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THE LEVEL AND PROSPECTS OF THE FOREST INDUSTRY IN THE ESTONIAN SSR

1. Some features of the development of the Estonian timber, wood-processing, pulp and paper industries

Timber, wood-processing, pulp and paper industries are among the oldest branches of production in Estonia. The abundantly existing timber resources and the favourable geographical position of Estonia made it possible to develop comparatively well-advanced wood-processing and paper industries on the territory of Estonia as far back as last century already. Pulp, paper, plywood and match industries became branches of all-Russian importance. Before World War I, a number of big enterprises worked in Estonia, e. g. the "Waldhof" pulp mill in Pärnu (the mill was founded in 1898 and destroyed in 1915), A. M. Luther & Co Plywood and Furniture Factory in Tallinn (the furniture department was founded in 1841, the plywood department in 1887), etc. The above-mentioned enterprises listed among the biggest and best-equipped in tsarist Russia. The greater part of the output of the wood-processing industry went to the all-Russian market.

Bourgeois Estonia encountered big difficulties in the development of her wood-processing, pulp and paper industries. Owing to her anti-Soviet economic policy, bourgeois Estonia was left without any commissions from Soviet Russia. Other major obstacles were the instability of the commercial orders from foreign markets, as well as economic crises. In comparison to the period before World War I, the structure of the utilization of timber deteriorated, and the role of final products in the output and export of wood-processing and paper industries diminished. So, for example, 38,000 tons of paper were produced in 1925, whereas in 1935 the production reached only 19,000 tons. At the same time, the production of pulp grew rapidly for exporting purposes. Bourgeois Estonia became the supplier of capitalist powers (Great Britain in the first place) with raw material and semi-manufactured production.

According to the demand of the world market, round timber was exported in comparatively large quantities. This process had an unfavourable effect on the Estonian forests. The journal "Konjunktuur" (1937, Nos. 32/33, p. 510) presents the following comments: "The volume of cut timber from all the forests in the period of 1924 to 1934 exceeds the annual medium regeneration rate by 900,000 solid metres or 32.2 per cent, on the average. In the years of favourable conjuncture, the overcutting of forest exceeded its regeneration twice."

Round timber, sawn timber, plywood and various kinds of semi-manufactured products were the most important items of export in bourgeois Estonia. The export of round timber and products of wood-processing pulp and paper industries, in the terms of raw material, amounted to about one million solid metres a year. 60 per cent of the timber used in Estonia served as fuel.

The capacity of the wood-processing industry depended to a great extent on the demand of the foreign market. Work was usually done below capacity. The majority of enterprises consisted of small factories and shops.

World War II caused much havoc to forest industry as well as to its raw material basis — the forests. Devastating felling of trees and damages caused by warfare considerably diminished the timber resources of Estonia. A great part (80 per cent) of the capacity of the wood-processing, pulp and paper industries was destroyed.

The national economy of Estonia was in a very difficult position after World War II. It was necessary to reconstruct the destroyed enterprises and residential quarters and lay a solid foundation for the rapid development of the national economy. Big quantities of timber and wood-processing industry products, such as sawn timber, plywood, etc. were needed for that purpose. To meet the demand, forests were intensively cut. The cutting of timber exceeded its natural regeneration rate in those years. Such an uneconomic management was temporarily caused by the necessity of the intensive development of the republic's national economy in order to do away with the damages wrought by war. Since 1961, trees have been felled in accordance with the limits set by the natural regeneration rate.

The development of the timber, wood-processing, pulp and paper industries in the ESSR in the period of 1945 to 1968 can be divided into three main stages.

1. The period of 1945 to 1950. The reconstruction of the existing enterprises with no considerable rise in the technical level of production. By the end of this period, the pre-war level of production was achieved, in all items with the exception of plywood and pulp. That was achieved owing to the qualified staff and the economic assistance given by other Union republics. Nevertheless, the production basis inherited from bourgeois Estonia was scattered (the level of concentration was low). New co-operatives and local industrial combines were set up on the basis of small factories and workshops.

