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The Situation in the Poultry Sector in Bosnia and Herzegovina

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Abstract: ***Bosnia and Herzegovina have sufficient capacities for production and processing of poultry meat and it can meet the needs of the BiH population. Consumption of poultry meat is about 14 to 16 Kgs/capita/year and 180 eggs/capita/year – these quantities are relatively high and there is a growth potential.***
More than 90% of poultry meat producers are cooperants of one of the processing units in Bosnia and Herzegovina. Usually cooperation between processors and farmers goes like this: processors are selling to farmers' one-day chicken and concentrate, and also providing monitoring of process, veterinary services, etc.
The key issue for the poultry industry is the need to import feed ingredients and in some cases complete feed on a regular basis. Given the cost of feed often represents about 70% of total costs, any disruption in normal/traditional supply channels could increase costs significantly, or worse – completely close the flow of feed to producers.
Bosnia and Herzegovina has currently around 1.4 million chickens in production. Current production is about 370 million eggs per year while needs of BiH are about 400 to 450 million eggs a year. Price of the egg is 0,18 BAM per piece. Around 70% of table egg production goes through organized cooperative systems similar like meat production. 30% of table eggs production is coming from small farms. These eggs are sold directly on farms, green markets or small markets.
Keywords: broiler, eggs, meat

Introduction

Poultry sector presents the highest growing sector in Europe and together with dairy and fruits & vegetable presents the most competitive agribusiness sector in Bosnia and Herzegovina. According to Organization for Economic Co-operation and Development (OECD), this sector will become the largest meat sector from 2020 on, with approximately annual 2,3% growth of poultry meat production between 2013 and 2023, while data for only EU are predicting growth of 1% per year until 2023.

Due to the economic nature of food production and processing, poultry meat is the most competitive in the food industry. Poultry meat is the most suitable because of its nutritional properties, ecological production and economic sustainability. When the chick hatches weighs 40 grams, and three days later its weight is doubled, and within a week weight increased five times, and after one months 38 times. So in less than 40 days old chicken reaches a weight of 2.2 kg. Feed conversion ratio is approximately 1.8 kg per kilogram of chicken waith gain, while other meat production have higher feed conversion – cattle - 8 kg of feed per 1 kg gain and with pigs 3 kg of raw material per one kg of gain.

Poultry production in comparison with other branches of meat-processing industry has many advantages. Consumption is characterized by a 4 major trends: healthy food, price-quality, favorable taste very fast and easy to prepare (eggs and meat).

Today, the average consumption of chicken meat is on a second place, and projections show that the share of consumption of poultry meat will increase. Therefore, the prosperity and growth of this industry is very important taking into account that poultry meat is consumed by all religious faiths.

Also, chickens consume the least water and have the lowest CO2 emissions. Perspective is a vertical production (from egg to meat and meat products).

Poultry production effectively comprises two completely different businesses: meat production from broilers and egg production from laying hens.

More than 90% of poultry meat producers are cooperants of one of the processing units in Bosnia and Herzegovina. Usually cooperation between processors and farmers goes like this: processors are selling to farmers' one-day chicken and concentrate, and also providing monitoring of process, veterinary services, etc. After 40-42 days of chicken fattening, farmers are selling chicken back to processors. Current price of live chicken is 2,10 BAM per kg. This system works for years in Bosnia and Herzegovina and farmers gets their income through difference in prices of inputs and outputs. Almost all processing units are using only 50 -70% of their processing capacities.

Around 10% of smaller farmers are working outside of this huge system and selling products on local markets. Existence of these small farmers is endangered because they don't have regular veterinarian services, regular salary and they don't satisfy requirements of EU farms regarding slaughterhouses and meat testing. Because of all these, their profit is decreased and any new investment in improving the farm in order to satisfy all regulations and requirements would be a burden.

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Materials and Methods

On the basis of available statistical data and calculations, this paper shows the number broilers and chicken meat production in B&H in the period in 2011. to 2016th in the Federation of Bosnia and Herzegovina and the Republic of Srpska. Own research and data from the Associations of poultry producers RS and FB&H collected the data about numeber and production parent's flocks, leading breeders of parent flock, the leading hatcheries and slaughter facilities and facilities for processing of raw chicken meat. Data on imports and exports are from Foreign Trade Chamber B&H.

