UDK 636.03

Izlaganje sa znanstvenog skupa

Conference paper

ANIMAL PRODUCTION AS A PERSPECTIVE FOR QUADRILATERAL COLLABORATION

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Summary

This paper gives the main characteristics of animal production in Croatia and analyzes its competitiveness as a basis for possible collaboration between the countries of Quadrilateral in the field of animal production. It describes the current state and recent trends in milk and meat production and their perspective after Croatian accession to EU. Particular emphasis is put on the analysis of trade relations with countries of the Quadrilateral. The main characteristic of Croatian livestock production is the small average farm size and low productivity what could be the main reasons for a general inefficient domestic livestock production and dependence on import of both live animals and animal products (milk and meat). In order to increase the competitiveness of Croatian farmers' and meet the increasing for milk and meat additional farm concentration and the cooperation of small holders as well as a more effective use of local resources such as land, labour and livestock tradition is necessary. In addition, after EU accession Croatian livestock sector can expect further integration in international trade and better opportunities for export (e.g. elimination of protective tariffs) on common EU market, especially with regard to products that are lacking in EU (e.g. beef). In this way collaboration between countries of Quadrilateral through development and implementation of new technologies can contribute to a better use of specific national resources and better production efficiency.

Key words: Quadrilateral countries, livestock, milk and meat production.

1. Introduction

The question about possibility of collaboration between the Croatia, Hungary, Italy and Slovenia (Quadrilateral countries) in the field of animal production became more interesting in context of Croatian accession to EU in the near future (2013). In negotiations with the EU Croatia has secured a period of 7 years of adjustment for its agriculture. Among the changes in agricultural legislations and system of subsidies, it could be expected that current structural changes in animal production will be intensively progress. After a big reduction of animal production during the early 1990s as results of the war and economic transition, a trend of recovery in livestock production could be seen after the year 2000 (World Bank, 2011).

Rad je pripoćen na 19 simpoziju "Animal Science Days", Primošten, 19-23. rujna 2011 g.

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In the past ten years Croatian government made immense efforts to increase the livestock production through the two models: “Capital investments model” and “Favourable credit programmes” associated with operational programmes for the development in each sub-sector of animal production. The intention was to create sustainable farms with marked-oriented production which could be competitive on the common European market. In addition, the biggest efforts have been put into the adjustment and implementation of EU standards of “Good Agricultural Practices” related to animal production, health and welfare. Therefore, the experiences of both new (Hungary, Slovenia) and old (Italy) EU members in the implementation of these standards could be of interest for Croatia. The collaboration between institutions involved in higher education such as Universities could help in a better exchange of existing experiences. In addition, it is expected that animal scientists in collaboration with extension services could contribute to the transfer and implementation of new technologies in agricultural sector. In some cases business cooperation between companies involved in animal production sector (e.g. trade of material resources such as farm equipment, animal feed, live animals and genetic material, etc.) is not associated with professional support what could result in the absence of expected production results.

The aim of this overview is to give the main characteristics of animal production in Croatia and to analyze its competitiveness and possibilities for collaboration between the countries of Quadrilateral in the field of animal production.

2. Main characteristics of livestock production in Croatia

Agriculture is important part of Croatian economy with the 6.8 % share of GDP, which is higher in comparison to other Quadrilateral countries (4.2 % in Hungary and 2 % in both Italy and Slovenia; Eurostat, 2007a). In terms of total agricultural output, in 2007 livestock production contributed 46.7% to total agricultural output from which the milk production accounts for about 13.2% (or 28.3 % of animal output). In meat production sector, pig meat contributed 12.2 % to total agricultural output (or 26.1 % of animal output). The other three meat sub-sectors, important in terms of output: poultry, beef and sheep and goat in the same year contributed 7.6 %, 7.3 % and 1.5 % of total agricultural output or 16.3 %, 15.6 % and 3.2 % of animal output, respectively.

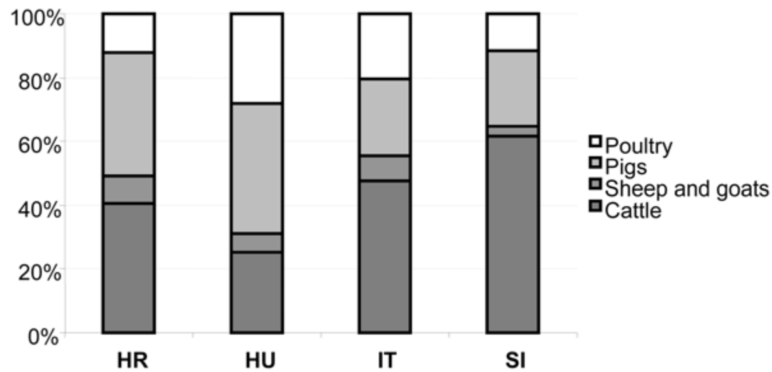
As can be seen in Table 1, in 2007 Croatia had 1 202 thousands ha of total utilized agricultural area (UAA), of which 847 thousands ha arable land and 270 thousands ha permanent pastures. In general, Croatia has an unfavourable structure of agricultural holdings with a lot of small family farms. The average farm size in Croatia of 5.6 ha is the smallest among the Quadrilateral countries (Table 1). On the other hand, the density of livestock populations on UAA expressed trough livestock density index (LDI), as indicator of land resources available for livestock production in Croatia (0.73) is at the average EU-27 level (0.78; Eurostat, 2011). With regard to human population pressure, Croatia has similar livestock units per capita (around 0.20) as Hungary, but higher than in Italy. In both indicators of livestock production density, Slovenia has the highest figures among Quadrilateral countries (Table 1). As can be seen in Figure 1, Slovenia and Italy has the greatest contribution of cattle to total livestock units, while in Croatia and, especially in Hungary, the pigs and poultry together dominate. In 2010, Croatia had about 444 thousand cattle, 1 230 thousands pigs, 9 470 thousands birds and 630 thousands sheep. In the livestock sector, small production units predominate, especially for cattle, pig, sheep and goat keeping. Poultry production on the other hand is characterised by large-scale production units (for poultry meat and eggs).

