

Competitiveness of the Livestock Production in Croatia in the Process of Joining EU

Ivan JURIC¹

Dubravko MIKULIĆ²

Marija ĐIKIĆ¹

Ino ČURIK¹

Ante KOLEGA³

Višnja KNJAZ²

SUMMARY

The competitiveness of livestock production was decreasing during the long period in the history. From 1880 to 1915 livestock production in Croatia was competitive and the large number of agricultural products was exported to other countries.

Current livestock production is present in the small family farms and this is the main reason for the low competitiveness of the livestock production in Croatia.

Recently, the size of the family farms started to enlarge. Tourism is important part of the Croatian economy leading to the development of autochthonous products which are able to be sold in large quantities at high prices.

KEY WORDS

competitiveness, livestock production, size of farm, autochthonous livestock products

¹ Animal Science Department
Faculty of Agriculture, University of Zagreb
Svetošimunska 25, 10000 Zagreb, Croatia

² Agriculture, Food industry, and Forestry Department
Croatian Chamber of Economy,
Rooseveltov trg 2, 10000 Zagreb, Croatia

³ Department of Agricultural Marketing
Faculty of Agriculture, University of Zagreb,
Svetošimunska 25, 10000 Zagreb, Croatia
E-mail: ijuric@agr.hr

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INTRODUCTION

From the middle of the 18th century, the livestock production in Croatia had specific development which caused lagging behind livestock production in other western European countries. Specific characteristics of this development begin after announcement of Karlovy Urbari from 1937. In the development strategy of Austria the Croatia had to become the main raw materials basis for the development of textile industry. From that reason development of sheep production, domestic silkworm (*Bombyx mori*, Linnaeus, 1758), hemp production and linen production was forced. As a result of this strategy the livestock production lagged behind also in comparison to other countries from Austro-Hungarian Monarchy until 1980 (Gross, 1985, Gross i Szabo, 1992).

By Croatia - Hungary agreement from 1869, Croatia became independent in creation of agricultural politics. Two important laws that are related to land properties had been brought. The Law about Commune real estate from 1872 and the Law about land societies from 1894. With the Jelačić abolition of serfs from 1848 the relations were solved for "alodij" land as well as "selišno" land. From 1880 till 1915 the livestock production was increasing substantially and in this period Croatia become specialized country for livestock production (Stipetić 1959). In this period cattle is the main export product and, thus, 56000, 75000, 125000 and 152000 cattle has been exported in 1895, 1900, 1905 and 1913, respectively.

By the establishment of Yugoslavia in 1918 new law has introduced taxes on the export of cattle. How, there was not sufficient demand of cattle on the Yugoslave market, development of the large producers has been stopped. From that time the livestock production is stagnating and lagging behind in comparison with Western and Middle European countries.

After the Second World War the Socialist establishment has limited the size of farms, being held by private producers and including even farms held by brotherhoods, to the maximum of 10 ha. In the same period, meadows and forests owned by regional communities has been also expropriated. Thus, the basis for the livestock production has been

disappeared on the family farms (those existing only as a very small units) while on the government sector the poultry production was the only successfully organized production. The process of enlargement and specialization of family farm has not started until 1995. The size of family farms according to pig and cattle production is shown in Table 1.

The data in Table 1 are the consequence of the extreme anti-market socialism that was characteristic for Croatian agricultural politics between 1979 and 1980. The opposite process has been realized in Hungary and Slovenia. While after 1980 the livestock production in Hungary and Slovenia has moved towards the Western European type Croatian livestock production has moved towards Soviet Union type. In Slovenia, the number of farms with more than 10 cows has been substantially increased in the period between 1981 and 1990 (Osterc et al., 2003).

In Croatia, the law about livestock production brought in 1979, that was the basis for the realization of political decisions, has been changed in 1997. Surprisingly, for the new democratic environment, the law from 1997 followed the same ideas not changing the socialistic logic of agricultural management. This was particularly obvious from the fact that breeders' organizations that are creating its own breeding policy (establishment of new breeding goals, production of reproduction materials, etc...) were still not favored. In the field of livestock production, the political changes from 1991 were ignored and according to the Croatian legislative it is still not possible to establish private company that deals with breeding and genetics as well as to make any connections with other breeding companies outside Croatia.

Overall, the low level of competitiveness of livestock production in Croatia is a consequence of the lagging that was caused during 35 years (from 1880 to 1915). The situation has been further deteriorated by the strategy brought in 1979/1980 that moved toward anti market organization. The consequences of this strategy in comparison to the livestock production in Hungary and Slovenia are presented in Table 2. (see Jurić et al. 2000).

