

## DEVELOPMENT OF EGG PRODUCTION IN KAZAKHSTAN

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Дана оценка развития птицеводческой отрасли Республики Казахстан, в частности производства куриных яиц в разрезе лет, по регионам республики. Выявлено, что производство яиц имеет значительный потенциал в стране.

Қазақстан Республикасының құс шаруашылығы саласының дамуына баға берілген, атап айтқанда тауық жұмыртқасын жылдар, республика өңірлері шеңберінде өндіру. Жұмыртқа өндірісінің біздің елімізде елеулі әлеуеті бар екені анықталған.

**Abstract.** The evaluation of poultry industry development in the Republic of Kazakhstan, in particular egg production by years and by region of the country has been presented. It was found that egg production has considerable potential in the country.

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**Ключевые слова:** агропромышленный комплекс, промышленное птицеводство, рынок, птицеводческие фермы, регион, население, эффективность птицеводческой отрасли.

**Тұтқалы сөздер:** агроөнеркәсіптік кешені, өнеркәсіптік құс шаруашылығы, өңір, халық, құс шаруашылығы саласының тиімділігі.

**Keywords:** agri-industrial sector, industrial poultry production, market, poultry farms, region, population, efficiency of poultry industry.

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Eggs are considered as the most simple, affordable and popular products on our food baskets. Although it isn't well known that the product is unique in its composition, has a lot of useful features and is able to prevent a lot of diseases. Therefore, eggs are the desired product in the diet of people leading a healthy life-style [1].

Hens are bred in almost all parts of our planet. People use it in food for over two thousand years. Eggs are composed of protein, yolk and shell. Eggs are of different sizes and colors depending on the species, weight, age, diet of chickens. The color of eggs does not affect its nutritional and healthy properties.

Eggs are useful as protein and egg yolk. Egg shell also has useful properties and is widely used in the recipes of traditional medicine. In cooking, the eggs are prepared as separate dishes and used as an ingredient for the preparation of a variety of different dishes (salads, soups, baked goods) [2].

The composition of eggs includes 12 basic vitamins such as A, D, E, H, PP, K, group B (B1, B2, B4, B9), and others. According to the concentration of vitamin D, egg yolk is second only to fish oil. Chicken eggs contain macro- and trace elements such as calcium, phosphorus, iodine, iron, copper, cobalt, potassium, magnesium, sulfur, boron, manganese and other minerals. Eggs are rich in essential amino acids the human body [3].

The poultry industry in Kazakhstan is currently one of the most developed sectors of the livestock.

According to current Russian standards, the marking shall be on every egg produced at the poultry farm. The first digit in the marking is valid shelf life:

- the letter "D" represents diet egg, such eggs implemented within 7 days;
- the letter "C" stands for table egg which is implemented within 25 days.

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The second sign in the marking means a category of eggs, depending on its weight:

- "3" - the third category - from 35 to 44.9 g;
- "2" - the second category - from 45 to 54.9g;
- "1" - the first category - from 55 to 64.9 g;

"O" - an elite category - from 65 to 74.9 g;  
 "B" - the highest category - 75 g or more.  
 The categories are deeply considered in the (Table 1) [4].

Table 1 - Egg marking

	Weight of piece, g	Weight of dozen, g	Number of eggs in 1kg
<i>"B" - the highest category</i>			
Eggs with shell	75 and above	750 and above	less than 14
Eggs without shell	680	680	15
White of egg	41	410	24
yolk	26	260	38
<i>"O" - Selected</i>			
Eggs with shell	65-74,9	65-749,9	14-15
Eggs without shell	59-68	590-680	15-17
White of egg	36-41	360-410	24-28
yolk	23-26	230-260	38-43
<i>"1" - First category</i>			
Eggs with shell	55-64,9	550-649,9	15-18
Eggs without shell	50-59	500-590	17-20
White of egg	30-36	300-360	28-33
yolk	19-23	190-230	43-52
<i>"2" - Second category</i>			
Eggs with shell	45-54,9	450-549,9	18-22
Eggs without shell	40-50	400-500	20-25
White of egg	25-30	250-300	33-40
yolk	16-19	160-190	52-63
<i>"3" - Third category</i>			
Eggs with shell	35-44,9	350-449,9	22-28
Eggs without shell	32-40	320-400	25-31
White of egg	19-25	190-250	40-52
yolk	12-16	120-160	63-83

Depending on the direction, egg producers may give certain directions, for example, eggs enriched with selenium or iodine.

According to the data given in the (Table 2), it can be seen that from 2010 to 2014 the egg production in Kazakhstan grows with some fluctuations. The period between 2010 and 2012 indicates the steady fall, and then the production was recovered and has reached to almost 4.3 billion eggs in 2014.

