>2,010</b>	<b>107,964</b>

### *1.8. Breeding centers and artificial insemination*

The semen company Asyl Tulik (hereinafter: the Company) was established in 2001 to make a large-scale influence on the overall animal breeding sector of the Republic, improve the productive and breeding qualities of the animals in all business entities by distribution of genetic material, reproduction of valuable gene bank of highly productive animals, and wide-scale introduction of the methods of artificial insemination and biotechnology.

The Company founders comprise 120 shareholders. 94.89% of the shares are owned by the JSC KazAgroInnovation.

As of 01.08.2013, the sperm bank of the Company had 6.992 head doses of semen from the stud bulls of 21 breeds (1.316 head of unmarked doses in straw and 802,200 doses in granules), including 1.168 head doses assessed for the quality of offspring (137,900 unmarked doses and 55,400 doses in granules).

Specifically, among the total number, there are 5.152 head doses of dairy cattle, 1.285 head doses of combined breeds and 555,600 doses of beef cattle breeds.

At the moment, the Company keeps the stud bulls of 7 dairy breeds, 5 combined breeds and 39 beef breeds.

#### **Breeds of the stud bulls of the JSC “RTsPZh Asyl Tulik”**

<b>##</b>	<b>Breed</b>	<b>Number of head</b>	<b>Country of origin</b>	<b>Potential</b>
1	Holstein Black and White	4	Germany	Average milk yield 10 000-15 000 kg
2	Holstein Red and	2	Germany	Average milk yield

	White			11 000-16 000 kg
3	Angeln	1	Germany	Average milk yield 10 000-12 000 кг
4	Simmental	5	Germany	Average milk yield 8 000- 12 000 kg
5	Hereford	10	6-Germany 2-USA, 2- Canada	Average daily weight gain 1100-1250 g
6	Kazakh White Head	13	7-Russia, 6-Kazakhstan	Average daily weight gain 800-1200 g
7	Aberdeen Angus	6	1- Germany, 1- Canada, 4- USA	Average daily weight gain 1000-1200 g
8	Auliekolskaya	5	Kazakhstan	Average daily weight gain 900-1000 g
9	Santa Gertrudis	4	Kazakhstan	Average daily weight gain 750-950 g
10	Charolais	1	Canada	Average daily weight gain 980-1050 g
Total:		<b>51</b>		

As shown in the Table, among all the stud bulls housed in the Company, the proportion of dairy breeds is 13.7%, combined breeds – 9.8% and beef breeds – 76.5%. Thus, taking into account the availability of semen of the stud bulls of dairy breeds in the sperm bank of the Company and the priority of the beef cattle sector development in the country, preference is given to the collection and storage of bull semen of the beef breeds, e.g. those of foreign selection.

For further advance promotion of the artificial insemination sector, taking into consideration the current trends, technologies and expertise, it is planned to establish collaboration of the Company with the top international genetic centers with the following aims: to become aware and implement the gained experience in the competitive environment; transfer and reproduce the valuable genetic materials; and, to optimize the quality of provided services and the staff professionalism.

There are 1,513 artificial insemination stations operating in the Republic, staffed with 1,830 certified insemination technicians. As of 01.08.2013, 359,900 thousand cows and heifers had been artificially inseminated, 87,000 head of them in the agricultural organizations and 272,900 head in the individual households. The percent of coverage of the seed stock cattle by artificial insemination was 13.8% of the total seed stock population of the Republic of Kazakhstan.

**2. Increase in the seed stock of the commercial cattle herd. Increase in the share of selection purebred beef cattle in the commercial herd. Increase in slaughter weight of the beef cattle**

For fast increase in seed stock of the commercial herd in the Republic, it is necessary to import the purebred population (breeding young animals) by the farms in the quantities specified below by subsidizing of its import and making arrangements for soft lending, and also to continue the program of soft lending to promote acquisition of outbred seed stock by the farmers for breeding transformation by the pedigree stud bulls. It is necessary to keep on paying subsidies for the breeding and selection work



to the commercial entities that are involved in breeding transformation (use of the pedigree stud bulls in the ratio of 1 bull per no more than 30 cows, with the bull replacement every 2 years), to motivate build-up of the seed stock.

*Table. Projected population of the commercial herd in the Republic over time*

Year	Population of commercial cattle at the end of year	Demand for pedigree stud bulls	Seed stock of commercial cattle	Import of seed stock of purebred cattle	Procurement of cattle seed stock from individual households and agricultural commodity producers
1	2	3	4	5	6
2013	740,451	5,766	<b>345,956</b>	10,000	51,100
2014	965,938	7,522	<b>451,309</b>	20,000	57,676
2015	1,227,503	9,559	<b>573,518</b>	20,000	66,105
2016	1,530,919	11,921	<b>715,281</b>	20,000	75,881
2017	1,882,881	14,662	<b>879,726</b>	20,000	87,222
2018	2,291,158	17,841	<b>1,070,482</b>	20,000	100,378
2019	2,764,758	21,529	<b>1,291,759</b>	20,000	115,639
2020	3,314,135	25,807	<b>1,548,441</b>	20,000	133,341

*Column 2 = Column 4 x 2.15 (seed stock proportion in the herd – 46.7%)*

*Column 3 = Column 4/30/2 (standard: 1 bull per 30head; replacement every 2 years)*

*Column 4<sub>i</sub> = Column 4<sub>i-1</sub>+ Column 5+ Column 6; for example, at the end of 2014, the seed stock consists of 451,309 head, in 2015 the number of additionally imported head will be 20,000 and the number of purchased domestic cattle will be 66,105 head; ultimately, by the end of 2015 the seed stock will include 573,518 head.*

Breakdown of the indicators specified in Columns 5 and 6 by region is given in Appendices 7 and 8.

The increase in commercial herd population will lead to the annual increase in numbers of bulls, heifers and rejected cows intended for slaughter:

Year	Seed stock	Calf yield *	50% bulls	50% heifers	Seed stock repl. - slaughter	Slaughter weight* *	Bulls – slaughter ***	Slaughter weight **	Heifers – slaughter ***	Slaughter weight **	Total for slaughter, head
2013	345,956	80%	138,382	138,382	69191	216	105502	224	23382	184	<b>198075</b>
2014	451,309	80%	181,088	181,088	90262	220	138382	229	26990	187	<b>255634</b>
2015	573,518	81%	230,841	230,841	114704	224	181088	233	35473	191	<b>331264</b>

2016	715,281	81%	288,795	288,795	143056	229	230841	238	43928	195	<b>417825</b>
2017	879,726	81%	356,289	356,289	175945	234	288795	243	53976	199	<b>518716</b>
2018	1,070,482	81%	434,883	434,883	214096	238	356289	248	65899	203	<b>636284</b>
2019	1,291,759	82%	526,392	526,392	258352	243	434883	253	80031	207	<b>773266</b>
2020	1,548,441	82%	632,925	632,925	309688	248	526392	258	96763	211	<b>932843</b>

\* the proportion of calf yield is projected to increase by 0.25% every year due to the optimized professionalism of the farmers and the improved material and technical resources at the farms

\*\* the increase in slaughter weight by 2% every year is projected due to the selection and breeding activity

\*\*\* shift for 1 year, as the slaughter of bull calves and heifers takes place at the age from one to two years old.

Growth of meat production from the commercial beef cattle by year:

<b>Year</b>	<b>Cows</b>	<b>Bull calves</b>	<b>Heifers</b>	<b>Total</b>
2013	14,927	23,675	4,293	<b>42,894</b>
2014	19,862	31,674	5,055	<b>56,590</b>
2015	25,745	42,278	6,776	<b>74,798</b>
2016	32,750	54,971	8,559	<b>96,281</b>
2017	41,086	70,148	10,727	<b>121,960</b>
2018	50,994	88,273	13,358	<b>152,625</b>
2019	62,766	109,900	16,547	<b>189,213</b>
2020	76,743	135,685	20,407	<b>232,835</b>

Growth of the gross meat production from the commercial beef cattle population from 2013 to 2020 will be 190 000 tons.