Table 1. – UTILIZED AGRICULTURE AREA (UAA, 1 000 hectares)

	Total	Arable land	Pasture (permanent)	Crops (permanent)	UAA per agricultural holding	LDI	LSU per capita
HR	1 202	847	270	80	5.6	0.73	0.20
HU	4 229	3 553	504	155	6.8	0.56	0.21
IT	12 744	6 939	3 452	2 323	7.6	0.77	0.17
SI	489	173	288	26	6.5	1.13	0.27

Source: EUROSTAT, 2011a; LDI – livestock density index calculated as livestock units (LSU) per hectare of UAA

Figure 1. – CONTRIBUTION OF SPECIES TO TOTAL LIVESTOCK UNIT, 2007 (EQUIDAE, RABBITS, BEEHIVES AND OTHERS NOT INCLUDED)



3. Milk production – current state and perspective for quadrilateral collaboration

With annual production of 769 thousands tons in 2010 Croatia meet up about 90 % of its demands for milk and milk products. The current level of milk production is a result of significant changes in dairy sector in the past 20 years. Firstly, a negative trend from 1990 to 2000 reduced milk production by 30 %. The main reasons for such fall in milk production were war (1991-1995) and economical changes which resulted in depopulation of 1/3 mainly rural territory of Croatia, along with the collapse of the common market, decrease in the purchasing power and changes in the land ownership. In addition, more than 1.5 million hectares of agriculture land, mostly pasture, disappeared in the past 15 years. Than, from 2000 milk production grew to reach the highest level of 834 thousand tons in 2007 (increase of 35 %). The reasons for this increase were high price of milk and secured buy-off from dairies as well as availability of favourable Governmental crediting programmes through the "Operative program for development of cattle production in Croatia". The intention of this program was to achieve milk production of 1 200 thousand tons (or 100 % self-sufficiency at average domestic consumption of 200 kg per capita and consumption of milk by tourist) and to obtain 208 500 calf for fattening through to building of 7 220 new dairy farms adaptation of 6 000 existing dairy farms and 228 new cow-calf production farms. The program did not give expected results and was extinct in 2009. Only 190 farms were realised (of 7220 planed) and only 14 % of available budget was utilised. As the main reasons for absence of expected results could be insufficient assimilative capacity of farmers (small farms limited in agricultural land, unfavourable age and educational structure, lack of knowledge about dairy farm management), administrative limitations for re/construction of farms, limit capacity of extension services as well as the drop of milk prices and economic crisis in the 2008 and 2009.

As shown in Figure 2, after 2007 a negative trend in milk production was observed again, with the reduction in total milk production for about 3-4 % per year. These trends in milk production could be a direct consequence of reduction in number of dairy farms and total number of cows. With respect to the structure of milk production (number of farms and dairy cows, herd size, milk yield) Croatia showed similar trends as other transitional countries. A constant reduction in the number of dairy farms and cows were observed while the milk yield and herd size were increased (Figure 3).

Figure 2. – TREND IN MILK PRODUCTION IN CROATIA (2005-2010),
Source: Croatian bureau of statistic, 2010; Croatian agriculture agency, 2010

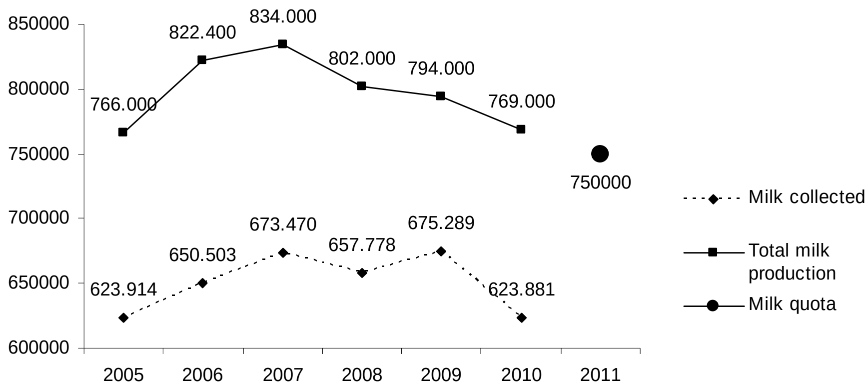


Table 2. – MILK PRODUCTION, 2009 (1 000 tones)

