The round wood amount, quality and prices in Lithuanian State Forests in the period 2002 – 2007

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ABSTRACT

In 2006 the total forest area was 2218 thou. ha, and covered 32.5 percent of the Lithuania territory. Thought the total growing stock volume was 401 mln. m^3.
State forest enterprises and other state forest managers harvested 3.5 million m^3 in 2006. On the final felling 2/3 wood and 1/3 on intermediate felling are received. The number of selective felling increased.
In the period of 2002-2007 in each year the forest enterprises sell about 2.5 million m^3 round wood in home market. The greatest part of the round wood which was realized in home market is sawlogs - about 42 %. The spruce logs presented the largest part of sawlogs - about third of all logs. Average quality class of spruce sawlogs was C.0, pine and birch – B.9, black alder – C.3.
In each year the forest enterprises sell 0.7 million m^3 round wood in foreign market in 2002-2007. The greatest part of export wood is pulpwood - 74 percent. The greatest part of pulpwood is spruce tree - 42 percent.
It was determined that price of spruce sawlogs increased - 72 percent, pine - 56 percent, birch - 52 percent, a black alder - 98 percent and aspens - 85 percent, while comparing prices of 2002 and 2007. Among The birch pulpwood was the most expensive – 44,6 EUR/m^3 in 2007, i.e. their price had increased more than three times during last 6 years.
Keywords: felling, intermediate, roundwood, quality, price.

INTRODUCTION

The state importance forestland was 1.05 mln. ha according the data obtained from the last forest assessment in 2007. The biggest growing stock volume accumulated in Vilnius council forests is 84.2 mln. m^3. Thought the total growing stock increased from 401.1 mln. m^3 till 404.7 mln. m^3. The average growing stock volume remained at 199 m^3 ha^{-1} (Lithuanian Statistical Yearbook 2007).
In Lithuania timber harvesting volumes were decreasing during three years. States forest enterprises and other state forest managers harvested 3.5 mln. m^3 merchantable roundwood in 2006.

TIMBER HARVESTING VOLUMES IN LITHUANIA

It was necessary to use different indicators to do the quality and quantity analyze of roundwood. In the paper the forestry statistical tables, summarized data about roundwood stocktaking and move in EU markets and data from Directorate General of State Forests during the period 2002-2007 was used.

The timber harvesting areas and volumes during the period 2002-2006 are presented in 1 table. Timber harvesting volumes decreased in the state forest, because private forest areas increased.

Table 1: The timber harvesting areas and volumes in states forest during the period 2002-2006

Fellings	Years									
	2002		2003		2004		2005		2006	
	Area [thou. ha]	Volume, [thou. m^3]	Area [thou. ha]	Volume, [thou. m^3]	Area [thou. ha]	Volume, [thou. m^3]	Area [thou. ha]	Volume, [thou. m^3]	Area [thou. ha]	Volume, [thou. m^3]
Final felling	**11.9**	**2407.0**	**11.2**	**2399.0**	**11.6**	**2364.0**	**11.3**	**2259.1**	**12.0**	**2400.4**
Clear felling	10.0	2206.6	9.8	2199.1	9.8	2167.9	8.8	1969.4	9.0	2065.7
Intermediate felling	**245.3**	**1494.6**	**174.9**	**1357.5**	**168.6**	**1209.8**	**198.7**	**1333.9**	**129.7**	**1141.5**
pre-commercial thinning	12.0	18.5	12.5	15.4	12.7	16.1	12.5	12.1	12.3	13.4
commercial thinning (1)	4.9	180.0	5.1	172.4	4.7	159.1	3.7	122.0	4.9	151.4
commercial thinning (2)	5.9	319.8	5.4	287.4	4.6	254.0	3.2	163.0	5.3	285.6
sanitary cutting	220.9	911.5	148.1	838.3	144.7	736.7	178.2	997.8	106.2	650.9
Total	**257.2**	**3901.6**	**186.1**	**3756.5**	**180.2**	**3573.8**	**210.0**	**3593.0**	**141.7**	**3541.9**

From 2004 in total it was harvested 3.5 – 3.6 mln. m^3 timber per year. On the final felling 2/3 wood and 1/3 on intermediate felling are received.

REALISATION OF ROUNDWOOD IN HOME AND FOREIGN MARKET

There are various roundwood assortments in Lithuanian mature forest stalls. The logs length was determined the using standards and the customer's requirements. The state forest enterprises realized almost 19.5 mnl. m^3 timber in home and foreign market during the period 2002 – 2007, i.e. 3.24 mnl. m^3 timber per year.

The sawlogs presented the greatest part of the roundwood – 1.0 – 1.1 mnl. m^3. It comprised 31 - 35 percent from total amount of delivered roundwood. While the coniferous sawlogs comprised 60 percent, where the spruce logs presented the largest part of sawlogs - about third of all logs.