Calculation of the necessary funds from the budget:

**2. Soft lending for acquisition of the seed stock of imported selection cattle and domestic commercial cattle and pedigree stud bulls:**

- **Subsidizing of the interest rate for the commercial loans.** The JSC NUKh KazAgro and the second-tier banks will fund acquisition of the said types of cattle using their own and borrowed funds, and later the loan price will be reduced by 7% of the annual interest rate to create conditions for motivating the farmers to purchase the cattle by subsidizing the interest rate.

*Table. The required amount of funds by year for the reduction of the loan interest rate*

<b>Year</b>	<b>Import of selection cattle</b> (Cost per head –	<b>Acquisition of domestic cattle</b> (Cost per head –	<b>Acquisition of pedigree stud bulls</b> (Cost per head – Tenge 600,000	<b>Funds required for interest rate</b>
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	Tenge 300,000 and taking subsidies into account – Tenge 182,000)		Tenge 180,000)		and taking subsidies into account – Tenge 482,000)		<b>reduction*, Tenge mln</b>
	Number of head	Amount of required loan funds, Tenge mln	Number of head	Amount of required loan funds, Tenge mln	Number of head	Amount of required loan funds, Tenge mln	
2013	10,000	1,820	51,100	9,198	5,766	2,779	3,863
2014	20,000	3,640	57,676	10,382	7,522	3,626	4,941
2015	20,000	3,640	66,105	11,899	9,559	4,607	5,641
2016	20,000	3,640	75,881	13,659	11,921	5,746	6,453
2017	20,000	3,640	87,222	15,700	14,662	7,067	7,394
2018	20,000	3,640	100,378	18,068	17,841	8,600	8,486
2019	20,000	3,640	115,639	20,815	21,529	10,377	9,753
2020	20,000	3,640	133,341	24,001	25,807	12,439	11,223
<b>Total:</b>	<b>150,000</b>	<b>27,300</b>	<b>687,343</b>	<b>123,722</b>	<b>114,608</b>	<b>55,241</b>	<b>57,754</b>

*Table. Scheme of financing loans for the procurement of 1 cattle head and the reduction of the loan interest rate, Tenge*

*Amount of subsidies is fixed immediately upon conclusion of a credit agreement for the entire period of its validity.*

Year	Imported selection cattle				Domestic commercial cattle				Pedigree stud bull			
	Outstanding PL	PL payment	% payment (14%)	Subsidizing up to 7%	Outstanding PL	PL payment	% payment (14%)	Subsidizing up to 7%	Outstanding PL	PL payment	% payment (14%)	Subsidizing up to 7%
1	18000	-			180000	-			482000	-		
2	182000	-	25480	12740	180000	-	25200	12600	482000	-	67480	33740
3	145600	36400	25480	12740	144000	36000	25200	12600	385600	96400	67480	33740
4	109200	36400	20384	10192	108000	36000	20160	10080	289200	96400	53984	26992
5	72800	36400	15288	7644	72000	36000	15120	7560	192800	96400	40488	20244
6	36400	36400	10192	5096	36000	36000	10080	5040	96400	96400	26992	13496
7	-	36400	5096	2548	-	36000	5040	2520	-	96400	13496	6748
		<b>182000</b>	<b>101920</b>	<b>50960</b>		<b>180000</b>	<b>100800</b>	<b>50400</b>		<b>482000</b>	<b>269920</b>	<b>134960</b>

*a. Subsidizing of acquisition of the imported selection young animals and domestic pedigree stud bulls:*

The rated amount per head is Tenge 118,000 for the imported selection young animals and Tenge 118,000 for the domestic breeding stud bulls.

Subsidizing of acquisition of the young cattle is regulated by Resolution of the RK Government #35 dated January 25, 2013.

*Table. Funds required for payment of subsidies by year*

Year	Import of selection cattle		Procurement of domestic pedigree stud bulls	
	Number of head	Amount of subsidies, Tenge mln	Number of head	Amount of subsidies, Tenge mln
2013	10,000	1,180	5,766	680
2014	20,000	2,360	7,522	888
2015	20,000	2,360	9,559	1,128
2016	20,000	2,360	11,921	1,407
2017	20,000	2,360	14,662	1,730
2018	20,000	2,360	17,841	2,105
2019	20,000	2,360	21,529	2,540
2020	20,000	2,360	25,807	3,045
<b>Total:</b>	<b>150,000</b>	<b>17,700</b>	<b>114,608</b>	<b>13,524</b>

*b. Investment subsidizing*

To address the issue of poor process equipment at the farms and to improve human labor productivity, reduce the cost of the released products, increase production through the introduction of advanced technologies, it is planned to provide the farms involved in commercial cattle raising and having a capacity above 100 head of seed stock with the necessary equipment and machinery. It will be accomplished by payment of the investment subsidies at a rate up to 50% of the total amount of investments for the said equipment and machinery (grain crusher/roller, tractor, disk mounted mower, roll baler, roll grabber, bulldozer equipment, hay cart (details specified in Appendix 2).

*Table. Funds required for paying subsidies by year*

Year	Number of farms for material and technical support	Required amount of investment subsidies, Tenge mln
2014	200	762
2015	200	762
2016	200	762
2017	200	762
2018	200	762
2019	200	762
2020	200	762
<b>Total:</b>	<b>1,400</b>	<b>5,334</b>

*C. Carrying out of the breeding and selection business*

To motivate the farms to increase the seed stock, it is necessary to continue the practice of paying subsidies per seed stock head which will cover the farmer expenses for acquisition and keeping of a breeding bull (1 bull per 30 head:  $30 \times 14\,000 =$  Tenge 420,000; the bull price considering the

subsidies is Tenge 482,000) for breeding transformation.

Subsidizing of the breeding and selection business is regulated by Resolution of the RK Government #35 dated January 25, 2013.

*Table. Funds required for paying subsidies for breeding and selection business*

<b>Year</b>	<b>Commercial beef cattle (seed stock)</b>	<b>Rated amount per head, Tenge</b>	<b>Required funds, Tenge mln</b>
2013	345,956	14,000	4,843
2014	451,309	14,000	6,318
2015	573,518	14,000	8,029
2016	715,281	14,000	10,014
2017	879,726	14,000	12,316
2018	1,070,482	14,000	14,987
2019	1,291,759	14,000	18,085
2020	1,548,441	14,000	21,678
<b>Total:</b>	<b>6,876,472</b>		<b>96,271</b>

*d. Reduction in price of rough and succulent feed*

For receiving high-quality products, it is crucial to provide the animals with complete high-nutrient diet of succulent, rough and concentrated feed with addition of the necessary vitamins, minerals and salt. The body of beef calves is basically developing till the age of 8 months, and in case of failure to receive the necessary energy and nutrients at this age, the animal body will not reach the indicators of the standard of the breed even if intensive feeding after weaning is provided.

For this purpose, rough and succulent feed for cattle is subsidized; the subsidizing process is regulated by Resolution of the RK Government #36 dated January 25, 2013. It is necessary to increase the rate of subsidizing from Tenge 4,500 to Tenge 15,000 per seed stock head taking into account the high price of feed for ensuring the complete diet.

