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RESEARCHES REGARDING THE FORESTRY ARRANGEMENTS OF UPF IV CALARASI COUNTRY

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Abstract

The forestry measures applied consist in adjusting and decreasing of the forestry personnel for obtaining wooden material as required, with a good physiological state, without any specific flaw on its surface. The IV production Unit of Chirnogi belongs and develops in district Campiei Burnasului, it is administered by Mitreni SilvicDistrict, while being a public property of the state in the R.N.P. Romsilva. Thinning shave been done in UPF IV Chirnogi on a surface of 41.16 ha with a volume of 455 m^3 and a 46 m^3 annual average. The major modifications have been done by assignations in the parcel and underlake area in UP III Frasin Ulmeni.

Key words*: assignations, thinning, parcels.*

INTRODUCTION

Forestry deals with the problems of creating and cultivating forests, harvesting and benefit from forests, and organizing and managing the entire administration process (Nicolescu, 2003).

Like the major importance, the forests have presented the main vector in developing the human community, due to the quality of the wood disposed, the paraphernalia and the variety of utility that it holds within the construction and tool area and also the heating in homes (Daia, 2003).

Thus if the great exploitations during the antic times would have been avoided, the big citadels and historical vestiges that can be seen today as well, would have ceased to exist, proving again its role as a significant resource. That is why through forestry we understand the science that deals with studying, rationalizing and managing of all the wood resources of the Earth.

MATERIALS AND METHODS

The cleaning methods of the trees have the thinning as purpose from both point views (quantity and quality) and takes place only in the early stage of growth (underdeveloped sapling).

Those cleaning methods have taken place within UPF 4 Chirnogi on a surface of 41.87 ha with a total volume of 56 m cube and a 6 m cube annual volume. The hygiene works of the tress have as a main purpose taking out the dried or damaged trees in the wake of the weather phenomena outside the other established things. They are done to prevent an eventual disease infestation, such as mushrooms, insect pests and other destructive agents from within the forest that can affect the quality of the wooden material. Those hygiene works have taken place within UPF 4 Chirnogi on a surface of 138.23 ha with a total volume of 1,062 m cube and a 106 m cube annual volume.

RESULTS AND DISCUSSIONS

Methods of storing trees consist in adjusting and decreasing the forest effect with the purpose of obtaining wooden material developed according to our requests with a good physiological state without any flaw on its surface. There are three types of storing: selective, schematically, combined.

Execution technique: a first step would be the recognition of all the trees with a maximum economic value. Thus the numeric status of the trees, the distance, as well as the distribution and layout of all the tree crowns to decide

which measures are to be taken to act upon (Nistor, 2003).

Intensity and periodicity: Varies based on the physiological conditions of each tree and also the state of the technical forestry from before the thinning**.**

It is also in a decreasing order in reverse to the early developing stages of the young trees.

That's why a new intervention of this kind will take place only in case of multiple deficiencies found in the superior level of the stands. The appliance is not indicated after a certain cycle of thinning established without knowing the state of the land because it can disturb the quality development especially the ability to protect against disasters. Thus for a maximum efficiency of work there are consistent artificial adjustments made at level 0.8 or 0.7.

In Romania thinning at the state takes between 4 and 6 years and for the rest of the procedures the execution period is between 5 and 10 years.

In UPF IV Chirnogi thinning were done on a surface of 41.16 ha with a 455 m cube volume and a 46 m cube annual average.

The cleaning methods of the trees are similar to the thinning ones (quantitative and qualitative), but they only take place in the early growth stage. It is applied only where competition is excessive between the younglings and leads to keeping the useless species economically speaking which exclude the artificial species unable to cope. There are several steps.

The execution technique: takes in consideration the trees with a negative affect towards the remaining stock.

Thus the ratio between component species and the excess growth (individual and collective as well) is adjusted, the species that stimulate the growth getting excluded only when it come to the conclusion that they are harmful towards the dominating species or prevent circulation on forest roads. For the pure species for an efficient yield is recommended keeping the density of certain parameters, and for the mixed species is recommended favoring the natural seed grown trees. In the mountain area the leading methods are more reduced compared to the country area.

With these methods the internal forest roads get well shaped too. As a parallel between the two types of woods, the hardwoods compared with the softwoods show an inexistent interest for the woodworking industry in order to obtain the main products due to the poor plastic processing characteristics and the low quality aspect.

In the U.P.F. IV Chirnogi cleanings were carried out on an area of 41.87 ha with a total volume of 56 m cubic meters and an annual volume of 6 m cubic meters. Hygiene works of the trees - removing the dry or damaged trees after meteorological phenomena, other than the other established works. This is made in order to prevent a possible infestation with diseases, fungi, insect pests and other destructive factors inside the forest, not to damage the quality of the wood.