	Total	Cows' milk		Ewes milk	Goats milk	Buffalos milk	Total milk production per capita(kg)	Total milk production per UAA (kg)
		Production	Collected (%)					
HR	848	826	81.7	8	14		197.6	707
HU	1 762	1 758	80.0	1	3		175.4	417
IT	12 193	11 364	92.4	600	34	195	204.0	957
SI	629	626	82.6	1	2		310.4	1 342

Source: EUROSTAT, 2011a

In the past five years the number of dairy cows was reduced for about 40 thousands (or 17 %) and number of commercial dairy farms by about 30 thousands (or 64 %). Similar trend continued in first 6 month of 2011, in which the number of commercial dairy farms was reduced by additional 1850 farms or 11 % (unpublished data, Croatian agriculture agency). At the same time the average milk production per cow, number of dairy cows per farm and average milk production per farm and year were increased by 17 %, 56 % and 64 %, respectively. In comparison to other Quadrilateral countries, in 2010 Croatia had the smallest amount of collected milk per cow (3 100 kg vs. 4 700, 5 520 and 6 070 kg in Slovenia, Hungary and Italy, respectively). The average number of cows per farm and annually collected milk per farm in 2007 was 7.0 and 24.4 tons vs. 6.1 and 27.6 tons in Slovenia, 21.8 and 119 tons in Hungary and 29.3

and 163.5 tons in Italy. Together with the concentration of milk production to larger production units the share of collected milk by dairies is in constant growth. In the year 2010 dairy companies collected 81.1 % of total milk production, while 18.9 % was used on the farm as animal feed or was directly sold to consumers as fresh milk or milk products. This is at the similar level as in Hungary (80.0 %, 2009) and Slovenia (82.7 %, 2009) but lower than in Italy (92.4 %, 2009). In the past ten years the amounts of milk in Croatia dairies varies with changes in domestic production and increased demand of domestic inhabitants and tourist. Negative trends in the past three years resulted in decrease in processing of domestic milk and increase in import of fresh milk and milk products. In 2010, the collected cows milk decreased by 7.6 % or 52 thousands tons in comparison to 2009, while the import of the whole milk by dairies increased by 36.7 % or 16.3 thousands tons. In the year 2010 about 685 million kg of raw milk was processed, of which about 50 % was utilised as drinking milk. However, trend of increasing processing of milk into cheese and fermented products was observed in recent years. Similar changes were observed in the structure of milk consumption. The consumption of fresh milk was reduced while the consumption of fermented milk products and cheese was increased. With consumption of about 9 kg of cheese per capita Croatia is under the EU-27 average (18 kg) as well Italy (22.6 kg) but at similar to Hungary (9.0 kg) and Slovenia (11.4 kg; Table 3).

Figure 3. – CHARACTERISTICS OF MILK PRODUCTION IN CROATIA (2005-2010),
Source: Croatian bureau of statistics, 2010; Croatian agriculture agency, 2010

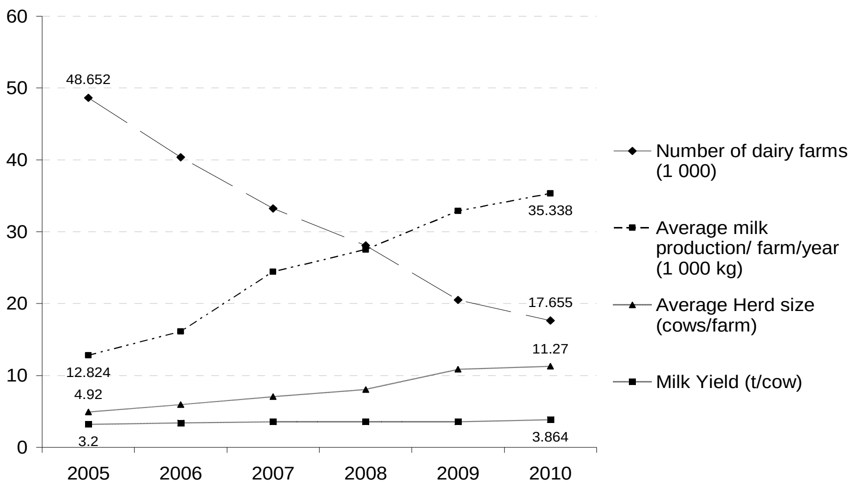


Table 3. – SUPPLY BALANCE SHEET AND INDICATORS OF MILK PRODUCTION (2009)*

	HR	HU	IT	SI
Gross human consumption (1 000 t)				
Drinking milk	-	728.89	3 533.42	-
Cheese	38.48	90.24	1 329.77	22.74
Butter	7.43	7.54	169.43	2.42
Gross human consumption per capita (kg)				
Total milk	217.52	175.59	256.1	240.00
Drinking milk	-	72.67	60.12	-
Cheese	8.67	9.0	22.63	11.39
Butter	1.67	0.75	2.88	1.21
Degree of self-sufficiency (%)				
Drinking milk	-	89.33	87.37	-
Cheese	82.14	78.96	82.96	104.75
Butter	103.6	83.12	69.93	181.26