2. The period of 1951 to 1958 — the years of rapid development of production. Several new enterprises were built (especially in furniture industry), and the existing ones reconstructed and equipped with installations affording higher productivity. As a result, it became possible to increase the output of the production and raise the labour productivity. In the years of 1946 to 1958, the production of timber, wood-processing, pulp and paper industries increased 7.6-fold in the ESSR. The furniture, pulp and paper industries were especially rapidly advanced, and their production rose correspondingly 18-fold and 11-fold during that period. In comparison to the other branches of industry of the Estonian SSR of the given period, the forest industry made slower progress. The total industrial output of the Republic grew 12.6-fold in the years of 1946 to 1958. The slower advance in forest industry was mainly due to the shortage of local timber resources as well as to the dispersed production of a multitude of small, badly mechanized and scattered enterprises, especially in the wood-processing industry. So, for example, in 1956, furniture was produced at 144 scattered enterprises.

During that period, qualitative changes took place in the timber industry of the Republic. New more powerful mechanisms were implemented, the production technology was duly improved, and work was better organized, on the whole. By the end of the given period, timber combines were organized that grew into complex enterprises of timber and wood-processing industries with modern equipment and a highly qualified permanent staff. The felling of trees, hauling and transport were completely mechanized. As a result, the productivity of labour rose considerably. The complex production in specialised timber enterprises of the Republic per lumberman was 240 solid metres in 1945, as compared to 295 solid metres in 1955, 455 solid metres in 1960, and 504 solid metres in 1967.

During the years of 1946 to 1958, the level of centralization and concentration in forest industry rose considerably.

3. The period from 1959 onwards. The main object of the seven-year plan (1959—1965) was not so much to increase intensively the capacity of production in forest industry, but to raise its economic effectiveness. For this purpose, it was necessary

to raise the level of specialization and concentration of production and to favour the development of progressive branches, such as the production of pulp and paper, wood-particle boards, wood-fibre boards, etc.

In the years of 1959—1965, the output of the timber, wood-working, pulp and paper industries grew 50 per cent. The total industrial output of the Republic rose two-fold. Owing to the more intensified development of other branches of industry, the role of the timber, wood-working and paper industries diminished from 9.5 per cent in 1960 to 7.5 per cent in 1965 (the role of the workers employed in these industries decreased from 14.3 per cent to 11.2 per cent).

Qualitative changes took place in the wood-processing industry during the given period. The output of progressive items of production increased, and their quality improved. A foundation for the production of wood-particle boards and wood-fibre boards from wood waste was laid, and the production of fodder yeast from sulphite pulp waste was developed. The output of wood particle boards in 1967 was 25.3 thousand solid metres, that of wood fibre boards 2.6 million sq. m, and the production of fodder yeast — 5,700 tons. In 1967, about 150,000 solid metres of wood waste was used for technological purposes. Of late, the level of concentration of production has become higher, especially in the furniture industry. In 1965, the new Narva furniture factory, the second in size in the Republic, was put into operation, with a capacity of 5.5 million roubles worth of furniture a year. At the time being, 97 per cent of furniture is being produced at ten bigger enterprises. Alongside of the rapid growth of furniture industry during the seven-year period (it grew 2.2-fold), the designs and quality of the furniture improved a great deal. The furniture designed in Estonia has enjoyed an all-Union recognition. Furniture executed in Estonian national style is being exported to foreign countries (for example, to England, France etc.). In spite of all the progress in the development of the furniture industry, it still does not fully meet all the growing requirements of the people, especially as to the quality and assortment of items.

A rapid growth has been achieved in the production of shop furniture, skis and other sport goods. The output of these articles is of all-Union importance. Such branches of the wood-working industry as the saw-mill industry, the production of plywood, tare and construction parts have also developed. The development of these branches has been hindered by the limited raw material resources. That is why the production of sawn material has even decreased during that period, mainly that of small-scale enterprises. In the ESSR, the saw-mills and the enterprises making construction parts and tare are greatly dispersed, which circumstance makes a further raising of the effectiveness of production or further rationalization in the utilization of timber almost impossible. Sawn material is being produced in the Republic at almost 700 enterprises (including agricultural enterprises). There are 14 saw-mills in Estonia with an annual output of more than 10,000 solid metres. In 1966, they yielded 47 per cent of the total sawn material output (in 1966 the output was 712,000 solid metres).