Table 1. The number of family farms in Croatia (according to the register from 1981 and 1991)

The number of heads (saws or cows)	The number of farms with saws			The number of farms with cows		
	1981	1991	1981=100 %	1981	1991	1981=100%
1	78.530	73.587	93.7	109.293	88.350	80.8
2	35.883	26.836	74.8	95.115	63.863	67.1
3	10.951	8.000	73.1	33.530	22.45	66.9
4 i 5	6.469	5.135	79.4	21.694	16.417	75.7
6-10	1.982	1.941	97.9	5.244	5.667	108.1
>10	347	343	98.8	376	430	114.4

Source: DSZ

Table 2. The comparison of the livestock production between Croatia, Hungary and Slovenia (1989-1991=100%)

	1995		1996		1997	
	Crop production	Animal production	Crop production	Animal production	Crop production	Animal production
Croatia	56.7	62.2	59.6	64.3	59.7	51.6
Hungary	70.9	67.9	80.1	74.7	80.8	74.3
Slovenia	98.0	98.4	102.2	99.5	102.5	99.9

Source: FAO

STATUS OF LIVESTOCK PRODUCTION IN CROATIA

Status of the livestock production in Croatia is presented here by the quantification of the livestock production and by the export to import ratio in last two years. The livestock production in Croatia does not show stability and increase that is necessary. However, at least the large decrease has been stopped. The production of several important animal products (2000 versus 2001) has been shown in Table 3.

Disbalance of the export with respect to import of livestock products (see Table 4) is caused by the total lack of livestock production.

The large import of animal products is related to the products made by ruminants and this is a consequence of inadequate use of land in Croatia (see table 5). It is obvious that strategy for cattle and sheep production was the most inefficient one.

Export versus import balance for the important plant production that is associated to the livestock production is shown in Table 6.

Table 3. Livestock production in Croatia in 2000 and 2001

		Year		Index 2001/2000
		2000.	2001.	
Milk yield	10 ⁶ liters	607	653	107.6
Eggs	10 ⁶ pieces	774	787	101.7
Honney	10 ³ kg	1.580	2.068	130.9
Cattle growth	10 ³ kg	62.908	56.387	89.6
Sheep growth	10 ³ kg	11.102	8.699	78.4
Pig growth	10 ³ kg	164.462	108.052	65.7
Poultry growth	10 ³ kg	93.105	92.610	99.5

Source: DZS

Table 4. Import and export of the livestock products (in millions of USA \$) in 2002.

	Import	Export	Import – export
Total	999.78	557.95	-441.83
Live animals	65.18	1.12	-64.06
Live cattle	49.91	0.00	-49.91
Live sheep and goat	3.95	0.01	-3.01
Meat (total)	57.30	5.11	-52.19
Poultry meat	3.12	3.42	+0.30
Milk and dairy products	58.41	26.06	-32.35

Source: DZS

Table 5. Usage of agricultural land in Croatia

Year	Total		Arable		Medows		Pasture		Other	
	ha	ha/inhabitant	ha	ha/inhabitant	ha	ha/inhabitant	ha	ha/inhabitant	ha	ha/inhabitant
1998.	3181	0.73	1587	0.36	434	0.10	1130	0.26	30	0.001
Utilization 1999 (%)	39	–	65		24		10			
Utilization 1999	1244	0.28	1038	0.24	104	0.02	113	0.02		

Source: Jurić et al., 2002

Table 6. The value of the Croatian import and export for chosen plant products (in millions of USA \$)

Forage	Export	Import	Difference
Corn	19.9	2.5	17.4
Wheat	21.1	1.0	20.1
Oil seed and pellets	11.6	53.1	-41.5

Source: DZS

PERSPECTIVES OF INCREASE OF THE COMPETITIVENESS OF LIVESTOCK PRODUCTION IN CROATIA

Our prediction is that the competitiveness of the livestock production in Croatia will mostly depend on the following factors:

- Increase of livestock polygons
- Lend politics and legislative related to the lend usage
- Legislative related to the selection and animal breeding
- Creation of the attractive products competitive on the domestic and foreign market
- Development of traditional highly qualitative products
- Subsidiary politics.