*Source: EUROSTAT, 2011a; * 2007 or 2008 data have been used to replace data that were not available for 2009.*

In the past five years the annual import of milk and milk products was about 150 million tons (expressed as milk equivalents), while export vary between 75 to 105 million tons. Therefore Croatia is net importer of milk and dairy products with self-sufficiency rate between 85 % (2004) and 95 % (2007). In the structure of import dominate cheese, followed by fresh and condensed milk and fermented products. While import of cheese significantly increased in recent years due to low prices of cheese on the European market and liberalization of Croatian market toward EU, import of fresh milk was mostly dependent by domestic production. With reduction of milk production in the past two years import of fresh milk is rapidly growing (36.7 % in 2010). Ten years ago Hungary and Slovenia were important suppliers of fresh milk and fermented milk products with share of 40 % in total import of milk and dairy products. However, import of fresh milk and fermented dairy products from these countries rapidly decreased in the recent years. In 2010 the main part in import of fresh milk had Bosnia and Herzegovina (75 %) while Hungary and Slovenia participated only with 14 % and 2.9 %, respectively. Cheese is mostly imported from EU countries, especially from Germany. About 5.1 % and 6.7 % of imported cheese originated from Italy and Slovenia, respectively. Croatian export of milk and dairy products is mostly oriented on traditional markets in

Bosnia and Herzegovina (75 %), Slovenia (8.6 %) and other ex-Yugoslavia countries. With 217.5 kg of total milk consumption per capita (Eurostat, 2007b) and current negative trend in milk production as well as assigned milk quota of 750 million tons after accession to EU, the dependence of Croatia to import of milk and dairy products is expected to increase.

4. Meat production – current state and perspective for quadrilateral collaboration

When it comes to meat production sector, as visible from Figure 4, Croatia has biggest production within pig-production sub-sector which in period 2000-2008 averagely accounted for about 45.7 % of gross indigenous production (GIP). It is followed by the production of poultry (31.9 % of GIP), beef (14.2 % of GIP) and sheep and goat meat (2.3 % of GIP). Domestic production of meat during this period varied between 272 thousand and 308 thousand tons, with an overall increase of 10.8 % (% change 2000-2008). The highest relative increase was observed in beef and sheep/goat sub-sectors with 13.5 %, while for the pigs and poultry the increase was 11.6 % and 9.0 %, respectively. The increasing trend in meat production can be partly interpreted as an overdue recovery of the livestock sector after the post-war years and the result of Government development programmes for cattle and pig production in order to increase production, and to improve production systems by establishing new and modern farms, capable of fully meeting the conditions necessary for the achievement of a standardized product quality, environmental standards and animal welfare. Also, a recent sector investments of several large livestock breeders and feedstuff producers (e.g. Belje d.d., Žito d.o.o.) that have the important role in the market, particularly in pork and beef sector, have significantly contributed to positive trends.

In comparison to other Quadrilateral countries (Table 4), Croatia has the lowest per capita overall production of meat, amounting 68 kg, which is the slightly lower than in Italy (70 kg), while the highest per capita meat production has Hungary (91 kg), followed by Slovenia (78 kg). Per capita production is an indication of how far domestic production goes to meet a national per capita consumption and hence elimination of imports. Among the different kind of meat, Hungary is leading in per capita production of both pork (42 kg) and poultry (39 kg), followed by Croatia in production of pork (31 kg) and Slovenia in production of poultry (31 kg). Slovenia also leads in per capita production of beef (20 kg).

Figure 4: – TRENDS IN MEAT PRODUCTION IN CROATIA (2000-2008), SOURCE: MAFRD, 2008; GROSS INDIGENOUS PRODUCTION: NET PRODUCTION PLUS EXTERNAL TRADE BALANCE (EXPORTS MINUS IMPORTS) OF ALL ANIMALS OF THE SPECIES.