*Table. Required funds for paying subsidies on the reduction in price of rough and succulent feed*

<b>Year</b>	<b>Pedigree cattle (seed stock population)</b>	<b>Rated amount per head, Tenge</b>	<b>Required amount of funds, Tenge mln</b>
2013	345,956	4,500	1,557
2014	451,309	15,000	6,770
2015	573,518	15,000	8,603
2016	715,281	15,000	10,729
2017	879,726	15,000	13,196
2018	1,070,482	15,000	16,057
2019	1,291,759	15,000	19,376
2020	1,548,441	15,000	23,227
<b>Total:</b>	<b>6,876,472</b>		<b>99,515</b>

*e. Cattle insurance (See a similar paragraph in the pedigree livestock farming)*

Table. Required funds for the insurance of principle debt per cattle head, Tenge

Year	Stud bulls	Selection cattle	Commercial cattle
1	4,820	1,820	1,800
2	4,820	1,820	1,800
3	3,856	1,456	1,440
4	2,892	1,092	1,080
5	1,928	728	720
6	964	364	360
7	-	-	-
	<b>19,280</b>	<b>7,280</b>	<b>7,200</b>

Table. Required funds for cattle mortality risk insurance (50% of the risk, 1%)

Year	Pedigree stud bulls		Imported selection cattle		Domestic commercial cattle	
	Number of head	Amount of funds, Tenge mln	Number of head	Amount of funds, Tenge mln	Number of head	Amount of funds, Tenge mln
1%						
2013	5,766	111	10,000	73	51,100	368
2014	7,522	145	20,000	146	57,676	415
2015	9,559	184	20,000	146	66,105	476
2016	11,921	230	20,000	146	75,881	546
2017	14,662	283	20,000	146	87,222	628
2018	17,841	344	20,000	146	100,378	723
2019	21,529	415	20,000	146	115,639	833
2020	25,807	498	20,000	146	133,341	960
<b>Total:</b>	<b>114,608</b>	<b>2,210</b>	<b>150,000</b>	<b>1,092</b>	<b>687,343</b>	<b>4,949</b>

f. Table. Funds required for increasing the commercial herd of beef cattle

Year	Investment subsidies	Subsidizing of remuneration rate	Subsidizing of breeding business	Subsidizing of making products	Cattle insurance	Total:
2013		3,863	6,704	1,557	552	12,676
2014	762	4,941	9,566	6,770	706	22,745
2015	762	5,641	11,517	8,603	806	27,329
2016	762	6,453	13,781	10,729	922	32,646
2017	762	7,394	16,406	13,196	1,056	38,814
2018	762	8,486	19,452	16,057	1,212	45,970
2019	762	9,753	22,985	19,376	1,393	54,270
2020	762	11,223	27,083	23,227	1,603	63,898
<b>Total:</b>	<b>5 334</b>	<b>57,754</b>	<b>127,494</b>	<b>99,515</b>	<b>8,251</b>	<b>298,347</b>

### 3. Building of the feedlots with advanced infrastructure

To ensure production of cost-effective competitive products, it is necessary to expand the process chain of intensive bull-calves fattening at the dedicated feedlots. The feedlots are intended for finishing fattening of the population using advanced processes to form continuously large lots of standard meat.

The scheme of cattle movement will look as follows:

Calving: January – May, grazing and suckling in summer

Weaning: September-November

Fattening: all-the-year-round, duration of bull-calf fattening from 3 to 6 months

As of August 1, 2013, total capacity of the feedlots (capacity starting from 200 cattle stalls) is 115,000 cattle stalls, including 51,700 cattle stalls in the export-oriented feedlots with advanced infrastructure (capacity starting from 1,000 cattle stalls).

Given consideration the projected trend of growth of the commercial cattle in the Republic, the bull-calf yield factor (40% of the seed stock), two shifts in each cattle stall (an average fattening period is 6 months), the schedule of the feedlot commissioning by year looks as follows:

Year	Seed stock cattle population, head	Number of fattened bull calves*, head	Capacity of feedlots*, cattle stalls	Beef export, tons	Necessary capacity of export-oriented feedlots, cattle stalls**
1	2	3	4	5	6
2013	345,956	105,502	52,751	345	51,700
2014	451,309	138,382	69,191	17,335	52,700
2015	573,518	181,088	90,544	23,428	52,700
2016	715,281	230,841	115,421	30,723	57,700
2017	879,726	288,795	150,000	39,978	75,000
2018	1,070,482	356,289	180,000	54,112	100,000
2019	1,291,759	434,883	240,000	74,591	150,000
2020	1,548,441	526,392	300,000	102,719	200,000

\* Taking into consideration a 7-8 month period to weaning, the necessary feedlot capacities should be commissioned a year later.

Breakdown of the indicators specified in Columns 4 and 6 is shown region-wise in Appendices 8 and 9.

#### *Fattening process*

A recommended capacity for simultaneous animal keeping is no less than 3,000 head per feedlot. Process flow chart, cattle movement and cash flow were calculated for a standard project

for 3,000 head, and it is shown in the Appendix.

Every feedlot with advanced infrastructure should have the following facilities:

A veterinary station building fitted with the equipment to handle cattle (a lock with scale and passageway), a cattle sorting system, and a ramp for cattle loading/unloading  
Water supply system and automatic livestock waterers  
Concrete floors in front of the feeding troughs (no less than 3 meters wide)  
Feeding troughs  
Grain crusher/flattener/combined feed plant  
Roll grinder and spreader  
Granary, capacity for min. 1-2 years of grain consumption  
Tractor with feed dispenser, a loader (front end/telescopic)  
Feed conservation equipment

a. *Investment subsidies*

To motivate the farmers in complying with the up-to-date feeding processes, investment subsidies will be paid to those, who have initiated the construction of feedlots with the capacity of no less than 3,000 cattle stalls, in the amount of up to 50% of the total investments in the above mentioned facilities, equipment and technical tools.

Note: this package of the infrastructure facilities, equipment and technical tools is almost the same for feedlots with the capacity of both 3,000 and 10,000 cattle stalls.

*Table. Funds required for paying investment subsidies to export-oriented feedlots*

<b>Year</b>	<b>Number of feedlots</b>	<b>Amount of funds, Tenge mln</b>
<b>1</b>	<b>2</b>	<b>3</b>
2014	3	542
2015	5	903
2016	5	903
2017	5	903
2018	5	903
2019	5	903
2020	5	903
<b>Total:</b>	<b>33</b>	<b>5,957</b>

a. *Soft-term funding – subsidizing of the loan rate*

*For soft-term funding of the construction of feedlots the following two instruments are envisaged:*

- *Construction work funding at the expense of the RK National Fund.*

*Amount of allocated funds – Tenge 12,868 mln*

- *Reduction in interest rate on commercial loans to 7% a year.*



Table. Scheme of feedlot funding and subsidizing of the loan interest rate:

Year	Outstanding PL	14%	7%
1	100%	1,000	-
2	100%	1,000	-
3	90%	900	154
4	80%	800	140
5	70%	700	126
6	60%	600	112
7	50%	500	98
8	40%	400	84
9	30%	300	70
10	20%	200	56
11	10%	100	42
12	0%	0	28
<b>Total:</b>			<b>910</b>
			<b>455</b>

Table. Funds required for interest rate (%) reduction

Year	Number of feedlots	Amount of funds, Tenge mln
1	2	3
2014	3	1,365
2015	5	2,275
2016	5	2,275
2017	5	2,275
2018	5	2,275
2019	5	2,275
2020	5	2,275
<b>Total:</b>	<b>33</b>	<b>15,015</b>

c. Subsidizing for making products

A gradual transition to subsidizing of the beef produced at export-oriented feedlots is planned; a complete transition will take place beginning from 2016.

Year	Beef production at the feedlots, thousand tons	Subsidized amount, thousand tons	Rated amount Tenge/kg	Amount of subsidies, Tenge mln
2013	23,675	28,226	147	4,141
2014	31,674	34,703	147	5,089
2015	42,278	37,604	147	5,516
2016	54,971	30,723	220	6,759
2017	70,148	39,978	220	8,795

2018	88,273	54,112	220	11,905
2019	109,900	74,591	220	16,410
2020	135,685	102,719	220	22,598
<b>Total:</b>	<b>556,603</b>			<b>81,212</b>

*d. Consolidated table of funds required for the development of the infrastructure of intensive cattle feeding*

Year	Investment subsidies	Subsidizing of remuneration rate	Subsidizing of breeding business	Subsidizing of making products	Cattle insurance	Total:
2013				4,141		4,141
2014	542	1,365		5,089		6,995
2015	903	2,275		5,516		8,694
2016	903	2,275		6,759		9,937
2017	903	2,275		8,795		11,973
2018	903	2,275		11,905		15,082
2019	903	2,275		16,410		19,588
2020	903	2,275		22,598		25,776
<b>Total:</b>	<b>5 957</b>	<b>15,015</b>		<b>81,212</b>		<b>102,185</b>

#### 1. Construction of advanced cattle markets

To develop organized cattle trade and fair pricing it is necessary to create conditions for the construction of regional cattle markets with advanced infrastructure.