Success has also been achieved in timber industry during the given period. The production of timber is no longer a seasonal work. A qualified permanent staff is being trained, and well-organized settlements with improved public services have been erected near the working places at all the timber combines; timber is being hauled only in the form of trunks, which in turn contributes to raising the productivity of labour, mechanizing the sorting and cutting of trunks in terminal storage yards, and improving the assortment of timber. In the coming years, work in the terminal storage yards will be fully mechanized.

The pulp and paper industries of our Republic have developed due to the partial reconstruction and expansion of the existing enterprises as well as to the mechanization and automation of production. The Estonian pulp and paper industries are mainly based on imported raw material. That is why an intensified development of this branch of industry is not possible. During the seven-year period, the production of chemical pulp increased 20 per cent, and the production of paper — 13 per cent. Part of the installation in pulp and paper industries is old, and its complex reconstruction and modernization

is a major issue of the day. The rates of development of the branches of forest industry have been varying, and that has caused some changes in the structure of the production of the Estonian timber, wood-working, pulp and paper industries. During the ten-year period, the share of the wood-working industry decreased a great deal in the total production of forest industry.

Table 1

The structure of production of timber, wood-working, pulp and paper industries in the ESSR in 1955—1968, %

Branches of production	Years		
	1955	1958	1968
Forest industry (total)	100.0	100.0	100.0
Timber industry	21.2	24.0	28.5
Wood-working industry,	50.3	50.1	42.8
including furniture industry	18.1	20.9	26.4
Pulp and paper industry	28.5	25.9	28.7

and especially the output of furniture. The role of the furniture industry, a leading branch of the wood-working industry, has been constantly increasing. In 1958, the share of furniture industry in the total production of wood-working industry was 41.6 per cent, whereas in 1968 it already formed 61.9 per cent.

2. The level of production and economic relations of the Estonian forest industry

The Estonian wood-processing, pulp and paper industries have achieved a comparatively high level. This can be characterized by one of its main features, the per capita output of the main items of production.

In the ESSR, the per capita production of paper exceeds that of the USSR 6-fold, and the production of furniture, wood-particle boards and plywood more than three-fold. The level of production in several branches surpasses home needs by far. That makes it possible to export part of the production to other Union republics and abroad. For example, in 1965, 72 per cent of the output of sulphite pulp, 45 per cent of furniture, 82 per cent of shop furniture, 72 per cent of matches, 97 per cent of kraft paper bags, 83 per cent of skis, 40 per cent of paper, etc. was exported. The main export article is sulphite pulp (22,000 tons in 1965, or 35 per cent of the production). Sulphite pulp is mainly exported to England, the German Federal Republic, etc. In recent years, the export of furniture, wooden toys, fodder yeast and skis has grown. On the whole, the production of wood-processing, pulp and paper industries, in the terms of round timber, is exported from the ESSR in the amount of ca 850,000 solid metres annually.

At the same time, the need for timber in the Republic greatly exceeds the capacity of the timber felled locally. In recent years, only 63—65 per cent of used timber were obtained from local resources. The consumption of wood in the Estonian SSR in the recent years has amounted to 3.6—4.0 million solid metres, including 2.1—2.3 million solid metres of timber. The consumption of wood as fuel has decreased in the years of 1960—1966 by 25 per cent, owing to the ever wider utilization of economically more effective kinds of fuel (gas, peat briquettes, etc.). The need for wood fuel is totally met by local resources. 700—800 thousand solid metres of timber are annually imported mainly from the north-western part of the Soviet Union to meet the demand for wood. Pulpwood and saw-logs form the main part of the timber imported (in 1966 the figures

That decrease was caused by the comparatively slow growth in the development of the saw-mill industry, construction parts industry and some other branches of the wood-working industry. The role of the timber industry as well as the pulp and paper industries has increased to a great extent. Timber-cutting has not actually increased, but some other items of the production of complex timber-processing enterprises have made progress, e. g. the timber combines,

being respectively 46.4 and 36.1 per cent). Imported timber meets the demand for about 60 per cent of pulpwood, 50 per cent of plywood blocks, up to 70 per cent of poles in the ESSR. Besides round timber, several wood-working and paper industry products for the needs of the national economy of the Republic are imported, for example, sawn timber (94 thousand solid metres in 1965), veneer (3.6 million sq. metres), bleached chemical pulp (16 thousand tons), paper and paperboard (23 thousand tons), etc. The greater part of the above-mentioned articles is being imported from other Union Republics, and partly from abroad (for example, paper and paperboard mainly from Finland).