There are occurrences of any type of forest presenting periodicity, being required only in cases of necessity and having an independent character. The quantity of wood resulted from these works reflect the forest's state at the moment, with a margin of 1 m cube/year/ha.

They take place throughout the year without any inconvenience.

In U.P.F. 4 Chirnogi, hygienic works were carried out on an area of 138.23 ha with a total volume of 1,062 m cubic meters with an annual volume of 106 cubic meters.

Given the background, followed by the restitution and the assignations remembered, as internal structure and evolution we have the following situation (Table 1 and Table 2).

Table 1. Size of parcel and underparcel

Year		2004	2014
Parcels	Number	61	18
	Average	14.6	18.01
	Maximum	64.4	35.50
	Minimum	0.5	6.26
Underparcels	Number	402	136
	Average	2.2	2.38
	Maximum	17.2	19.11
	Minimum	0.1	0.14

Table 2. Density evolution of plots

Year	Subunit of production	Surface	Consistency			Average consistency
			0,1-0,3	0,4-0,6	> 0,7	
1994	Abies alba	219.9	2	0.4	4	0.8
	Quercus	114.4	0	0	0	0.7
2004	Abies alba	249	5	1	9.4	0.8
	Quercus	103.3	0	1	9.9	0.8
2014	Abies alba	213.61	3	1.1	8.6	0.7
	Quercus	109.98	0	3.1	6.9	0.8

According to the table the density of the stands rises up to 50% until 2004 followed by a decrease in 2014 by 30%.
Analyzing the results, we can observe that no matter the age, the trees show an ascent trend until year III and IV followed by a decrease down to 0 in year V and VI (Figure 1).

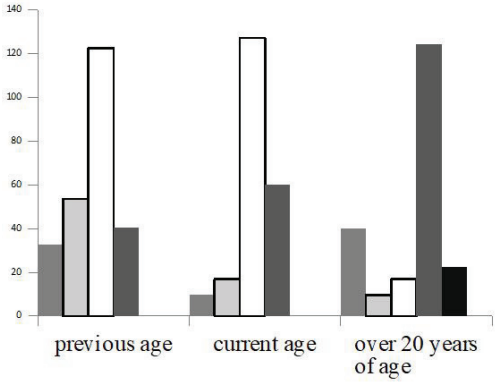

Figure 1. Dinamic of structure based on age

With an annual possibility of 300 m cube/year, there are only 3 possibilities that met a 70% increase, the fourth remaining null (Figure 2).

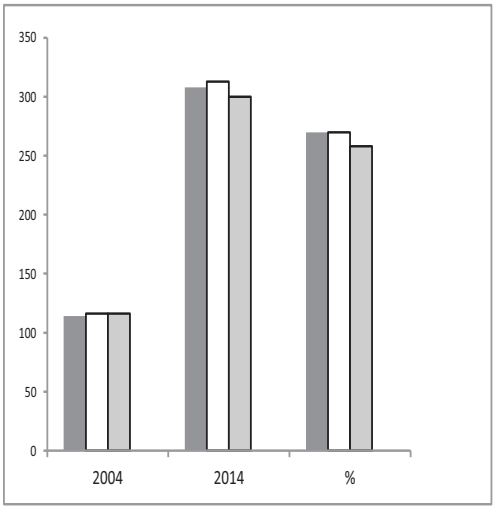

Figure 2. Possibility of plots

According to the calculated possibilities from 10 to 10 years it is concluded that in the next 10 years a small decrease of only 10 m cube will take place followed by an increase of 30 m cube after 20 years and another 10 m cube increase after 30 years (Table 3).

Table 3. Possibility laid out in years

Present arrangement		after 10 years		after 20 de years		after 30 de years	
Surface	Possibility	Surface	Possibility	Surface	Possibility	Surface	Possibility
36.49 ha	450 m^3	45.51 ha	440 m^3	27.98 ha	470 m^3	43.99 ha	480 m^3

CONCLUSIONS

As a result of the research made in UPF 4 Chirnogu, there are the following conclusions:
- the quantitative and wood indices underwent numerous changes over several years until now;
- specifically, the wood volume averaged 118 cube meters (while it currently averages 104 cube meters), the total increase got to 6,319 cube meters (in comparison with the current 1,034 cube meters), and the average increase went from the previous 7.2 cube meters to the actual 3.2 cube meters, only so that afterwards, the previous total increase to reach 693 cube meters in comparison to the current one, reaching 438 cube meters;
- similarly, it can be state the same thing about the average increase index (previously 2.8 cube meters) which is now 2 cube meters, followed by the possibility of main products of 4,541 cube meters compared to the current value of

750 cube meters, with a harvesting index (previously reaching 166 cube meters) currently of 98 cube meters;
- this is followed by a possibility of secondary products of 480 cube meters, now reaching a current 52 cube meters and a harvesting index of the secondary products (previously 17 cube meters), now reaching 6.2 cube meters.

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