Increase of livestock polygons

The size of livestock polygons during last three to four years has been increasing and this will certainly enlarge competitiveness. However, due to the current status, the existence of the large number of small farms (see Table 1), the increase of the competitiveness in Croatia is still not satisfactory. How, there is no official statistical records about enlargement of the livestock polygons the illustration about the mentioned trends was deduced from the information about bought milk in "Lura" d.o.o. for 2000, 2001 and 2002 (see Table 7). Thus, as demonstrated in Table 7, the number of producers is decreasing while the total amount of milk that is bought by the dairy is increasing and the observed trend is a consequence of the increasing number of large milk producers.

The same trend has started in 1978 but at that time it was politically unwanted so large investments were forced to stop this trend. For more information about those strategies see Jurić (1983), Jurić et al. (1984), Jurić et al. (1993), Jurić et al. (2000A), Jurić et al. (2000B) and Jurić et al. (2002).

Lend politics and legislative related to the lend usage

As it is shown in Table 5, the area of used land has been constantly decreasing. The highest proportion of the land that is not used is related to the meadows and pastures. If in the negotiations with EU, Croatia succeed to solve the problem of the land that

is currently not used then the activation of the land can be enabled by demands of the markets that were historically associated with Croatia. For example, this was the case with Italy for the beef and milk production. The products from the arable land with respect to its quality are potential for the higher competitiveness of the livestock production. Certainly, without good legislative meadows and pastures will further degrade into forest.

Legislative related to the selection and animal breeding

Only the large changes in the current Law related to livestock production might bring the conditions for the full usage of highly productive cattle and pigs. The situation is much better in the poultry production and this is evident in the import - export ratio. The low genetic value of the animals currently used is an important factor that is limiting the creation of good productive studs and thus to the competitiveness of livestock production.

Creation of the attractive products competitive on the domestic and foreign market

In Croatia, the process of creating attractive products that are competitive on the foreign market has started. The largest number of created products is in the dairy and poultry industry. The creation of meat as well as other products has also been stimulated. The large success achieved by "Vegeta" and "Adriatic tuna fish" has started to be used as a model for making good and competitive products. The creation of new domestic products has been also stimulated by the Ministry of Science and Technology through the financial support of technological projects. In this sense the register of "Croatian products" and "Products with sign of Croatian quality" has been made. For Croatia the Italian market has historically been open for the beef and milk products. On this market the products from EU countries will further arrive (Meyn 2000, Cassandro 2003, Cozzi i Ragno 2003). Now the large unused areas of lend in Croatia might be activated by this market.

Croatia has allowed the presence of the large market chains (King Cross, Billa, Mercatone, Metro, Mercator etc...). The effect of the entrance of the large market chains is still difficult to be evaluated but it is certain that large shopping excursions of

Table 7. The milk quantity purchased from the co-operands of Lura d.o.o dairy

Purchased milk (l)	Number of co-operands			Percentage
	2000	2001	2002	2002/2000
until 20.000	29.321	28.034	26.675	88.8
20.000 – 39.699	977	1.198	1.544	158.0
40.000 – 59.000	182	225	294	161.5
60.000 – 79.000	47	87	106	225.5
80.000 – 99.999	27	33	37	137.0
100.000 – 199.999	42	47	52	123.8
200.000 and more	4	4	7	175.0
Total number of co-operands	30.600	29.628	28.715	93.8
Total purchased milk (10 ⁶ l)	187	202	221	118.2

Source: Lura d.o.o.

Table 8. Prices of the well known domestic products

		Type of the product	Price in shops (Euro)
Kulen	kg	sausage	12–25
Smoked ham (Dalmatia, Istria)	kg	smoked ham	18–20
Pag cheese	kg	hard sheep cheese	18–20
Dingač	0.75 l	black vine	12–15

Source: Authors research

Table 9. Number of slaughtered animals (* 10³)

Year	Cattle – total number	Calves number	Calves (kg)	Pigs – total number	Suckling pigs number	Suckling pigs (kg)	Sheep total number	Lambs number	Lambs (kg)
1992	157	13	66	556	28	13	34	29	11
2001	108	29	65	623	36	12	30	28	13

Source: DZS

Croatian citizens into nearby Countries have stopped. In addition, those market chains have started large series of livestock products in Croatia as well as the marketing of good through their channels. The secure marketing of livestock product through the large chains positively influences the growth of livestock production in Croatia. Even there is good opportunity that through those chains Croatian livestock products are present at the EU market. The export - import trends in the last two to three years should be analyzed with caution because they do not include the massive shopping excursions.

Development of traditional highly qualitative products.

How Croatia imports large quantity of the livestock products, the increase of the competitiveness within Croatia can also assure the growth of the livestock production. Competitiveness of the domestic market can be also considered as export because in summer the consumption is increased by the tourists. Peculiarity of the Croatian market is that instead of the low standard, highly qualitative products will reach rather high prices, see Table 8.