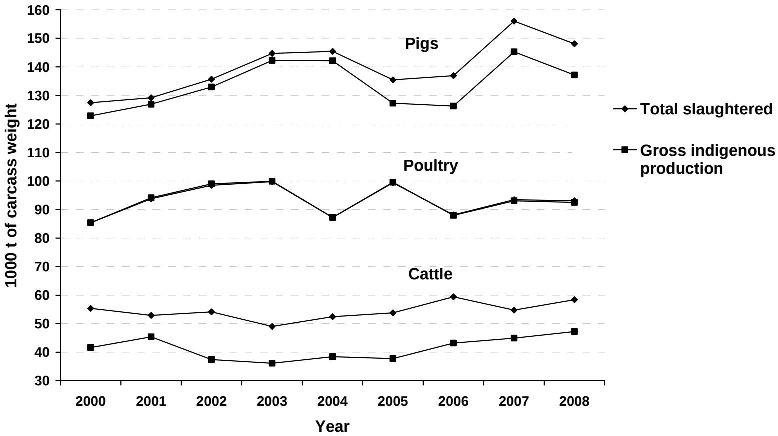


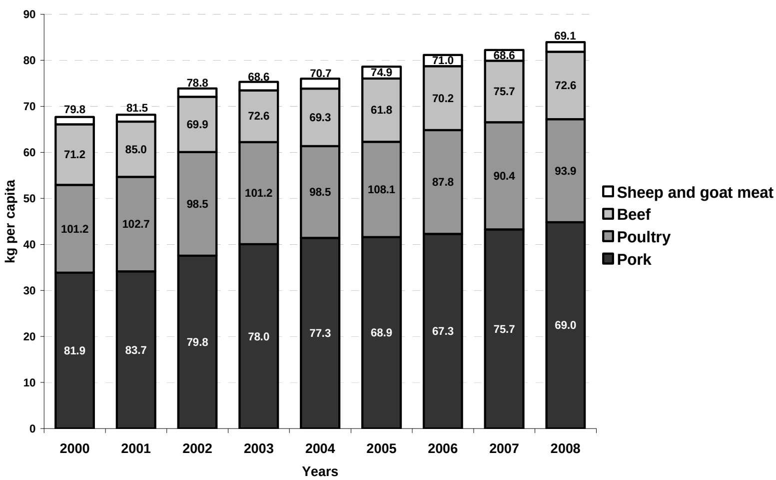
Table 4: – SUPPLY BALANCE SHEET AND INDICATORS OF MEAT PRODUCTION, 2009 (1 000 t)

	HR*	IT	HU	SI**
Gross indigenous production (GIP)	301.5	4245.0	910.0	158.9
Cattle	47.2	855.0	45.0	41.0
Pigs	137.1	1605.0	423.0	45.4
Sheep and goats	6.4	41.0	7.0	2.0
Horses	0.11	11.0	1.0	0.5
Poultry	93.0	1249.0	388.0	62.6
GIP per capita (kg)	68.0	70.3	90.9	77.8
Cattle	10.6	14.2	4.5	20.1
Pigs	30.9	26.6	42.2	22.2
Sheep and goats	1.4	0.7	0.7	1.0
Horses	0.02	0.2	0.1	0.2
Poultry	21.0	20.7	38.7	30.7
Consumption per capita (kg)	87.6	90.0	80.0	94.2
Cattle	14.7	23.0	3.0	20.5
Pigs	44.8	38.0	44.0	40.5
Sheep and goats	2.1	1.0	0.0	1.0
Horses	0.0	1.0	0.0	0.2
Poultry	22.3	19.0	29.0	28.1
Degree of self-sufficiency (%)	77.8	78.0	114.0	82.6
Cattle	72.6	61.0	163.0	98.1
Pigs	69.0	70.0	96.0	54.8
Sheep and goats	69.1	49.0	639.0	97.5
Horses	138.8	23.0	209.0	145.9
Poultry	93.9	108.0	134.0	109.1

*Source EUROSTAT, 2011b; * Source: MAFRD, 2008; data for 2008; **Source SORS, 2011.*

Consumption of meat in Croatia (Figure 5) increases steadily in recent years, reaching 88 kg / per capita in 2008 (23.8 % change 2000-2008), of which pork with 44.8 kg / per capita (32.4 % increase) and poultry with 22.3 kg / capita (17.3 % increase) are decisive in consumption. The per capita consumption of beef (14.7 kg) and sheep and goat (2.1 kg) meat also rose (11.1 % and 30.9 % change, respectively). However, the increase in meat consumption was never fully supplied by domestic production. The overall level of self-sufficiency for meat in 2008 was 77.8 %, with the highest rate for poultry (93.4 %), followed by beef (72.6 %) and pork and sheep/goat meat (both around 69 %). The steepest drops in the level of self-sufficiency as a result of increase in consumption in recent years were observed for pork, poultry and sheep and goat meat.

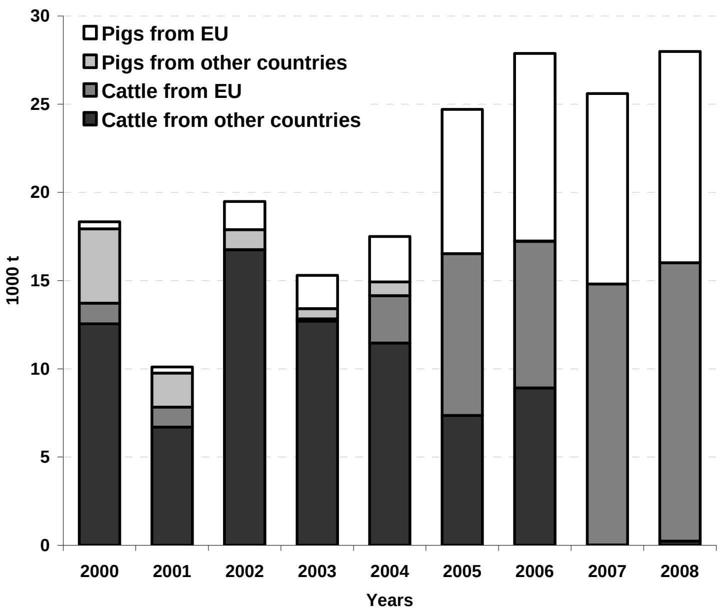
Figure 5: – PER CAPITA MEAT CONSUMPTION AND THE LEVELS OF SELF-SUFFICIENCY (%) IN CROATIA (2000-2008), *SOURCE: MAFRD, 2008*