Location of a cattle market should ensure equal access for all regions involved in meat cattle breeding and fattening, along the republican highways and near the cities/urban settlements or large villages.

Livestock marketing will include pedigree/commercial cattle, sheep and goats, and horses.

A cattle market is designed as covered premises with a sufficient height, functioning all-the-year-round, equipped with rows of cattle pens and an auction ground with spectator seats. Capacity of the cattle market should be calculated considering the number of livestock in the region and auction frequency.

Advanced infrastructure of a cattle market implies gangways for cattle unloading/loading, a ground for cattle sorting and short-term keeping, a cattle locker with scale and separating passageway, and also manure storage. In planning of the infrastructure, it would be logical to provide also offices for the organizations involved in lending for cattle acquisition, shops of veterinary products and various farm equipment items (drinking bowls, feeding troughs, locks and races, electric fences, etc.).

The profitable part of a cattle market will consist of a daily rent for an animal stay in the market, space lease, as well as cattle delivery services. For this purpose, cattle trucks should be purchased.



As top priority, it is necessary to construct five large regional cattle markets, for instance, in the following regions (the largest cattle population as of July 1, 2013):

Aktobe Region, Almaty Region, East Kazakhstan Region, Karaganda Region, South Kazakhstan Region.

Since the arrangement of competitive cattle trade is one of the key factors influencing the sector

development, it is necessary to provide the state support at the sector formative stage by organizing soft-term lending and investment subsidizing of projects in the amount of up to 50% of their cost.

*Table. Funds required for paying investment subsidies*

<b>Year</b>	<b>Number of cattle markets</b>	<b>Amount of funds, Tenge mln</b>
<b>1</b>	<b>2</b>	<b>3</b>
2014	1	750
2015	1	750
2016	1	750
2017	1	750
2018	1	750
2019		
2020		
<b>Total:</b>	<b>5</b>	<b>3,750</b>

*Table. Scheme of cattle market construction funding and loan interest rate (%) subsidizing (in case when the cost of one facility is Tenge 1,500 head and the investment subsidizing is 50% of the total cost)*

<b>Year</b>	<b>Outstanding PL</b>		<b>14%</b>	<b>7%</b>
1	100%	750	-	-
2	100%	750	-	-
3	90%	675	116	58
4	80%	600	105	53
5	70%	525	95	47
6	60%	450	84	42
7	50%	375	74	37
8	40%	300	63	32
9	30%	225	53	26
10	20%	150	42	21
11	10%	75	32	16
12	0%	0	21	11
<b>Total:</b>			<b>683</b>	<b>341</b>

*Table. Funds required for interest rate (%) reduction*

<b>Year</b>	<b>Number of cattle markets</b>	<b>Amount of funds, Tenge mln</b>
<b>1</b>	<b>2</b>	<b>3</b>
2014	1	341
2015	1	341
2016	1	341
2017	1	341
2018	1	341
2019		
2020		
<b>Total:</b>	<b>5</b>	<b>1,705</b>

Table. Funds required for the development of infrastructure of the **organized cattle marketing** within the program “Agribusiness-2020”

<b>Year</b>	<b>Investment subsidies</b>	<b>Remuneration rate subsidizing</b>	<b>Breeding business subsidizing</b>	<b>Production subsidizing</b>	<b>Cattle insurance</b>	<b>Total:</b>
2013						
2014	750	341				1,091
2015	750	341				1,091
2016	750	341				1,091
2017	750	341				1,091
2018	750	341				1,091
2019						
2020						
<b>Total:</b>	<b>3,750</b>	<b>1,705</b>				<b>5,455</b>

## **6. Implementation of the world-class information systems for animal accounting and traceability of livestock product origin to meet the requirements of the meat importing countries**

In view of the plans for exporting high-quality beef, requirements of the importing countries should be taken into account, in particular those of the advanced countries. Japan and South Korea are notable for very stringent requirements to the imported livestock products. Of interest is the experience of Australia, as the largest beef supplier to the said countries, as regards its implementation of an information system in the livestock sector and, in particular, in beef cattle production.

This system consists of several components that enable tracking the chain of product origin from farm to consumer table.

The main component is the database of the farm animals that is an integrator of all subsystems. Its functions consist of the accounting of all types of animals, with obligatory indication of the following data:

- Cattle ownership (organization (farm, feedlot, slaughter station /meat processing plant with the registration number, Business Identification Number (BIN), or a physical person with the Individual Identification Number (IIN))
- Geographical reference to a region, district, rural area, place of winter housing

- Individual number of the animal (unchangeable throughout the life of an animal)
- Number of the ear tag/brand mark/electronic chip
- Date of birth
- Livestock species
- Sex
- Breed (in the absence of data: outbred), color
- Type of productivity
- Information on the date of registration and the registrar of the animal in the system and all changes (change of owner, ear tag, branding, etc.)
- Status of pledge and other encumbrance/restrictions

Component: the state register for accounting of the pedigree cattle. It shows the following information in addition to the basic data:

- Animal birthplace farm (including imported animals)
- Animal name
- Number of the breeding certificate, date of issue, issuing body
- Information on the origin (three levels of ancestry)
- Breeding value of the animal
- For females: information on the date and method of insemination, stud bull, calving and offspring
- Software for accounting of the breeding cattle by the Purebred Associations with a possibility of synchronization with the server
- An offline application for the cattle accounting at a farm with a possibility of synchronization with the server for animal data entering/amendment

Component: system of accounting of the farms and other organizations involved in the livestock sector and possessing registration numbers.

- Type of activities
- Data on the location
- Contact information
- Legal information
- Data on the agricultural land (if any)
- Data on the structures
- Data on the animal population, sales

Component for accounting of the measures of state support (subsidizing), with the analytical block and function of generation of the budget requests

Specialized components arranged as separate applications for small and large farms, feedlots, cattle markets and slaughter stations/meat processing plants, considering the characteristics of every animal, and integrated into a single database of animals that will enable traceability of all livestock products at each stage.

## **7. Improvement of professionalism of the farmers and development of a knowledge sharing and technology commercialization system**

The Soviet system of research, technical developments and knowledge sharing which provided services to the farmers had collapsed and was not replaced with another system capable to meet requirements of the growing number of farmers. Research in the agricultural area was performed earlier by 10 centers staffed with 1200 scientists. The system did not receive adequate funding as compared with agricultural research institutions of other countries. However, its main drawback can be characterized as a lack of mechanisms aimed at the distribution of agricultural research results among the farmers and the promotion of technology implementation by the farmers and companies processing agricultural raw materials. This drawback was not compensated by the private sector which received only 10 percent of all investments made in agricultural research in Kazakhstan.

For improving skills and ensuring full coverage of all stakeholders it is necessary to implement the following measures on a regular basis:

1. To render consulting services for farmers at the regional level on a regular basis (SIKC in the facilities of the JSC “KazAgroMarketing”) focused on the state support measures, including soft-term funding and subsidizing; livestock registration with IAS and ISLS; business plan development for crediting organizations; feeding diets and technologies of housing and reproduction. In this context, it is necessary to provide centralized training courses for the consulting experts on a quarterly basis.
2. To conduct off-site training workshops for the MIO staff and farmers once or twice a year for elucidating the state policy and the sector development strategy, new measures of the state support, and reviewing challenges to ensure prompt response.
3. Targeted consultations with the engagement of world-class experts possessing international experience for large-scale farms (50-100 largest farms in terms of the livestock population) on the following topics: comprehensive feeding; livestock housing and reproduction technologies; process automation; veterinary care; selection and evaluation.
4. Subsidies for the service costs charged by consultants who provide support to the farms on a regular basis in the amount not above 1% of the production output, especially to start-up companies for at least a three-year period from the commencement date. This measure will cover reproduction farms involved in the pedigree cattle raising and feedlots with the capacity of at least 1000 cattle stalls.
5. To establish training (template) farms in all regions of the Republic, where the beef cattle farming is developed, using optimal technologies for each particular region. For this purpose, to engage foreign vendors of machinery and equipment and to establish such training farms in the facilities of training entities and pilot farms. To use such training farms for conducting a short-term advanced training and one-year training course for future farm specialists.
6. To build an information portal for posting data on all farms involved in the beef cattle raising sector, and marketing products, specifying their contact information and location on the map.