Results and Discussion

Table 1. Number of broilers and chicken meat production in Federation B&H and Republic of Srpska (Source: Institute for statistic FB&H, Institute for statistic RS)

	FBH					
	2011	2012	2013	2014	2015	2016
Broilers	24.315.500	29.898.200	20.568.600	20.997.400	24.353.300	28.110.600
Net weight kg	33.575.700	41.897.200	29.764.000	31.240.900	36.247.100	42.424.900
	RS					
	2011	2012	2013	2014	2015	2016
Broilers	6.863.000	6.738.000	6.869.000	7.306.000	7.011.397	9.464.823
Net weight kg	10.780.800	10.990.400	11.006.130	11.732.258	11.305.600	15.028.600

(Source: Institute for statistic FB&H, Institute for statistic RS)

In the analyzed six-year continuous increase in broiler output and chicken meat production. Compared to 2011. in 2016. year, the increase in broiler breeding in the Federation B&H increased by 15.61% and in the Republic of Srpska increased by 37.91%.

Table 2. Parent's flocks (Source: Associations of poultry producers RS and FB&H)

	Move in RS	Move in FB&H	Total BIH
2011	203.000	149.850	352.850
2012	209.200	148.000	357.200
2013	173.100	146.000	319.100
2014	176.800	191.500	368.300
2015	175.800	203.000	378.800
2016	186.700	209.500	396.200

Compared to 2011. in 2016. year, the increase of parents flock in Bosnia and Herzegovina by 12,28%

Table 3. Leading breeders of parent flock in BiH (Source: Associations of poultry producers RS and FB&H)

Company Name	Place	Quantities					
		2011	2012	2013	2014	2015	2016
Iradia	Laktasi	103.000	106.000	76.000	88.500	87.200	91.300
Brovis	Visoko	89.000	70.000	73.000	74.500	79.000	83.000
Madi	Tesanj		14.000	28.000	66.500	73.500	81.000
Perutnina Ptuj	Srbac	37.000	37.000	36.600	36.600	36.600	37.000
HS Company	Gračanica	34.700	37.000	35.000	36.000	36.000	35.000
Zivanic	Prnjavor	10.000	16.000	16.000	16.000	16.000	16.000
Agrounija	Srbac	16.500	16.500	16.500	11.000	11.000	12.000
Poljovet	Gradacac		10.000		11.000	11.000	11.000
Posavina koka	Orašje	8.000	8.000	7.000	8.000	10.000	10.000
GT Satelit	Banja Luka	8.000	8.000	8.000	8.000	8.000	8.000
Savić Company	Bijeljina	12.000	6.000	6.500	6.700	7.000	7.000
Vetprodukt	Prnjavor	5.000	5.000	5.000	5.000	5.000	5.000
Ljubivit	Ljubinje	5.000	5.000	5.000	5.000	5.000	5.000
Others		2.150			3.500	3.500	4.500

Table 4. The leading hatcheries in BiH (Source: Associations of poultry producers RS and FB&H)

Company Name	Place	Number of ovary places for hatching per year	Maximum annual number of chickens / hatches 80%
Brovis	Visoko	20.000.000	16.000.000
Madi	Tesanj	15.000.000	12.000.000
Zivanic	Prnjavor	7.020.000	5.616.000
Agreks	Donji Zabar	6.912.000	5.529.600

Vetprodukt	Prnjavor	6.000.000	4.800.000
Poljovet	Gradacac	6.000.000	4.800.000
Posavina koka	Orasje	6.000.000	4.800.000
Savic Company	Bijeljina	5.740.800	4.592.640
Insta d.o.o.	Srbac	5.125.500	4.100.400
HS Company	Gracanica	5.000.000	4.000.000
Agrounija d.o.o.	Srbac	3.993.600	3.194.880
Jatoprodukt	Petrovo	3.224.000	2.579.200
Kiko d.o.o	Bijeljina	1.996.800	1.597.440
Zivino-vet	Srbac	1.996.800	1.597.440
Pilkom	Kaoci	1.996.800	1.597.440
Ljubivit	Ljubinje	1.800.000	1.440.000
Dragisic	Gradiska	1.120.000	896.000
Vulis d.o.o.	Bratunac	1.000.000	800.000

The largest slaughter facilities and facilities for processing of raw chicken meat are:
1. MADI - Tešanj - capacity of slaughterhouses: 6,000 chickens per hour
2. Perutnina Ptuj - Srbac - capacity of slaughterhouses: 4,000 chickens per hour
3. BROVIS - Visoko - capacity of slaughterhouses: 4,000 chickens per hour
4. BROJLER - Sarajevo - capacity of slaughterhouses: 4,000 chickens per hour

These are the four largest processing capacity that also deal with the processing of chicken meat (whole chickens, chicks, ready-made meat).