As could be seen from Table 4, the current meat consumption per capita in Croatia is approaching the level in Slovenia (94 kg) and Italy (90 kg), and is higher than in Hungary (80 kg). The pork is the most frequently consumed meat in all Quadrilateral countries, with the highest average consumption in Croatia and Hungary (around 45 kg). The consumption of poultry meat is the highest in Hungary (29 kg), where it partly replaced the post-accession fall in other meat (mainly pork) consumption, and in Slovenia (28 kg). The highest consumption of beef is in Italy (23 kg) and Slovenia (21 kg); while consumption of other kind of meats is generally low (sheep and goat) or related to specific traditional diet (e.g. use of horse meat in Italy). In relation to the degree of self-sufficiency for meat in other Quadrilateral countries, only Hungary with the overall rate of 114 % meets its own needs, while neither Slovenia nor Italy covers all the domestic needs with the self-sufficiency rate of 83 % and 78 %, respectively. The widest gaps are present in Slovenia for pork (55 %) and in Italy for all kind of meats (beef 61 %, pork 70 %, sheep/goat 49 % and horse meat 23 %), except poultry.

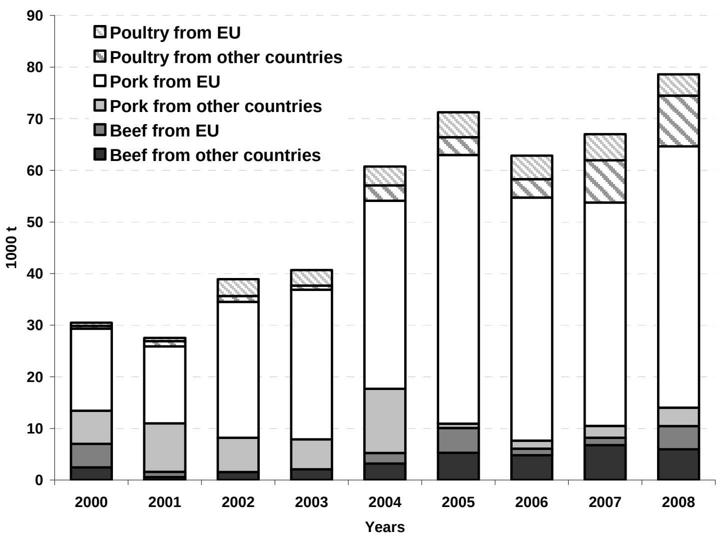
As a result of deficits for all type of meats, Croatia is a growing importer of both live animals and meat. From live animals, the most significant (> 90 %) is import of pigs and cattle, which grew strongly from less than 20 thousand in 2000 to nearly 30 thousand tons in 2008, mainly due to large increase in import of live pigs (Figure 6). In recent years, almost entire import of both live pigs and cattle originate from the EU. In the same period, the import of meat has increased around 2.5 times, from an initial 30 thousand tons to nearly 80 thousand tons. The most imported meat is pork, mainly from EU, followed by poultry and beef, which are imported more equally from both EU and other countries (Figure 7).

Figure 6: – IMPORT OF LIVE PIGS AND CATTLE IN CROATIA (2000-2008), *SOURCE: MAFRD, 2008*



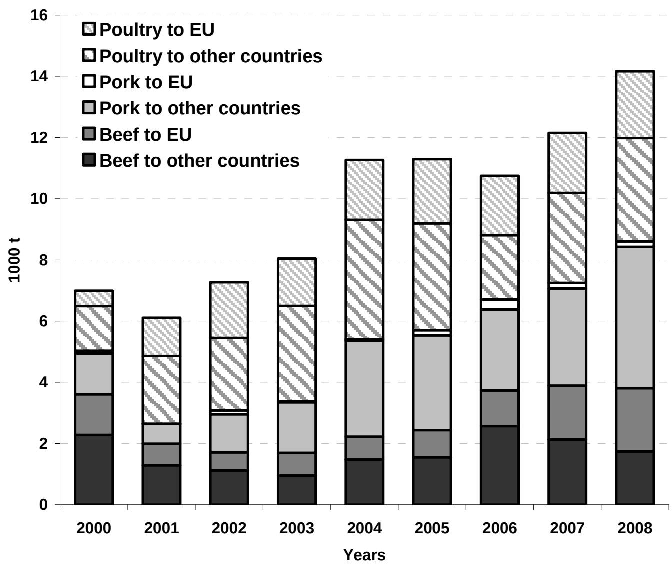
Export of live animals is small but has increased over the observed period from initial 0.5 thousand to more than 6 thousand tons in 2008, of which about 73 % was live cattle, 16 % pigs, 10 % poultry and 1 % horses (data not shown). The export of both pork and poultry meat is also growing; however, a significant proportion of export on the EU market is present only for poultry and beef (Figure 8). The European market is particularly deficient in beef and it is estimated that import of beef in EU-27 will reach the level of 741 thousand tons until 2014 (EC, 2007).