## **8. Legal and regulatory framework update**

The Ministry has adopted multiple measures to improve the legal framework and the state support mechanisms in the area of livestock farming; create new lending products; and, to develop programs for advancing various segments of the livestock farming sector.

In 2010, based on Resolution of the RK Government (#63, dated 02.02.2010) the updates were introduced in the mechanism of subsidizing of the pedigree livestock farming sector. Subsidies became

available for the buyers of pedigree products; earlier they were paid to the sellers, i.e. breeding farms of the Republic. To this end, they were informed about the quotas, and fixed prices were established per unit of marketed products. This approach was in contradiction with the market-based economy concepts and misrepresented the actual status.

The rated amounts of subsidies were increased by an order of magnitude, and criteria for commodity producers were introduced, providing incentives for farm upsizing.

Resolution of the RK Government dated July 29, 2011, #877 approved a comprehensive action plan for implementing the project on the development of export potential of the cattle meat.

The comprehensive plan specified indicators reflecting the development of export potential of beef, including the establishing of an infrastructure of industrial beef production with the arrangement of a network of farms housing 224 thousand head of seed stock herd, feedlots for 15.0 thousand cattle slots for one-time keeping, and reproduction farms with the import of 72.0 thousand beef cattle head of the foreign selection.

The state support for pedigree livestock farming has become effective in the form of providing subsidies for the costs of selection and breeding activities and keeping of pedigree stud bulls in the public herds consisting of the cattle population from individual households/backyards. These measures are targeted at breed transformation of the commercial herd and improvement of its productivity characteristics.

On January 12, 2012 a Law of the Republic of Kazakhstan “On making amendments and additions to some of the RK legislative acts, concerning pedigree livestock farming issues” was signed. The law was aimed at reforming of the breeding business through its harmonization with the international requirements.

Pursuant to the adopted Law:

In the area of livestock farming, the transition has been made from the status “pedigree cattle farm” and “pedigree cattle plant” has been made to the status “pedigree animal”;

Public associations have been created in the form of the republican chambers, and some of the functions in the sphere of pedigree livestock farming have been delegated to these chambers;

An index system for the beef cattle evaluation is being introduced now.

In line with the address of the President of the Republic of Kazakhstan and the protocol request specified at the form of Agribusiness professionals, some measures are taken for advancing the infrastructure of livestock breeding on pastures through the investment subsidizing of up to 80% of the costs of commodity producers involved in livestock breeding on pastures.

Review of the currently effective normative and legal acts regulating the beef cattle farming segment

## **Laws of the Republic of Kazakhstan**



- Law “On the state regulation of the development of the agribusiness (“agro-industrial complex” – *in Russian*) and the rural areas” dated July 08, 2005, #66
- Law “On the pedigree livestock farming” dated July 09, 1998, #278
- Law “On the veterinary area” dated July 10, 2002, #339
- “On peasant and farm holdings” dated March 31, 1998, #214
- “On the protection of the selection achievements” dated July 13, 1999, #422-I
- Land Code dated June 20, 2003, #442

### **Resolutions of the Government of the Republic of Kazakhstan (RK)**

- # 151 dated February 18, 2013 “Program on the development of the agribusiness in the Republic of Kazakhstan for 2013 – 2020 “Agribusiness – 2020”
- #35 dated January 25, 2013 “On the approval of the Rules of providing subsidies to support pedigree livestock farming”
- # 36 dated January 25, 2013 “On the approval of the Rules of providing subsidies for the purposes of improving productivity and quality of the livestock products”
- # 1439 dated November 14, 2012 “On the approval of the veterinary (veterinary and sanitary) requirements to the production facilities involved in animal raising and marketing”
- # 1230 dated September 22, 2012 “On the approval of the Rules of issuing veterinary documents to the facilities subject to the state veterinary and sanitary control and surveillance” year
- # 924 dated July 09, 2012 year “On the approval of the forms for accounting pedigree products (material) by livestock farming segment
- # 724 dated June 01, 2012 year “On the approval of the Rules of assigning the status “pedigree animal””
- # 877 dated July 29, 2011 “On the approval of the comprehensive action plan for implementing the project on the development of export potential of the cattle meat” for 2011-2015”
- # 1755 dated November 04, 2009 “On the approval of the Rules of the assigning of accounting numbers to the production facilities that conduct animal raising; slaughter, storage, processing and marketing of animals, animal-origin products and raw materials; and, the organizations conducting production, storage and marketing of veterinary drugs, feedstuffs and feed supplements

### **Orders of the Minister**

- # 18-02/212 dated April 26, 2012 “On the approval of the Provision concerning the procedure of recognizing a pedigree certificate or an equivalent document thereof issued for imported pedigree products (material) by the competent bodies of the exporting countries”

### **International documents and agreements**

- Technical Regulation of the Customs Union “On the food safety”

Changes required for successful functioning of the sector:

- To adopt a Law “On livestock farming” which will regulate the issues on insurance of animals, individual households, use of pastures and droves for the development of distant-pasture livestock breeding?
- To incorporate changes in the Law “On pedigree livestock farming” – as regards the definitions of pedigree certificate, genealogy, pedigree animal, purebred animal; the regulation of establishing and activities of the Republican Chambers of cattle breeds; the state register and accounting of pedigree animals; the procedure of recognition of imported pedigree products (a pedigree certificate template is approved by the RK Ministry of Agriculture and the recognition should be a responsibility of the Republican Chambers).
- To incorporate changes in the Law “On the state regulation of the development of the agribusiness and the rural areas” – as regards the approval of the authorities of the RK Ministry of Agriculture on additional measures of the state support, including the investment subsidizing
- To incorporate changes in the Law “On the veterinary sphere” – as regards animal identification and accounting;
- To update the technical regulation of the Customs Union “On the food safety.”

To ensure competitiveness of the domestic products on the foreign markets, its promotion is required in the premium segment of organic, natural and biologically pure products, as well as the “halal” segment.

To achieve this objective, it is necessary to set up a regulatory framework, defining standards of organic and halal agriculture which match the international practices. To this end, the following standards corresponding to the international requirements should be included in the technical regulation of the Customs Union “On the food safety”:

- “bio,” “eco” and “organic” meeting the requirements of the European Union (Council Regulation (EC) No 834/2007; Commission Regulation (EC) No. 889/2008; and, Commission Regulation (EC) No) 1235/2008);
- “Halal” with the appropriate accreditation.

In addition, to make amendments of the following:

- The rules of assigning the status “pedigree animal”
- The rules of farm animal identification
- The veterinary (veterinary and sanitary) requirements to the production facilities involved in animal raising and marketing (in order to comply with the livestock housing technology for the improvement of its productivity and increase in man labor efficiency)
- The rules of issuing veterinary documents on the facilities subject to the state veterinary and sanitary control and surveillance.