Table 2

The per capita production in 1965

Items of production	Unit of measure	Production per capita in 1965		
		USSR	The Baltic economic region	ESSR
The production of wood	solid metre	1.64	1.37	1.45
of it timber	"	1.10	0.75	0.89
Sawn timber	"	0.48	0.44	0.55
Plywood	"	0.007	0.024	0.022
Wood-particle board	"	0.003	0.009	0.011
Wood-fibre board	sq. m	0.60	0.79	1.50
Furniture*	rouble	7.9	17.7	24.7
Chemical pulp	kilogram	14.3	72.2	87.6
Paper	"	14.0	55.1	79.0
Paperboard**	"	6.3	15.3	11.3

* In wholesale prices of July 1, 1955.

** Including paper for the production of corrugated cardboard.

The reasons for importing the above-mentioned articles of production are, as follows:

(1) The capacities of the production of raw material resources of the ESSR cannot guarantee the necessary volume of production (in the way of veneer, paperboard, sleepers).

(2) All the products needed by the ESSR are not produced in the Republic, owing to the specialization or historically established profile of production. Such products are, for example, bleached sulphite pulp, various special kinds of plywood (aeroveneer, water-proof veneer, etc.), and some kinds of paper (newsprint, punch-card paper, parchment, etc.).

(3) The necessity for widening the assortment of consumer goods. In spite of the fact that furniture is produced, in the ESSR, twice as much as needed by the Republic, it is also imported from other Union Republics (the Latvian and Lithuanian SSR) and some foreign countries (Finland, the German Democratic Republic, the Socialist Republic of Czechoslovakia).

As there is a shortage of timber in the ESSR, the rationalization of the utilization of timber is of great importance. During the last 10 years, the structure of production of timber, wood-processing and paper industries of the Republic has to some extent improved. Particular stress was laid on the output of products of chemically worked timber and the production of consumer goods (furniture, skis, etc.). In timber industry, the assortment of particularly needed and scarce kinds of timber, such as pulpwood and veneer blocks, increased in the volume of cut timber. There was a considerable growth in the utilization of wood waste and low-rate timber for technological purposes (wood-particle boards, wood-fibre boards, chemical pulp, fodder yeast, chlorophyll-carotene paste). As a result of this, the utilization of timber has improved.

In spite of some qualitative changes in the utilization of timber, it is possible to rationalize the structure of cutting and usage of wood further on, as well. This can be confirmed by the results of comparative analysis of the utilization of timber. The effectiveness of the utilization of timber can be estimated by the cost indicator of the per unit production of main articles and the indicator showing the utilization of timber in chemical industry. Analysis shows that, in 1965, the main articles of production (sawn timber, plywood, wood-particle boards, wood-fibre boards, chemical pulp, mechanical pulp, paper and paperboard) were produced per 1,000 solid metres of consumed timber, as follows (in prices valid in the Soviet Union): in the Estonian SSR for 15.6 thousand roubles, in the Soviet Union for 10.8 thousand roubles, in Finland for 27.2 thousand roubles, in the German Federal Republic for 37.8 thousand roubles, and in Canada for 41.3 thousand roubles. Although the level of the utilization of timber in the Estonian SSR is much higher than in the Soviet Union as a whole, it still considerably lags behind countries with highly developed wood-processing, pulp and paper industries (Finland, Canada, etc.).

The methods of wood-working have exercised a great influence on the level of value indicators of the main branches of production. Raw material is more rationally used in the chemical working of timber as compared to its mechanical working. The chemical working of timber ensures a higher value of the final product per unit of used raw material. In the Estonian SSR, the role of chemically worked timber products compared to the total value of main articles of production is 1.5 times lower than in Finland or Sweden.