The pulpwood is the second large part of roundwood assortments. The pulpwood amount varied in large range during the period of 2002 - 2007. In 2002 – 2003 year, i.e. after storms and massive spruce desiccation the pulpwood amount comprised 22.7 – 20.7 percent. Later, the pulpwood amount decreased till 16 – 18 percent, with the largest part of the spruce and birch pulpwood.

The demand on wood for board industry increased: its increased from 7.5 till 10.6 percent (from 238 thou. m^3 till 334 thou. m^3) from total amount of roundwood delivery.

Nevertheless the amount of fuelwood was stable (about 14-15 percent), except 2006 year when it was realized almost 140 thou. m^3 more fuelwood than in average in the period of 2002-2007 (Table 2).

Table 2: Delivery sales of roundwood in state forest enterprises during 2002-2007 year

Roundwood assortments	Years											
	2002		2003		2004		2005		2006		2007	
	Volume [thou.m^3]	%	Volume, thou.m^3	%	Volume, thou.m^3	%	Volume, thou.m^3	%	Volume, thou.m^3	%	Volume, thou.m^3	%
Sawlogs	1030.62	31.3	1069.63	32.3	1063.67	33.4	1117.72	35.4	1089.16	32.8	1117.49	35.4
Veneer log	92.51	2.8	54.64	1.6	47.70	1.5	44.07	1.4	27.76	0.8	20.01	0.6
Shortwood	19.08	0.6	16.77	0.5	15.47	0.5	18.18	0.6	19.38	0.6	14.00	0.4
Pallet timber	663.53	20.1	723.61	21.9	770.83	24.3	731.05	23.2	750.63	22.5	658.84	20.8
Total logs	1805.74	54.8	1864.65	56.3	1897.67	59.7	1911.02	60.6	1886.93	56.7	1810.34	57.2
Pulpwood	747.82	22.7	685.81	20.7	567.40	17.9	547.31	17.3	536.12	16.1	577.05	18.2
Total of industrial roundwood.	2553.56	77.5	2550.46	77.0	2465.07	77.6	2458.33	77.9	2423.05	72.8	2387.39	75.4
Wood for board industry	256.05	7.7	262.29	7.9	237.73	7.5	254.09	8.1	299.61	9.0	334.07	10.6
Fuelwood	487.67	14.8	501.56	15.1	473.29	14.9	442.81	14.0	606.36	18.2	442.20	14.0
Total	3297.28	100	3314.31	100	3176.09	100	3155.23	100	3329.02	100	3163.66	100

In foreign market it was realized 4.4 mln. m^3 roundwood during the period 2002 – 2007. Roundwood delivery varied from 934 thou. m^3 in 2002 year till 614 thou. m^3 in 2005 year. During the last tree year the export of roundwood was lover than inaverage. The pulpwood comprised the biggest amount of roundwood, which was realized in foreign market (about 74.3 percent). The spruce logs presented the largest part of pulpwood (about 41.6 percent), following the birch pulpwood – 38.7 percent, pine – 14.2 percent and aspen – 4.6 percent.

The second largest part of roundwood was sawlogs – 13.6 percent. The spruce sawlogs presented the largest part of realized sawlogs (42.58 thou. m^3 per year). According the quality class, the spruce sawlogs distributed such as follow : class A – 1.3 percent, class B- 41.0 percent, class C- 52.4 percent and class D - 5.3 percent. Average quality class of spruce sawlogs was – B.6.

The birch sawlogs was in the second place (37.6 thou. m^3 per year). According the quality class, the birch sawlogs distributed in such way: class A – 1.0 percent, class B - 19.1 percent, class C - 51.0 percent and class D - 28.9 percent. Average quality class of birch sawlogs was – C.1.

In foreign market it was realised 15.77 thou. m^3 of pine sawlogs per year. The pine sawlogs with quality class C presented the largest part of realized pine sawlogs – almost 60 percent. The class B and D quality was similar, respectively – 17.6 and 17.9 percent.

Fig. 1, 2 presents the pulpwood and pine, spruce and birch sawlogs amount realized in foreign markets.