## 9. Summary spreadsheet of funds required for the beef cattle farming development up to 2020

**Increase in the pedigree beef cattle population and implementation of the breeding business, Tenge head**

Year	Investment	Remuneration	Breeding	Commodity	Cattle	Total,
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	<b>subsidies</b>	<b>rate subsidizing</b>	<b>business subsidizing</b>	<b>production subsidizing</b>	<b>insurance</b>	<b>Tenge mln</b>
2013		930	10,803	599	337	12,669
2014	1,232	1,673	6,573	2,491	239	12,209
2015	1,232	1,673	6,871	2,811	239	12,827
2016	1,232	1,673	7,150	3,110	239	13,405
2017	226	1,673	7,465	3,447	239	13,051
2018	226	1,673	7,814	3,820	239	13,772
2019	226	1,673	8,200	4,234	239	14,572
2020	226	1,673	8,627	4,692	239	15,458
<b>Total:</b>	<b>3,018</b>	<b>12,643</b>	<b>63,504</b>	<b>25,204</b>	<b>2,010</b>	<b>107,964</b>

**Increase in the commercial beef cattle population and selection & breeding activities,  
Tenge head**

<b>Year</b>	<b>Investment subsidies</b>	<b>Remuneration rate subsidizing</b>	<b>Breeding business subsidizing</b>	<b>Commodity production subsidizing</b>	<b>Cattle insurance</b>	<b>Total, Tenge mln</b>
2013		3,863	6,704	1,557	552	12,676
2014	762	4,941	9,566	6,770	706	22,745
2015	762	5,641	11,517	8,603	806	27,329
2016	762	6,453	13,781	10,729	922	32,646
2017	762	7,394	16,406	13,196	1,056	38,814
2018	762	8,486	19,452	16,057	1,212	45,970
2019	762	9,753	22,985	19,376	1,393	54,270
2020	762	11,223	27,083	23,227	1,603	63,898
<b>Total:</b>	<b>5,334</b>	<b>57,754</b>	<b>127,494</b>	<b>99,515</b>	<b>8,251</b>	<b>298,347</b>

**Development of the intensive feeding infrastructure, Tenge head**

<b>Year</b>	<b>Investment subsidies</b>	<b>Remuneration rate subsidizing</b>	<b>Breeding business subsidizing</b>	<b>Commodity production subsidizing</b>	<b>Cattle insurance</b>	<b>Total, Tenge mln</b>
2013				4,141		4,141
2014	542	1,365		5,089		6,995
2015	903	2,275		5,516		8,694
2016	903	2,275		6,759		9,937
2017	903	2,275		8,795		11,973
2018	903	2,275		11,905		15,082
2019	903	2,275		16,410		19,588

2020	903	2,275		22,598		25,776
<b>Total:</b>	<b>5,957</b>	<b>15,015</b>		<b>81,212</b>		<b>102,185</b>

#### Development of the cattle trade infrastructure, Tenge head

Year	Investment subsidies	Remuneration rate subsidizing	Breeding business subsidizing	Commodity production subsidizing	Cattle insurance	Total, Tenge mln
2013						
2014	750	341				1,091
2015	750	341				1,091
2016	750	341				1,091
2017	750	341				1,091
2018	750	341				1,091
2019						
2020						
<b>Total:</b>	<b>3,750</b>	<b>1,705</b>				<b>5,455</b>

#### Consolidated spreadsheet of funds required for the sector development up to 2020, Tenge head

Year	Investment subsidies	Remuneration rate subsidizing	Breeding business subsidizing	Commodity production subsidizing	Cattle insurance	Total, Tenge mln
2013	0	4,793	17,507	6,296	889	29,485
2014	3,286	7,577	16,139	14,350	945	43,040
2015	3,647	9,930	18,389	16,929	1,045	49,940
2016	3,647	10,742	20,931	20,598	1,161	57,079
2017	2,641	11,683	23,872	25,438	1,295	64,929
2018	2,641	12,775	27,266	31,782	1,451	75,915
2019	1,891	13,701	31,185	40,020	1,632	88,429
2020	1,891	15,171	35,711	50,517	1,842	105,132
<b>Total:</b>	<b>19,644</b>	<b>86,372</b>	<b>190,999</b>	<b>205,931</b>	<b>10,261</b>	<b>513,951</b>

#### 10. Effect from the implementation of the sector development program

Increase in beef production output from the meat cattle by 221,000 tons and export to 100,000 tons by 2020:

Year	Beef export	Beef production	Incl. from bull-calves (HQB)	Incl. from rejected heifers	Incl. from rejected pedigree population
2013	345	54,075	29,604	5,382	19,089
2014	17,335	71,851	40,100	6,586	25,165
2015	23,428	93,890	52,786	8,701	32,403

2016	<b>30,723</b>	<b>122,227</b>	68,342	11,012	42,874
2017	<b>39,978</b>	<b>153,072</b>	86,922	13,806	52,344
2018	<b>54,112</b>	<b>187,561</b>	107,089	16,869	63,602
2019	<b>74,591</b>	<b>227,691</b>	130,380	20,452	76,858
2020	<b>102,719</b>	<b>275,439</b>	158,157	24,780	92,502

Balance of beef production, consumption, import and export in the country

Year	Population number over time		Consumption*		Country balance				meat cattle	dairy cattle	Individual households
					share	import	export	production			
	As of Jan.01	average	kg/year	tons	%	tons	tons	tons	tons	tons	tons
2013	16,911,911	17,036,911	25	425,923	4%	15,400	345	410,868	<b>54,075</b>	52,944	<b>303,441</b>
2014	17,161,911	17,286,911	25	432,173	4%	15,400	17,335	434,108	<b>71,851</b>	57,890	<b>303,441</b>
2015	17,411,911	17,536,911	26	455,960	3%	15,400	23,428	463,987	<b>93,890</b>	63,213	<b>303,441</b>
2016	17,661,911	17,811,911	27	480,922	3%	15,400	30,723	496,245	<b>122,227</b>	68,987	<b>303,441</b>
2017	17,961,911	18,111,911	28	507,134	3%	15,400	39,978	531,712	153,072	75,247	<b>303,441</b>
2018	18,261,911	18,411,911	29	533,945	3%	15,400	54,112	572,658	187,561	82,035	<b>303,441</b>
2019	18,561,911	18,711,911	30	561,357	3%	15,400	74,591	620,548	227,691	89,394	<b>303,441</b>
2020	18,861,911	19,000,000	31	589,000	3%	15,400	102,719	676,319	275,439	97,153	<b>303,441</b>

Note\*: Beef consumption is increasing by 1 kg every year due to the growth of well-being of the citizens

## Estimate of investments for the sector

Investments, GDP from beef production, increase in export revenues and reduction in import costs

Year	Spending of budgetary funds	Beef production growth, t	Gross income, Tenge mln *	Profit from the program implementation	Beef export, t	Export revenues, Tenge mln**	Reduction in beef imports, t	Import cost savings, Tenge mln ***	Foreign exchange balance, Tenge mln
2013	29,485	54,075	40,556	11,377	345	311	35,589	14,236	14,546
2014	43,040	71,851	53,888	11,135	17,335	15,602	41,839	16,736	32,337
2015	49,940	93,890	70,417	22,540	23,428	21,085	65,626	26,250	47,335
2016	57,079	122,227	91,671	36,847	30,723	27,651	90,588	36,235	63,886
2017	64,929	153,072	114,804	49,988	39,978	35,980	116,800	46,720	82,700
2018	75,915	187,561	140,670	64,621	54,112	48,701	143,612	57,445	106,146
2019	88,429	227,691	170,768	82,505	74,591	67,132	171,024	68,409	135,541
2020	105,132	275,439	206,579	101,812	102,719	92,447	198,666	79,467	171,914
<b>Total:</b>	<b>513,951</b>	<b>1,192,053</b>	<b>889,353</b>	<b>380,826</b>	<b>343,232</b>	<b>308,909</b>	<b>863,744</b>	<b>345,498</b>	<b>654,406</b>