The higher level of utilization of timber in the countries with advanced wood-working, pulp and paper industries (Finland, Sweden, Canada, etc.) as compared to the Estonian SSR, is mainly guaranteed by the following factors:

(1) The greater share of the technologically used timber in the total bulk of timber used by national economy (in 1965: 59 per cent in the ESSR; 75 per cent in Finland; about 90 per cent in Sweden).

(2) The higher proportion of the chemical utilization of timber in the volume of the technologically used timber.

(3) The more rational utilization of wood waste and low-rate timber. So, for example, in the ESSR, only up to 20 per cent of wood waste is used for technological purposes, whereas in the countries with an advanced wood-working industry the figure amounts to 50 or 70 per cent. Inconsiderable use is made of deciduous trees in the production of pulp in the Republic.

(4) More complete technical devices and technology of production in the wood-working industry, which make it possible to diminish the cost expenses of timber and to utilize timber of a comparatively lower quality.

A general analysis shows that there are ample possibilities for a more rational utilization of timber in the ESSR, especially by means of a more expedient utilization of timber waste and low-rate timber. This factor has been taken into consideration while working out the prospects for the development of the Estonian wood-working, pulp and paper industries.

3. Timber resources and the trend of development of forest industry in the Estonian SSR

The local raw material basis serves as a decisive factor in the further development of the Estonian forest industry.

a) A survey of the Estonian forest resources

About 34 per cent of the territory of the Estonian SSR is covered with forest. By Jan. 1, 1966, forest lands formed 2.04 million hectares, the growing stock being 156.5 million solid metres. The per capita forest land area is 1.5 hectares (4.2 hectares in the

USSR, 0.3 hectares, on the average, in Europe), and the corresponding growing stock amounts to 105 solid metres (340 solid metres in the USSR). The ESSR may be looked upon as a comparatively poorly forested area of the USSR. 68 per cent of forested land is under state forests, 19 per cent belongs to collective farms, 11 per cent to state farms, and 2 per cent to other organizations. The forests of the Republic can be classified according to the species of trees, as follows (the territory under forests according to the predominating species): pine — 41.7 per cent; spruce — 21.9 per cent; birch — 27.3 per cent; aspen — 2.3 per cent; alder — 6.4 per cent; oak and ash — 0.2 per cent, and other species — 0.2 per cent. The average mass of wood per hectare is 108 solid metres in the ESSR; in state forests, the figure is 126 solid metres, in collective farm forests — 78 solid metres, and in state farm forests — 84 solid metres.

There are over 41 per cent of young forests in the ESSR, whereas only 16 per cent of forests are mature or overmature for cutting. There is a shortage of about 5 to 6 per cent of mature or over-mature-for-cutting forests in the Republic. That is due to over-cutting in the past.

The annual growth of forests in the ESSR is about 4 million solid metres, including 2.4 million solid metres in state forests. The yearly per hectare growth of state forests is 2.8 solid metres.

The cutting of forest resources is nowadays brought into accordance with the limits set by the scientifically calculated wood-cutting area. For the period of 1966—1970, the annual cutting capacity is fixed at 2.6 million solid metres on the average.

In connection with the intensification of wood production, there are prospects for some increase in the forest resources of the Republic and in the capacity of timber-cutting.

In the forests of the ESSR, the prospects envisage annually: forest regeneration — 8 thousand hectares, including 6.5—7 thousand hectares of forest seeding and planting; forest drainage — 20 thousand hectares; construction of forest roads — 300 km. At the present time, the territories under forest regeneration exceed the wood-cutting areas about 30 per cent. In the future, more attention will be paid to the fertilization of forest soil.

b) The prospects for the development of the wood-working and paper industries in the ESSR

As mentioned above, it is not possible to increase wood-cutting in the near future to a considerable extent, in spite of the comparatively intensified forest regeneration. The import of timber is also limited since the growing stock of the regions supplying the ESSR with timber has diminished.

It is uneconomical to get timber supplies from far-off regions (Siberia, etc.) due to high transport cost. That is why there are no prospects for any intensified development of the Estonian wood-working and paper industries. Main attention in the development of this branch of industry should be paid to the more rational utilization of the existing timber resources and to the increase of the economic effectiveness in the production of timber, wood-working and paper industries.