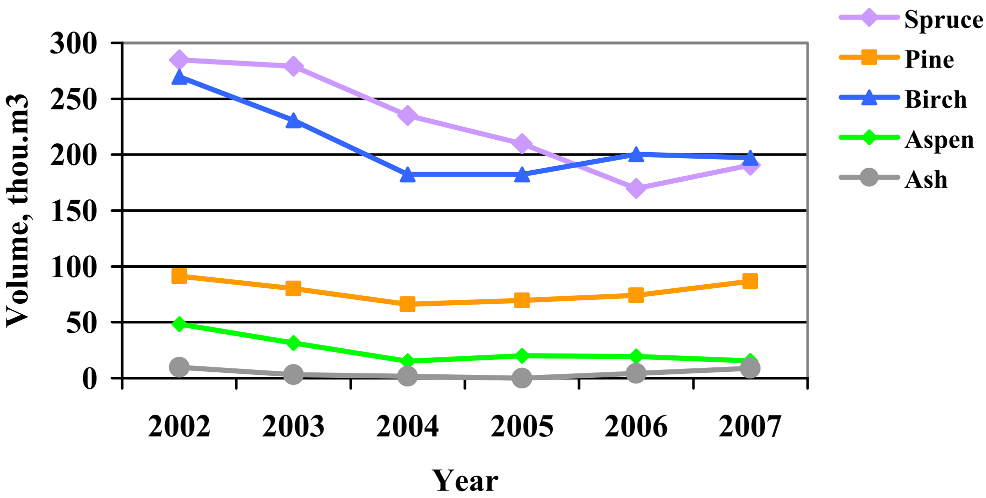

Figure 1: The amount of pulpwood realized in foreign market during period 2002-2007

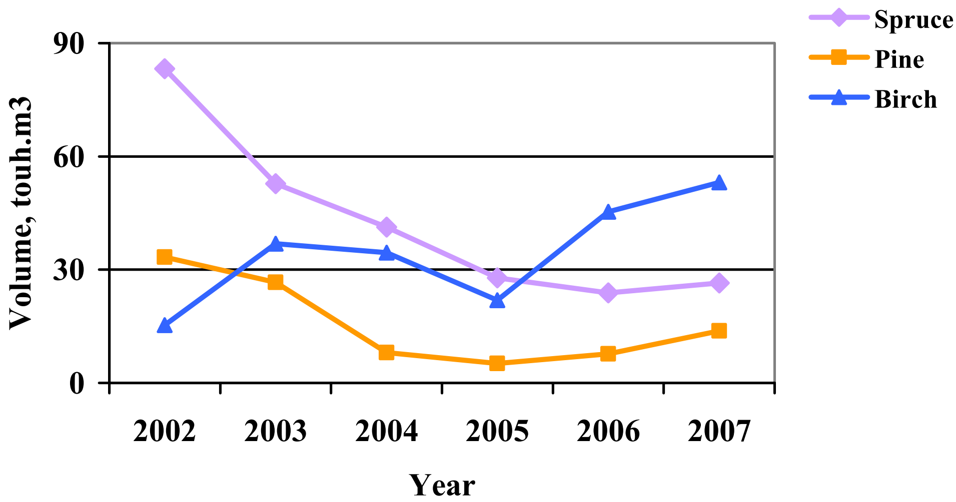

Figure 2: The amount of sawlogs realized in foreign market during period 2002-2007

As it is shown in the Fig. 1 the birch, spruce and aspen pulpwood amount decreased gradually from 2002. In the foreign market in 2002 it was realised 94.1 percent of total pulpwood, in 2007 only 84.6 percent. It shows that the raw materials was used in our country.
The spruce and pine sawlogs amount, which was realized in foreign market, was lower in 2007 than in 2002-2003 (Fig. 2). The amount of birch sawlogs increased every year.

ROUNDWOOD PRICE VARIATION DURING THE PERIOD 2002 – 2007

During last years, the roundwood prices increased quite considerably. The prices of same roundwood assortments are presented in Fig. 3.