Figure 7: – IMPORT OF MEAT IN CROATIA (2000-2008), *SOURCE: MAFRD, 2008*



More detailed data about the trade balance in live animals and livestock products between Croatia and other Quadrilateral countries in 2010 are given in Tables 5 and 6. As could be seen (Table 5), from the total number of cattle imported in Croatia (around 140 thousands) 11.4 % originated from Hungary. The largest share in total import had calves for fattening (about 64 %) and cattle for slaughtering (32 %), of which 3.1 % and 29.7 %, respectively, were imported from Hungary. From other cattle categories, Croatia has also imported 4 % breeding animals, of which 1.4 % was of Italian and 0.6 % of Hungarian origin. The same year, Croatia imported around 626 thousands of live pigs, of which 4.6 % came from Hungary. By far the most important category were piglets for fattening (around 98 %), of which 4.3 % originated from Hungary, along with 25.8 % of imported live pigs for slaughtering. In 2010, Hungary was also one the most important exporter of live poultry and sheep (mainly lambs for fattening and slaughter) on Croatian market with the share of about 28 % for both in total import of 1 200 thousands and 56 thousands heads, respectively. In addition, 6.3 % of the total number of imported live poultry originated from Slovenia and 1.7 % from Italy. In the same period, Croatia sold abroad (mainly to ex-Yugoslavia markets and Middle East countries) approximately 9.5 thousands cattle, 24 thousands pigs and 2 million birds. However, there was no export to other Quadrilateral countries, except for a minor trade of horses (640) for slaughtering in Italy.

Figure 8: – EXPORT OF MEAT FROM CROATIA (2000-2008), *SOURCE: MAFRD, 2008*



As regards to meat trade balance (Table 6) in 2010, Croatia imported more than 72 thousands tons of meat, of which around 7 % (principally pork, poultry and dried/salted meats) originated from other Quadrilateral countries (3.3 % from Italy, 2.8 % from Hungary and 1.2 % from Slovenia). From nearly 40 thousands tons of imported pork, Hungary supplied 4.5 %, Italy 0.5 % and Slovenia 0.1 %. In addition, from around 15 thousands tons of poultry meat imported, 4.4 % originated from Slovenia, 1.4 % from Hungary, and 0.9 % from Italy. In total import of salted/dried meats (around 2.3 thousand tons), Italy was by far the most important partner with the 88.8 % share in overall trade, followed by Slovenia with the 7.4 % share.

Table 5: – TRADE BALANCE IN LIVE ANIMALS, 2010

HR		Heads	$ (1000)	Origin / destination (%)		
				HU	IT	SI
Import						
Cattle						
	Total	140 123	87 283	11.4	0.01	
	Breeding animals	5 764	10 970	0.6	1.4	
	Calf for fattening	89 853	56 854	3.1		
	Cattle for slaughtering	44 506	19 459	29.7		
Swine						
	Total	626 126	42 989	4.6		
	Breeding animals	806	456			
	Piglets for fattening	615 831	41 608	4.3		
	Pigs for slaughtering and other	9 489	925	25.8		
Sheep and goats						
	Total	56 248	3 873	27.7		
	Lamb (fattening and slaughter)	54 281	3 735	27.8		
	Other	1 967	137	25.0		
Poultry	Total	1 180 118	2 787	28.0	1.7	6.3
Export						
Cattle		9 496	14 550			
Swine		23 818	3 967			
Sheep and goats		510	37 391			
Poultry		2 036 030	1 448			

Source: Croatian chamber of economy, 2011

At the same year, export of Croatian meat amounted 11 thousand tons, of which about 13 % end on markets of other Quadrilateral countries, mostly Italy and Slovenia. The most significant is export of beef in Italy (20.7 % of total 5.6 thousand tons) and to lesser extent the export of poultry meat in Slovenia (7.1 % of total 3.7 thousand tons). These two countries where also an export destination for a minor quantities of salted/dried meats, while Hungary was destination for some pork (1.2 % of total 0.9 thousand tons).

Table 6: – TRADE BALANCE IN ANIMAL PRODUCTS, 2010

				Origin / destination (%)		
HR		Tons	$ (1 000)	HU	IT	SI
Import						
Milk	Total milk and products	77 354	119 961	11.7	0.8	3.4
	Fresh and fermented products	64 274	62 378	14.0		2.9
	Cheese	11 955	51 909	0.3	5.1	6.7
	Butter	1 125	5 673		0.1	0.2
Meat	Total meats and offal	72 377	199 011	2.8	3.3	1.2
	Beef	8 381	29 529			
	Pork	39 755	105 822	4.5	0.5	0.1
	Sheep and goat	1 542	9 726			
	Poultry	15 176	33 025	1.4	0.9	4.4
	Salted/dried meat	2 346	15 446	0.04	88.8	7.4
Eggs		2 812	9 253	10.1	1.9	20.5
Export						
Milk	Total milk and products	51 884	62 693		0.4	8.6
	Fresh and fermented products	47 272	40 448		0.4	8.9
	Cheese	2 132	10 122			8.3
	Butter	1 252	6 281			6.0
Meat	Total meats and offal	11 000	31 692	0.1	10.6	2.4
	Beef	5 594	17 815		20.7	
	Pork	912	2 572	1.2		
	Poultry	3 754	10 137			7.1
	Salted/dried meat	83	790		7.2	1.2
Eggs		663	2 658	12.4		3.3