Analysis of import and export of poultry meat and products made from poultry meat

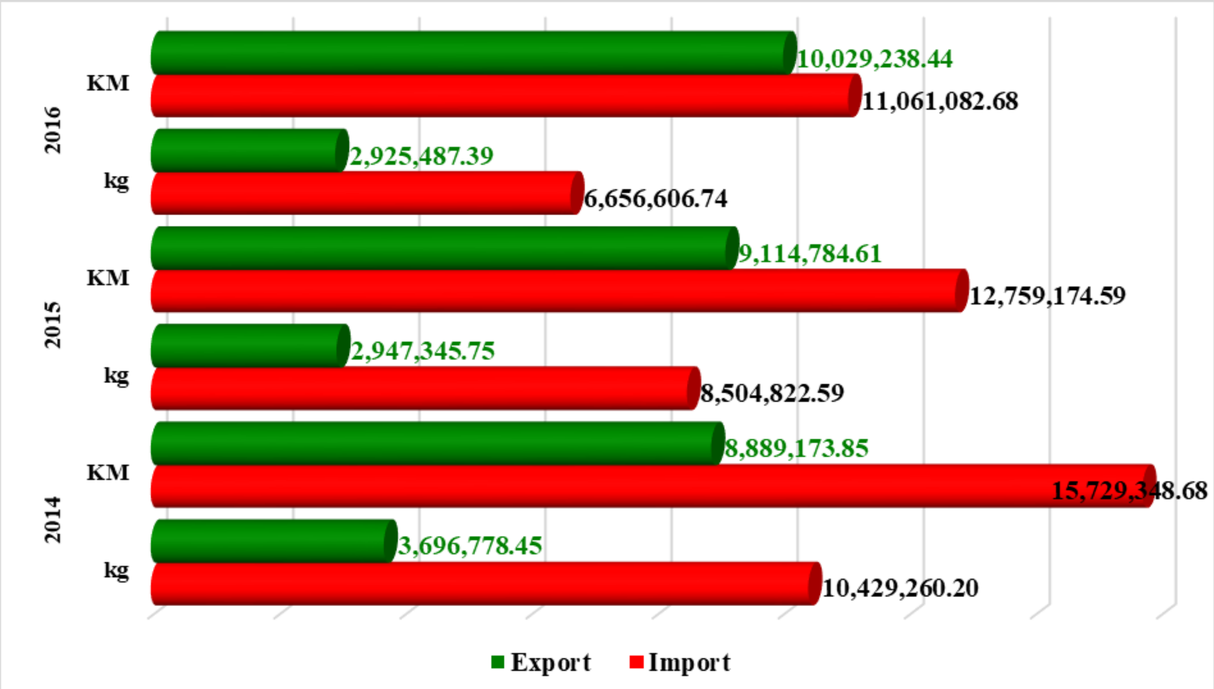

Chart 1: Import/Export of poultry meat (broilers) (Source: Foreign trade chamber B&H)