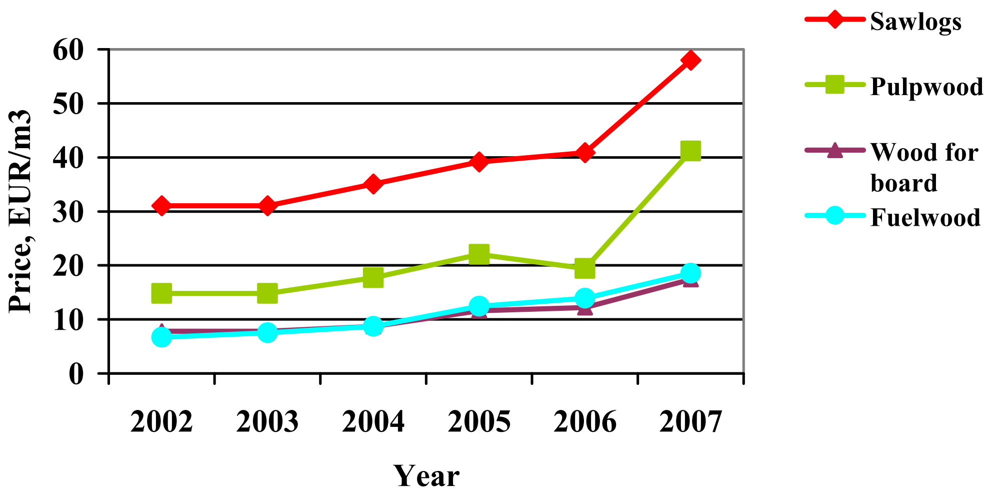

Figure 3: The prices of roundwood assortments during period 2002-2007

As it is shown in the Fig. 3 the fuelwood price is higher than wood for board price in the last few year.
The pine sawlogs price was 36.4 €/m3 ant it was the highest price in 2002 year, so in 2007 year the prices of spruce and pine sawlogs was equal and was 61.45 € for 1 m3 (Fig. 4).

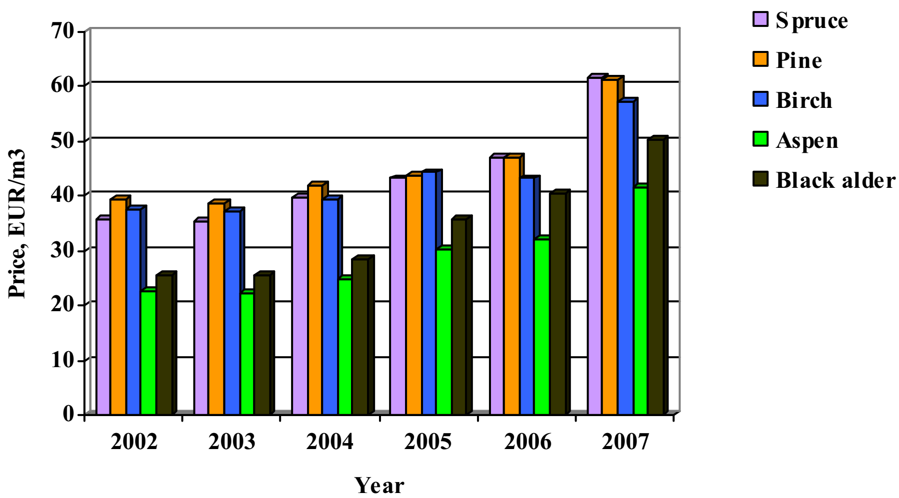

Figure 4: The variation of sawlogs prices during the period 2002-2007

The Fig. 2 presents the pulpwood prices according tree species are in.

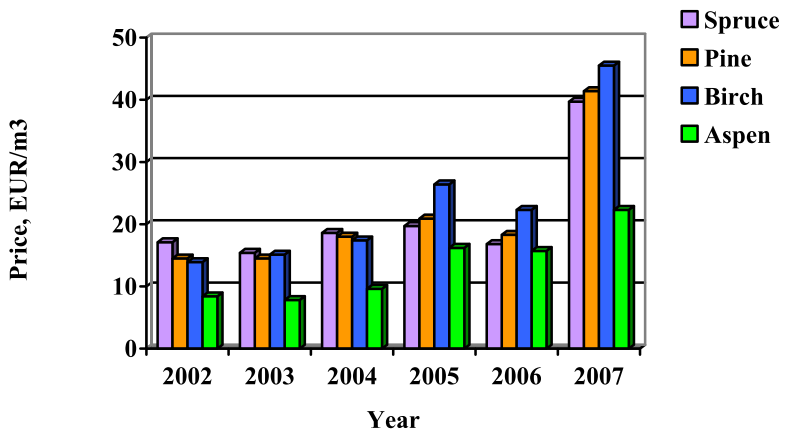

Figure 5: The variation of pulpwood prices during the period 2002-2007r

The birch pulpwood was the expensive one – 45 EUR/m^3 in 2007, i.e. price was 2.7 times higher than in 2002 year (Fig. 5).

CONCLUSIONS

1. In the period of 2002-2007 in each year the forest enterprises sell about 2.5 million m^3 round wood in home market.
2. The spruce logs presented the largest part of sawlogs - about third of all logs. Average quality class of spruce sawlogs was C.0, pine and birch – B.9, black alder – C.3.
3. In foreign market in the period 2002-2007 in each year the forest enterprises sell 0.7 million m^3 round wood. The greatest part of export wood is pulpwood - 74 percent, where the spruce tree comprise the biggest part of pulpwood (42 percent).
4. While comparing prices of 2002 and 2007, it was determined that price of spruce sawlogs increased - 72 %, pine - 56 %, birch - 52 %, a black alder - 98 % and aspens - 85 %,.
5. In 2007 the birch pulpwood was the most expensive – 44,6 EUR/m^3, i.e. it price had increased more than three times during last 6 years.

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