Source: Croatian chamber of economy, 2011

5. Conclusions

The small average farm size and low productivity are the main reasons for a general inefficient Croatian livestock production and dependence on import of both live animals and animal products (milk and meat). Milk production as one of the most important part of Croatian agriculture sector is undergoing structural changes (farm concentration, higher milk yield, new technologies). Despite of that the production continuously decreasing, the foreign trade balance of milk and milk products deteriorating and the rate of self-sufficiency falling. With the current negative trend in milk production it can not be expected to meet the allocated quota after Croatia EU accession in near future. An important supplier of milk and dairy products for Croatia are countries of Quadrilateral (Slovenia and Hungary for fresh milk and Italy for cheese). The consumption of milk and dairy products slightly increased in recent years and reached the similar level as in Hungary but it is still lower than in Slovenia and Italy. The main lag remains in consumption of cheese and fermented dairy products. Meat production, a traditionally vital part of Croatian livestock and agricultural sector, shows a slight upward trend of recovery during the last decade. Pig and poultry are decisive in both production and consumption. However, in general meat production does not meet the rising domestic demands and Croatia is a net importer of live animals and meat from both EU and other countries. In relation to Quadrilateral partners, Croatia still lags in overall meat production per capita and the rate of self-sufficiency, especially in relation to Hungary (for pork and poultry) and Slovenia (for beef and poultry). In Croatian import, both Hungary and Slovenia account for a notable proportion of live birds and poultry meat, and Hungary alone is also a significant partner in import of live cattle, lambs, pigs and pig meat. In addition, Italy and to lesser extent Slovenia, are the most important foreign suppliers of salted/dried meats. On the other hand, Croatian export to other Quadrilateral countries is less significant, except for export of beef to Italy, which accounts for a substantial part of domestic meat export. As preferential quota for export on EU market (9.4 thousand tons) has not yet been reached, the national beef producers will have good opportunity for export expansion in coming years, especially regarding traditional Italian market.

With the EU accession, Croatian livestock sector (both milk and meat) can expect further integration in international trade and better opportunities for export (e.g. elimination of protective tariffs) on common EU market, especially with regard to products that are lacking in EU (e.g. beef). However, with accession, Croatian milk and meat producers will be additionally exposed to fierce competition within the EU market, and further import penetration and consequent market share reduction could be expected as well. To improve the competitiveness of Croatian farmers' additional farm concentration and the cooperation of small holders as well as a more effective use of local resources such as land, labour and livestock tradition is necessary. Collaboration between countries of Quadrilateral through development and implementation of new technologies can contribute to a better use of specific national resources and better market position on common EU market.

Acknowledgements

Authors are grateful to Željka Mesić (Faculty of Agriculture Zagreb) and Jasminka Dukić (Croatian chamber of economy) for their kind assistance and data provided.

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STOČARSKA PROIZVODNJA KAO OSNOVA BUDUĆE SURADNJE IZMEĐU ZEMALJA KVADRILATERALE

Sažetak

U radu su prikazana glavna obilježja stočarske proizvodnje u Hrvatskoj te je analizirana njena konkurentnost u odnosu na zemlje kvadrilaterale kao temelj za buduću suradnju na području animalne proizvodnje. Opisano je trenutno stanje i najnoviji trendovi u proizvodnji mlijeka i mesa u Hrvatskoj kao i njihova perspektiva nakon ulaska Hrvatske u EU. Poseban naglasak je stavljen na analizu trgovinskih odnosa sa zemljama kvadrilaterale. Glavno obilježje hrvatske stočarske proizvodnje je mala prosječna veličina gospodarstva i niska produktivnosti što bi mogao biti glavni razlog za opću neučinkovit domaće stočarske proizvodnje i ovisnost o uvozu kako živih životinja tako i proizvoda životinjskog podrijetla (mlijeko i meso). U cilju povećanja konkurentnosti neophodna je daljnja koncentracija stočarske proizvodnje, veća suradnja malih proizvođača kako bi se što uspješnije koristili lokalni resursi kao što su zemljište, radna snaga i stočarska tradicija. Osim toga, nakon pristupanja EU hrvatskom stočarskom sektoru se otvara mogućnost lakše integracije na međunarodno tržište te mogućnost izvoza (npr. ukidanje zaštitnih carina) na zajedničko tržište EU, posebice s obzirom na proizvode koji nedostaju u EU (npr. govedina). Suradnja između zemalja kvadrilaterale kroz razvoj i implementaciju novih tehnologija može pridonijeti boljem korištenju specifičnih nacionalnih resursa kojima raspolažu pojedine zemlje, a samim time i većoj efikasnosti u proizvodnji.

Ključne riječi: Zemlje Kvadrilaterale, stočarstvo, proizvodnja mlijeka i mesa.

Primljeno: 05.10.2011.