\* calculated for 1 kg of beef – Tenge 750

\*\* calculated for 1 kg of high-quality beef (HQB) – Tenge 900

\*\*\* calculated for 1 kg of frozen beef – Tenge 400

## Appendix 1. List of equipment and machinery for a pedigree cattle reproduction farm

Name of structure and equipment	Cost, Tenge	Name of equipment and machinery	Cost, Tenge
Building of veterinary station with passageway	24,000,000	Tractor, 120 h.p.	6,000,000
Equipment for veterinary station (cattle locker)	1,300,000	Feed dispenser, 12-18 cubic meters	7,500,000
Cattle sorting system and cattle loading/unloading ramp	10,000,000	Front end loader	9,000,000
Mobile fixture with panels to handle cattle at pasture	1,650,000	Telescopic loader	11,000,000
Pasture fencing	18,000,000	Truck with trailer	11,000,000
Calving unit with a ground	14,000,000	Precision seed drill	4,500,000
Diesel substation min 30 kW	2,000,000	Forage combine harvester	50,000,000
Water supply system and automatic livestock waters	10,000,000	Shovel for haylage/silo tramping	6,000,000
Grain crusher/flattener	2,000,000	Tractor 80 h.p., with loader and bucket	4,100,000
		Trailed mower-conditioner	2,300,000
		Tedder rake	1,000,000
		Fodder roller	2,650,000
		Roll grinder and spreader	3,200,000
<b>Investments in structures and equipment, total</b>	<b>82,950,000</b>	<b>Investments in machinery, total</b>	<b>118,250,000</b>

**Appendix 2. List of equipment and machinery for a farm raising commercial cattle**

<b>Name of equipment</b>	<b>Cost, Tenge</b>	<b>Name of machinery</b>	<b>Cost, Tenge</b>
Grain crusher/flattener	250,000	Tractor of 80 h.p. with hay fork and bucket	4,100,000
		Mounted disk mower	270,000
		Fodder roller/bale pick-up	2,000,000
		Trailer cart for hay transportation	1,000,000
<b>Investments in equipment, total</b>	<b>250,000</b>	<b>Investments in machinery, total</b>	<b>7,370,000</b>

**Appendix 3. List of equipment and machinery for an export-oriented feedlot**

<b>Name of structure and equipment</b>	<b>Cost, Tenge</b>	<b>Name of machinery and equipment</b>	<b>Cost, Tenge</b>
Building of veterinary station	24,000,000	2 x Tractor 120 h.p.	12,000,000
Equipment for veterinary. station (cattle locker)	1,300,000	2 x Feed dispenser, 15-20 cubic meters	15,000,000
Cattle sorting system and cattle loading/unloading ramp	10,000,000	Front end/loader	9,000,000
Diesel substation min 30 kW	2,000,000	Telescopic loader	11,000,000
Water supply system and automatic livestock waterers	10,000,000	Truck with trailer	11,000,000
Grain crusher/flattener	2,000,000	Precision seed drill	4,500,000
Granary (banks for 10 000 tons of grain)	180,000,000	Forage combine harvester	50,000,000
Roll grinder and spreader	3,200,000	Shovel for haylage/silo tramping	6,000,000
		Tractor 80 h.p., with loader and bucket	4,100,000
		Trailed mower-conditioner	2,300,000
		Tedder rake	1,000,000
		Fodder roller/bale pick-up	2,650,000
<b>Investments in structures and equipment, total</b>	<b>229,300,000</b>	<b>Investments in machinery, total</b>	<b>131,750,000</b>

**Appendix 4. Planned indicators of the commercial cattle seed stock population, as of the end of the year**

<b>Regions</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Akmola Region	20,000	27,000	35,000	44,000	54,000	65,000	80,000	100,000
Aktyubinsk Region	26,000	45,000	67,000	92,000	120,000	150,000	185,000	225,000
Almaty Region	53,000	60,000	67,000	74,000	82,000	90,000	100,000	110,000
Atyraus Region	1,500	2,500	3,500	5,000	7,000	9,000	12,000	15,000
East Kazakhstan Region	50,000	60,000	75,000	95,000	120,000	150,000	180,000	215,000
Zhambyl Region	13,000	20,000	28,000	36,000	44,000	52,000	65,000	80,000
West Kazakhstan Region	45,000	53,000	61,000	70,000	80,000	90,000	105,000	120,000
Karaganda Region	50,000	70,000	92,000	117,000	145,000	185,000	225,000	270,000
Kostanay Region	23,000	30,000	37,000	45,000	56,000	70,000	90,000	110,000
Kyzylorda Region	13,000	18,000	23,000	29,000	35,000	41,000	47,000	55,000
Pavlodar Region	20,000	27,000	35,000	45,000	58,000	73,000	89,000	110,000
North Kazakhstan Region	15,000	18,000	22,000	27,000	34,000	41,000	49,000	60,000
South Kazakhstan Region	16,500	21,000	28,000	36,000	45,000	55,000	65,000	80,000
<b>The Republic, total</b>	<b>346,000</b>	<b>451,500</b>	<b>573,500</b>	<b>715,000</b>	<b>880,000</b>	<b>1,071,000</b>	<b>1,292,000</b>	<b>1,550,000</b>

**Appendix 5. Plan on the acquisition of the domestic commercial cattle seed stock population under the program “Sybaga”**

<b>Regions</b>	<b>Total</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Akmola Region	41,500	3,500	3,500	4,000	4,500	5,500	6,000	6,500	8,000
Aktyubinsk Region	82,000	3,200	4,000	6,300	9,000	11,000	13,500	16,000	19,000
Almaty Region	68,200	4,700	8,000	8,000	8,500	9,000	9,500	10,000	10,500
Atyrau Region	7,800	800	1,000	1,000	1,000	1,000	1,000	1,000	1,000
East Kazakhstan Region	89,600	4,100	7,500	9,000	9,500	11,500	13,500	15,500	19,000
Zhambyl Region	36,500	4,000	4,000	4,000	4,000	4,000	5,000	5,500	6,000
West Kazakhstan Region	63,800	2,900	7,200	7,200	8,000	8,500	9,000	10,000	11,000
Karaganda Region	108,500	3,500	8,000	10,000	12,000	14,000	16,500	21,000	23,500
Kostanay Region	44,600	3,000	3,600	4,000	5,000	5,500	6,500	8,000	9,000
Kyzylorda Region	26,500	2,000	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Pavlodar Region	42,500	2,300	3,200	4,000	4,500	5,500	6,500	7,500	9,000
North Kazakhstan Region	27,500	2,500	2,500	2,500	3,000	3,500	4,000	4,500	5,000
South Kazakhstan Region	37,000	3,500	3,500	3,500	4,000	4,500	5,000	6,000	7,000
<b>The Republic, total</b>	<b>676,000</b>	<b>40,000</b>	<b>58,000</b>	<b>66,000</b>	<b>76,000</b>	<b>87,000</b>	<b>100,000</b>	<b>116,000</b>	<b>133,000</b>

**Appendix 6. Plan on the import of the selection cattle seed stock population under the program “Sybaga”**



<b>Regions</b>	<b>Total</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Akmola Region	4,500	1,000	500	500	500	500	500	500	500
Aktyubinsk Region	71,800	1,800	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Almaty Region	4,500	1,000	500	500	500	500	500	500	500
Atyrau Region	0	0	0	0	0	0	0	0	0
East Kazakhstan Region	8,300	1,300	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Zhambyl Region	3,800	300	500	500	500	500	500	500	500
West Kazakhstan Region	8,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Karaganda Region	29,000	1,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Kostanay Region	4,600	1,100	500	500	500	500	500	500	500
Kyzylorda Region	2,600	500	300	300	300	300	300	300	300
Pavlodar Region	8,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
North Kazakhstan Region	2,100	0	300	300	300	300	300	300	300
South Kazakhstan Region	2,800	0	400	400	400	400	400	400	400
<b>The Republic, total</b>	<b>150,000</b>	<b>10,000</b>	<b>20,000</b>	<b>20,000</b>	<b>20,000</b>	<b>20,000</b>	<b>20,000</b>	<b>20,000</b>	<b>20,000</b>