The reasons of such fluctuations are due to the post-financial crisis measures carried out by the Government of the Republic of Kazakhstan.

From the information given in the (Table 1), it can be seen that Kazakhstan's North regions

are the drivers of the egg production sector. Admittedly, egg production in the South regions of Kazakhstan has been increased steadily and reached the pick in 2013, and then plummeted [5].

In the early ninetieth, the poultry sector the Republic was at its peak, and it can be identified from the (Chart 1) that the productions numbers of 90's had been recovered only in 2014. During the period of 1990 and 2000, it can be noted that there was a sharp drop in production by approximately 60%. The period can be labeled as a post-Soviet Union shock, where country's economy was far from stable. The new century became a fresh air to Kazakhstan's poultry sector,

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as shown in the (Chart 1). From the beginning of 2000, there has been steep rise in numbers from

about 500 million eggs to approximately 4.5 billion.

Table 2 - Egg production by the regions

	mln pcs.				
	2010	2011	2012	2013	2014
Republic of Kazakhstan	3 720,3	3 718,5	3 673,4	3 896,0	4 291,2
Akmola	448,0	437,7	495,6	523,4	587,2
Aktobe	185,2	177,5	185,8	174,8	173,4
Almaty	909,3	878,8	815,8	868,0	980,3
Atyrau	1,8	1,9	1,8	10,6	23,6
West Kazakhstan	130,8	137,4	136,2	139,7	156,6
Zhambyl	114,1	118,4	115,2	110,5	109,1
Karagandy	299,7	373,3	468,8	554,9	615,2
Kostantai	491,8	553,2	527,2	457,2	522,4
Kyzylorda	13,6	12,1	9,7	7,1	5,7
Mangistau	0,8	0,7	0,7	0,6	0,6
South Kazakhstan	271,1	266,2	276,6	276,6	280,2
Pavlodar	186,5	181,9	64,0	121,5	124,9
North Kazakhstan	396,9	400,2	437,2	492,7	549,3
East Kazakhstan	266,9	175,6	135,7	144,1	154,8
Astana city	0,2	0,3	0,3	0,3	0,3
Almaty city	3,6	3,3	2,8	13,8	7,6

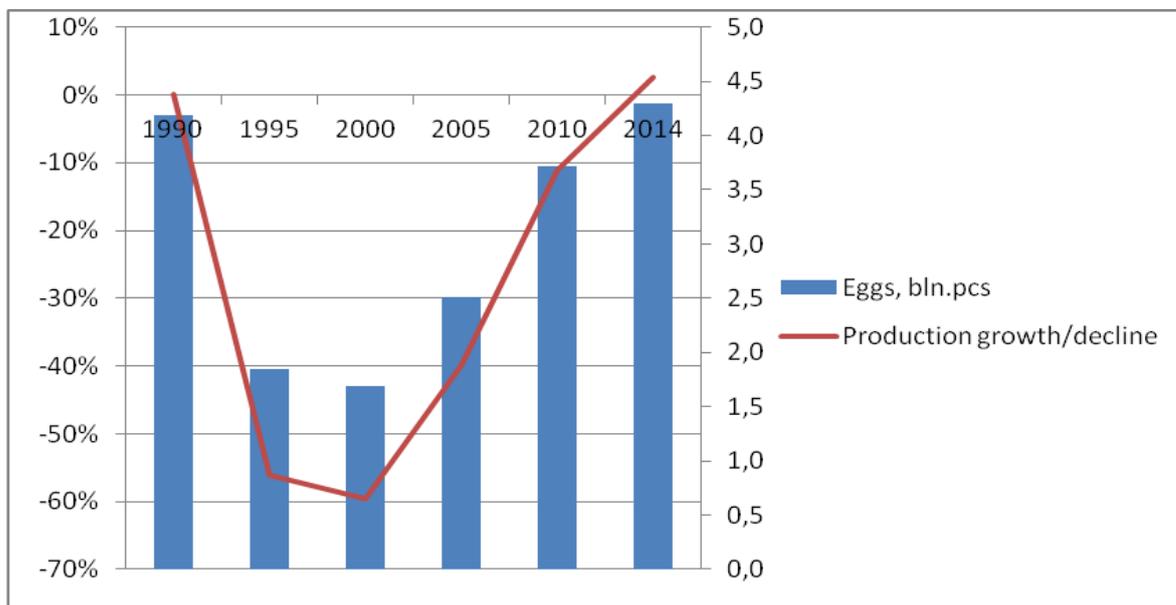


Chart 1 - Egg production in Republic of Kazakhstan

According to the (Chart 2) it is clear that in the first three month period of 2015 the commercial poultry sector has a share in the domestic market by greater than 80%. As far as analysis is concerned, it is estimated the annual

growth in egg production in 2018 and 2020 by 17 and 33% respectively.