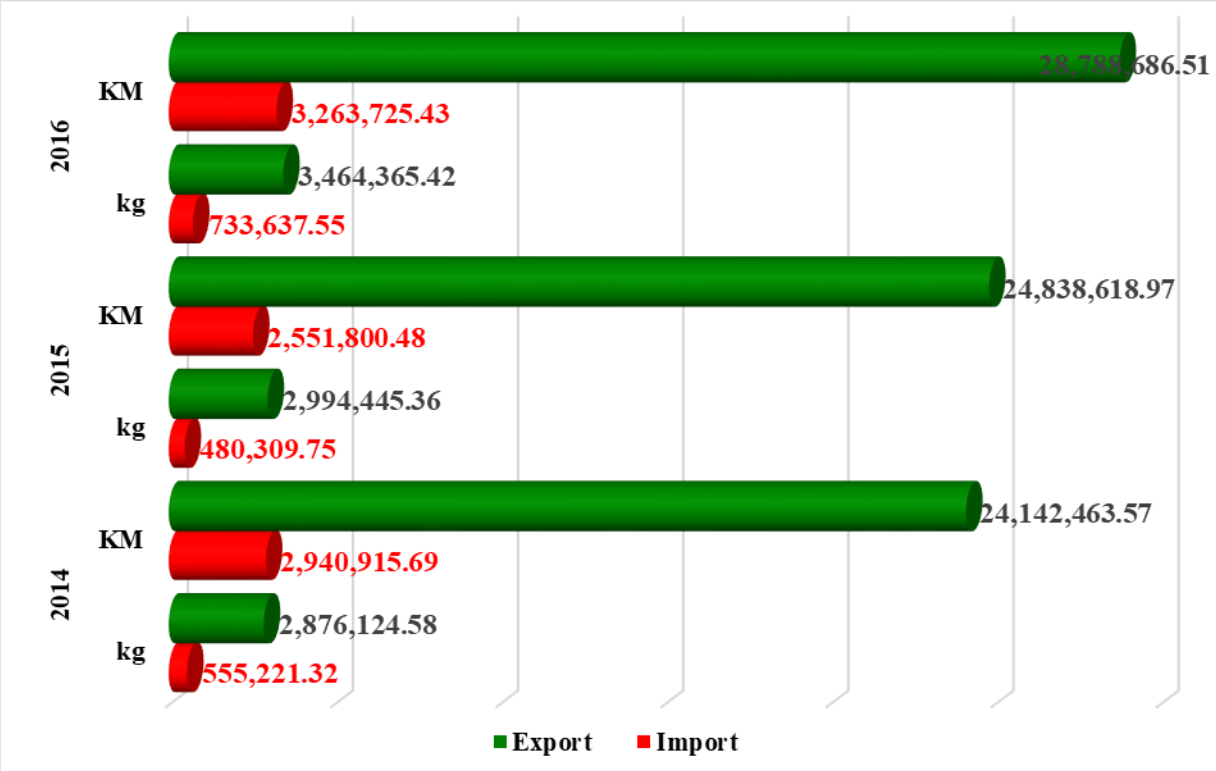

Chart 2: Import/Export of products made of poultry meat (broilers) (Source: Foreign Trade Chamber B&H)

Infrastructure:
Current infrastructure on poultry farms
• Almost all large laying farms use cages (Animal welfare issue)
• Most buildings (especially on large farms) need only minor or no improvement
• Many farms use manual ventilation
• Most farms have no heating systems
• Many farms use manual feeding
• 80 percent of feed stores need some improvement
• 70 percent of manure stores need some improvement
Main investment needs:
• Upgrading of buildings on larger commercial layer farms in order to meet EU standards, particularly for animal welfare. This will include replacement of traditional batery cages with EU-compliant “enriched cages”;
• Upgrading of larger broiler units to comply with lower EU stocking density limits and other animal welfare requirements;
• Expansion of (layer and broiler) buildings to allow all at least the existing capacity at the new lower stocking densities
• Upgrading of automated equipment for feeding, watering, ventilation and climate control
• Improving facilities for storage of poultry manure and provision of machinery for manure transport and spreading.

Main investment needs in processing industry:
• Sewage and waste-water treatment, at least as a pre-treatment process prior to discharge into municipal facilities;
• Disposal of solid waste from meat processing, via one or more rendering plants;
• Upgrading or building new slaughterhouses;
• Upgrading of technology where appropriate, including packaging equipment.
• Plant upgrading to improve operating efficiency
• Meet EU hygiene, welfare and/or environmental standards
• Animal waste storage, transport and disposal (safe collection and disposal of animal waste in line with EU standards for public and animal health and the environment)
• (Re)construction of buildings

Conclusion

The foreign trade balance in the poultry sector has been continuously positive, with growth of export-import ratio (2011: 123% 2015: 138%). The structure of the exchange is relatively good, because we are net importers of live poultry and poultry meat, while acknowledging the positive balance for eggs and poultry meat. The key markets in the region: Serbia, Kosovo, Macedonia and Montenegro, where in 2015 it accounted for 99% of total exports. On the Croatian market in 2012 was placed 14.3 million. KM (52% poultry, 27% of eggs and 20% of products).
Although the sector continues to grow, there are two main challenges regarding the foreign trade in the poultry sector:
• BiH is allowed to export the poultry products to the EU markets

The situation could be improved affter BiH gets the approval to export poultry to the European Union, but based on the dairy sector experience, the return to the Croatian market will not be quick and smooth.

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