The experience with those products is beginning to be used in development of productions of other attractive productions that started to reach higher price that would reach the foreign products with the same quality. At the same time the consumers started to prefer domestic products. The reason for this attitude is the politics of high ecological standards in Croatia that, probably as this is going well with the tourism, started to be accepted. It is most frequently expressed by statements “The clearest sea in the Europe”, “The clearest rivers in the Europe”, “The water with highest drinking quality in the Europe”, “The less polluted land in the Europe”. With this politics the consumers started to believe in those statements and together in domestic products. It is difficult to make strong conclusion but reality is showing that consumers started to believe in Croatian products.

The production of young animals' meat has been restricted in Croatia. The large land areas that are not used are suitable for developments of technologies that are based on the production of young animals and those are more and more favored by tourists as well as by domestic consumers. Table 9 shows the quantities of the young slaughtered animals

and the numbers presented in the Table 9 still do underestimate the real status because at the private sector the number of young pigs is even much higher.

The production of young animals is maintained under specific autochthonous technologies that are lately begun to be stimulated.

Subsidiary politics

Croatia has been forced to accept the principles of EU subsidiary politics. Comparing the subsidiary politics in Croatia and the measurements taken by Slovenia before entering EU (Uradni list Republike Slovenije, br. 27/2003) it is possible to conclude that subsidiary politics similar to the EU Countries will be more suitable for Croatian producers.

CONCLUSION

After long time period in legging behind EU Countries and the decrease in the competitiveness in livestock production, in Croatia the processes that increase competitiveness have started. Are those processes fast enough for the achievement of reduced import - export ratio it will be shown soon? One might expect that, even in the near future, the export of livestock products in Croatia will be larger than import.

LITERATURA

- Cassandro M. (2003). Status of milk production and market in Italy. (in press).
- Cozzi G., Ragno E. (2003). Meat production and market in Italy. (in press).
- FAO Production (1989-2002)
- FAO Trade (1989-2002)
- Gross M. (1985) Počeci moderne Hrvatske, Globus - Zagreb i Centar za povijesne znanosti Sveučilišta u Zagrebu.
- Gross M., Szabo A. (1992). Prema hrvatskom građanskom društvu. Globus, Nakladni zavod – Zagreb.
- Jurić I, Đikić M., Martinić Jerčić Z., Kolega A. (2000). Razvoj govedarske proizvodnje u svijetu i stanje, problemi i perspektive govedarske proizvodnje u Hrvatskoj. Praxis Veterinaria, Zagreb, 48: 21-31.
- Jurić I. (1983). Elementi razvoja i perspektive govedarske proizvodnje do 2000.godine prema procjenama komisije EAAP. Savjetovanje: "Mogućnosti dugoročnog razvoja govedarstva u SR Hrvatskoj. Zbornik radova, str. 14-35.
- Jurić I., Đikić M. (1993). Strategija razvoja govedarstva u Hrvatskoj. Krmiva, 35 : 155-162.
- Jurić I., Đikić M., Čurik I., (2002). Prilagodba hrvatskog stočarstva uvjetima Europske unije. Zbornik radova: Prilagodba Europskoj zajednici hrvatske poljoprivrede, šumarstva i ribarstva HAZU. 5-8. lipanj, 2002. Zadar, 68-90.
- Jurić I., Đikić M., Kolega A. (2000). Comparison of the Condition of animal production between Croatia, Hungary and Slovenia. Papers of 8th International Symposium "Animal Science Days" Animal product and human health, Osijek, 20-22, September 2000, Agriculture 6: 30-32.
- Jurić I., Đikić M., Kolega A., Predrijevac V., Petričević A, (1994). Current problems of livestock development in the Republic of Croatia. 2nd International Symposium "Animal Science Days", - Actual problems in development of livestock production. 21-23. September 1994, Rovinj, Croatia. Znan.prak.poljopr.tehno. 24: 244-259.
- Meyn K. (2003). Competitiveness of Livestock Production in the Process of joining the EU. (in press)
- Osterc J., Čepin S., Klopčič M., Štuhec I., Helcman A., Komprej A. (2003). Competitiveness of livestock production in Slovenia during the process of association to the EU. (in press).
- Statistički ljetopis RH (2002). Državni zavod za statistiku.
- Stipetić V. (1959). Kretanje i tendencije u razvoju poljoprivredne proizvodnje na području NR Hrvatske. Zagreb.
- Uradni list Republike Slovenije, br. 27/2003