Leading region of egg production in the Republic is Almaty oblast (Chart 3).

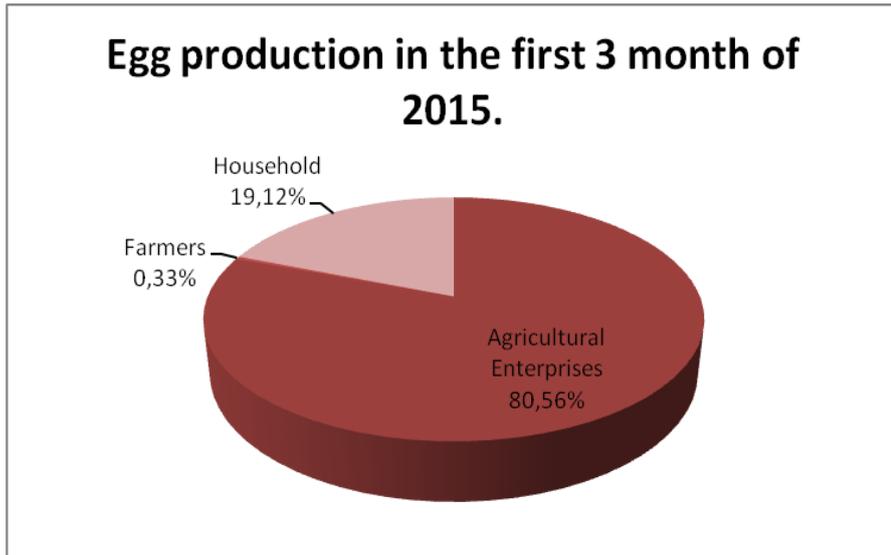


Chart 2 – Egg production by sectors

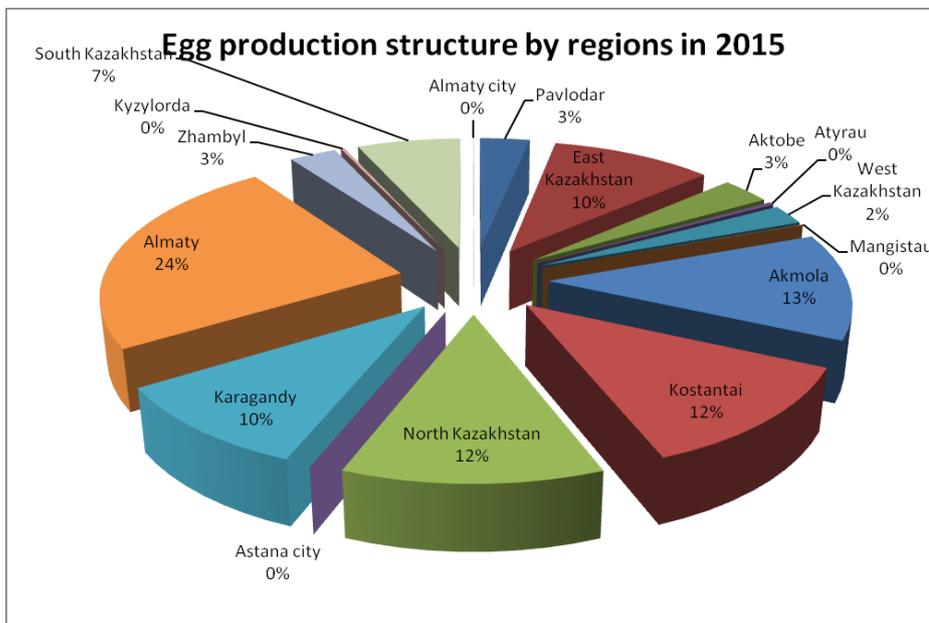


Chart 3 – Egg production by regions as of first quarter, 2015

According to the Union of poultry breeders of Kazakhstan, the plan for the upcoming period of 2014-2018, is the substitution of imported products by 100%.

Moreover, it is planned to increase the domestic production of poultry meat up to 200 tons by 2016. Owing to the nature of the production process, the achievement of these indicators is based on increasing the production of large and medium-sized enterprises due to a large investment capacity of production.

Significant growth in the national scale of production in the sector of personal subsidiary

farms is seen unlikely.

According to the Poultry farmer's Union of Kazakhstan, the local market is fully covered by domestic product in 2015. Nowadays, the industry is becoming export-oriented, mainly to the neighboring countries. Having concluded all the information given above, the egg production in Kazakhstan has a big potential of becoming a main GDP contributor. Although the North and South regions have a big share in the production, Entrepreneurs of the other regions are starting to invest funds to develop poultry business in their respective regions.



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