There are following ways for increasing the effectiveness of the utilization of timber resources:

- (1) improvement of the structure of the utilization of timber, constantly increasing the application of low-rate timber as technological raw material and the role of chemical timber-working;
- (2) improvement of production technology in order to reduce the specific cost of raw material and the amount of waste at wood-processing;
- (3) the increase of the utilization of unavoidable production wastes;
- (4) the wider utilization of other contemporary materials instead of timber, especially in construction work and the production of tere.

For the next ten years, extensive measures have been envisaged for increasing the level of concentration in the Estonian timber and wood-working industries, especially in sawmill industry and the production of tare. Two new sawmills will be established, each with a capacity of 120 thousand solid metres of sawn timber a year. In the bigger already existing enterprises, or in those to be established, barking and the production of chips from wood waste has been envisaged. That will widen the sphere of utilization of timber waste considerably.

For a more rational utilization of wood waste and low-rate timber, it is planned to establish a wood-particle board mill with a capacity of 100 thousand solid metres of boards a year, and a wood-fibre board mill with a capacity of 10—11 million sq. m of boards a year. It is envisaged to construct a cardboard tare mill in the Republic, with a capacity of 40 thousand tons of cardboard tare a year, in order to substitute cardboard, a more effective kind of tare, for wooden tare.

As regards the pulp and paper industry, the Tallinn and Kehra Pulp and Paper Combines are under extensive reconstruction, which will enable to increase the output of pulp up to 30 per cent and the production of paper up to 25 per cent, and raise the technical and economic level of production. The utilization of broad-leaved timber and wood waste in the production of pulp will increase.

As a result of the application of the envisaged measures, it will be possible, in the near future, to increase the utilization of wood waste and low-rate timber for technological purposes up to 670 thousand solid metres a year (in 1967, about 200 thousand solid metres).

The development of the production of wood-particle boards, wood-fibre boards, cardboard and other effective articles of production, and their even wider utilization in national economy will enable to economize timber (up to 800 thousand solid metres a year).

Taking into consideration the shortage of timber in the Estonian SSR as well as the comparatively high level of wood-working and paper industries (the per capita production), it is not envisaged to intensify production in the given branch of industry. Main stress will be laid on the enhancement of the effectiveness of production and the improvement of quality.

Alongside of the development of the Estonian wood-working and paper industries, the necessity for a further specialization of production will be taken into consideration. As the Republic possesses a highly qualified staff and long-standing production experience, chief attention will not be paid to the production of the so-called mass commodities, but to specialization in the production of high-quality goods, especially in the way of furniture, skis and other consumer goods. Such production can easily be exported abroad. This fact is of great importance in national economy, ensuring higher effectiveness of production than before.

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EESTI NSV METSA-, PUIDU- NING PABERITÖÖSTUSE ARENEMISTASE JA PERSPEKTIIVID

Resümee

Artiklis antakse ülevaade Eesti NSV metsa-, puidu- ja paberitööstuse senisest arengust, käsitletakse nende arenemise perspektiive ja puidu kompleksse kasutamise probleeme.

Märkimisväärsete metsaressursside olemasolu ja soodsa geograafilise asendi tõttu arenes Eesti territooriumil juba möödunud sajandil välja suhteliselt kõrge tasemega puidutöötlemistööstus, mille toodangust valdav osa välja veeti.

Kodanlikus Eestis oli puidu- ja paberitööstuse arendamisel suuri raskusi, mis tule-nesid peamiselt Nõukogude Venemaa kui suure tarbija tellimuste äralangemisest kodanliku Eesti Nõukogude-vaenuliku majanduspoliitika tõttu, välisturgude ebastabiilsusest ja majanduskriisidest. Tunduvalt halvenes puidu kasutamise struktuur, vähenes valmistoodangu osatähtsus puidutöötlemistööstuse toodangus ja väljaveos. Real aastail esines ulatuslikku üleraiet.

Eesti NSV metsa-, puidu- ja paberitööstuse arenemist sõjajärgsetel aastatel võib vaadelda kolme põhietapina.