#### Appendix 7. Plan on the acquisition of the pedigree stud-bulls of meat breeds

<b>Regions</b>	<b>Total</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Akmola Region	7,083	333	450	583	733	900	1,083	1,333	1,667
Aktyubinsk Region	15,167	433	750	1,117	1,533	2,000	2,500	3,083	3,750
Almaty Region	10,600	883	1,000	1,117	1,233	1,367	1,500	1,667	1,833
Atyrau Region	925	25	42	58	83	117	150	200	250
East Kazakhstan Region	15,750	833	1,000	1,250	1,583	2,000	2,500	3,000	3,583
Zhambyl Region	5,633	217	333	467	600	733	867	1,083	1,333
West Kazakhstan Region	10,400	750	883	1,017	1,167	1,333	1,500	1,750	2,000
Karaganda Region	19,233	833	1,167	1,533	1,950	2,417	3,083	3,750	4,500
Kostanay Region	7,683	383	500	617	750	933	1,167	1,500	1,833
Kyzylorda Region	4,350	217	300	383	483	583	683	783	917
Pavlodar Region	7,617	333	450	583	750	967	1,217	1,483	1,833
North Kazakhstan Region	4,433	250	300	367	450	567	683	817	1,000
South Kazakhstan Region	5,775	275	350	467	600	750	917	1,083	1,333
<b>The Republic, total</b>	<b>114,650</b>	<b>5,767</b>	<b>7,525</b>	<b>9,558</b>	<b>11,917</b>	<b>14,667</b>	<b>17,850</b>	<b>21,533</b>	<b>25,833</b>

#### Appendix 8. Planned indicators of the seed stock population of pedigree cattle of meat breeds

<b>Regions</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Akmola Region	21,000	22,500	25,000	26,000	27,000	28,000	30,000	32,000
Aktyubinsk Region	9,300	14,000	16,000	18,000	21,000	24,000	26,000	30,000
Almaty Region	16,800	22,000	24,000	26,000	28,000	30,000	31,000	32,000
Atyrau Region	300	300	1,000	1,500	2,000	2,000	2,500	3,000
East Kazakhstan Region	18,500	22,000	24,000	26,000	28,000	30,000	35,000	40,000
Zhambyl Region	3,600	4,000	6,000	8,000	10,000	12,000	14,000	16,000

West Kazakhstan Region	12,400	15,000	16,500	18,000	19,000	20,000	22,000	24,000
Karaganda Region	5,300	7,500	11,000	14,000	17,000	22,000	26,000	30,000
Kostanay Region	24,600	28,000	30,000	31,500	33,000	35,000	37,500	40,000
Kyzylorda Region	500	700	1,500	2,500	5,000	7,000	9,000	11,000
Pavlodar Region	11,400	15,000	17,000	17,500	18,000	19,000	20,000	22,000
North Kazakhstan Region	8,700	10,000	11,000	12,000	13,000	14,000	15,000	16,000
South Kazakhstan Region	1,100	2,000	4,000	6,000	9,000	12,000	14,000	16,000
<b>The Republic, total</b>	<b>133,500</b>	<b>163,000</b>	<b>187,000</b>	<b>207,000</b>	<b>230,000</b>	<b>255,000</b>	<b>282,000</b>	<b>312,000</b>

#### Appendix 9. Acquisition of the domestic and imported pedigree cattle seed stock

Regions	Total	2013	2014	2015	2016	2017	2018	2019	2020
Akmola Region	9,400	1,000	1,200	1,200	1,200	1,200	1,200	1,200	1,200
Aktyubinsk Region	17,200	2,500	2,100	2,100	2,100	2,100	2,100	2,100	2,100
Almaty Region	13,200	4,800	1,200	1,200	1,200	1,200	1,200	1,200	1,200
Atyrau Region	-								
East Kazakhstan Region	17,800	3,800	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Zhambyl Region	10,900	400	1,500	1,500	1,500	1,500	1,500	1,500	1,500
West Kazakhstan Region	9,400	1,000	1,200	1,200	1,200	1,200	1,200	1,200	1,200
Karaganda Region	22,000	1,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Kostanay Region	13,100	4,000	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Kyzylorda Region	9,100	-	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Pavlodar Region	8,900	4,000	700	700	700	700	700	700	700
North Kazakhstan Region	6,200	1,300	700	700	700	700	700	700	700
South Kazakhstan Region	12,800	200	1,800	1,800	1,800	1,800	1,800	1,800	1,800
<b>The Republic, total</b>	<b>150,000</b>	<b>24,000</b>	<b>18,000</b>	<b>18,000</b>	<b>18,000</b>	<b>18,000</b>	<b>18,000</b>	<b>18,000</b>	<b>18,000</b>

#### Appendix 10. Plan of the construction of feedlots (from at least 200 cattle stalls)

Regions	Actual number	2013	2014	2015	2016	2017	2018	2019	2020
Akmola Region	15,380	4,000	5,000	6,000	7,000	9,000	11,000	19,000	20,000
Aktyubinsk Region	12,800	5,000	5,000	10,000	13,500	22,000	25,000	32,000	44,000
Almaty Region	17,600	10,000	15,000	20,000	13,500	15,000	17,000	19,000	20,000
Atyrau Region	1,300	1,000	1,000	1,000	1,000	1,000	1,000	2,000	2,000
East Kazakhstan Region	25,570	10,000	10,000	12,000	15,000	20,000	25,000	36,000	46,000
Zhambyl Region	3,300	3,000	3,000	4,000	6,000	7,000	9,000	10,000	13,000
West Kazakhstan Region	18,142	9,000	9,000	11,000	12,000	14,000	16,000	24,000	30,000

Karaganda Region	3,100	3,000	10,000	14,000	19,000	25,000	30,000	38,000	46,000
Kostanay Region	4,800	5,000	5,000	5,000	7,500	9,000	11,000	15,000	20,000
Kyzylorda Region	2,400	2,600	2,600	2,600	4,500	6,000	7,000	8,000	10,000
Mangistaus Region	0	0	0	0	0	0	0	0	0
Pavlodar Region	4,900	4,000	5,000	6,000	7,000	9,000	12,000	15,000	20,000
North Kazakhstan Region	3,500	3,000	3,000	4,000	4,000	6,000	7,000	11,000	16,000
South Kazakhstan Region	2,520	3,300	3,300	4,000	5,500	7,000	9,000	11,000	13,000
<b>The Republic, total</b>	<b>115,312</b>	<b>62,900</b>	<b>76,900</b>	<b>99,600</b>	<b>115,500</b>	<b>150,000</b>	<b>180,000</b>	<b>240,000</b>	<b>300,000</b>

#### Appendix 11. Plan of the construction of export-oriented feedlots

Regions	Actual number	2013	2014	2015	2016	2017	2018	2019	2020
Akmola Region	7,000	7,000	7,000	7,000	7,000	7,000	7,000	10,000	10,000
Aktubinsk Region	10,000	10,000	10,000	15,000	15,000	15,000	20,000	25,000	40,000
Almaty Region	8,000	9,000	14,000	19,000	19,000	19,000	9,000	10,000	10,000
Atyrau Region									
East Kazakhstan Region	8,560	8,560	8,560	8,560	8,560	13,000	20,000	25,000	30,000

Zhambyl Region									
West Kazakhstan Region	8,640	8,640	8,640	8,640	8,640	10,000	10,000	15,000	20,000
Karaganda Region	2,000	2,000	2,000	2,000	7,000	12,000	20,000	35,000	45,000
Kostanay Region	3,500	3,500	3,500	3,500	3,500	5,000	5,000	10,000	15,000
Kyzylorda Region									
Mangistaus Region									
Pavlodar Region	1,000	1,000	1,000	1,000	1,000	1,000	6,000	10,000	15,000
North Kazakhstan Region	3,000	3,000	3,000	3,000	3,000	3,000	3,000	10,000	15,000
South Kazakhstan Region									
<b>The Republic, total</b>	<b>51,700</b>	<b>52,700</b>	<b>57,700</b>	<b>67,700</b>	<b>72,700</b>	<b>85,000</b>	<b>100,000</b>	<b>150,000</b>	<b>200,000</b>

END UNOFFICIAL TRANSLATION.