1. Aastad 1945—1950, mil taastati omaaegsed ettevõtted. Ajavahemiku lõpuks saavutati kõigi tähtsamate toodete osas, välja arvatud tselluloos ja vineer, sõjajärgne tootmistase.

2. Aastad 1951—1958, mil intensiivselt arendati tootmist. Ehitati mitmed uued ettevõtted ja rekonstrueeriti olemasolevaid. Tunduvalt tõusis tootmise tehniline tase ning kontsentratsioon.

3. Alates 1959. aastast aeglustus mõnevõrra puidutööstuse kasvu tempo piiratud tooraineresursside ja saavutatud suhteliselt kõrge tootmistase tõttu. Paranes märksa tootmisstruktuur ja puidu kasutamine, suurenes tootmise kontsentratsioon ja spetsialiseeritus, pandi alus mitmete uutele progressiivsetele tootmisaladele (puitlaastplaadid ja puitkiudplaadid, söödapärm jne.). Kõige kiirem kvantitatiivne ja kvalitatiivne arenemine toimus mööblitööstuses.

Eesti NSV puidu- ja paberitööstus on saavutanud suhteliselt kõrge arenemistase. Nii toodeti Eesti NSV-s 1967. aastal keskmiselt ühe elaniku kohta tselluloosi ja paberit peaaegu 5, vineeri, mööblit, puitlaastplaate ja puitkiudplaate ligi 3 korda rohkem kui NSV Liidus. Kuna saavutatud tootmistase ületab enamiku toodete osas vabariigi vajadused, veetakse suur osa toodangust välja teistesse liiduvabariikidesse, samuti välismaale.

Samal ajal ületab tarbepuidu vajadus (kasutamine) vabariigis märksa puidu varumise mahu kohalikest metsadest. Viimastel aastatel on sellest vajadusest kohalike ressursside arvel kaetud ainult 63—65%. Puudujääk (enamikus paberipuit ja saepalgid) kaetakse sisseveo arvel teistest liiduvabariikidest, peamiselt Vene NFSV Looderajoonist.

Kuigi viimastel aastatel on puidu kasutamine vabariigis paranenud, on Eesti NSV-s tähtsamate toodanguliikide väljalase (väärtuselises väljenduses) kasutatud puidu ühiku kohta tunduvalt madalam kui niisugustes arenenud puidutööstusega välisriikides, nagu Soome, Rootsi, Kanada ja mõned teised. Selle peamiseks põhjusteks on 1) tarbepuidu väiksem osatähtsus rahvamajanduses kasutatud puidu mahus, 2) keemilise ümbertöötamise väiksem osatähtsus tehnoloogiliseks otstarbeks kasutatud puidu mahus ja 3) puidujäätmete ja madalasordilise puidu suhteliselt vähene kasutamine tehnoloogilisteks vajadusteks.

Eesti NSV puidu- ja paberitööstuse edasisel arendamisel tuleb lähtuda eelkõige kohalikest puiduresurssidest, kuna puidu sisseveo suurendamine ei ole kas võimalik või majanduslikult põhjendatud. Lähemal aastail aga ei ole võimalik tunduvalt suurendada puidu varumist kohalikest metsadest, vaatamata metsamajanduse intensiivsele arendamisele. Seetõttu tuleb peamine tähelepanu pöörata puidu ratsionaalsemale kasutamisele, milleks on põhiliselt järgmised teed: 1) puidu kasutamise parandamine, eeskätt puidujäätmete ja madalasordilise puidu järjest laialdasema kasutamisega tehnoloogiliseks otstarbeks ja puidu keemilise ümbertöötamise osatähtsuse suurendamise teel, 2) tootmistehnoloogia täiustamine eesmärgil tagada puidu võimalikult täielikum ärakasutamine tehnoloogilises protsessis ja puidu erikulu vähendamine, 3) puitu asendavate materjalide laialdasem kasutusele võtmine, eriti ehituses ja taara tootmisel.

Puidujäätmete ja madalasordilise puidu ratsionaalsema kasutamise tagamisel on esmajärguline tähtsus tootmise kontsentreerimise süvendamisel metsa- ja puidutööstuses ning uute tootmisvõimsuste loomine puitlaastplaatide ja puitkiudplaatide tootmiseks madalasordilistest puidust ja puidujäätmetest. Perspektiivis tuleb rajada puitlaastplaatide tehas võimsusega 100 tuh. tm ja puitkiudplaatide tehas võimsusega 10—11 milj. m² plaate aastas. Kavandatud abinõud puidu ratsionaalsemaks kasutamiseks võimaldavad lähemas tulevikus suurendada madalasordilise puidu ja puidujäätmete kasutamist tehnoloogilise toorainena kuni 670 tuh. tm aastas 200 tuh. tm asemel 1967. aastal.

Kuna Eesti NSV-s on suur tarbepuidu defitsiit ning puidu- ja paberitööstus on saavutanud suhteliselt kõrge arenemistase, ei tule nende tööstusharude edasisel arendamisel peatähelepanu pöörata mitte tootmismahu suurendamisele, vaid efektiivsuse tõstmisele.

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Saabus toimetuses
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О. ЛУГУС

УРОВЕНЬ И ПЕРСПЕКТИВЫ РАЗВИТИЯ ЛЕСНОЙ ПРОМЫШЛЕННОСТИ В ЭСТОНСКОЙ ССР

Резюме

В статье дан обзор состояния лесной промышленности в Эстонской ССР, рассматриваются проблемы перспективного развития отрасли и комплексного использования древесины.

За годы Советской власти деревообрабатывающая и целлюлозно-бумажная промышленность республики достигла относительно высокого уровня развития. В 1967 г. целлюлозы и бумаги было произведено на душу населения почти в 5 раз, фанеры, мебели, древесноволокнистых и древесностружечных плит в 3 раза больше, чем в среднем по СССР. Объем производства основных видов продукции отрасли значительно превышает потребность республики в них, в связи с чем значительная часть продукции вывозится за ее пределы.

Вследствие этого потребность лесообрабатывающей промышленности в сырье значительно превосходит то количество древесины, которое заготавливается в лесах республики в пределах расчетной лесосеки. Поэтому в течение последних лет 35—37% годовой потребности в деловой древесине удовлетворялось за счет ввоза из других районов Советского Союза.

В дальнейшем потребность народного хозяйства республики в древесине, несмотря на все более широкое применение заменяющих ее материалов, будет расти. Однако увеличения заготовки древесины в местных лесах и ввоза ее из других сравнительно близких районов СССР не предвидится. В связи с этим при дальнейшем развитии деревообрабатывающей и целлюлозно-бумажной промышленности республики основное внимание должно быть уделено более рациональному использованию лесосырьевых ресурсов. Для этого имеются следующие возможности: 1) улучшение структуры потребления древесины за счет все большего использования низкосортной (дровяной) древесины и древесных отходов в качестве технологического сырья; увеличение химической переработки древесины; 2) совершенствование технологии производства с целью экономии круглого леса и пиломатериалов и минимизации отходов при обработке и переработке древесины; 3) расширение применения различных заменителей древесины, особенно в строительстве и тарном производстве.

При дальнейшем развитии лесоперерабатывающей промышленности Эстонской ССР важное значение также имеет повышение степени концентрации и специализации производства, что способствует рациональному использованию древесины и повышению эффективности производства.

Расчеты показали, что в Эстонской ССР использование низкосортной древесины и древесных отходов даст экономический эффект при выпуске прежде всего таких видов продукции, которые в возможно большей степени заменяют деловую древесину и пиломатериалы. Таковыми видами являются древесностружечные и древесноволокнистые плиты и картон. Учитывая потребность народного хозяйства республики, необходимо в будущем создать мощности для производства древесностружечных плит в объеме 100 тыс. м³ и древесноволокнистых плит — в объеме 10—11 млн. м² в год. Важной задачей является также замена деревянной тары и упаковки картонной и бумажной, что исключительно эффективно.

Принимая во внимание острый дефицит в деловой древесине и относительно высокий уровень производства, достигнутый в лесоперерабатывающей промышленности республики, основное внимание в перспективе должно быть обращено не на быстрое увеличение объема производства, а на повышение его экономической эффективности.

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